Responses to Comments Document for the Final Environmental Impact Report

Independence at Lincoln Development Project

March 2017

PREPARED FOR:
City of Lincoln
Community Development Department
600 Sixth Street
Lincoln, California 95648
Contact: Steve Prosser, AICP

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ACRONYMS AND ABBREVIATIONS

ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
BMPs	best management practices
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
DWR	Department of Water Resources
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHGs.	greenhouse gases
LDR	Low Density Residential
MRF	Material Recovery Facility
PeMS	Performance Measurement System
SWMM	Stormwater Management Manual
SWMP	Stormwater Management Plan
SWQP	Stormwater Quality Plan
UAIC	United Auburn Indian Community of the Auburn Rancheria
VMT	vehicle miles travelled
WPWMA	Western Placer Waste Management Authority
WRSL	Western Regional Sanitary Landfill
WTRF	Wastewater Treatment and Reclamation Facility
WWTRF	Wastewater Treatment and Reclamation Facility

1 INTRODUCTION

This document has been prepared by City of Lincoln (City), as lead agency, in accordance with the requirements of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines (CCR Section 15132). This document contains comments received on the draft environmental impact report (DEIR) for the Independence at Lincoln Development Project (project), responses to those comments, and revisions to the DEIR. Together this document, “Responses to Comments Document for the Final Environmental Impact Report-Independence at Lincoln Development Project,” and the DEIR constitute the Final EIR for the project.

1.1 PURPOSE AND INTENDED USES OF THIS FEIR

CEQA requires a lead agency that has prepared a DEIR to consult with and obtain comments from responsible and trustee agencies that have jurisdiction by law with respect to the project, and to provide the general public with an opportunity to comment on the DEIR. The FEIR is the mechanism for responding to these comments. This document has been prepared to respond to comments received on the DEIR, which are reproduced in this document; and to present corrections, revisions, and other clarifications and amplifications to the DEIR, including minor project modifications, made in response to these comments and as a result of the applicant’s ongoing planning and design efforts. Together this document, “Responses to Comments Document,” and the DEIR constitute the Final EIR for the project. The FEIR will be used to support the City’s decision regarding whether to approve the project.

This FEIR will also be used by CEQA responsible and trustee agencies to ensure that they have met their requirements under CEQA before deciding whether to approve or permit project elements over which they have jurisdiction. It may also be used by other state, regional, and local agencies that may have an interest in resources that could be affected by the project or that have jurisdiction over portions of the project.

Public agencies with known permits, other approvals, or jurisdiction by law over resources on the site included, but may not be limited to, the agencies listed below:

1.1.1 Lead Agency

- City of Lincoln: overall project approval, including certification of the adequacy of this EIR.

1.1.2 Federal Agencies (Potential Permitting Authority)

- U.S. Fish and Wildlife Service (sensitive species consideration)

1.1.3 State Responsible Agencies

- California Department of Fish and Wildlife (consideration of special-status species and species of special concern)
- Central Valley Regional Water Quality Board (permitting requirements, including final regulatory closure certification associated with the former wastewater treatment plant)

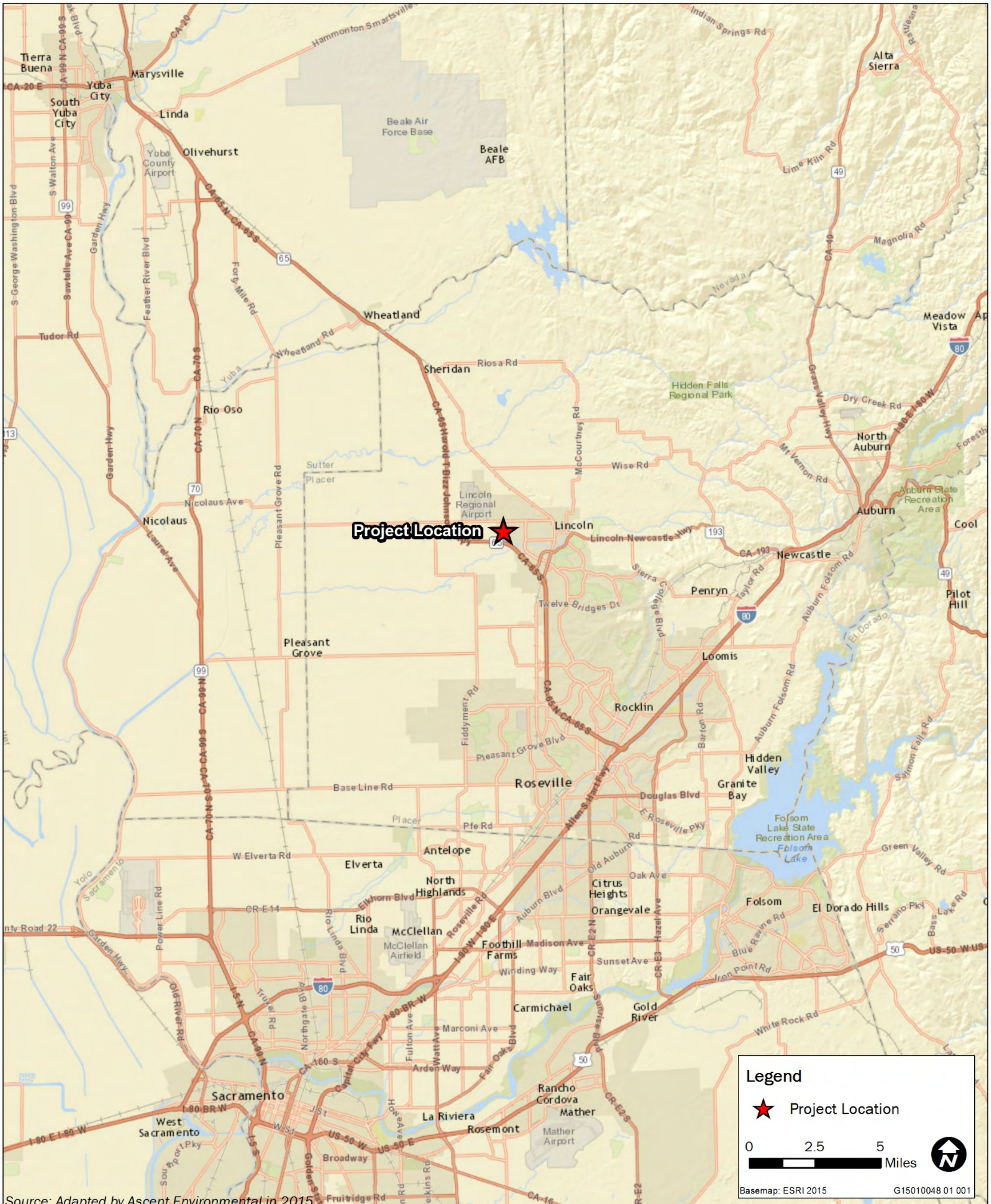
1.1.4 Local Responsible Agencies

- City of Lincoln (related to water and sewer service and potential roadway and pedestrian walkway improvements; general plan and zoning amendments; tree permit)
- Placer County Air Pollution Control District (authority to construct)
- Placer County ALUC (Airport Land Use Commission review of the proposed General Plan Amendment and rezoning for consistency with the Placer County ALUCP)
- Placer County School District (related to school district capacity to serve project)
- Placer County Transit (review and approval of improvement plans)
- Placer County Water Agency (water supply review)
- City of Lincoln's Wastewater Treatment and Reclamation Facility (WWTRF)
- Western Placer Waste Management Authority (WPWMA)

1.2 PROJECT LOCATION

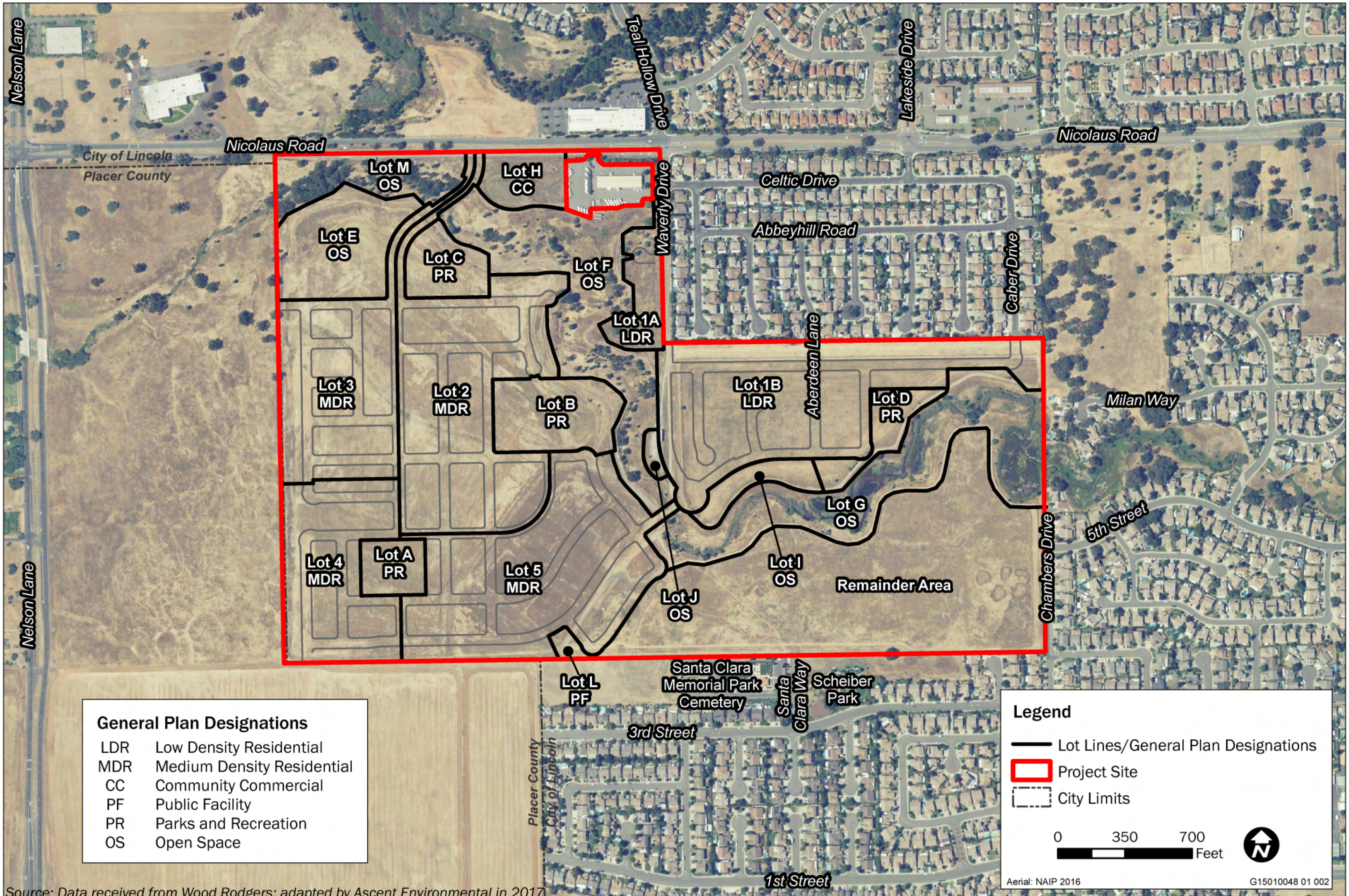
The Independence at Lincoln Development Project (project) is located on 194.2 acres on Assessor's Parcel Number 021-262-006, 021-262-010, 021-262-012, and 021-262-038, in the City of Lincoln in Placer County (Exhibit 1-1). The project site is traversed by Markham Ravine Lower Tributary, which is tributary to the Markham Ravine watershed. The site is accessed from Nicolaus Road via Waverly Drive (Exhibit 1-2).

Adjacent land uses include single-family, residential neighborhoods to the northeast and east; a property used for school bus and maintenance operations to the northeast; Santa Clara Memorial Park Cemetery and single-family, residential neighborhoods to the south; undeveloped land to the west and southwest; and Nicolaus Road, commercial development, and undeveloped land to the north. The project site is located approximately 32 miles northeast of downtown Sacramento and 27 miles south of Yuba City.



Source: Adapted by Ascent Environmental in 2015

Exhibit 1-1 **Project Vicinity**



Source: Data received from Wood Rodgers; adapted by Ascent Environmental in 2017

Exhibit 1-2

Project Location

1.3 PROJECT OBJECTIVES

CEQA requires that an EIR include a statement of objectives for the project, and that the objectives include the underlying purpose of the project. These objectives help the lead agency determine the alternatives to evaluate in the EIR (see CEQA Guidelines Section 15124[a]). The following is a list of objectives for the project:

- Provide residential development that meets local and state requirements for energy efficiency and mitigates for adverse environmental impacts.
- Provide open space, parks, and single-family residential uses at the project site and within an area designated for urban development and expansion.
- Create a project that provides a fair-share contribution of infrastructure to the community through the payment of fees and/or construction of required capital improvements, including transportation improvements in accordance with the City's general plan.
- Protect the highest quality natural features and resources of the project site while being sensitive to the character of adjacent land uses.
- Provide a residential community containing open space and a range of passive and active recreational amenities for both the residents within the community and the City.
- Provide a comprehensively planned project that is sensitive to environmental issues including waterway and tree preservation.
- Improve emergency access and circulation by providing new roadway connections to Nicolaus Road.
- Implement the City's general plan strategies and methods for achieving its vision and goals of sustainable growth and economic development.
- Repurpose the project site for residential and open space land uses consistent with closure certification from the Central Valley Regional Water Quality Control Board.

1.4 SUMMARY DESCRIPTION OF THE PROJECT

The project applicant, Lewis Land Developers LLC, proposes to construct a 575 single-family unit, master-planned residential community on a 194.2-acre site in the City of Lincoln, Placer County, California. The community would include five residential village neighborhoods, each with distinct single-family, residential lot sizes and a range of homes sizes on 93 acres of the site. The development would also include 45.6 acres of passive open space and preservation areas, 13.6 acres of active parks including a community center, a 2.7-acre mixed-use area, and 3 gross acres of public facilities and major roadway areas. Markham Ravine and an unnamed tributary traverse the site and would be preserved as part of a continuous open space corridor. No changes or development activity are proposed within a 35-acre parcel designated as a "Remainder Area" located within the southeastern portion of the project site and south of the tributary to Markham Ravine.

1.5 CEQA PUBLIC REVIEW PROCESS

On September 30, 2016, the DEIR was released for a 45-day public review and comment period. The DEIR was submitted to the State Clearinghouse for distribution to reviewing agencies; posted on the City's website (http://www. lincolnca.gov); and hard copies were made available for public review at the City of Lincoln Community Development Department and the Lincoln Public Library.

A public hearing was held on October 26, 2016, to receive input from agencies and the public on the DEIR. The hearing was held during a City of Lincoln Planning Commission meeting in City Hall at 6 p.m. The hearing was recorded and a transcript was prepared.

As a result of these notification efforts, comments were received from agencies, organizations, and individuals on the content of the DEIR. Chapter 2, "Responses to Comments," identifies these commenting parties, their respective comments, and responses to these comments. None of the comments received, or the responses provided, constitute "significant new information" by CEQA standards (State CEQA Guidelines CCR Section 15088.5).

In April 2017, the City will hold a public hearing before the City of Lincoln Planning Commission to consider certification of the EIR and the City Council will decide whether to approve the project and adopt the CEQA Findings. The public and interested agencies may comment on the project at either or both meetings.

1.6 ORGANIZATION OF THE FEIR

This document is organized as follows:

Chapter 1, "Introduction," describes the purpose of the FEIR, summarizes the project, provides an overview of the CEQA public review process, and describes the content of the FEIR.

Chapter 2, "Responses to Comments," contains a list of all parties who submitted comments on the DEIR during the public review period, copies of the comment letters received, a copy of the transcript from the October 26th public hearing, and responses to the comments.

Chapter 3, "Revisions to the DEIR," presents revisions to the DEIR text made in response to comments, or to amplify, clarify or make minor modifications or corrections. Changes in the text are signified by ~~strikeouts~~ where text is removed and by <u>underline</u> where text is added.

Chapter 4, "References," identifies the documents used as sources for the analysis.

Chapter 5, "List of Preparers," identifies the lead agency contacts as well as the preparers of this FEIR.

2 RESPONSES TO COMMENTS

This chapter contains comment letters received during the public review period for the Draft Environmental Impact Report (DEIR), which concluded on November 14, 2016, including transcribed comments received during the October 26, 2016 public hearing. In conformance with Section 15088(a) of the State CEQA Guidelines, written responses were prepared addressing comments on environmental issues received from reviewers of the DEIR.

2.1 LIST OF COMMENTERS ON THE DEIR

Table 2-1 presents the list of commenters, including the numerical designation for each comment letter received, the author of the comment letter, and the date of the comment letter.

Table 2-1 List of Commenters

Letter No.	Commenter	Date
	AGENCIES (A)	
A1	Angela Calderaro, Senior Environmental Scientist (Specialist) California Department of Fish and Wildlife, North Central Region, Habitat Conservation Branch	October 14, 2016
A2	State of California Native American Heritage Commission Sharaya Souza, Staff Services Analyst	October 26, 2016
A3	Central Valley Regional Water Quality Control Board Stephanie Tadlock, Environmental Scientist	October 28, 2016
A4	State of California Department of Transportation, District 3 Kevin Yount, (Acting) Branch Chief, Office of Transportation Planning	November 10, 2016
A5	Placer County Air Pollution Control District Yushuo Chang, Planning & Monitoring Section Manager	November 14, 2016
A6	Placer County Airport Land Use Commission Celia McAdam, FAICP CTP, Executive Director	October 17, 2016
A7	Western Placer Waste Management Authority Bill Zimmerman, PE, Deputy Executive Director	November 10, 2016
A8	Crystal Jacobsen, Principal Planner/Environmental Coordinator County of Placer, Planning Division	November 14, 2016
	ORGANIZATIONS (O)	
O1	Lincoln Open Space Committee Paul Denzler, Chair	November 8, 2016
O2	Frayji Design Group Tony Frayji PE, Principal	October 24, 2016
O3	Placer Community Foundation Veronica Blake, CEO	November 14, 2016
O4	Lincoln Open Space Committee Paul Denzler, Chair	January 20, 2017 (LATE: Received after public comment period)

Table 2-1 List of Commenters

Letter No.	Commenter	Date
INDIVIDUALS (I)		
I1	Mark Liechty	October 26, 2016
I2	Mindy Krutch	October 26, 2016
I3	James McCloud	October 26, 2016
I4	Mark and Tami Liechty	October 6, 2016

2.2 COMMENTS AND RESPONSES

The verbal and written individual comments received on the DEIR and the responses to those comments are provided below. The comment letters and verbal comments made at the public hearing are reproduced in their entirety and are followed by the response(s). Where a commenter has provided multiple comments, each comment is indicated by a line bracket and an identifying number in the margin of the comment letter.

2.3 AGENCIES

Letter A1

From: Calderaro, Angela@Wildlife [mailto:Angela.Calderaro@wildlife.ca.gov]
Sent: Friday, October 14, 2016 4:14 PM
To: Steve Prosser
Cc: Wildlife R2 CEQA
Subject: Comments on DEIR for the Independence at Lincoln Development Project (SCH 2015112041)

Dear Mr. Prosser,

The California Department of Fish and Wildlife (Department) is providing comments on the Draft Environmental Impact Report (DEIR) for the Independence at Lincoln Development Project (project) as both a trustee agency and responsible agency under the California Environmental Quality Act (CEQA). As trustee for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species (Guidelines § 15386). The Department may also be a responsible agency for a project affecting biological resources where we will exercise our discretion after the lead agency to approve or carry out a proposed project or some facet thereof (CEQA Guidelines § 15096).

The project is a proposed master planned residential community in the City of Lincoln that would include construction of 575 single-family, residential homes on 94.3 acres, 45.6 acres of passive open space and preservation areas, 13.6 acres of active parks, a 2.7 acre mixed use area, and three gross acres of public facilities and major roadways areas. A1-1

The DEIR also describes a 35-acre parcel designated as a "Remainder Area" located within the southeastern portion of the project site and south of the tributary to Markham Ravine. This area was used as mitigation land to permit the development of other property within the City of Lincoln over 20 years ago. The DEIR does not describe for what purpose this was set aside for mitigation (as part of a requirement for an environmental permit i.e., CESA ITP, USFWS BO, etc. or for CEQA). The DEIR also does not describe if there is a conservation easement or management plan over this Remainder Area. In addition, the DEIR mentions that the seasonal wetlands and other habitat features surrounding the tributary were also built as part of mitigation for a separate project (USACE Permit No. 9000104 and the Laehr Project). Any development surrounding these areas may diminish the mitigation value that these areas were set aside for. The Department would appreciate additional information on the particulars of why this parcel was set aside and if the proposed project would impact the value of these areas as mitigation.

Riparian Habitat/ Streambed Alteration Agreement

The CEQA analysis should state what, if any, Department-jurisdictional features will be removed, disturbed, or otherwise altered by the project. The DEIR incorrectly defines the Department's jurisdiction under FGC 1600. The Department's jurisdiction includes the bed, bank and channel and any associated habitat including areas where water has flowed and where the width of its course can be identified by physical or biological indicators. This may include the floodplain or associated contributing drainage areas. The Ordinary High Water Mark (OHWM) usually only takes into account the low-flow channel or thalweg. Riparian vegetation is not the end of our jurisdiction either. In some cases there may be no vegetation. When determining jurisdiction, the Department must consider the fluvial geomorphology of the system including the following: (1) where water currently flows, or has flowed, over a given course during the historic hydrologic regime (can be subsurface flows), (2) the maximal extent of the or expression of a stream on the landscape, (3) the connectivity between the groundwater table and surrounding landscape (may include springs, swales, surface runoff source areas that are a source of water to a stream), and (4) the nexus between the stream and all life associated with the streams. Riparian can include areas adjacent to perennial, intermittent, and ephemeral streams, lakes and estuarine marine shorelines that are transitional between terrestrial and A1-2 aquatic ecosystems and are distinguished be gradients in biophysical conditions, ecological processes, and biota. They are areas through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. Riparian areas connect upland and aquatic environments through both surface and subsurface hydrologic flow paths. Within the Biological Resources section of the DEIR, the top of bank is shown on Exhibit 4.4-1. The Department's jurisdiction may extend beyond these boundaries. In Table 4.4-1, the DEIR describes the non-native grassland and black willow thicket as "non-sensitive", these area may be under the Department's jurisdiction under FGC 1600. A portion of the WWTP facilities drained into the creek from weir on the eastern boundary. This drainage may also be under the jurisdiction of the Department as it drains into the creek. Table 4.45 incorrectly describes the extent of our jurisdiction and therefore did not analyze the potential impacts to it. A1-2 cont

The project would result in direct and indirect impacts to Department-jurisdictional features as bridges will be crossing the tributary to Markham Ravine and the open space corridor adjacent to creek would include multi-use trails, benches, interpretive signage, and water quality basins. Any stormwater drains that enter into the creek should also be analyzed. The CEQA document should address direct (temporary and permanent), indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. Impact 4.4-1 states that the bridge construction will occur outside of the OHWM and CDFW Section 1602 jurisdictional areas (although our jurisdiction as defined in the DEIR is incorrect); however there are temporary impacts associated with the construction of the bridges and impacts associated within the shading of the riparian habitat as well as indirect impacts associated with the increase in human activity within and around this sensitive community. Upgrading an existing culvert would still be within the Department's jurisdiction. A1-3

Direct Impacts

An entity (any person, State, local government agency, or public utility) should consider and analyze whether implementation of the proposed project will result in reasonably foreseeable potentially significant impacts subject to regulation by the Department under Section 1600 et seq. of the FGC. In general, such impacts result whenever a proposed project involves work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel, including ephemeral streams and watercourses. As a responsible agency under CEQA, the Department must rely on the CEQA analysis for the project when exercising our discretion after the lead agency to approve or carry out some facet of a proposed project, such as the issuance of a Lake and Streambed Alteration Agreement (LSAA). Therefore, the CEQA document should include specific, enforceable measures to be carried out onsite or within the same stream system that will avoid, minimize and/or mitigate for project impacts to the natural resources. If CDFW-jurisdictional features will be removed as a result of the project, the Department recommends a minimum *3 acres of restored habitat for each acre removed*. Mitigation measures should also describe when the mitigation measure will be implemented, and explain why the measure is feasible. The Department recommends that the CEQA document does not defer mitigation details to some future time. The CEQA document should identify the following items: how each measure will be carried out; who will perform the measures; when the measures will be performed; the performance standards and mechanisms for achieving success, and an assured source of funding to acquire and manage identified mitigation lands. The CEQA document should describe a range of enforceable mitigation measures that will be implemented in instances where approval and cooperation with the entities identified above either does or does not occur. A1-4

Indirect Impacts

Project activities may result in disrupted reproduction depending on the time of year construction occurs; noise, light, dust, and ground vibration during construction; and possible increased sedimentation into associated seasonal wetlands and floodplain resulting from fill material inadvertently entering the A1-5 waterway. Indirect impacts from development may occur from effects to water quality, increase in noise, light and human-wildlife interaction, as well as disturbances to wildlife species and the habitats on which they depend. A1-5 cont

Nesting Birds and Raptors

The project has the potential to disturb bird species or nests protected under the Migratory Bird Treaty Act (MBTA), FGC §3503 and 3503.5. Since project activities may occur during the nesting season (determined by region, species, and climate), construction activities could result in disturbance to nesting raptors and other migratory birds. Raptors and other migratory birds are protected under the MBTA and FGC §3503.5; therefore, potential impacts may be considered potentially significant unless adequate avoidance, minimization and/or mitigation is incorporated. If nests are identified on or adjacent to the project site, implementation of the project may adversely impact the success of the nest site and/or take a bird, their eggs and/or nest.

Mitigation Measure 4.4-2 states that preconstruction surveys will be conducted within 14 days prior to the start of construction. The Department recommends that this is changes to three (3) days prior to the start of construction. In addition, if there is a break in construction activity of more than 2 weeks or if there is a change in the level of disturbance at a site, then subsequent surveys should be conducted. Due to changes in weather patterns some birds are nesting earlier in the year. The Department recommends changing the nesting season dates so that surveys would be required between February 15th and September 1st. All measures to protect birds should be performance-based. While some birds may tolerate disturbance within A1-6
500 feet of construction activities, other birds may have a different disturbance threshold and "take" (FGC §86) could occur if the no-work buffers are not designed to reduce stress to that individual pair. The Department recommends including performance-based protection measures for avoiding all nests protected under the Migratory Bird Treaty Act and FGC §3503.5. A 500-foot no-work buffer may be sufficient; however, that buffer may need to be increased based on the birds' tolerance level to the disturbance. Below is an example of a performance-based protection measure:

Should construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer will be increased such that activities are far enough from the nest to stop this agitated behavior. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

The best method is to have a qualified biologist onsite monitoring activities as birds may nest within pipes or on cleared ground. The removal of a nest tree even if it is not within the breeding season may still constitute a significant impact especially for Swainson's hawk a state-listed species and one that has high nest site fidelity. FGC 3503 and 3503.5 does not state if the nest is active or not.

Burrowing Owl

Suitable habitat for burrowing owl is present on and adjacent to the project site. Under the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), the Department recommends a qualified biologist will complete four surveys for burrowing owl. The biologist will conduct 4 survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Surveys will be conducted on the project site and within 150 A1-7
meters of areas that will be directly or indirectly impacted by the project, where feasible. Surveys shall not be conducted during inclement weather, when burrowing owls are typically less active and visible. If burrowing owls or evidence of burrowing owls (e.g., whitewash or pellets) are not observed during surveys, no additional mitigation is necessary. If the birds are present, then there is potential for impacts to occur and the project proponent to take a bird protected under FGC. If any new burrowing owl colonizes the

project site after the CEQA document has been adopted, it may constitute changed circumstances that should be addressed in a re-circulated CEQA document (CDFG 2012).

Passive relocation is considered an impact to the species unless there is adjacent natural habitat nearby. The Department recommends that mitigation measure 4.4-2 is amended so it is consistent with the *Staff Report on Burrowing Owl Mitigation*. Namely, the project proponent should develop a Burrowing Owl Exclusion Plan approved by the Department. In addition, the impact analysis does not include compensatory mitigation for the loss of occupied burrowing owl habitat. The Department recommends that temporary and permanent loss of habitat is mitigated as outlined in the Department's staff report to include permanent protection of mitigation land, a management plan, and endowment. A1-7 cont

California Endangered Species Act

The Department has regulatory authority pursuant to California Endangered Species Act (CESA) over projects that have the potential to result in the take[1] of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species. Take of species protected pursuant to CESA is prohibited (Fish and Game Code [FGC] § 2080). However, the Department, may authorize the take of these species by permit if the conditions set forth in FGC Section 2081, subdivisions (b) and (c) are met (See also Cal. Code Regs., title 14, § 783.4).

The Department has concern that the project may adversely affect and may take a State-listed species. If the project may result in the take of any species protected pursuant to CESA, an incidental take permit, issued by the Department, should be obtained before the take occurs. If the Department issues an incidental take permit, the Department must rely on the CEQA document to prepare and issue its own findings regarding the project (CEQA Guidelines §§15096 and 15381). The Department will only use the CEQA document if it adequately addresses the effects of those project activities, including all avoidance, minimization and the mitigation required for the take authorization. A1-8

Any activity resulting in loss of habitat, decreased reproductive success, or other negative effects on population levels of species protected pursuant to CESA should be analyzed. Project activities should be designed to avoid and minimize the potential for take of CESA species. If the project has the potential to take CESA species, those impacts will need to be fully mitigated.

Tricolored Blackbird

Tri-colored blackbird is known to occur in the area; there are numerous occurrences within a 10-mile radius (CDFW 2016; CNDDB layer in BIOS). Tricolored blackbird is a candidate for State listing. Any activity resulting in loss of habitat, decreased reproductive success, or other negative effects on population levels of species protected pursuant to CESA should be analyzed. Project activities should be designed to avoid and minimize the potential for take of CESA species. If the project has the potential to take CESA species, those impacts will need to be fully mitigated. The DEIR should address potential impacts to foraging habitat for tricolored blackbird as it may result in decreased reproductive success such as abandonment of a nearby colony site. The loss of foraging habitat should be mitigated for in relation to the species nesting habitat. Impacts to foraging habitat may have a detrimental impact on a colony. If adjacent foraging habitat is removed, it may cause colony abandonment and result in a tremendous loss of reproductive success for a species that is already at risk and in decline. The mitigation as proposed is not enough to offset impacts to this species. A1-9

Swainson's Hawk

[1] Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

There are numerous occurrence records within a 10-mile radius of the project (CDFW 2016; CNDDB layer in BIOS). The loss of nesting and foraging habitat due to agricultural and urban expansion has greatly reduced the breeding range and abundance of Swainson's Hawk in California (CDFW 1993; 5-year Status Review: Swainson's Hawk). The Department recommends that mitigation for loss of Swainson's hawk foraging habitat includes 1 acre preserved for each 1 acre lost (1:1 ratio) *at a minimum*. Even a 1:1 ratio represents a net loss as no new habitat is being created only existing land is being preserved. Over time the cumulative impact would be significant. In addition, riparian habitat represents high quality nesting habitat and any adjacent foraging habitat is of greater value as the hawk does not need to expend additional energy traveling farther to forage which may aid in having more reproductive success. Mitigation land should be of equal or greater value of foraging habitat for Swainson's hawk and preserved in perpetuity under a conservation easement. Nearby preserved nesting sites should be located in close proximity to the mitigation land. In addition the land should not have conflicting land uses (i.e., airports), or conflicting mineral rights or wind rights, and should have an endowment to manage land in perpetuity to uphold habitat values. The Department recommends that any mitigation for loss of Swainson's Hawk foraging habitat is reviewed and approved by the Department, that it includes a greater than 1:1 mitigation ratio, and it includes management and funding in perpetuity specifically for Swainson's hawk. Mitigation Measure 4.4-2 does not analyze the loss of a nest tree or use of the nest tree after construction is complete and during project implementation (the urbanization of the area). This is a serious oversight. The Department recommends that the analysis consider these potentially significant impacts and propose mitigation that would reduce impacts to a less than significant level. A1-10

For mitigation to Swainson's Hawk foraging habitat, the Department considers the following criteria.
1) Proposed mitigation parcel should be occupied by Swainson's Hawk
2) Foraging habitat mitigation sites should be in close proximity to the impact sites
3) Foraging habitat mitigation sites should contain at least the same quality or better of suitable foraging habitat than habitat impact sites
4) Foraging habitat mitigation sites should be connected to other protected habitat thereby contributing to a larger habitat preserve
5) Foraging habitat mitigation sites should be outside of areas identified for urban growth
6) Foraging habitat mitigation sites should be managed in perpetuity as foraging habitat
7) CEQA Lead Agencies should be supportive
8) Regional conservation efforts should be supportive

The Department recommends that the project provide a minimum 2:1 mitigation ratio. The Draft PCCP uses an approximate 1.4:1 ratio; however this low ratio takes into account the wider aim of the conservation strategy which is to provide large contiguous blocks of habitat which cannot be done on a project-by-project basis. Until the Plan is adopted, the Department must assume a higher mitigation ratio.

Placer County Conservation Plan
Although the Placer County Conservation Plan has not yet been adopted, the parties have signed the Planning Agreement, which requires a consistency review of interim projects in the Plan Area. This project is a "Interim Project" as described in the Planning Agreement which outlines an interim project process (Section 6.6) this process must be followed for all projects that meet the interim project definition. Since this process was not completed, the Department recommends that the CEQA document analyze the project's consistency with the Habitat Conservation Plan/Natural Communities Conservation Plan and provide the necessary documentation to the Wildlife Agencies as outlined in the Planning Agreement. A1-11

Thank you for considering our comments. If you could please reply and let me know you received this email, it would be greatly appreciated. Department personnel are available for consultation regarding biological resources and strategies to minimize impacts. If you have questions, please do not hesitate to contact me.

Regards,

Angela Calderaro
Senior Environmental Scientist (Specialist)
Habitat Conservation Branch
California Department of Fish and Wildlife, North Central Region
1701 Nimbus Road, Rancho Cordova CA 95670
Office: 916-358-2920
Fax: 916-358-2912
Angela.Calderaro@wildlife.ca.gov
www.wildlife.ca.gov

Letter A1	**California Department of Fish and Wildlife, North Central Region, Habitat Conservation Branch** Angela Calderaro, Senior Environmental Scientist (Specialist) October 14, 2016

A1-1 The comment requests additional information regarding the Remainder Area, located within the southeastern portion of the project site and south of the tributary to Markham Ravine. This area was used as wetland mitigation for discharge of fill material into 13.7 acres of wetlands for development of a 44-acre site that included an elementary school, community multipurpose center, and planned residential development ("Laehr Project") within the City of Lincoln in 1991. USACE issued a Clean Water Action Section 404 permit (USACE Permit No. 9000104) to the Western Placer Unified School District and the Lincoln Redevelopment Agency and approved the final mitigation plan for the project (ENTRIX and Hydro Science 1991). The mitigation plan established goals to construct 15 acres of seasonal wetlands, 2.1 acres of freshwater pond and marsh, 0.5 acres of vernal pools, and 4 acres of riparian wetlands along the unnamed tributary to Markham ravine. Based on annual monitoring, the mitigation goals and performance standards established in the mitigation plan were achieved within 3 years of construction (Gibson and Skordal 1999). Because the mitigation goals and performance standards were met, no additional monitoring or management of the mitigation area was required. The mitigation plan and USACE permit does not restrict land use or management activities on parcels adjacent to the mitigation area.

No change in land use would occur in the mitigation area as a result of the project and the function and habitat value of the mitigation area is expected to remain as it exists currently. Most of Remainder Area would be buffered from potential disturbances by open spaces areas (Lot G and Lot I) shown on Exhibit 3-2 of the DEIR. Only a small portion of the Remainder Area along the northwestern side, would directly border Medium Density Residential and Public Facility development. The former wastewater treatment facility was located and historically operated in this area. The project does not conflict with the long-term preservation of wetlands in the Remainder Area or the mitigation requirements described in the mitigation plan and USACE permit.

A1-2 The comment states that the EIR did not correctly describe CDFW's jurisdiction and did not correctly evaluate impacts to resources within its jurisdiction. Table 4.4-5 on page 4.4-18 of the DEIR identifies the potential areas subject to CDFW jurisdiction under FGC Section 1602 that occur on the project site. WRA (2015b) delineated the potential areas subject to CDFW jurisdiction following guidance provided on the Lake and Streambed Alteration Program page of the CDFW website (August 2015). The guidance for CDFW Section 1602 jurisdiction is understood to include all streams and to extend laterally to the top-of-bank. If riparian vegetation is present within the top-of-bank, then CDFW jurisdiction extends to the outer dripline of such vegetation (CDFW 2015). Additionally, seasonal or perennial wetlands, immediately adjacent to the top of bank of a stream are considered riparian wetlands and thus are included within CDFW jurisdiction. The EIR used this definition of CDFW jurisdiction to assess project impacts. Specifically, the DEIR included a summary of information provided by the WRA delineation report (2015b), to support the CEQA analysis and referenced this document in the EIR (see pages 4.4-1, 4.4-5 through 4.4-6, and 4.4-17 through 4.4-18). Because delineation reports are technical reports typically used to support permitting under CWA or FGC Section 1602, they are not required to be included in the EIR, but can be referred to and are available for review at the City. This is consistent with guidance offered in State CEQA Guidelines Section 15148. However, to help clarify the conclusion that wetland and riparian areas would be avoided by the project, the WRA delineation report (2015b) is included as Appendix A of this document. None of the potential CDFW jurisdictional areas identified by WRA would be disturbed by proposed construction activities. Impact 4.4-1 on pages 4.4-24 and 4.4-45 of the DEIR describes how the project would avoid direct and indirect impacts to wetlands, riparian habitat, and other waters. The design of the bridge crossing to span the jurisdictional areas is also shown on Exhibits 3-6a and 3-6b on pages 3-11 and 3-12 of the DEIR. The comment provides an expansive definition of CDFW's jurisdiction that is not consistent with written CDFW policies and guidance and is more expansive than as described in previous CDFW correspondence on other projects. The comment does not provide support for the suggested definition or methodology. The City has complied with the methodology presented in the CDFW's Lake and Streambed Alteration Program, as described on CDFW's website (August 2015). Additional evaluation is not required..

The last paragraph on page 4.4-17 of the DEIR has been amended as follows:

Section 1602 Streams and Riparian Areas

Preliminary maps of potentially jurisdictional areas under Section 1602 FGC for portions of the project site were prepared by WRA, Inc. (2015b). <u>The methodology used to delineate CDFW jurisdictional areas and detailed maps are provided in Appendix A of the Responses to Comments Documents for the Final EIR.</u> Potentially jurisdictional areas include a perennial stream, as well as adjacent riparian vegetation and wetlands. The total area of Section 1602 jurisdiction consists of 13.50 acres and is summarized in Table 4.4-5. None of these protected features are located within the area disturbed by proposed construction activities.

A1-3 Indirect impacts to Markham Ravine are discussed in Impact 4.4-1 on pages 4.4-24 and 4.4-45 of the DEIR. In addition, potential short-term and long-term impacts to water quality are discussed in Impacts 4.6-1 and 4.6-3 of the DEIR. Stormwater drainage entering the creek was analyzed in Impact 4.6-2 of the DEIR. No riparian habitat exists in the areas where the bridges would be constructed. Upgrading the existing culvert would not substantially divert or obstruct the natural flow of the creek, substantially change or use any material from the bed, channel or bank, or deposit any debris within the channel. The comment offers no evidence to alter this conclusion. Regarding the delineation of CDFW jurisdiction, see response to comment A1-2.

A1-4 The comment describes CDFW requirements for evaluating direct impacts to jurisdictional features. Impact 4.4-1 analyzed potential impacts to CDFW-jurisdictional features and the impact was determined to be less than significant because project construction would not occur in jurisdictional areas and indirect impacts would be minimized through implementation of standard and commonly accepted best management practices (BMPs) and other water quality protection measures as described in the project description (see page 3-14 of the DEIR). No loss of CDFW jurisdictional habitat would result from project implementation and no significant impact would occur; therefore, no mitigation would be required. The comment offers no evidence that would alter the DEIR's conclusions. No further response is necessary.

A1-5 For discussion of indirect impacts to wetlands and waterways, please see response to comment A1-3. Impacts to nesting birds were discussed in Impacts 4.4-2 and 4.4-3 on pages 4-25 through 4-28 of the DEIR. The effect of the project on wildlife use of the project site, including wildlife movement corridors, is discussed on pages 4-23 and 4-24 of the DEIR. The comment offers no evidence that would alter the DEIR's conclusions. No further response is necessary.

A1-6 Impacts to nesting birds and raptors are discussed in Impacts 4.4-2 and 4.4-3 on pages 4.4-25 through 4.4-28 in the DEIR. Mitigation Measure 4.4-2 states that preconstruction surveys would be conducted within 14 days prior to the start of construction. The comment recommends changing this to 3 days prior to the start of construction. Surveying within 3 days would not allow adequate time to coordinate with the appropriate resource agencies, establish protective buffers around active nests, modify construction work schedules, or other measures that would protect active nests from disturbance. Surveying within 14 days is a standard mitigation approach and would allow time for appropriate response to protect active nests if they are found. Mitigation Measure 4.4-2 has been modified (see A1-7 below) to identify the nesting season as February 15 to September 1 and to clarify that preconstruction surveys would be conducted within 14 days prior to project-related ground-disturbing or vegetation removal activities. In addition, if there is a break in construction activities for more than two weeks or increase in severity of disturbance, subsequent surveys would be conducted. The recommendation to include a performance-based protection measure of active nests has been included in the revisions below. The comment also states that because some birds may exhibit site fidelity, loss of nest sites outside of the breeding season may also constitute a significant impact. Although the project site contains trees that could be used in the future by nesting raptors, including Swainson's hawks, no nest sites were observed during surveys of the project site (WRA 2015a, p. 26) and therefore, it is not expected that traditionally used nest sites would be lost, Clarification to Mitigation Measure 4.4-3 would not change the conclusions of the DEIR.

Mitigation Measure 4.4-3 on page 4.4-28 of the DEIR has been amended as follows:

Mitigation 4.4-3: Direct loss or disturbance of special-status bird (non-raptor) nests.

a. To the extent feasible, construction-related vegetation removal shall occur before the nesting season (February 15 – September 15). If vegetation removal or other disturbance related to construction is required during the nesting season, focused surveys for active nests of special-status birds shall be conducted before and within 14 days of initiating <u>ground-disturbance or vegetation removal associated with project</u> construction. A qualified biologist shall conduct preconstruction surveys to identify active nests that could be affected. The appropriate area to be surveyed and timing of the survey may vary depending on the activity and species that could be affected. If no active nests are found during focused surveys, no further mitigation shall be required.

b. If ground-disturbing construction activities cease for a period of two weeks or longer, or if there is a change in type of construction disturbance, surveys for nesting birds shall be conducted again, as described above.

~~b~~c. Should any active tricolored blackbird colonies or other special-status bird be found nesting on the project site, the project applicant, in consultation with the City and CDFW, shall avoid all active colony and nest sites while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the colony or nest site. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the colony site. The size of the buffer zone shall be determined in consultation with the City and CDFW, and shall be~~, at a minimum, 100 feet~~ based on the behavior of the nesting birds. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the protective buffer shall be increased such that activities are far enough from the nest that the birds no long demonstrate agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. The buffer zone shall be delineated by highly visible temporary construction fencing. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used.

A1-7 Impacts to burrowing owl are discussed in Impact 4.4-2 on pages 4.4-25 through 4.4-27 in the DEIR. Mitigation Measure 4.4-2 states that preconstruction surveys would be conducted in accordance with current CDFW guidelines. In response to the comment, Mitigation Measure 4.4-2 has been modified to clarify that at least four survey visits would be conducted, according to the guidelines, which stipulate that: (1) at least one site visit is conducted between 15 February and 15 April, and (2) a minimum of three additional survey visits are conducted, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Surveys would not be conducted during inclement weather, when burrowing owls are typically less active and visible. If burrowing owls or evidence of burrowing owls (e.g., whitewash or pellets) are not observed during surveys, no additional mitigation is necessary. If burrowing owl is present and passive relocation is necessary, a Burrowing Owl Exclusion Plan will be prepared for approval by CDFW. The plan would include compensatory mitigation as outlined in the CDFW's staff report.

In response to comments A1-6 and A1-7, Mitigation Measure 4.4-2 on page 4.4-26 and 4.4-27 of the DEIR has been amended as follows. These changes would not alter the conclusions of the DEIR.

Mitigation 4.4-2: Impacts to Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors.

Tree-nesting raptors (including Swainson's hawk and white-tailed kite):

- If removal of a known nest tree is required, it shall be removed when no active nests are present, generally between October 1 and February 1.
- If project activity would commence between February ~~2nd~~ 15th and September ~~30th~~1st, a qualified biologist shall be retained to conduct preconstruction surveys for active nests in suitable habitat on and within 0.25 mile of the project site no more than 14 days and no less than seven days before commencement of ~~construction~~ project-related ground disturbance or vegetation removal activities. If this survey does not identify any nesting raptors in the area within the project site that would be disturbed plus the 0.25-mile radius, no further mitigation would be

required. If ground-disturbing construction activities cease for a period of two weeks or longer, or if there is a change in severity of construction disturbance, surveys for nesting raptors shall be conducted again.

- If an occupied nest is present, CDFW guidelines recommend implementation of a 0.25- mile buffer for Swainson's hawk (CDFG 1994) and 500 feet for other tree-nesting raptors, but the size of the buffer may be adjusted if a qualified biologist and CDFW determine that it would not be likely to adversely affect the nest and shall be based upon observed behavior of the nesting birds. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the protective buffer shall be increased such that activities are far enough from the nest that the birds no long demonstrate agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or that the young have fully fledged. Monitoring of the nest by a qualified biologist shall be required if the activity has potential to adversely affect the nest. For Swainson's hawks, no intensive new disturbances or other project-related activities that could cause nest abandonment or forced fledging, shall be initiated within the ¼-mile (buffer zone) of an active nest between March 1 - September 15 (CDFG 1994).

Burrowing owl:

- A qualified biologist shall be retained to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 150 meters of project activities. At least four ~~S~~surveys shall be conducted prior to the start of construction activities during breeding season. Surveys shall be conducted before project activity following updated survey guidelines (CDFG 2012). One survey shall be conducted between 15 February and 15 April, and a minimum of three additional survey visits shall be conducted, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Surveys will not be conducted during inclement weather, when burrowing owls are typically less active and visible. If burrowing owls or evidence of burrowing owls (e.g., whitewash or pellets) are not observed during surveys, no additional mitigation is necessary.

- During the breeding season (February 1 through August 31) occupied burrows shall not be disturbed. The development of a protective buffer shall be supported by a qualified biologist. The protective buffer shall be informed by monitoring the burrowing owls sensitivity and shall be put in place to prevent burrow destruction and disturbance to nest sites (including nest abandonment and loss of eggs or young). The 2012 CDFG Staff report identifies variables to consider for the buffer such as habitual disturbances (visual and audible), existing vegetation, and type and extent of disturbance and impact. The staff report gives general guidelines for buffers during the breeding season. It recommends that, at minimum, the protective buffer during the breeding season be 200 meters; moving up to 500 meters for high levels of disturbance. These guidelines shall be followed. If activities are allowed closer than these recommended setback distances, then a broad-scale, long-term, scientifically-rigorous monitoring program that ensures that the owls are not detrimentally affected by the alternative approach shall be conducted. The protective buffer shall remain until the end of the breeding season unless a qualified biologist approved by the permitting agencies verifies through non-invasive means that either: 1) the birds have not begun egg-laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.

- If occupied burrows cannot be avoided, burrowing owls occupying the project site shall be evicted from the project site during the non-breeding season (September 1 through January 31) by passive relocation to encourage owls to move to alternative burrows outside of the disturbance area. A ~~Passive Relocation~~ Burrowing Owl Exclusion Plan shall be prepared as described in the CDFG Staff Report on Burrowing Owls (2012) and shall include compensatory mitigation for permanent loss of occupied habitat in accordance with the guidance in the CDFG Staff Report on Burrowing Owls (2012).. No passive relocation shall occur until CDFW approves the plan. No occupied burrows found by the survey shall be disturbed during the breeding season. After burrowing owls have been confirmed absent or removed from the site, the burrows may be destroyed.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-2 would reduce potentially significant impacts on Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors to **less-than-significant** levels because it would ensure that project activities would not remove an active nest tree or burrow, disturb nest sites, and prevent nest abandonment and loss of eggs, young, or individuals.

A1-8 The comment states CDFW's authority under CESA for projects that have potential to result in take of state listed species. State-listed species with potential to occur on the project site are identified in Tables 4.4-2 and 4.4-3 in the DEIR and impacts to those species are analyzed in Impacts 4.4-2, 4.4-3, and 4.4-6. Although the project would seek take permits if take is likely to occur, with implementation of Mitigation Measures 4.4-2 and 4.4-3, BMPs, and other project design features, take of state listed species is unlikely to occur.

A1-9 Tricolored blackbird is identified as having high potential for occurrence at the project site (Table 4.4-3, page 4.4-13 in the DEIR). Suitable nesting habitat is present in the seasonal wetlands located in the eastern half of the project site. The nearest documented occurrences of tricolored blackbird are about 2 miles south and 4 miles north of the project site, but tricolored blackbirds are not known to nest or forage on the project site (WRA 2015a). Impact 4.4-3 analyzes the potential impact to tricolored blackbird and Mitigation Measure 4.4-3 describes measures to be implemented to avoid take of the species and reduce impacts to a less-than-significant level. The non-native grassland on the project site is considered low quality foraging habitat because it does not provide an abundant, concentrated supply of insects (such as associated with dairy farms or wastewater treatment plants). See description in Table 4.4-3 on page 4.4-13 of the DEIR. Because other non-native grasslands and agricultural areas are available in the region, loss of low quality foraging habitat on the project site is not considered a significant impact and no mitigation is required. The comment offers no evidence that would alter the DEIR's conclusions.

To better clarify quality of foraging habitat in the project area, the second paragraph under Impact 4.4-3 on page 4.4-27 of the DEIR has been amended as follows. This change does not alter the conclusions of the DEIR.

Tricolored blackbird is designated as a species of special concern and was designated as a candidate for state threatened status by the California Fish and Game Commission on December 10, 2015. As a candidate species, the tricolored blackbird receives the same legal protection afforded to an endangered or threatened species (Fish & Game Code, § 2085). Tricolored blackbirds are colonial nesters that prefer nesting in thick stands of emergent wetland vegetation such as cattails, tules, and blackberries. They require a permanent water source at or adjacent to their nesting area. Tricolored blackbirds have also been observed nesting in riparian vegetation such as willows (*Salix* spp.), thistles (*Cirsium* spp.), wild rose (*Rosa* spp.) when freshwater emergent vegetation is not available. They nest from April through August. Nesting areas are usually within three miles of foraging areas (i.e., rice fields, pond margins, and grasslands). Freshwater marsh and blackberry bushes present in mesic areas within the project site could provide potential nesting habitat for tricolored blackbirds. Non-native grasslands and adjacent agricultural fields could be used for foraging~~.~~, but it is considered low quality because it does not provide an abundant, concentrated supply of insects (such as associated with dairy farms or wastewater treatment plants). Because other non-native grasslands and agricultural areas are available in the region, loss of low quality foraging habitat on the project site is not considered a significant impact and no mitigation is required.

A1-10 Impact 4.4-2 analyzes impacts to Swainson's hawk and identifies that there are several nesting occurrences within 5 miles of the site. The impact discussion also describes that Swainson's hawk foraging habitat on the project site is low quality because the site contains mostly disturbed soils from the operation of the former wastewater treatment plant and is fragmented and disturbed by adjacent land uses. The following information is provided to clarify the discussion.

No Swainson's hawk nest sites have been observed on the project site (WRA 2015a,: 26). The DEIR evaluated the suitability of the project site to provide foraging habitat for Swainson's hawk. Suitability of foraging habitat for Swainson's hawk is based on (1) patch size of the habitat, (2) prey abundance, and (3) prey accessibility. Swainson's hawk tend not to use small patches of foraging habitat and prefer to forage over large areas in non-fragmented landscapes (Estep 2008). Abundance of prey, particularly of meadow vole (*Microtus californicus*), pocket gopher (*Thomomys bottae*), as well as other small rodents, including deer mouse (*Peromyscus californicus*) and house mouse (*Mus musculus*), is an important component of suitable foraging habitat for Swainson's hawk (Estep 1989). Foraging areas with low vegetative cover is also important so that Swainson's hawks are able to access the ground and capture prey. Agricultural practices or vegetation management can also influence suitability of foraging habitat. Commonly, Swainson's hawks will follow mowers and tractors, capturing prey that is visible after vegetation cover has been reduced or small mammals have been injured (Estep 1989).

Vegetation types that provide foraging habitat for Swainson's hawk because they support prey species populations and their management creates foraging opportunities include hay, grain, and row crops; irrigated pasture; seasonal wetlands; and uncultivated grassland habitats. Fields lacking adequate prey populations (e.g., flooded rice fields) or those that are inaccessible to foraging birds (e.g., vineyards and orchards) are rarely used (Estep 1989).

Although Swainson's hawks may fly over the site and it is possible that they could forage on the site if a prey item was visible, the project site does not meet the criteria of having suitable non-fragmented habitat, prey abundance, and prey accessibility. The DEIR concluded that the loss of low quality foraging habitat was less than significant and therefore, no mitigation is required. The comment offers no evidence that would alter the DEIR's conclusions.

Impact 4.4-2 on page 4.4-25 of the DEIR has been amended as follows. This change does not alter the conclusions of the DEIR.

Impact 4.4-2: Impacts to Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors.

Implementation of the project could disturb nesting Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors, potentially resulting in their abandonment, failure, and/or mortality of chicks and eggs. Individual mortality and loss of nests would be a **potentially significant** impact.

The project site contains isolated trees as well as riparian and oak woodland land cover that could be used for nesting by hawks and owls. No Swainson's hawk nest sites have been observed on the project site (WRA 2015a: 26). The non-native grasslands and adjacent agricultural fields provide potential foraging habitat for hawk and other raptors.

According to the CNDDB, the closest documented nesting of Swainson's hawks is about half a mile northeast of the project site in a valley oak in 2003; additionally, there are several other documented nesting occurrences within 5 miles (CDFW 2015). Swainson's hawks were observed soaring over the project site during the August 2015 WRA site visit (WRA, Inc. 2015a). The foraging habitat on the project site is considered low quality for Swainson's hawk because it is mostly disturbed soils from the former wastewater treatment plant and is fragmented and disturbed by adjacent land uses. Swainson's hawk is strongly associated with agricultural areas that provide suitable foraging habitat. The suitability of foraging habitat for Swainson's hawk is based on (1) patch size of the habitat, (2) prey abundance, and (3) prey accessibility. Swainson's hawk tend not to use small patches of foraging habitat and prefer to forage over large areas in non-fragmented landscapes (Estep 2008). Abundance of prey, particularly of meadow vole (*Microtus californicus*), pocket gopher (*Thomomys bottae*), as well as other small rodents, including deer mouse (*Peromyscus californicus*) and house mouse (*Mus musculus*), is an important component of suitable foraging habitat for Swainson's hawk (Estep 1989). Foraging areas with low vegetative cover is also important so that Swainson's hawks are able to access the ground and capture prey. Agricultural practices or vegetation management can also influence suitability of foraging habitat. Commonly, Swainson's hawks will follow mowers and tractors, capturing prey that is visible after vegetation cover has been reduced or small mammals have been injured (Estep 1989). Although Swainson's hawks may fly over the site and it is possible that they could forage on the site if a prey item was visible, the project site does not meet the criteria of having suitable non-fragmented habitat, prey abundance, and prey accessibility. Conversion of open space and non-native grassland on the project site would not result in a significant loss of foraging habitat for Swainson's hawk. White-tailed kite, a Fully Protected species under the FGC, has also been observed foraging over the project site and could also nest in large trees on or near the project site (WRA, Inc. 2015a). Western burrowing owl, which is designated by CDFW as a species of special concern, nests in burrows and could also nest in the disturbed and non-native grassland habitat on the project site.

Construction and demolition activities for the project may remove nest trees or disturb active raptor nests, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Nest loss or chick mortality would be a **potentially significant** impact for nesting raptors.

Page 7-6 in Chapter 7, References, of the DEIR has been amended as follows:

Entrix and Hydro Science. 1991 (February). Lincoln Wetland Mitigation Plan (Permit No. 9000104 and Laehr Project). Prepared by ENTRIX, Walnut Creek and Hydro Science, Davis, CA.

Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

Estep Environmental Consulting. 2008 (March). The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (*Buteo swainsoni*) in Yolo County, California. Prepared for Technology Associates International Corporation and Yolo Natural Heritage Program.

Gibson and Skordal. 1999 (August). Mitigation Monitoring Report, Third Year, for the Lincoln Wetland Mitigation, Prepared for City of Lincoln.

A1-11 Although the Placer County Conservation Plan has not yet been adopted, the parties have signed a Planning Agreement, which requires a consistency review of interim projects in the Plan Area. As stated on page 4.4-22 of the DEIR, the project site is identified within the potential future growth area of the Plan Area and does not contain existing conservation reserve areas or reserve acquisition areas. There are no conflicts between the project and PCCP based on analysis of the published version of the PCCP Reserve map (Placer County 2015).

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Letter A2

October 26, 2016

Steve Prosser
City of Lincoln, Community Development Department
600 Sixth Street
Lincoln, CA 95648

Sent via Email to: sprosser@lincolnca.gov

Re: SCH# 2015112041, Independence at Lincoln Development Project, Placer County

Dear Mr. Prosser:

The Native American Heritage Commission (NAHC) has reviewed the Draft Environmental Impact Report (DEIR) prepared for the project referenced above. The review may have included the Cultural Resources Section, Archaeological Report, Appendices for Cultural Resources Compliance, as well as other informational materials. We have the following concerns: A2-1

- There is no information in the Cultural Resources section documenting the completion of mandated contact or consultation with California Native American tribes for this project.

- Tribal Cultural Resources assessments are not documented. These should adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, and mitigation of project-related impacts to tribal cultural resources. A2-2

The California Environmental Quality Act (CEQA)[1], specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.[2] If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.[3] In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE). A2-3

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).[4] **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** AB 52 created a separate category for "tribal cultural resources"[5], that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.[6] Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.[7] Your project may also be subject to **Senate Bill 18 (SB 18)** (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. **Both SB 18 and AB 52 have tribal consultation requirements.** Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966[8] may also apply. A2-4

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

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[1] Pub. Resources Code § 21000 et seq.
[2] Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)
[3] Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1); CEQA Guidelines § 15064 (a)(1)
[4] Government Code 65352.3
[5] Pub. Resources Code § 21074
[6] Pub. Resources Code § 21084.2
[7] Pub. Resources Code § 21084.3 (a)
[8] 154 U.S.C. 300101, 36 C.F.R. § 800 et seq.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/. Additional information regarding AB 52 can be found online at http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices". A2-5

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. A2-6

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Please contact me at Sharaya.souza@nahc.ca.gov, or call (916) 373-3710, if you have any questions.

Sincerely,

A2-7

Sharaya Souza
Staff Services Analyst

Attachment

cc: State Clearinghouse

2

Pertinent Statutory Information:

Under AB 52:

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:
Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.
A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.[9] and **prior to the release of a negative declaration, mitigated negative declaration or environmental impact report**. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18).[10]
The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.
b. Recommended mitigation measures.
c. Significant effects.[11]

1. The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.
b. Significance of the tribal cultural resources.
c. Significance of the project's impacts on tribal cultural resources.

If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.[12]
With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.[13]
If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss** both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.[14] A2-7 cont

Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.[15]

Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 **shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program**, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.[16]
If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation** pursuant to Public Resources Code section 21084.3 (b).[17]
An environmental impact report **may not be certified**, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.[18]

This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:

Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

[9] Pub. Resources Code § 21080.3.1, subds. (d) and (e)
[10] Pub. Resources Code § 21080.3.1 (b)
[11] Pub. Resources Code § 21080.3.2 (a)
[12] Pub. Resources Code § 21080.3.2 (a)
[13] Pub. Resources Code § 21082.3 (c)(1)
[14] Pub. Resources Code § 21082.3 (b)
[15] Pub. Resources Code § 21080.3.2 (b)
[16] Pub. Resources Code § 21082.3 (a)
[17] Pub. Resources Code § 21082.3 (e)
[18] Pub. Resources Code § 21082.3 (d)

3

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf
- Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**[19]
- There is no Statutory Time Limit on Tribal Consultation under the law.
- Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research,[20] the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.[21]
- Conclusion Tribal Consultation: Consultation should be concluded at the point in which:
  - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.[22]

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
  - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
    - The request form can be found at http://nahc.ca.gov/resources/forms/.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
  - If part or the entire APE has been previously surveyed for cultural resources.
  - If any known cultural resources have been already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

A2-7 cont

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
  - Planning and construction to avoid the resources and protect the cultural and natural context.
  - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - Protecting the cultural character and integrity of the resource.
  - Protecting the traditional use of the resource.
  - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.[23]
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.[24]

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

[19] (Gov. Code § 65352.3 (a)(2)).
[20] pursuant to Gov. Code section 65040.2,
[21] (Gov. Code § 65352.3 (b)).
[22] (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).
[23] (Civ. Code § 815.3 (c)).
[24] (Pub. Resources Code § 5097.991).

4

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.[25] In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

A2-7 cont

[25] per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).

5

Letter A2	**State of California Native American Heritage Commission** Sharaya Souza, Staff Services Analyst October 26, 2016

A2-1 Regarding consultation with local Tribes. page 4.5-4 under “Native American Outreach and Consultation,” describes the City’s contact and consultation with named California Native American tribes regarding the project, which included Sacred Lands File Outreach, Senate Bill (SB) 18 consultation, and Assembly Bill (AB) 52 consultation.

A2-2 As summarized under the “Results” subsection on page 4.5-5 of the DEIR: “No prehistoric or historic archaeological sites or sites of traditional Native American religious or cultural significance, including sacred sites, contemporary use areas or tribal cultural resources, have been identified in or immediately adjacent to the project site.” Further, as detailed under the “Assembly Bill 52 Consultation” subsection (page 4.5-4 of the DEIR), as agreed during consultation with the United Auburn Indian Community of the Auburn Rancheria (UAIC) pursuant to PRC §21080.3.2, an agreed upon mitigation measure (Mitigation Measure 4.5-4) addressing potential project-related impacts to undocumented tribal cultural resources was included as part of the EIR.

A2-3 The comment summarizes CEQA requirements related to evaluation of historical resources. Historical resources are addressed above in response to comment A2-2 and under Impact 4.5-1 of the DEIR (p. 4.5-12 of the DEIR). No historic resources are located on the project site.

A2-4 Project compliance with AB 52 and SB 18 is addressed in responses A2-1 and A2-2 above.

A2-5 Project compliance with AB 52 is addressed in responses A2-1 and A2-2 above.

A2-6 Tribal consultation for the project is addressed in responses A2-1 and A2-2 above.

A2-7 The comment provides a summary of portions of AB 52, SB 18, and NAHC recommendations. The comment offers no evidence that would alter the DEIR’s conclusions. No further response is necessary.

Water Boards
CALIFORNIA

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MATTHEW SECRETARY ENVIRONMENTAL PROTECTION

Letter A3

Central Valley Regional Water Quality Control Board

28 October 2016

Steve Prosser
City of Lincoln, Community Development Department
600 Sixth Street
Lincoln, CA 95648

CERTIFIED MAIL
91 7199 9991 7035 8421 5357

COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, INDEPENDENCE AT LINCOLN DEVELOMENT PROJECT, SCH# 2015112041, PLACER COUNTY

Pursuant to the State Clearinghouse's 30 September 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environment Impact Report* for the Independence at Lincoln Development Project, located in Placer County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

A3-1

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

KARL E. LONGLEY ScD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

11020 Sun Center Drive #200, Rancho Cordova, CA 95670 | www.waterboards.ca.gov/centralvalley

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Placer County

28 October 2016

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at: http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

A3-1 cont

In part it states:

> *Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*
>
> *This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

A3-2

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(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]
The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

A3-2 cont

Industrial Storm Water General Permit
Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit
If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water

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[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

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drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements – Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

A3-2 cont

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

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http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

A3-2 cont

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

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28 October 2016

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

A3-2 cont

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock

Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Letter A3	**Central Valley Regional Water Quality Control Board** Stephanie Tadlock, Environmental Scientist October 28, 2016

A3-1 The comment describes the agency's authority to regulate activities that could affect water quality and surface and groundwaters of the State. The project's potential surface and groundwater quality impacts were evaluated in Section 4.6, "Hydrology and Water Quality," of the DEIR; the section includes a description of existing hydrologic and water quality setting for the project site, including runoff, storm drainage, flooding, and groundwater. Consistent with the regulatory requirements identified by the comment, the DEIR evaluates the project's water quality impacts in Impacts 4.6-1 through 4.6-4 (see pages 4.6-13 through 4.6-15).

A3-2 The comment describes the agency's permitting requirements. Permitting requirements that fall under the authority of the SWRCB and are applicable to the project are described and evaluated in Section 4.6, "Hydrology and Water Quality," of the DEIR.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
703 B STREET
MARYSVILLE, CA 95901
PHONE (530) 741-4286
FAX (530) 741-5346
TTY 711
www.dot.ca.gov/dist3

Letter
A4

Serious drought.
Serious drought.
Help save water!

November 10, 2016

GTS# 03-2016-PLA-00031
03-PLA-65/PM R15.283
SCH# 2015112041

Mr. Steve Prosser
City of Lincoln
600 Sixth Street
Lincoln, CA 95648

Independence at Lincoln Development Project

Dear Mr. Prosser,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We review this local development for impacts to the State Highway System in keeping with our mission, vision and goals for sustainability/livability/economy, and safety/health. We provide these comments consistent with the State's smart mobility goals that support a vibrant economy, and build communities, not sprawl.

The proposed project is a master-planned residential community development that would include construction 575 single-family, residential homes on 94.3 acres, 45.6 acres of passive open space and preservation areas, 13.6 acres of active parks including a community center, 2.7 acre mixed-use area (Lot H) which would provide flexibility for either multi-family residential or neighborhood commercial development, and three gross acres of public facilities and major roadway areas. Located northeast of the intersection of SR 65 and Nelson Lane. The following comments are based on the Draft Environmental Impact Report (DEIR). A4-1

Traffic Operations

The AM trip distribution indicates that 20% of the AM trips are going from one residential neighborhood to another, with no schools in that neighborhood. Please provide further explanation, for Caltrans to review.

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Hydraulics

The development of this site will increase impervious surface area through the construction of roads, driveways, parking lots, buildings, etc. with a corresponding increase in surface water runoff. This project will decrease surface water detention, retention and infiltration. No net increase to 100-year storm event peak discharge may be realized within the State's highway right of way and/or Caltrans drainage facilities as a result of the project. Any cumulative impacts to Caltrans drainage facilities arising from effects of development on surface water runoff discharge from the 100-year storm event should be minimized through project drainage mitigation measures.

Increases in peak runoff discharge for the 100-year storm event to the State's highway right of way and to Caltrans' highway drainage facilities must be reduced to at or below the pre-construction levels. The cumulative effects on drainage due to development within the region should be considered in the overall development plan of this area.

All grading and/or drainage improvements must maintain or improve existing drainage pathways and may not result in adverse hydrologic or hydraulic conditions within the State's highway right of way or to Caltrans drainage facilities. The developer must maintain or improve existing drainage patterns and/or facilities affected by the proposed project to the satisfaction of the State and Caltrans. This may be accomplished through the implementation of storm water management Best Management Practices (i.e., detention/retention ponds or basins, sub-surface galleries, on-site storage and/or infiltration ditches, etc.). Once installed, the property owner must properly maintain these systems. The proponent/developer may be held liable for future damages due to impacts for which adequate mitigation was not undertaken or sustained. A4-2

Runoff from the proposed project that will enter the State's highway right of way and/or Caltrans drainage facilities must meet all regional water quality control board water quality standards prior to entering the State's highway right of way or Caltrans drainage facilities. Appropriate storm water quality Best Management Practices may be applied to ensure that runoff from the site meets these standards (i.e., is free of oils, greases, metals, sands, sediment, etc.). Once installed, the property owner must properly maintain these systems in perpetuity.

All work proposed and performed within the State's highway right of way must be in accordance with Caltrans' standards and require a Caltrans Encroachment Permit prior to commencing construction.

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Mr. Steve Prosser/City of Lincoln
November 10, 2016
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Encroachment Permit

Any work or traffic control that encroaches upon the State's ROW requires a Caltrans issued encroachment permit. To apply, a completed encroachment permit application, environmental documentation, and five sets of plans indicating the State's ROW must be submitted to the address below:

Office of Permits
Caltrans – District 3
703 B Street
Marysville, CA 95901

Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. Please visit the following URL for additional information: http://www.dot.ca.gov/hq/traffops/developserv/permits/. A4-3

We would appreciate the opportunity to review and comment on any changes related to this development. Please provide our office with copies of any other actions concerning this project.

If you have questions regarding these comments or require additional information, please contact Kevin Yount, Intergovernmental Review Coordinator for Placer, by phone at (530) 741-4286 or via email to kevin.yount@dot.ca.gov.

Sincerely,

KEVIN YOUNT, (Acting) Branch Chief
Office of Transportation Planning
Regional Planning Branch—North

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Letter A4	**State of California Department of Transportation, District 3** Kevin Yount, (Acting) Branch Chief, Office of Transportation Planning November 10, 2016

A4-1 The comment requests explanation for trip distribution assumptions. In Section 4.10, "Transportation and Circulation," of the DEIR, Exhibit 4.10-5 indicates that 15 percent of AM peak hour project trips would travel north on Lakeside Drive and 5 percent would travel north on Teal Hollow Drive. Many of these trips are destined for Foskett Ranch Elementary School, which is located on Joiner Parkway north of Nicolaus Road. The DEIR used these trip distribution assumptions because review of existing AM peak hour travel patterns along Nicolaus Road along with travel time estimates shows that these routes are more direct and quicker than traveling through the Nicolaus Road/Joiner Parkway intersection. These routes may also be used to a lesser degree to access businesses and employment areas along Venture Drive.

A4-2 The comment describes the agency's requirement for drainage that drains to its facilities. Impacts to stormwater drainage systems were analyzed in Section 4.6, "Hydrology and Water Quality." As described under Impact 4.6-2 of the DEIR, a drainage study was completed in 2015 for the project to evaluate and confirm sizing of onsite detention and conduit facilities (Wood Rodgers 2015). To accommodate the increase in impervious surfaces, the project includes construction of a drainage conveyance system with three detention basins: North Basin, Central Basin, and South Basin. The basins would be 4.4 acres, 0.3 acre, and 1.4 acres, respectively. The onsite drainage system was designed in conformance with Central Valley RWQCB requirements, the Placer County Stormwater Management Manual (SWMM), and the City of Lincoln's Stormwater Management Plan (SWMP).

The post-project peak flow rates and runoff volume would be managed through the use of three onsite detention basins to collect stormwater before its discharge into Markham Ravine and the Markham Ravine Lower Tributary. A comparison of peak discharge rates at different outfall locations was modelled and verified that runoff leaving the project would not exceed pre-project flow rates (Wood Rogers 2015:26-27). Therefore, the project's peak runoff volume for the 100-year storm event is not anticipated to result in a cumulative impact to the State's highway right-of-way and to the Caltrans drainage facilities. This would remain as a less-than-significant impact.

A4-3 The comment identifies requirements to obtain a Caltrans issued encroachment permit. These comments do not address the adequacy of the DEIR but are noted for the decision makers' consideration. No further response is necessary.

Letter
A5

Placer County
AIR POLLUTION CONTROL DISTRICT
110 Maple Street, Auburn, CA 95603 • (530) 745-2330 • Fax (530) 745-2373 • www.placer.ca.gov/apcd
Erik C. White, Air Pollution Control Officer

November 14, 2016

Steve Prosser, Senior Planner
City of Lincoln Community Development Department
600 Sixth Street
Lincoln, CA 95648
SENT VIA: steve.prosser@lincolnca.gov

SUBJECT: Notice of Availability: Independence at Lincoln, Draft Environmental Impact Report (DEIR)

Dear Mr. Prosser,

Thank you for the opportunity to review and comment on the **Independence at Lincoln** project (Project) and associated Draft Environmental Impact Report (DEIR). The proposed Project includes 575 single-family residential units and a mixed use/commercial area, on approximately 194 acres. Our comments are provided as follows:

Construction Impacts

1. The DEIR concludes that air quality impacts related to construction are significant before mitigation and less than significant after mitigation. The discussion associated with Impact 4.2-1 states that Mitigation Measure 4.2-1b will further reduce NOx emissions from the first year (2016) of construction to below District thresholds by participating in the District's Offsite Mitigation Fund Program. The District requests that Mitigation Measure 4.2-1b identifies the total air quality mitigation fee for this impact and when it will be paid to offset the construction impacts. The District suggests that the fee for construction impacts should be paid at the time of approval of the dust control plan required by Mitigation Measure 4.2-1c, and the air quality mitigation fee should be explicitly stated in the Project's Development Agreement. A5-1

   Please note that the Carl Moyer cost-effectiveness used for the fee calculation, as listed in Appendix B on page 238, is incorrect and should be modified to the current cost-effectiveness of $18,260 per ton of pollutant.

Operational and Greenhouse Gas Emissions Impacts

2. Table 4.2-5 and Table 4.3-2 of the DEIR states that the modeling analysis assumes the Project will prohibit the installation of wood-burning fireplaces in all residential units, and all fireplaces would be powered with natural gas. Particulate matter (PM10) and greenhouse gas (GHG) emissions from wood burning fireplaces were not included in the A5-2

November 14, 2016
Page 2

analyses. Therefore, the following shall be included as a condition of approval associated with the entitlements of the proposed Project.

i. Wood burning appliances, including fireplaces and woodstoves, shall not be installed within the residential and commercial areas. Any indoor or outdoor fireplace or stove shall be fueled by natural gas and be clearly delineated on the floor plans for all building permits. Wording relating to this restriction shall be included with the Project's Covenants, Conditions, and Restrictions (CC&R). A5-2

3. The DEIR states that the Project mobile source emissions were estimated using the emission factors provided in CARB's EMFAC2014 model and the Project-related vehicle trips and VMT from the Project's Traffic Study presented in Chapter 4.10. In the discussion the DEIR identifies that the project would generate a peak daily VMT of 48,325, at the Project buildout in 2020, and that this VMT data is used to estimate daily mobile source emissions in order to provide a conservative analysis. Appendix C of the DEIR includes the calculation to estimate ROG, NOx, PM10, and GHG mobile source emissions.

District staff has replicated the calculation for the Project related NOx and CO2 mobile source emissions by using the same methodology proposed in Appendix C. The District's results show that NOx emissions are consistent with the DEIR results but CO2 emissions are higher than the DEIR's. In order to verify this finding, District staff also used the new version of the CalEEMod model (CalEEMod 2016.3.1)[1] to estimate the NOx and GHG emissions based on the Project's related data (daily trips and VMT). A5-3
Since CalEEMod2016 has incorporated CARB's EMFAC2014 data for mobile source emission estimation for land use projects, the output from CalEEMod2016 can serve as another source of verification. The following table summarizes the mobile source emissions of NOx and GHG from the analyses of DEIR, the District, and the CalEeMod2016. The District's calculation and CalEEMod2016 modeling results are attached with this letter for reference.

At full buildout in 2020	NOx (lbs/day)	CO2e (MT/year)
DEIR[2]	32	4,626
PCAPCD	32	6,893
CalEEMod 2016[3]	42	6,888

Both the District's calculation and CalEEMod 2016 results show that the DEIR substantially underestimates the Project's mobile source GHG emissions at its full buildout in 2020. The District requires that the DEIR verifies its own mobile source

[1] CalEEMod 2016.3.1 was released on October 14, 2016 and can be downloaded from the following site: http://www.caleemod.com/
[2] DEIR Table4.3-2 on page 4.3-14
[3] CalEEMod 2016 NOx emissions for mobile sources include idling and starting emissions.

City of Lincoln, Independence at Lincoln, DEIR Comments

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emissions analysis for GHG and identifies if additional mitigation measures are needed to mitigate the Project related GHG emission impacts. A5-3 cont

Cumulative Impacts

4. The DEIR on page 5-6 concludes that the Project's long-term operational emissions of ozone precursors (ROG and NOx) would result in cumulatively significant impacts and proposes Mitigation Measure 1 to reduce the Project's cumulative impacts to a less-than-significant level. However, this mitigation measure was not listed in **Table 2-1 Summary of Impacts and Mitigation Measures**. The District requests this mitigation measure be described in Table 2-1 and that the fee requirement be explicitly stated in the Project's Development Agreement.

   In addition, the District recommends the following mitigation measures for consideration in order to further mitigate operational emission impacts to the maximum extent:

   i. Where natural gas is available, gas outlets shall be provided in residential backyards for use with outdoor cooking appliances such as gas barbeques.
   ii. Electrical outlets should be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.
   iii. Each single family home should include a conduit raceway to a spare electric box in the garage that is sized for a future minimum 50-amp 220v outlet and a 220v breaker space must be available in the electrical panel to promote electric vehicle usage. A5-4
   iv. The CC&R's for the projects within the Plan area shall include the required distribution of educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information shall be delivered as part of a "move-in" packet prior to occupancy of the residence.
   v. Electric vehicle charging stations (Conductive/inductive) and signage should be required within designated spaces for non-residential developments.
   vi. Vanpool parking only spaces and preferential parking for carpools should be required to accommodate carpools and vanpools in employment areas (e.g., community commercial, business-professional uses).
   vii. Within commercial areas, all truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two-dock doors. Signs shall be posted stating "Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-vot outlets to run auxiliary equipment.
   viii. Where feasible, streets should be designed to maximize pedestrian access to transit stops.
   ix. If it is available, provide electric outlets to promote electric landscape maintenance equipment be utilized to the extent feasible on parks and public/quasi-public lands.

City of Lincoln, Independence at Lincoln, DEIR Comments

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Thank you again for the opportunity to review the Project's proposal. Please do not hesitate to contact me at 530.745.2325 or ychang@placer.ca.gov if you have any questions.

Sincerely,

Yushuo Chang
Planning & Monitoring Section Manager

ec: Tom Thompson, Planning Consultant

Attachment: #1 PCAPCD Mobile Source Emissions calculation for the Independence at Lincoln
#2 CalEEMod 2016 modeling results

Letter A5	**Placer County Air Pollution Control District** Yushuo Chang, Planning & Monitoring Section Manager November 14, 2016

A5-1 The comment requests that the mitigation fee amount for construction impacts be identified in Mitigation Measure 4.2-1b, along with the timing of fee payment.

The following edits have been to Mitigation Measure 4.2-1b on Page 4.2-15 of the DEIR. These changes do not alter the conclusions of the DEIR.

> The applicant shall participate in PCAPCD's offsite mitigation program, the Land Use Air Quality Mitigation Fund, by paying the equivalent amount of air quality mitigation fees for the project's contribution of NO_X that exceeds the 82 lb~~s~~/day threshold, or the equivalent as approved by PCAPCD. The air quality mitigation fee shall be paid at the time of approval of the Dust Control Plan required under Mitigation Measure 4.2-1c below. The air quality mitigation shall also be explicitly stated in the project's Conditions of Approval document. As emissions of NO_X would be higher during the initial stages of project implementation (i.e., the first two years of construction ~~2016 and 2017~~), participation in PCAPCD's offsite mitigation program would only be necessary to offset NO_X emissions during that period. Emissions of NO_X in 2017 would be reduced below the PCAPCD threshold through incorporation of onsite reduction measures under Mitigation Measure 4.2-1a. Therefore, payment into the PCAPCD offsite mitigation program would only be necessary for 2016. The current applicable fee rate~~s~~ of the program is $18,260 per ton of pollutant. Based on this fee rate, the air quality mitigation fee amount estimated to be paid by the project would be $22,378. It should be noted that the fee estimate is calculated after accounting for onsite reductions and is provided for disclosure purposes. The actual amount may vary based on detailed fleet information and onsite reduction calculations, to be provided to PCAPCD before grading begins. The actual amount to be paid shall be determined, and satisfied per current guidelines, at the time of approval of the Grading or Improvement Plans.

In addition, the following fee rate corrections amend page 238 of Appendix B of the DEIR. These changes constitute minor clarifications and do not alter the analysis or conclusion of the DEIR:

Independence at Lincoln Construction Mitigation Year 2016

Mitigation Fee Calculation

Emission Source	ROG (lbs/day)		NOx (lbs/day)		PM10 (lbs/day)	
	summer	winter	summer	winter	summer	winter
Area Resource						
~~Vehicle Exhaust~~			~~174.00~~			
~~Total~~	~~0.00~~	~~0.00~~	~~173.88~~	~~0.00~~	~~0.00~~	~~0.00~~
Total	0.00	0.00	139.00	0.00	0.00	0.00

PCAPCD cumulative thresholds (lbs/day)	ROG (summer only)	NOx (summer only)	PM10 (winter only)
operational emissions	82	82	80

exceedence to the cumulative thresholds (lbs/day)	ROG	NOx	PM10
	0	57	n/a
~~exceedence to the cumulative thresholds (lbs/day)~~	~~ROG~~	~~NOx~~	~~PM10~~
	~~0~~	~~92~~	~~n/a~~

# of days of construction 43

	ROG	NOx	PM10
Required emission offset (tons) (exceed lbs/day x days in summer/winter ÷ 2000 lbs/ton)	0.00	1.23	n/a
	~~ROG~~	~~NOx~~	~~PM10~~
~~Required emission offset (tons) (exceed lbs/day x days in summer/winter ÷ 2000 lbs/ton)~~	~~0.00~~	~~1.98~~	~~n/a~~

Amount of required emission offset for ROG and NOx (tons)	**1.23**
~~Amount of required emission offset for ROG and NOx (tons)~~	**~~1.98~~**

current mitigation cost for ROG or NOx $/ton (per CARB Carol Moyer Guideline, July 2015)	**~~$18,030~~**	**$18,260**

current mitigation cost for PM $/ton (to be determined)	

Proposed APCD Offsite Mitigation Fee (ROG + NOx)	**~~$35,616.05~~**	**$22,377.63**

Proposed APCD Offsite Mitigation Fee (PM only)	**$0**

~~Source: MVWPSP DEIR Page 11-14~~

SUMMARY

	2016	~~$35,616~~	$22,378
TOTAL		**~~$35,616~~**	**$22,378**

A5-2 The comment recommends that the provision of natural gas fireplaces only be identified as a condition of approval for the project. The following text has been added within Section 3.4.2, Other Community Features, of the DEIR. The City will also include this statement as a condition of approval for the project. This change does not alter the conclusions of the DEIR.

3.4.2 Residential Villages and Community Center

The proposed community includes five residential village neighborhoods, each with distinct single-family, residential lot sizes. Each village would have a range of homes sizes which would be determined by future home buyer demand. Four of the five village neighborhoods are adjacent to and surround a central park (Lot B) with a community center which would be dedicated to the City of Lincoln after project build-out.

<u>To meet regional air quality requirements and standards, no wood burning appliances, including fireplaces and woodstoves, would be installed within the residential and commercial areas, and indoor or outdoor fireplaces or stoves would be fueled by natural gas and clearly delineated on the floor plans for all building permits.</u>

A5-3 The commenter modeled and estimated mobile source emissions based on assumptions used in the DEIR and using both manual calculations and the California Emissions Estimator Model (CalEEMod) Version 2016.3.1. The comment states that estimated NO_X emissions reported in the DEIR are accurate. Further, the comment asserts that the DEIR underestimated mobile source emissions percent of greenhouse gases (GHGs). Based on review of the comment's analysis, it was determined that the analysis replicates the DEIR mobile source GHG analysis except for the conversion between peak daily emissions and annual emissions. To elaborate, the daily emissions reported in the DEIR are based on peak daily vehicle miles travelled (VMT) provided by Fehr and Peers for this project. A conversion factor of 247 days per year, as shown on Page 262 of Appendix C of the DEIR, was used to account for reduced vehicle travel on off-peak days such as weekends and holidays. The conversion factor is consistent with data reported by the California Department of Transportation Performance Measurement System (PeMS) for Placer County (average of annual VMT divided by peak daily VMT for the duration of reporting in the system, which yields a conversion factor of 250 days). Multiplying the daily CO_2 emissions calculated by the commenter (18.88 $MTCO_2$/day) by 247 days per year would result in annual emissions of 4,663 $MTCO_2$/year, which is within one percent of the DEIR's results (4,626 $MTCO_2e$/year). Multiplying the daily emissions by 250 days per year would result in emissions of 4,720 $MTCO_2$/year, within two percent of the DEIR results. The project's emissions would be below the efficiency metric used to analyze project impacts in each case. No changes to the conclusions of the DEIR would be necessary.

A5-4 The commenter recommends additional measures be added to Mitigation Measure 1. Mitigation Measure 1 text on page 5-6 of the DEIR has been amended as follows. In addition, this mitigation measure has been added to Table 2-1 on p. 2-6 of the DEIR. The City shall also include this mitigation measure as a condition of approval for the project. These changes do not alter the conclusions of the DEIR.

Mitigation Measure 1: Reduce long-term operation-related ROG and NO_X emissions.

The following measures shall be implemented to reduce long-term operation-related emissions of ROG and NO_X:

- Participate in the PCAPCD Offsite Mitigation Program by paying fees based on the project's contribution of pollutants (ROG and NO_X), as follows:
  - The applicant shall pay $152 per residential unit (both single- and multi-family) to the PCAPCD's Offsite Mitigation Program (total fee due is $95,755.44 based on the current fee rate of $18,260 per ton of NOx and/or ROG), to offset 2.67 tons of ROG and 2.58 tons of NO_X. The payment of the fee shall be apportioned based on the number of residential lots created per each small lot final map and shall be due prior to each final map approval.
- Provide gas outlets, where natural gas is available, in residential backyards for use with outdoor cooking appliances such as gas barbeques.
- Install electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.
- Include a conduit raceway in each single-family home to a spare electric box in the garage that is sized for a future minimum 50-ampere 220-Volt outlet and a 220-Volt breaker space must be available in the electrical panel to promote electric vehicle usage.
- Distribute educational information on how homeowners can increase energy efficiency and conservation in their new homes in the Covenants, Conditions, and Restrictions for the projects within the Plan area. The information shall be delivered as part of a "move-in" packet prior to occupancy of the residence.
- Install electric vehicle charging stations and signage within designated spaces for non-residential developments.
- Install or designate vanpool parking only spaces and preferential parking for carpools to accommodate carpools and vanpools in employment areas (e.g., community commercial, business-professional uses).
- Equip all truck loading and unloading docks within commercial areas with one 110/208-volt power outlet for every two dock doors. Signs shall be posted stating "Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-volt outlets to run auxiliary equipment."
- Design streets to maximize pedestrian access to transit stops, where feasible.
- Install electric outlets on parks and public/quasi-public lands to promote electric landscape maintenance equipment be utilized to the extent feasible.

PLACER COUNTY
AIRPORT LAND USE
COMMISSION

Letter A6

October 17, 2016

Jim Bermudez, Development Services Manager
City of Lincoln Community Development Department
600 Sixth Street
Lincoln, CA 95648

Re: Independence at Lincoln Development Project Draft Environmental Impact Report (SCH No. 2015112041)
Lincoln Regional Airport Land Use Compatibility (ALUC 2016/17 – 3)

Dear Mr. Bermudez: Jim

The City of Lincoln prepared a Draft Environmental Impact Report (DEIR) for the Independence at Lincoln Development Project. Local action required for this proposal includes approval of several entitlements: General Plan Amendment, rezoning, General Development Plan, and large and small lot tentative subdivision maps. The Placer County Airport Land Use Compatibility Plan (ALUCP) for Lincoln Regional Airport shows that the Independence at Lincoln Development Project is located in the airport influence area. The ALUCP requires that an Airport Land Use Commission (ALUC) consistency determination be completed on the proposed project before local agency approval. The ALUC filing fee for the mandatory project review is $1,250, and must be submitted by the City of Lincoln with a request for an Independence at Lincoln Development Project consistency determination.

Overall, the Independence at Lincoln Development Project DEIR provides a good review of land use compatibility issues and adequately presents the environmental issues that encompass aircraft noise and safety due to aircraft operations. We would like to bring to your attention our following concerns. A6-1

Biological Impacts
The Independence at Lincoln Development Project includes passive open space, preservation areas, and on-site detention basins located within ALUCP Compatibility Zone C2. All of these proposed land uses are subject to various mitigation measures for impacts that the project would have on biological resources. Generally our concern is that majority of the Independence at Lincoln is located where about 80 percent of aircraft overflights occur. Open space and on-site detention uses create an increased attraction for wildlife, especially large flocks of birds, which also pose hazards to aircraft in flight. Please ensure that the mitigation measures are implemented in a manner consistent with Federal Aviation Administration (FAA) regulations (FAA Advisory Circular 150/5200-33B, "Hazardous Wildlife Attractants On or Near Airports"). Similarly, please refer to ALUCP Policy 3.5.3(a) (6). A6-2

299 Nevada Street • Auburn, CA 95603 • (530) 823-4030 (tel/fax)

Jim Bermudez, Development Services Manager
October 17, 2016
Page Two

Thank you for the opportunity to comment on the Independence at Lincoln Development Project DEIR. We appreciate your interest in planning for compatible land uses around the Lincoln Regional Airport. Should you have any questions regarding our comments, please contact David Melko of my staff at 530.823.4090. A6-2 cont

Sincerely,

Celia McAdam, FAICP CTP
Executive Director

DM/CM/ss

c: Bob Fiore, Caltrans Division of Aeronautics
Steve Prosser, City of Lincoln Community Development Department
David Melko, PCTPA

Letter A6	**Placer County Airport Land Use Commission** Celia McAdam, FAICP CTP, Executive Director October 17, 2016

A6-1 The comment identifies that the project site as within the airport influence area, the project would be required to complete Placer County Airport Land Use Commission (ALUC) consistency determination before local agency approval, and identifies the requirements of the ALUC filing fee for project review. The City acknowledges these comments and has considered these requirements as described on page 1-5 of the DEIR. Further, Section 1.3.4 of the DEIR identifies Placer County ALUC as a local responsible agency.

A6-2 The comment references Federal Aviation Administration (FAA) Advisory Circular 150/5200-33B "Hazardous Wildlife Attractants On or Near Airports" and Placer County Airport Land Use Compatibility Plan (ALUCP) Policy 3.5.3(a)6, which requires land uses within the Airport Influence Area to be consistent with FAA rules and regulations. The comment expresses concern over land uses and biological mitigation measures that may attract wildlife and pose hazards to aircraft in flight. FAA Advisory Circular 150/5200-33B recommends that land uses that can attract or sustain hazardous wildlife populations be separated by minimum distances from the airport to reduce potential hazards. The separation criteria area based on flight patterns of piston-powered and turbine-powered aircraft, the altitude at which most strikes happen, and National Transportation Safety Board recommendations. Recommendations include separating hazardous wildlife attractants from air operations by at least 5,000 feet for airports serving piston-powered aircraft or 10,000 feet for airports serving turbine-powered aircraft, and 5 miles to protect approach, departure, and circling airspace.

None of the project design features or biological mitigation measures are expected to be hazardous wildlife attractants. Three groups of detention basins are proposed on the project site approximately 6,500 feet from the edge of Lincoln Regional Airport in Phase 1 and approximately 4,000 feet in Phase 2 (see Exhibits 3-6a and 3-6b in the DEIR). The detention basins shown on Exhibit 3-6a would be 0.3 acre (2 basins) and 1.4 acres (2 basins) and the basin on Exhibit 3-6b would be 4.4 acres (3 basins). The Post-Construction Stormwater Quality Plan (SWQP) prepared by Wood Rodgers 2015 for the project shows the basins are designed to hold water for 48 hours or less after a rainfall event and would range from a maximum of 2.25 to 3 feet deep. They are similar in size to existing basins and stream habitat in Markham Ravine and are not expected to pose a substantial new attractant to wildlife in the area because they would not provide permanent or long-term water storage. No significant wildlife hazards would occur.

WESTERN PLACER
WASTE MANAGEMENT AUTHORITY

Letter A7

November 10, 2016

SENT VIA EMAIL: steve.prosser@lincolnca.gov

Steve Prosser, Senior Planner
City of Lincoln
Community Development Department
600 Sixth Street, 3rd Floor
Lincoln, CA 95648

RE: INDEPENDENCE AT LINCOLN DRAFT ENVIRONMENTAL IMPACT REPORT

Dear Mr. Prosser:

The Western Placer Waste Management Authority (WPWMA) appreciates the opportunity to review and provide comments on the DEIR for the Independence at Lincoln Development Project.

The WPWMA is a regional agency established in 1978 by the County of Placer and the cities of Roseville, Rocklin and Lincoln (Member Agencies). The WPWMA Board of Directors is comprised of elected officials from each of the Member Agencies. The WPWMA provides recycling and waste disposal services to those communities as well as the cities of Auburn and Colfax and the Town of Loomis. The WPWMA also provides waste disposal services to individuals, business entities and other governmental agencies in and around Placer County. The WPWMA's facilities are located at Athens Avenue and Fiddyment Road. The WPWMA's properties total approximately 960 acres. Of this, approximately 800 acres are entitled for landfilling and approximately 320 acres are currently used for active solid waste operations. A7-1

The WPWMA's facilities include the Western Regional Sanitary Landfill (WRSL) (the only active landfill in Placer County), a Materials Recovery Facility, compost facility, recycling drop-off and buy-back center and permanent household hazardous waste collection facility. The WPWMA's facilities provide for environmentally protective and sanitary disposal of solid wastes and ensure that municipalities, businesses and individuals utilizing the facility continue to comply with state and federal laws related to the diversion of materials from landfilling and the safe and proper handling of household hazardous wastes.

The WPWMA appreciates your consideration of the following concerns:

1. The following corrections should be made to Section 4.9.1of the DEIR (Western Regional Sanitary Landfill and Material Recovery Facility, page 4.9-2): A7-2

RECYCLING AND DISPOSAL MADE EASY
11476 C AVENUE AUBURN, CA 95603
(916) 543-3960 / (916) 543-3990 FAX
WWW.WPWMA.COM

STEVE PROSSER
INDEPENDENCE AT LINCOLN DEIR
NOVEMBER 10, 2016
PAGE 2

a. *316-acre Western Regional Sanitary Landfill* – the WRSL property is 320 acres.
b. *The MRF can accommodate over 2,000 tons of garbage per day* – the MRF is currently permitted to receive and process a maximum of 1,750 tons per day.
c. *The MRF diverts approximately 50 percent* – current MRF diversion is roughly 40 percent.
d. *23,789,423 cubic yards of capacity remaining* – remaining WRSL capacity as of June 30, 2016 is 24,836,245 cubic yards. A7-2 cont
e. *WRSL average annual throughput of 100,000 to 249,999 tons per year* – the WRSL received 248,773 tons of solid waste between July 1, 2015 and June 30, 2016.
f. *Average annual capacity of 500,000 to 749,000 tons per year* – the WRSL does not have an average annual capacity.
g. *Lifespan extending to 2042* – the WRSL has a current permitted estimated closure date of January 2058.

2. The DEIR uses the 2014 statewide average *disposal rate* of 4.5 pounds per resident per day to calculate the project's estimated waste generation. This number is incorrectly identified in the EIR as the statewide average *waste generation rate* and potentially underestimates the project's waste generation potential. The calculations also appear to include only residential waste while the project also potentially includes a commercial component (page 4.9-10 describes the disposition of Lot H as a 2.7-acre mixed-use area that could be used for either multi-family residential or neighborhood commercial development). Per a conversation between you and Stephanie Ulmer of my staff on 11/4/2016, it is our understanding that Lot H will likely consist of high-density residential development although not determined at this time. The WPWMA recommends that the City of Lincoln review its calculations to accurately reflect the project's solid waste generation potential. A7-3

   This section also references an average annual landfill capacity of 400,000 tons more than the average annual throughput. As previously noted, the WRSL does not have an average annual capacity.

3. The DEIR found that odor nuisances are considered less than significant as the project would not locate land uses in close proximity to any existing odor sources (Impact 4.2-5, page 2-8), the Odor section on page 4.2-7 states that there are no major sources of odors located in the immediate vicinity of the project, and page 5-8 states that there are no existing facilities in the project vicinity typically considered as sources of objectionable odors such as wastewater treatment facilities, landfills or livestock operations. However, the WPWMA's facilities are located approximately 3.5 miles southwest of the project and odor studies A7-4

STEVE PROSSER
INDEPENDENCE AT LINCOLN DEIR
NOVEMBER 10, 2016
PAGE 3

conducted on behalf of the WPWMA have identified numerous odor sources in the region in addition to the WPWMA's facilities, including a wastewater treatment plant and livestock operations. While the majority of the sources are outside the Placer County Air Pollution Control District's recommended screening distances (PCAPCD CEQA Air Quality Handbook, 2012) the WPWMA recommends that the Draft EIR identify all potential odor sources in the vicinity of the project that may impact future residential and commercial project occupants. A7-4 cont

Thank you again for the opportunity to review the DEIR for this project. Please contact Eric Oddo of my staff at (916) 543-3984 or eoddo@placer.ca.gov should you wish to discuss these comments.

Sincerely,

Bill Zimmerman, PE
Deputy Executive Director

CC WPWMA BOARD OF DIRECTORS
KEN GREHM, WPWMA EXECUTIVE DIRECTOR
ERIC ODDO, WPWMA PROGRAM MANAGER

Letter A7	**Western Placer Waste Management Authority** Bill Zimmerman, PE, Deputy Executive Director November 10, 2016

A7-1 This comment provides background information related to the history and composition of the Western Placer Waste Management Authority, a description of the authority granted to the agency to regulate waste in the region, and a summary of the facilities owned and managed by the waste agency. This comment provides prefatory remarks to the more detailed remarks stated later in the comment letter. Please refer to response to comments A7-2 through A7-4

A7-2 This comment requests several minor revisions to the text of the DEIR related to the waste processing facilities that would serve the project. To provide clarification, the text on page 4.9-2 of the DEIR is revised as follows. These changes do not alter the conclusions of the DEIR.

Western Regional Sanitary Landfill and Material Recovery Facility

Refuse from the project area is transported to the Western Placer Waste Management Authority's (WPWMA's) ~~316~~320-acre Western Regional Sanitary Landfill (WRSL) adjacent to the intersection of Athens Avenue and Fiddyment Road, west of State Route 65. The WPWMA is a joint powers authority comprised of the cities of Rocklin, Roseville, and Lincoln, and Placer County. Both the WRSL and the associated Material Recovery Facility (MRF) operate under permits issued by the California Integrated Waste Management Board. The MRF separates and recovers waste products for recycling, reuse, or conversion to energy sources. Materials that cannot be recycled are taken to the landfill. The MRF ~~can accommodate over 2,000~~ is currently permitted to receive and process a maximum of ~~-~~1,750 tons of garbage per day. Currently, the MRF diverts approximately ~~50~~40 percent of the material received from going to the landfill, helping Placer County comply with a state-mandated recycling rate (~~WPWMA 2016~~Zimmerman, pers. comm., 2016). Total capacity of the WRSL is 36,350,000 cubic yards, and there is ~~23,789,423~~ 24,836,245 cubic yards of capacity remaining as of June 30, 2016 (~~City of Lincoln 2016~~ Zimmerman, pers. comm.,2016). The WRSL does not have an average annual capacity but did receive 248,773 tons of solid waste between July 1, 2015 and June 30,2016 (Zimmerman, pers. comm., 2016). ~~WPWMA's regional landfill has an average annual throughput of 100,000 to 249,999 tons per year and an average annual capacity of 500,000 to 749,000 tons per year (CalRecycle 2015a).~~ ~~It is projected that the landfill has a lifespan extending to 2042 (City of Lincoln 2016)~~ The landfill has a current permitted estimated closure date of January 2058 (Zimmerman, pers. comm., 2016).

A7-3 This comment notes that the DEIR incorrectly identifies the rate of disposal per resident per day. The comment also notes that Lot H may include commercial uses, which could result in higher waste generation potential. The comment does not identify new waste generation rates that should be used. However, the City has updated the analysis to reflect City of Lincoln's 2015 per capita disposal rates. These changes are shown below. With regard to the potential for commercial development at the site, it is still unknown whether commercial uses would be developed therefore, the continued use of a residential waste generation rate is appropriate. Should it be determined that alternate land uses would be constructed onsite, the City will determine whether those uses would result in substantial increases in demand waste disposal.

The comment also requests text revisions consistent with comment A7-2 related to the average annual throughput. With regard to updated waste disposal rates, text on page 4.9-10 of the DEIR is revised as follows. This change does not alter the conclusions of the DEIR.

Solid Waste Disposal

The assessment of solid waste impacts is a quantitative analysis of the existing services available to the project site and a determination of whether project includes adequate provisions to ensure continued service that meets acceptable standards. The solid waste ~~generation~~ disposal rate used in this analysis is based on the ~~statewide average~~ ~~generation~~2015 City of Lincoln's annual per capita disposal rate of ~~4.5~~3.1 pounds per day per resident (CalRecycle ~~2015b~~2017). Because the disposition of Lot H is unknown, it is assumed that this area is built out with the maximum number of residential units (58) allowable at the site, which would provide the most conservative (i.e., highest solid waste generation) that could occur on the site.

The text on page 4.9-14 of the DEIR is revised as follows. This change does not alter the conclusions of the DEIR.

Impact 4.9-3: Generation of solid waste that exceeds the capacity of the Western Regional Sanitary Landfill.

While solid waste would be generated during construction and operation of the project, the WRSL has sufficient capacity to serve the proposed development. This impact would be **less than significant**.

Project construction activities would generate solid waste, including excess construction materials and material removed during site clearing. However, the site is generally vacant, and construction would not require demolition of existing structures or removal of large quantities of waste. It is anticipated that compliance with the construction waste requirements in CALGreen would be sufficient to address the potential for construction of the project to produce excessive quantities of solid waste that could affect the capacity of the local landfill.

During operation of the project, the residences would produce solid waste that would be collected by the City and transferred to the WRSL. Based on ~~a waste generation~~ 2015 City of Lincoln's annual per capita disposal rate of ~~4.5~~3.1 pounds per ~~person per~~ day per resident and 1,639 residents (1,489 for the residential aspect of the project and 150 for Lot H), the project is expected to produce approximately ~~1,221~~927 tons of solid waste annually. Given that the average annual ~~capacity~~ disposal rate at ~~of~~ the landfill ~~is approximately 400,000~~ ranges between 100,000 and 249,999 tons per year and anticipates closure within approximately 40 years~~tons, more than the average annual throughput~~, it is reasonable to conclude that the landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs in compliance with all applicable laws based on the calculated residential waste generation rate.

Solid waste collection services for the City are funded through an enterprise fund. Costs for operation services (containers, bins, trucks, loaders, and street sweepers) are funded by various fees and charges collected by the City through its utility billing for solid waste collection. As development occurs in the service area, revenue is generated to finance the expansion of operational services through fees generated by new utility customers. All new development must participate in the funding of needed facilities and equipment based on adopted program standards. These costs are spread over new development based on an equivalent dwelling unit factor such that capital facilities costs are equally borne by residential and nonresidential development.

Therefore, based on available capacity and the established funding mechanisms in place for continued service, impacts related to generation of solid waste would be **less than significant**.

Mitigation Measures

No mitigation is required.

A7-4 The comment states that there are multiple sources of odors within the project vicinity including a wastewater treatment plant and livestock operations and requests that revisions to the DEIR are made to reflect the potential sources of nuisance odors. Specifically, the comment states that livestock operations are located in the project's vicinity and should be considered as odor sources, but does not identify the locations or distances from the project. While there are scattered rural residences in the project vicinity that may include a small number of livestock, there are no concentrated livestock operations (e.g., dairies) that are known to the City near the project. Additionally, the City is considering plans to develop the agricultural land uses adjacent to the project site with residential and commercial development, so any existing livestock operations adjacent to the project site would cease.

For clarification, the following revisions have been made to amend Impact 4.2-5 on page 4.2-22 of the DEIR as follows. This change does not alter the conclusions of the DEIR.

> Implementation of the project would not locate people in close proximity to existing odor sources. There are no sources of objectionable odors, such as landfills or wastewater treatment facilities, within a mile of ~~near~~ the project site. Further from the project site, the Western Regional Sanitary Landfill (WRSL) is located approximately 3.5 miles southwest of the project site; and the City of Lincoln Wastewater Treatment and Reclamation Facility (WTRF) is located approximately 2 miles northwest of the project site. According to PCAPCD, both the WRSL and the WTRF are located beyond the screening distance for odor impacts from these sources (two miles) (PCAPCD 2012:Table 4-2). Additionally, ~~While~~ a sewer lift station is proposed to be constructed on the south side of the project site.~~,~~ However, the wells and pumps would be in a structure below grade, and the electrical controls and mechanical valves will be in a structure above grade, which would provide both noise attenuation and odor control.
>
> Because the project would not result in the frequent exposure of a substantial number of members of the public to objectionable odors, this impact would be **less than significant**.

COUNTY OF Pla

Letter A8

November 14, 2016

City of Lincoln, Community Development Department
ATTN: Paul Junker, Project Planner
600 Sixth Street
Lincoln, CA 95648

Email: pjunker@mbakerintl.com
matthew.wheeler@lincolnca.gov

Subject: Independence at Lincoln Draft EIR

Dear Mr. Junker:

Placer County appreciates the opportunity to review and comment on the "Independence at Lincoln" Draft Environmental Impact Report. After reviewing the submitted information, the County offers the following comments for your consideration regarding the proposed project:

Planning Services Division

1. The statement regarding the Placer County Conservation Plan (PCCP) should be revised as follows to better reflect the intent of the PCCP and how permits will be issued:

   The Placer County Conservation Plan (PCCP) is a county-proposed solution to coordinate and streamline the permitting process by allowing <u>local entities to issue</u> state and federal permits. The proposed PCCP is a habitat conservation plan (HCP) under the ESA and a natural community conservation plan (NCCP) under the California Natural Community Conservation Planning Act. As proposed, the PCCP would include the County Aquatic Resources Program <u>to issue</u> permits related to the Federal Clean Water Act and the California <u>Fish and Game Code</u>. The City of Lincoln is currently involved in the development of the PCCP. A8-1

HHS Division of Environmental Health

1. Under Mitigation Measure HAZ-1, additional wording should be added that the City of Lincoln shall obtain a final regulatory closure certification, for the former wastewater treatment facility, authorizing unrestricted land use of the parcel. A8-2

Flood Control and Water Conservation District

1. Please have the applicant confirm that the floodplain limits shown for both Markham Ravine and the Lower Tributary are per the updated FEMA Preliminary FIRM for the project area dated December 28, 2015. This most recent mapping A8-3

Planning Division • 3091 County Center Drive, #190 • Auburn, CA 95603
(530) 745-3000 office • (530) 745-3080 fax • planning@placer.ca.gov

COUNTY OF Placer

should be considered to be the most current best available information as this development moves forward. A8-3 cont

2. Impact 4.6-2: Impacts to stormwater drainage systems listed in Table 2-1 states that "post-project peak runoff and water quality volume would be reduced to pre-project conditions through the use of detention basins." Please have the applicant clarify if this refers to post-project peak flow rates and runoff volume being reduced to pre-project conditions and if volumetric retention will also be incorporated onsite or at an offsite regional facility. A8-4
3. A finding of "Less than significant" is made in Table 2-1 under the column heading "Significance before Mitigation" for Impact 4.6-2 which appears inappropriate. It is recommended that this be changed to "Potentially significant" and that the finding of "Less than significant" remain under the column heading "Significance after Mitigation" with the proposed detention/retention basins listed under "Mitigation Measure". A8-5
4. Within Section 4.6, Hydrology and Water Quality, and under the heading of Regulatory Setting, a discussion regarding State Senate Bill 5 legislation (dated 2007) and subsequent State of California Department of Water Resources, 200-year Urban Level of Flood Protection (ULOP) standards and the applicability to the project is now required. This discussion should be updated to include location specific information that will determine whether ULOP standards apply to this project or not. A8-6

Again, Placer County appreciates the opportunity to comment on the Independence at Lincoln Draft Environmental Impact Report. Should you have any questions, please contact Crystal Jacobsen, Environmental Coordinator at cjacobse@placer.ca.gov or 530-745-3085.

Sincerely,

CRYSTAL JACOBSEN, PRINCIPAL PLANNER
ENVIRONMENTAL COORDINATOR

Page 2

Letter A8	**Crystal Jacobsen, Principal Planner/Environmental Coordinator** County of Placer, Planning Division November 14, 2016

A8-1 The comment requests several minor revisions to the text of the DEIR that would clarify the permitting process as it relates to the project. These revisions were included in the DEIR. See page 4.4-21 and 4.4-22 of the DEIR.

A8-2 The comment requests a text clarification to Mitigation Measure HAZ-1 that would ensure that the City of Lincoln receives a final regulatory closure certification for the former wastewater treatment facility that was previously located on the project site. This revision was included in the DEIR (see 3rd bullet under Mitigation Measure HAZ-1 on page 1-6 of the DEIR).

A8-3 The comment requests that the floodplain limits information utilized in the DEIR, Section 4.6 Hydrology and Water Quality, regarding floodplain delineation for Markham Ravine and Lower Tributary is based upon the updated Federal Emergency Management Agency (FEMA) Preliminary Flood Insurance Rate Maps (FIRM) for the project area dated December 28, 2015. The date of the Drainage Study (September 2015) predates the referenced FIRM maps. As stated on page 4.6-5 of the DEIR, the updated FIRMs are preliminary and are expected to go into effect in 2017 after a public review and appeal period. However, in comparing Exhibit 4.6-1 (depicting 2009 FIRM maps) of the DEIR to updated FIRM Maps (Exhibit 2-1 of this document depicts December 2015 FIRM maps), less overall area identified as 100-Year Flood Zone is shown within the project site on Exhibit 2-1. This information does not alter the conclusions of the DEIR.

A8-4 The comment requests clarification regarding a statement under Impact 4.6-2, located in Section 4.6, "Hydrology and Water Quality," of the DEIR.

To provide clarification, the text on pages 4.6-13 and 4.6-14 of the DEIR is revised as follows. These changes do not alter the conclusions of the DEIR.

Impact 4.6-2: Impacts to stormwater drainage systems.

The project would add additional impervious surfaces at the project site, which would increase surface runoff on an ongoing basis. This increase could result in an increase in both the total volume and the peak discharge rate of stormwater runoff; however, the drainage study conducted for the project concluded that post-project peak ~~runoff~~ flow rates and ~~water quality~~ runoff volume would be reduced to pre-project conditions through the use of detention basins. Therefore, this impact would be **less than significant.**

The site is currently fallow land that was the previous site of the City of Lincoln wastewater treatment facility, and construction of the project would develop approximately 97 acres of the 159-acre site. Therefore, the project would substantially increase the amount of impervious surfaces onsite. However, a drainage study was completed in 2015 for the project to evaluate and confirm sizing of onsite detention and conduit facilities (Wood Rodgers 2015). To accommodate the increase in impervious surfaces, the project would involve construction of a drainage conveyance system with three detention basins: North Basin, Central Basin, and South Basin. The basins would be 4.4 acres, 0.3 acre, and 1.4 acres, respectively. The onsite drainage system was designed in conformance with Central Valley RWQCB

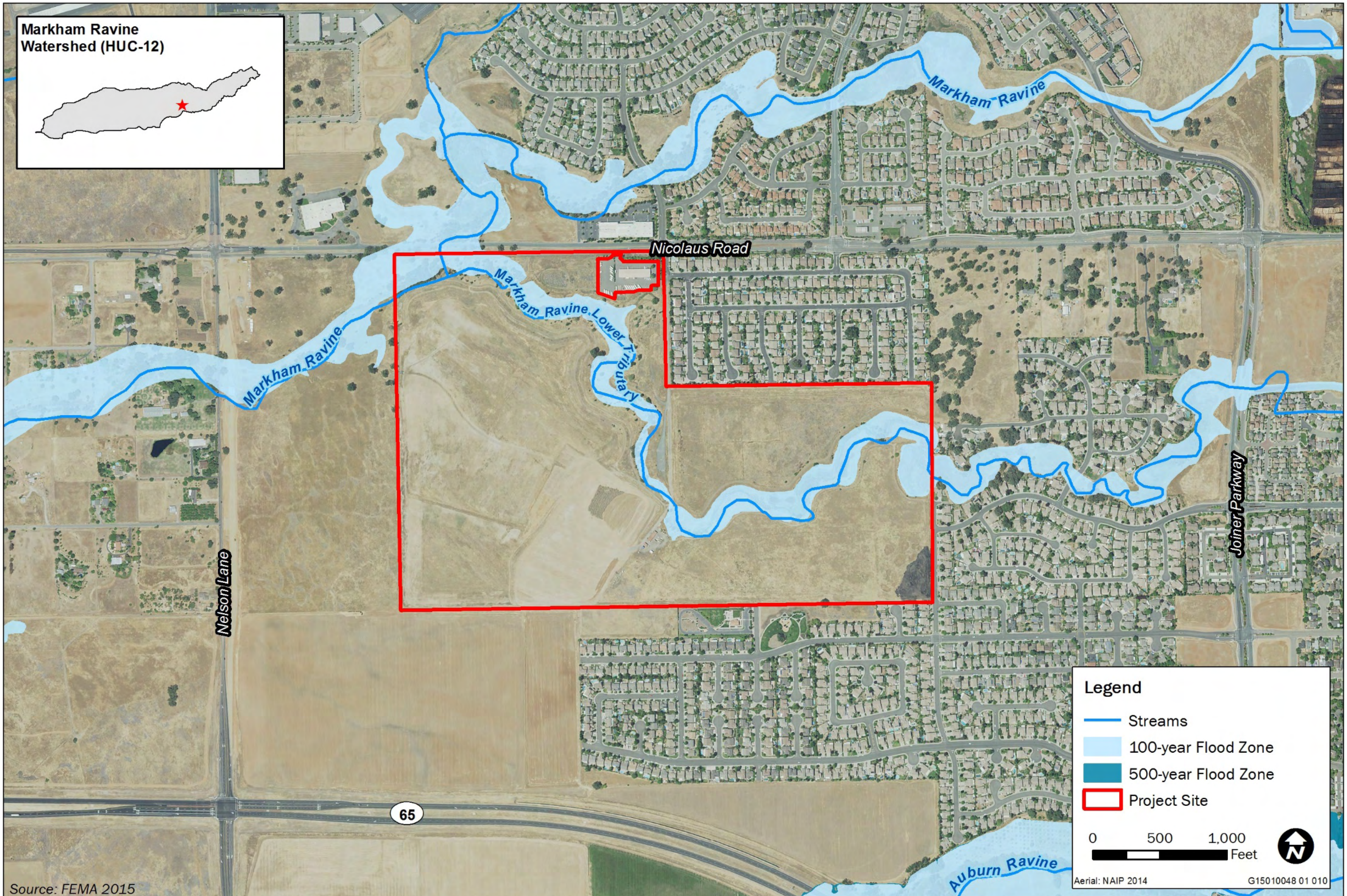

Exhibit 2-1 **Waterways in Project Vicinity (FEMA Preliminary FIRM for the Project Area, dated December 28, 2015)**

requirements, the Placer County SWMM, and the City of Lincoln's SWMP. LID methods to maintain pre-project runoff levels incorporated into the project design include limiting impervious coverage to 54 percent of the site, providing an open space corridor with parks adjacent to the open space, using the same net collection locations for drainage as in pre-project conditions, and integrating detention facilities into the site design. (Wood Rodgers 2015).

The post-project peak ~~runoff~~ flow rates and ~~water quality~~ runoff volume would be managed through the use of three onsite detention basins to collect stormwater before its discharge into Markham Ravine and the Markham Ravine Lower Tributary. A comparison of peak discharge rates at different outfall locations was modelled and verified that runoff leaving the project would not exceed pre-project flow rates (Wood Rogers 2015:26-27).

Table 4.6- 1 shows the comparison of pre- and post-project flow rate in the 2-year 24-hour storm event at each proposed outfall location.

Table 4.6-1 Pre- and Post-Project Peak Flow Rate in the 2-Year 24-Hour Storm Event at Proposed Outfall Locations

Proposed Drainage Management Areas	Proposed Basin Names	Pre-Project 2-Year 24 Hour (cfs)	Post-Project 2-Year 24 Hour (cfs)
DMA 1	Central Basin	0.49	0.44
DMA 2	South Basin	1.70	1.70
DMA 3	North Basin	5.80	4.33

The project's drainage system would be designed to appropriately accommodate and retained onsite the stormwater runoff generated from the project site to maintain pre-project discharge conditions. In addition, Markham Ravine lower tributary, which is the primary drainage onsite, would not be disturbed by the project. The drainage study concluded that the post-project peak runoff ~~and water~~ volume would be reduced to pre-project levels through the use of detention basins before discharging into Markham Ravine and the lower tributary. The onsite drainage would be consistent with General Plan Policies PFS-4.2, PFS-4.6, PFS-4.7, PFS-4.11, and OSC-4.1 Identify and Protect Aquifers because it would be designed to minimize drainage concentrations and impervious coverage, would provide stormwater detention sufficient to limit outflow and provide retention sufficient for incremental runoff from an eight-day 100-year storm, and would be designed in accordance with the SWMM. Infiltrating bioretention footprints for each drainage management area would be located onsite (Wood Rodgers 2015: Appendix N).

With implementation of the project's drainage plan, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in on- or offsite flooding. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

A8-5 The comment suggests a revision to Table 2-1, Summary of Impacts and Mitigation Measures to reflect that Impact 4.6-2 Impacts to Stormwater Drainage Systems is "Potentially Significant" prior to mitigation, and "Less Than Significant" after mitigation. As described in Section 4.6 Hydrology and Water Quality, the drainage report that was prepared for the project (Wood Rodgers, 2015) concluded that the project would construct a drainage conveyance system with three detention basins to collect stormwater before its discharge into Markham Ravine and the Markham Ravine Lower Tributary. A comparison of peak discharge rates at different outfall locations was modelled and verified that runoff leaving the project would not exceed pre-project flow rates. Therefore, with the implementation of these project design features, the impact would be less than significant. Because the basin and conveyance systems are considered project design features and were evaluated in the DEIR as such, no mitigation is required.

A8-6 The comment requests the addition of text related to Senate Bill 5 within the regulatory discussion of Section 4.6 Hydrology and Water Quality, of the DEIR. Further, the comment requests that the lead agency determine if and how the subsequent State of California Department of Water Resources (DWR), 200-year Urban Level of Flood Protection Standards apply to the project.

To provide clarification, the following text has been added to page 4.6-7 of the DEIR (just before the 'Local' header). This change does not alter the conclusions of the DEIR.

<u>State Plan of Flood Control</u>

<u>The Central Valley Flood Protection Act of 2008 (authorized by Senate Bill 5) directed the California Department of Water Resources (DWR) and the Central Valley Flood Protection Board to prepare a comprehensive flood protection plan for the Central Valley (DWR 2010). The resulting State Plan of Flood Control is meant to establish a system-wide approach to improving flood management in the areas currently receiving some amount of flood protection from existing federal, state, and local flood control facilities. In addition, the State Plan of Flood Control provides recommended structural and nonstructural means for improving performance and eliminating the deficiencies of flood management facilities, while also addressing ecosystem and other water-related issues. The flood legislation also established the 200-year flood event (flood with a 1-in-200 chance of occurring in any year) as the minimum level of flood protection to be provided in urban and urbanizing areas. Additionally, cities and counties in the Central Valley must incorporate the data, policies, and implementation measures of the State Plan of Flood Control into their general plans. Development within designated floodways and floodplains must acquire an encroachment permit from the Central Valley Flood Protection Board.</u>

With regard to DWR 200-year Urban Level of Flood Protection Standards, DWR developed the Urban Level of Flood Protection Criteria in response to requirements from the Central Valley Flood Protection Act of 2008, enacted by Senate Bill (SB) 5 (2007), to strengthen the link between flood management and land use. SB 5 (2007) as amended does not specify any enforcement authority for the urban level of flood protection, but instead relies on the due - diligence of cities and counties to incorporate flood risk considerations into floodplain management and planning. The City in consideration of this, has adopted General Plan Policy PFS-4.9 which requires that the drainage study for the project address 200-year flood design requirements. As described in Impact 4.6-5 of the DEIR, the hydrology and hydraulics analysis for the project were evaluated for 200-year flood levels. The proposed bridges for the site would be designed to withstand a 200-year flood event and would not impede or redirect flood flows, cause downstream flooding, or expose people or structures to a significant risk of loss, injury, or death involving flooding. Therefore, the project would be consistent with the City's General Plan Policy PFS-4.9. No significant flooding impacts would occur.

2.4 ORGANIZATIONS

Letter 01

Lincoln Open Space Committee

P.O. Box 1197, Lincoln CA 95648
www.lincolnopenspace.org

RECEIVED
NOV 8 2016
City of Lincoln
DEV SVCS

November 8, 2016

City of Lincoln, Community Development Department
600 Sixth Street, 3rd floor
Lincoln, Ca. 95648

RE: Independence at Lincoln Development Project

Attn: Mr. Prosser

We have reviewed the Draft EIR on this project and offer the following comments on this document.

The DEIR does not reference all the City policies that exist on this project site. Given the complete turnover of City staff that may be explainable. None-the-less this deficiency needs to be resolved in the Final EIR.

The Markham Ravine Nature Area Master Plan was adopted by the Lincoln City Council on November 22,2005. Page 1-7 of that document (copy attached) outlines the history of development of this plan in concert with a citizen committee, the Planning Commission and the Parks and Recreation Advisory Commission. It was adopted without changes and staff was directed to focus implementation on areas outside this site since it was still under active sewer use at that time. Over the years since adoption our group has made presentations to City Council on implementing this plan once the financial crisis was over. Our last communication was to Mark Miller the City Public Works Director at that time, when consideration of the sale of this site was being considered. (Jim Cutler transmittal is attached) While we had no problem with the sale of the site, we tried to make sure

01-1

that the City past decisions on this site was not lost to and was known to the new owner. For that reason the full Markham Ravine report and color photos and maps relevant to this site need to be included in the FEIR. 01-1 cont

Figure 7-5 of the Markham plan varies wildly from the Proposed General Plan designations. The Final EIR needs to specifically discuss the differences between these 2 maps and to list the different acreages involved. The loss of open space between this adopted Markham Ravine Plan and the proposal should be considered a significant environmental impact and add mitigation measures to deal with this issue. 01-2

An additional concern is that lack of trails along the creek corridor shown on Markham Ravine plan but not on the proposal. Creekside trails are an important component of the City and the City General Plan policies, especially T-5.7 which calls for trails and pathways along creeks and waterways. Such trails do not seem to be included within the project design. The Markham plan has specific discussion on this issue. Once again the FEIR requires discussion and mitigation on this Creekside trails. 01-3

After 5 years of drought, the wetland delineations found in the DEIR differ from those in more average rainfall years. The Delineation of Waters of the United States dated September 29, 2006 for the Corp of Engineers done for the Markham Ravine study in City files provides a better overview of site wetlands than is found in the DEIR. Assuming things may return to normal after this drought, a greater protected footprint may be needed. 01-4

The important point being made in this letter is that a more rigorous discussion of all differences between the Markham Ravine adopted plan and this proposal need to be discussed both in the FEIR and in staff reports when considering the merits of this proposal. 01-5

A second serious concern is that the eastern 2 parcels were historically designated by the City of Lincoln as a nature preserve. The signs posted around these parcels clearly acknowledged this designation. A color photo taken in 2013 of one of these 4 signs is attached. People bought adjacent homes based upon the City designation and realtors informed buyers that this area was protected. The sale of this land by the city to a private party does not change that history or that protection. That is one reason that the letter was sent to Mark Miller prior to the sale of this land so that full disclosure could be insured between buyer and seller that this issue is has not been resolved. The Final EIR needs to address this. 01-6

We recognize that massive staff changes provide challenges to preparing environmental documents and staff reports, but the history of such issues are still relevant to today's issues. O1-6 cont

Sincerely yours,

Paul Denzler, Chair of the Lincoln Open Space Committee

Letter O1	**Lincoln Open Space Committee** Paul Denzler, Chair November 8, 2016

O1-1 The commenter states that the Lincoln City Council adopted the Markham Ravine Nature Area Master Plan on November 22, 2005 and provided a draft version of the plan. The City has confirmed that the plan was adopted and included guiding policies and actions for development and management of lands within and near the plan area. Subsequent to the adoption of this plan, the City engaged in its general plan update process and reevaluated its goals and objectives for development within its boundaries. The General Plan 2050, adopted by the City Council on March 25, 2008, established current land use designations and governing policies including policies and designations pertaining to open space and recreation within and surrounding the Markham Ravine Nature Area. Specifically, the City identified and designated additional areas for residential and commercial development near Markham Ravine. The General Plan permits development closer to previously adopted preserve and buffer areas, and the General Plan is the governing land use policy.

Further, the Placer County Airport Land Use Commission also engaged in an update to its Airport Land Use Compatibility Plan (ALUCP) (adopted February 2014), which resulted in the opening of lands to residential and commercial development where they were previously restricted. Specifically, the project site was identified as being compatible with airport operations with residential or commercial development.

The DEIR used the adopted General Plan 2050 land use designations and policies and the Placer County ALUCP (2014) to evaluate the environmental impacts of the project. Overall, the project avoids impacts to riparian areas of Markham Ravine and would preserve the core habitats of the plan area. Further, the project provides recreational enhancements (e.g., trails, connections) that would be consistent with the recreational and access policies of the master plan. Subsequent to the City's receipt of this letter, the commenter submitted another letter (see comment letter O4 below), that expressed their satisfaction with the project site plan and its general responsiveness to the intent of the Markham Ravine Nature Area Master Plan. The City concurs that the project is appropriately protective through project design or mitigation of the Markham Ravine area and its resources and would be consistent with the intent of the master plan. Because of the changes to land use goals and policies subsequent to the adoption of the master plan (e.g., 2050 General Plan, Placer County ALUCP), no additional evaluation of the master plan is required.

O1-2 See response to comment O1-1.O1-3 See response to comment O1-1.

O1-4 A delineation of waters of the United States and stream and riparian areas subject to jurisdiction under Section 1602 of California Fish and Game Code was conducted by WRA, Inc. in 2015 and is included as Appendix A in this FEIR. Drought conditions were noted in the delineation report. The project was designed to avoid impacts to wetlands, riparian areas, and streams. See DEIR pages 4.1-1 through 4.1-4 and Impact 4.4-1 on DEIR pages 4.4-24 and 4.4-25.

O1-5 See response to comment O1-1.

O1-6 The project would not change land use in the area identified as the Remainder Area, which was established as a mitigation area 20 years ago. The project was evaluated for consistency with the General Plan 2050 land use designations. See Section 3.4.1 on page 3-5 of the DEIR.

Letter 02

From: Tony Frayji [mailto:TFrayji@frayjidg.com]
Sent: Monday, October 24, 2016 5:49 PM
To: Steve Prosser
Cc: Matthew Wheeler; 'Dick Peery'; Jason Reed; 'Chris Gill'; Jim Bermudez
Subject: Independence EIR

HI Steve

This email is regarding the EIR review/ comments for the Independence Project. We are very glad to see this project moving forward and looking forward to working with the City and Lewis Communities in order to benefit our projects and the existing residences and to make sure the process is as seamless as possible. We strongly believe in productive and positive cooperation that results in favorable outcomes to everyone.

02-1

Steve, It is our understanding based on the feedback we got from the City that the Land Plan exhibit shown in the EIR is not correct and needs to be updated. It is also our understanding that the connection from the Independence Project is at the Roundabout and not as shown on the exhibit to match the traffic Study completed by DKS.. in addition, we have discussed with the City last year the issue of the setbacks for the lots backing up to our project and any existing residential properties. We would like to make sure Independence includes similar setbacks as LDR setbacks to avoid having any issues with the proposed buildings being too close to the property line. This also provides better cohesiveness and transitions between the different zoning types. The land plan exhibit included in the EIR does not address this concern and we hope it is being addressed with the updates.

02-2

Please make sure we receive copies of the specific plan and GDP as soon as they are available to review them and provide additional feedback; Also please let me know if we need to send a formal letter on behalf of SUDB clients or this email is sufficient for your record and actions.

Thank you for your consideration.

Tony Frayji, PE
Principal
FRAYJI DESIGN GROUP, INC.
tfrayji@frayjidg.com
1540 Eureka Road, Ste 100
Roseville CA, 95661
Tel: (916) 782-3000
Fax:(916) 782- 3955
Cell: (916) 833-0306

Letter 02	**Frayji Design Group** Tony Frayji PE, Principal October 24, 2016

O2-1 The commenter indicates that the planned vehicular access point shown in the southwesterly corner of the project does not align with a planned street connection in the adjacent SUD-B Northeast Quadrant. The proposed access would be along the project's southerly boundary about 600 feet east of its westerly property boundary. A draft site plan for the SUD-B Northeast Quadrant property shows its connection to be closer to the westerly property boundary.

Exhibit 3-2 on page 3-3 of the DEIR is amended as follows (shown on page 2-64 below) to reflect proposed alignment of the southwest roadway connection to the SUD-B project and the northeast pedestrian connection to the Fullerton Ranch project.

O2-2 The commenter requests that residential lots adjacent to the project site include Low Density Residential (LDR) setbacks and points out that the land plan exhibit in the EIR does not address setbacks. The developer would indicate all required City setback requirements in the project's final subdivision maps. These maps would be reviewed by the City prior to project approval and City staff would ensure compliance with the City's required setback distances as part of the approval process.

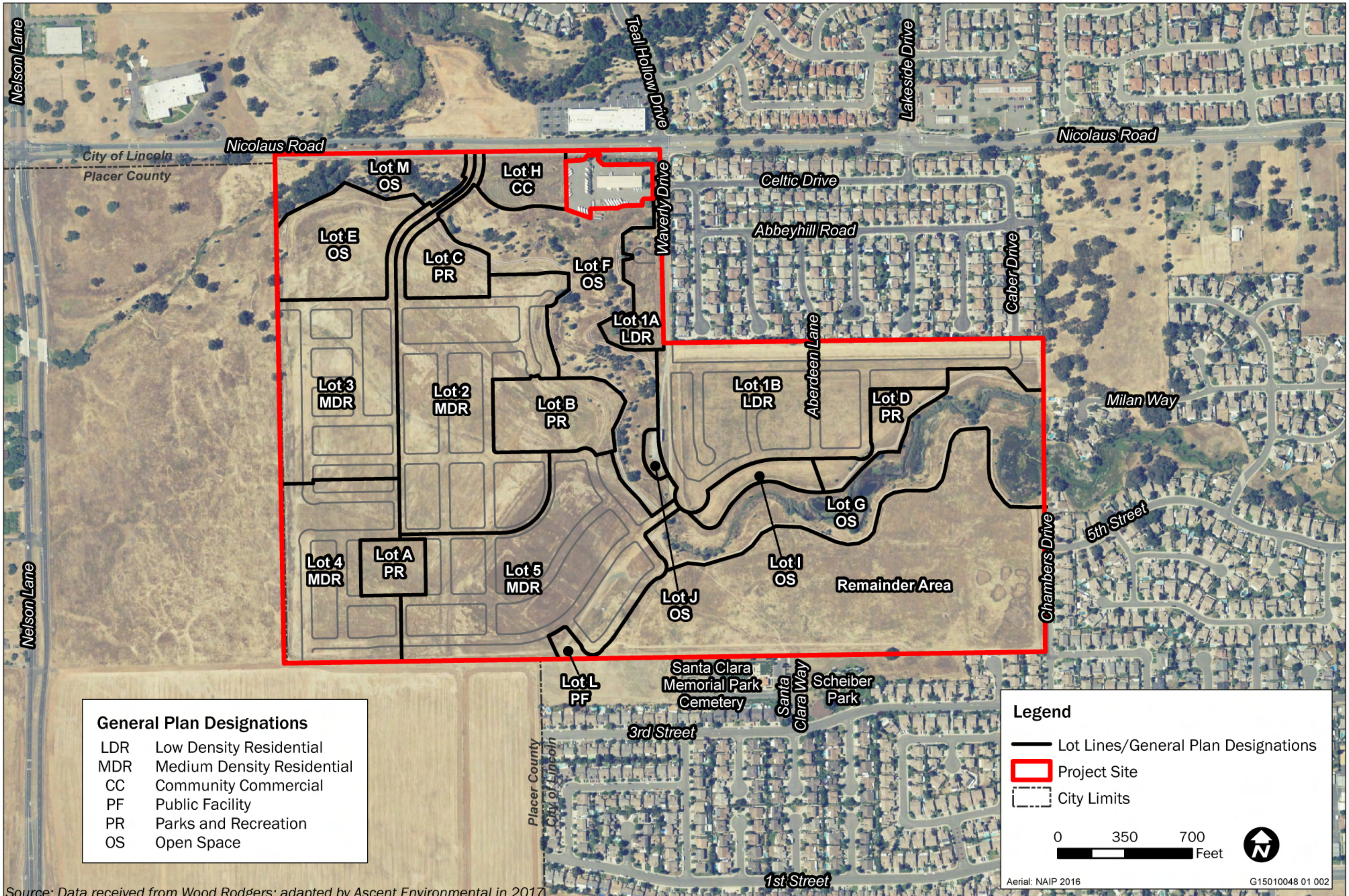

Exhibit 3-2

Project Location

Letter 03

Placer Community FOUNDATION

phone: 530-885-4920
mailing: P.O. Box 9207 • Auburn, CA 95604 *office:* 219 Maple St., Suite 200 • Auburn, CA 95603
www.placercf.org

November 14, 2016

Steve Prosser, AICP
City of Lincoln,
Community Development Department
600 Sixth Street
Lincoln, CA 95648

RE: Comments on Independence Draft EIR

Dear Mr. Prosser

Thank you for allowing the community to give comment to the Independence EIR. The City of Lincoln and the communities in Placer County lack an adequate supply of workforce and affordable housing. As it is needed for the community to grow and prosper, we hope the need to meet the workforce and affordability requirements are taken seriously. 03-1

According to current data prepared by SACOG. The affordable housing crisis in our community is significant. 42% of Lincoln's occupied housing units are paying 30% or more of their income towards housing costs: 03-2

Lincoln	Total Occupied	Number >30%	Percentage >30%
Owners	13,211	5,277	40%
Renters	3,727	1,902	51%
Total	**16,938**	**7,179**	**42%**

Source: 2014 5-year Census American Community Survey - Table B25106

Local giving. Lasting value.

Mr. Steve Prosser
November 14, 2016
Page 2

Since a significant number of household are paying more than 30% of their income on housing, the lack of affordable housing will have an indirect impact on the environment. A lack of affordable housing could result in the following:

1) Overcrowding - households that have too many occupants put a drain on community resources and infrastructure which includes water and wastewater treatment. If the lack of affordable housing continues to increase in Lincoln, overcrowding will have any impact community resources. 03-3

2) Commuting - Employees that can no longer live in the community in which they work will have to find housing elsewhere. This means increased impacts to traffic and air quality. If the lack of affordable housing continues to increase in Lincoln, impacts to traffic and air quality will become significant.

The City's housing element has a goal to accommodate new housing to meet the needs of present and future Lincoln residents and yet the housing element states that the City only approved construction of 73 affordable units from 2008-2012. It is difficult to determine how many affordable housing units have recently been approved since the City of Lincoln has not filed any of its annual reports since 2012. Regardless, it seems reasonable to conclude that there is not enough affordable housing to accommodate the housing needs of present and future residents of all income levels. 03-4

If the City of Lincoln continues to approve development projects without providing affordable housing, by the time the housing element is updated in 2021, there will be few opportunities to provide affordable housing, especially given the cities rapid growth rate. 03-5

We appreciate the opportunity to comment on the draft EIR.

Sincerely,

Veronica Blake, CEO
VB/fd

Letter 03	**Placer Community Foundation** Veronica Blake, CEO November 14, 2016

O3-1 The commenter provides prefatory remarks to the more detailed remarks stated later in comments. Please refer to response to comments O3-2 through O3-5.

O3-2 The commenter provides statistics regarding the affordability of housing in the City of Lincoln. These comments are included in the project record and will be considered by decision makers, but because they do not identify specific environmental issues, address potential concerns with the projects consistency with the City's Housing Element, or issues related to the adequacy of the DEIR, no further response can be provided.

O3-3 The commenter makes statements related to the possible effects of a lack of affordable housing on the environment. The first, is that the commenter expresses concern for overcrowding and the impacts on community infrastructure, including water and wastewater systems. The availability of water and wastewater service is discussed in Chapter 4.9 of this DEIR. The EIR states that the project would be served by the City of Lincoln with water received from Placer County Water Agency. The analysis concludes that the current water deliveries to City users are significantly lower than the full entitlement, and therefore, the capacity is sufficient for this project. Further, the project would also be served by the City's wastewater collection systems, and specifically by the reclamation facility that is approximately two miles south of the project along Fiddyment Road. The facility is currently operating at 4.2 million gallons per day but can be expanded up to 30 million gallons per day. Therefore, the capacity is sufficient for this project.

The commenter also notes the potential for traffic and air quality impacts if people are forced to commute due to unaffordable housing in the area. Air quality and traffic impacts were adequately addressed in Chapters 4.2 and 4.10, respectively, of this DEIR. The comment offers no evidence that would alter the analysis or conclusions of the DEIR; therefore, no further response can be provided.

O3-4 The commenter notes that the City's General Plan directs the City to provide adequate housing for existing and future residents of Lincoln, but only approved 73 affordable housing units between the years of 2008-2012. The commenter concludes that the City is not providing enough affordable housing for residents of all income levels at this time. These comments are included in the project record and will be considered by decision makers, but because they do not identify specific environmental issues or issues related to the adequacy of the DEIR, no detailed response is provided.

O3-5 The commenter expresses concern that if projects that do not provide affordable housing are continuously approved, the City of Lincoln will have created a deficit of affordable housing that will be difficult to remedy due by the 2021 Housing Element update. These comments are included in the project record and will be considered by decision makers, but because they do not identify specific environmental issues or issues related to the adequacy of the DEIR, no detailed response is provided.

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Letter 04

Lincoln Open Space Committee

P.O. Box 1197, Lincoln, CA 95648
www.LincolnOpenSpace.org

January 20, 2017

City of Lincoln
Community Development Department
600 6th Street, 3rd Floor
Lincoln, CA 95648

RE: Independence at Lincoln Development Project

The Lincoln Open Space Committee has discussed the Independence at Lincoln project and is generally very pleased with the proposed design. The nature of the landscape provides a positive starting place for good project design. As we indicated on our comments on the DEIR, there has been citizen involvement on this property since the decision was made by the City to build a new sewer plant at another location.

There was great concern around the year 2000 among area residents about planning and planning follow through on project along Markham Ravine. Based upon this frustration, the Markham Ravine Neighborhood Committee was established to push the City follow through with improvement along Markham Ravine. The City concurred on doing that and the Markham Ravine Nature Area Master Plan was adopted by the City November 22, 2005. They adopted an implementation program to be built over the next few years. Unfortunately, those efforts fell victim to the Great Recession. Importantly from our perspective, the 04-1

[redacted]

Markham Ravine Neighborhood Committee evolved into the Lincoln Open Space Committee to deal with open space issues on a citywide scale.

The City regraded some of the site over the last few years which eliminated the remnants of the sewer plant. That functionally made some the Markham Ravine plan for the western part of the site obsolete. We are pleased that the developer protected the northwestern end of the property if in a slightly different configuration than was originally envisioned for the property. 04-1 cont

There are two areas we wish to discuss on the master plan itself. The Mixed Use Area on the developers plan was shown for preservation on the Markham Ravine Nature Master Plan. Immediately to the east is a parcel of land owned by Western Placer Unified School District which is used as a bus maintenance and parking facility. The ultimate relocation of the bus facility would be of benefit to the open space elements of this project and to the existing residents further to the east. It would be desirable to add text to the approval documents and maps which encourage the City and the School District to work together to relocate the bus facility and to integrate the existing parcel into the final site planning of this Mixed Use Area. 04-2 The parcel, whether owned by the City or the School District, should be mandated to include a passive gateway into the adjacent open space area when the parcel is integrated within the adjacent Mixed Use Area. The hope is that a more creative mixed use design for both areas will be created. The passive gateway open space area should provide buffering to the open space areas already established by the development Master Plan. 04-3 The City General Plan specifically encourages loop trail and trail connections between neighborhoods. We would also like to see a trail be required from the Mixed Use Area to connect with the trail between Waverly Drive and the main access road into the site. 04-4

The Markham Ravine Nature Master Plan also called for an Interpretative Center to be built on site. While a building would be expensive to build and maintain, some interpretive signage along this trail adjacent to the creek and on the open lands within the Mixed Use Area would be a reasonable compromise consistent with both with the historical planning and creative design of the site. This could also serve as a staging area for the public wishing to enjoy the trails. A scaled down Interpretive Center with informational kiosks and displays explaining the habitat of the Markham Ravine area would be an educational feature that could also serve as a distinctive feature of the overall Mixed Use area. 04-5

The second area of concern is the Remainder Area. While a design is not known for this area, the Markham Ravine Nature Master Plan showed a larger protected 04-6

[redacted]

footprint than is reflected on the developer's master plan. We will be looking forward to a greater protected footprint in the future. The City should consider expansion of Scheiber Park into this area. One idea that could be conditioned even before that area is planned out is the construction of a trail along the southern and eastern perimeter of the site over the sewer easement. The goal is to provide a loop trail for the community on already easement protected land. Good design and amenities such as trails adds value to a project and marketing opportunities for the developers. 04-6 cont

Given the record of the City on the use of impact fees, the project facilities such as parks, trails, and open space improvements should all be turnkey facilities provided by the developer. Similarly, oak mitigation should be done within the open space lands onsite, rather than paying a fee. The conditions of approval should mandate this approach. The use of CFD's for ongoing operation and maintenance will spare the City budget while having those who receive the benefits of these facilities to pay for them. 04-7

Lastly, a detail on trail conditions of approval. Given the problem along the trails within the Twelve Bridges project where these fences have been vandalized often and easily. Consider using concrete trail posts for the fencing. These trail posts should look like the rest of the wooden posts. These should be placed along roadways and other areas where one could anticipate a safety or trespass issue. This should control long term replacement costs for the CFD which will be established. 04-8

It is nice to see a project that has been creatively planned. We hope the final results will live up to this potential.

Sincerely yours,

Paul Denzler
Chairman of the Lincoln Open Space Committee

[redacted]

Letter O4	**Lincoln Open Space Committee** Paul Denzler, Chair January 20, 2017 (received after public comment period)

O4-1 The comment states that LOSC is generally pleased with the proposed design of the project and provides an overview of protection efforts related to Markham Ravine over the years. This comment does not address the adequacy of the DEIR, but is noted for the decision makers' consideration. No further response is necessary.

O4-2 The comment requests that the adjacent Western Placer Unified School District (School District) bus facility be relocated to benefit the project's open space benefits and existing residents to the east. The comment encourages the City and School District to relocate the bus facility and integrate the parcel into the project's mixed use area. The School District's adjacent parcel is not proposed for development or relocation as part of this project. This comment does not address the adequacy of the DEIR, but is noted for the decision makers' consideration. No further response is necessary.

O4-3 The comment states that the School District parcel should be mandated to include a passive gateway into the project site's adjacent open space area after it is incorporated into the project's mixed use area. Development or modification of the School District property is not under consideration as part of this project. Please refer to response to comment O4-2 above.

O4-4 The comment references the City General Plan's encouragement of loop trail and trail connections between neighborhoods and requests that a trail connection be required from the mixed-use area to the trail between Waverly Drive and the main access road into the site. As stated on page 3-5 of the DEIR, proposed multi-use trail connections would connect to the eastern project boundary where existing Chambers Drive dead ends. These trail connections would provide the existing neighborhoods to the east and south with access to the open space and recreation components along and adjacent to the Markham Ravine tributary. Additional access points could be provided to the southwest and west to provide future connectivity to the adjacent undeveloped properties when they develop. Although proposed trails would not connect to Waverly Drive or Nicolaus Road under the project, there are a number of sidewalks proposed within the project site that could be used to access onsite trails from these locations.

O4-5 The comment requests interpretive signage along the proposed onsite Markham Ravine trail and on open space lands within the mixed-use area or a scaled down interpretive center with informational kiosks and displays explaining the Ravine's habitat. This comment does not address the adequacy of the DEIR, but is noted for the decision makers' consideration. No further response is necessary.

O4-6 The comment states they are looking forward to an increased protected footprint around the remainder area in the future. The comment also request that the City consider expansion of Scheiber Park into the remainder area and eventual construction of trails on perimeter of the remainder area. As stated on page 3-5 of the DEIR, no changes or development activity are proposed within the 35-acre parcel designated as a "Remainder Area" located within the southeastern portion of the project site. Any future proposal for development, would be required to undergo separate project review and consultation with the City of Lincoln and other outside resource agencies. This comment does not address the adequacy of the DEIR but is noted for the decision makers' consideration. No further response is necessary.

O4-7 The comment states that the projects facilities, including parks, trails, and open space improvements, should be turnkey facilities provided by the developer. The comment also states that oak mitigation should be completed within open space areas onsite instead of paying a fee. On pages 4.4-29 and 4.4-30 of the DEIR, Mitigation Measure 4.4-5 requires the developer replace oak woodlands onsite and that the developer comply with all conditions of project approval and any City guidelines for protected native oak trees and as stated in City of Lincoln Department of Public Works Design Criteria and Procedures Manual (City of Lincoln 2004). The comment's request for turnkey facilities is noted for the decision makers. Because the comment does not address the adequacy of the DEIR, no further response is required.

O4-8 The comment requests that the City consider use of concrete trail posts for fencing that is placed along roadways and other areas where trespassing is likely. The comment states that this condition should control long term replacement costs for the CFD which will be established. This comment does not address the adequacy of the DEIR, but is noted for the decision makers' consideration. No further response is necessary.

2.5 INDIVIDUALS

Letter I1

our history. And we're prepared to do so today and address any comments that we can.

DAN KARLESKINT: Thank you, Mr. Rodriguez.

Okay. It's open to the public. Everyone, we want you, anyone, who wishes to speak about EIR, please take the podium.

MARK LIECHTY: I didn't print enough copies here, but we'll start at one side and get to the other incase everyone hasn't seen the visual.

JIM BERMUDEZ: Just -- before you do, give it to the secretary.

MARK LIECHTY: There's nothing super about the picture. It's the end of Aberdeen Lane, so I don't take too much extra time. I did send an e-mail to Mr. Prosser. I'm assuming he's been really busy, and that he just hasn't had a chance to respond --

JIM BERMUDEZ: Go up and state your name, please.

MARK LIECHTY: So this is interesting because we signed papers on the house at the end of Aberdeen Lane, give or a take a week, 16 years ago. So it's taken a while to get to here, 'cause the week we signed, we were told eventually Aberdeen Lane would go through. And 16 years later, we're now having this discussion -- which is cool.

I1-1S

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I don't know how we get 575 people, 575 new homes up Aberdeen, up Waverly. I understand we said there's not a traffic impact. My kids both when from elementary school through Creekside, Glen Edwards, Lincoln High School. It's not possible for them to get from Aberdeen Lane safely to any of those schools -- even though Creekside was a, you know -- a driver and a 3 wood from being able to be on the campus. That's a two-mile walk across not good roads.

And, so, I would beg someone -- and I understand the developer -- we had a great conversation at Mr. Puenta's house about a year ago. And at that time, there were discussions about how kids could actually go to school without having to be driven. And, right now, I don't see that in the plan. I would -- I would beg of someone to figure out how we can tell our kids that they can ride their bikes to school without getting hit by cars and going, "We didn't see that coming." I1-2

It's not just that one little are around Caltrans. It's -- you can't safely -- there's no way of getting to Creekside or getting to Glen Edwards. There's no roadway if I'm driving my kids to school without having to go through that mess -- which is a mess today without these 575 new houses. So that's part A.

Part B is the picture. And I understand this I1-3

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may not be the EIR. But from the day we bought the house, we were told that that would be fully landscaped in as soon as we took possession of the property, that it would be paved or it would be properly taken care of. And then when we took the title of the deed, we were told by the city, but not in writing, "We're sorry. We need that for an emergency access, so we're taking your property, effectively, but you can keep paying the tax." So I've paid the tax, and I've waited.

And I've never been able the get anything back in writing from the city, including, again, Mr. Prosser. I'm assuming he's just been really busy. And he's going to put this in a plan that's going to promise that I'm going to get a proper graded driveway from the driveway that I put in the back, basketball court goes away, trees go away, and I don't end up with this ugly black asphalt as a "thank you" at the end of this.

And I don't know that this project for the city; and developer is probably a half a billion dollars or more, I understand it's a big deal for you. For me, I'm just one little guy in the corner with, "Where does this get written that this gets taken care of?" Because the city has not been willing to put that into writing, and what does that look like now? Because if we don't do it now, I don't know what later looks like.

I1-3 cont

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So I guess those are my two big concerns, is: How are we going to put 575 new homes with kids traveling through? I'm open -- I understand that it's going to come through Aberdeen, but how are we going to get people back and forth to school? And how are we -- what are you going to do to take care of the -- and if you haven't driven to the end of Aberdeen Lane, please, please do and take a look. And you'll understand what my concern is. There's no reasonable person who wouldn't understand this is a problem. But how does it get resolved?

I got a quote to get this thing landscaped about seven or eight years ago. And getting the driveway done, for me, was going to be probably 20 grand, or something. It's not cheap to get that properly asphalted and graded where the construction guys do it in an afternoon. And I just -- I'm an IT geek. I don't have construction. I1-4

Does that make sense?

JIM BERMUDEZ: Thank you. Can you state your name please?

MARK LIECHTY: I'm sorry?

JIM BERMUDEZ: State your name, please.

MARK LIECHTY: I'm sorry. Mark Liechty. And the property I'm asking about is 721 Aberdeen Lane. The guys at 720, across the street, have the other side of the -- and, by the way, this is the Google Map picture.

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The actual grass has now been replaced by rock because we have a drought, and I was trying to be considerate. So if you go to the house, that's not what it looks like.

I1-4 cont

JIM BERMUDEZ: Can you spell your last name?

MARK LIECHTY: L-I-E-C-H-T-Y.

Letter I2

JIM BERMUDEZ: Thank you.

DAN KARLESKINT: Thank you. Any other comments? Ma'am?

MINDY KRUTCH: This is not my thing. I teach first graders. I don't talk to adults. And I get hives on back to school night. So, my name is Mindy Krutch, K-R-U-T-C-H. And I'm at 940 Tartan Lane. I'm on the west side that backs up to Waverly. My concern, besides the fact that where I am I get all of the Glenmoor traffic in front of my house to go down Nicolaus to Nelson to 65. Now, I'm going to either have more traffic in front of me or behind me too. And that's my environment.

I2-1

I want to know what is going to be done about -- are we going to get a block wall? Is there going to be something to reduce the speed of the cars that would probably be zipping down Waverly if there's only that one little development that's going to be further down that's on the west side of Waverly? You know, those are things that impact our lives.

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I2-2

And I will tell you that where I live, in the second house from the corner, we used to have a Border Collie. She did not go to the street, but she ran from the corner to the driveway of house on other side of us. And people would slow for my dog being on the sidewalk, but people would not slow for the children playing on the sidewalk. And if you're going to add more traffic there, I have a big concern. Because now -- even though my children are gone, one of them lives with me and my three grandchildren. And we don't let them out to the front yard very much.

People come around that corner as if it's Infinity Raceway. And, somehow, that traffic needs to be slowed down. We've invited Lincoln PD to come and sit in our driveway and write tickets for the people running the stop sign and speeding. So truly to add more houses, I don't have a problem with the houses. My problem is with the traffic and their driving.

DAN KARLESKINT: Okay. Thank you.

Yes, sir.

Letter I3

I3-1

JAMES MCCLOUD: Good evening, James McCloud, 402 Montaro court. Just a couple comments on the draft EIR. Nicolaus Road, the impact -- most of the traffic impact will be on Nicolaus Road, we know that. They're taking 8700 ADT up to 11,500 ADT. And the comments in

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the EIR basically says that they are going to illuminate their intersection. I3-1 cont

I think it's time that the city and the developers in this area start thinking about a street light system for Nicolaus Road. It's a dark roadway. We have had a fatality out there in the last 15 years at night. I think it's time for safety of the motoring public that a street light system gets installed on Nicolaus Road. I think it's a safe route -- the school plan that the gentleman brought up would be a good idea to incorporate into the EIR. It is important that the developer work with the school district on whatever mitigations are required of the school district -- this is a general plan. I3-2

And, also, one other item that seems to keep getting overlooked, for some reason -- I don't know why -- but I live on Montaro Court, And I have an adjacent property line with the development. And when the waterlines in that area was installed, there was a 16-inch waterline installed on Milan Way. And there was a 16-inch waterline installed in Caber over in Glenmoor. And there's a temporary 12-inch connection that runs through this gentleman's property that makes a loop connection between for the city's system. I3-3

I've went through the utility plan, and I see no

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comment about taking the loop system out of service and what impact that would have on fire flow services for my development that I live in or the Glenmoor development. And I think it would be important to make that connection between Glenmoor and Brookview with this development and the development that we're going to be seeing in the near future with the Fullerton property. I think it would be important to the city system. And I would like to see us keep that waterline moving. I3-3 cont

I'm assuming, also, that phasing -- I saw something about phasing, phase one, phase two -- phase one was 120-something units, and phase two is the remainder. I'm assuming that Waverly is part -- improvements to Waverly Drive is part of phase one. Because that would certainly impact the residents in Glenmoor if it was not, so -- and that's all I have. I3-4

Thank you.

DAN KARLESKINT: Thank you.

Any further comments from the public? Going once, twice, three times. That will close the public meeting. Thank you very much for your comments. They have been taken down verbatim and we'll be responding to them.

(Whereupon, the public comment portion of the meeting was concluded at 6:37 p.m.)

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REPORTER'S CERTIFICATE

I hereby certify that the preceding commentary was stenographically reported, at the time and place herein named, by me, a duly Certified Shorthand Reporter and disinterested person, and was thereafter transcribed into typewriting.

I further certify I am not of counsel or attorney for either or any of the parties at said meeting nor in any way interested in the outcome of the cause.

Dated and signed this 6th day of November, 2016.

KNPowers

KARLY N. POWERS
Certified Shorthand Reporter
CSR No. 13991

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Letter I1	**Mark Liechty** October 26, 2016

I1-1 The comment provides prefatory remarks to the more detailed remarks stated later in his comments. See response to comments I1-2 through I1- 4.

I1-2 The comment expresses concern regarding potential safety impacts along Waverly Drive and Aberdeen Lane. Aberdeen Lane would be one of two public streets (along with Caber Drive) that would connect the easterly portion of the project to the existing residential area east of Waverly Drive and south of Nicolaus Road. Exhibit 4.10-6 of the DEIR shows that the project would add 19 AM peak hour trips and 24 PM peak hour trips into and out of this residential area via the Nicolaus Road/Lakeside Drive/Glenmoor Lane intersection. A modest amount of traffic may also use Aberdeen Lane to Abbeyhill Road to Tartan Lane to access Waverly Drive. On a daily basis, less than 300 vehicles (both directions of travel combined) would pass through the neighborhood. This level of traffic would not exceed the capacity of any of the internal streets and would not cause an impact at the Nicolaus Road/Lakeside Drive intersection. The majority of the project land uses are located west of Waverly Drive. Accordingly, Waverly Drive and the new Road B would accommodate most project trips.

As shown in Table 4.10-6 of the DEIR, Waverly Drive south of Nicolaus Road would carry 3,000 vehicles per day under existing plus project conditions. Under cumulative plus project conditions, it would carry 3,100 vehicles per day. This segment of Waverly Drive would be designed as a two-lane collector street including an on-street bike/NEV lane and detached sidewalks. This type of facility can comfortably accommodate 3,100 vehicles per day.

The comment also expresses concern regarding challenges students face when walking or biking to Creekside Oaks Elementary School on 1st Street and Glen Edward Middle School on L Street. The project would construct a 10-foot multi-use trail that parallels both sides of Markham Ravine and includes connections to Street 18, Waverly Drive, and other streets within the plan area. The multi-use trail would extend from the easterly boundary of the project to a future connection near Chambers Drive (north of Fifth Street). Once this connection is made, it would be possible for students to walk or ride a bike via this connection to both schools, without having to use Nicolaus Road or Joiner Parkway.

I1-3 The comment raises concerns related to a portion of the emergency access adjacent to his property not being landscaped or paved by the City. This comment does not address the content, analysis, or conclusions in the DEIR. Therefore, no further response is provided here. All comment letters submitted during the DEIR public review period will be reviewed and considered by the City of Lincoln Planning Commission and City Council before a decision on the project is rendered.

I1-4 The comment states that he has obtained quotes for paving and landscaping an emergency access area adjacent to his house. The comment does not pertain to the environmental analysis in the DEIR and no further response is required.

Letter I2	**Mindy Krutch** October 26, 2016

I2-1 The comment expresses concern regarding the increase in traffic anticipated on Tartan Lane, which is located directly east of and parallel to Waverly Drive. The comment also expresses concern regarding the amount of traffic and speeding expected on Waverly Drive. Tartan Lane would be used by a modest number of vehicles to travel from the easterly portion of the project site to Nicolaus Road via Aberdeen Lane to Abbeyhill Road to Tartan Lane. Waverly Drive would be more direct and quicker for most motorists. Refer to response to comment I1-2 above regarding the volume of traffic expected to use Waverly Drive. Waverly Drive extends for approximately 1,800 feet between Nicolaus Road and the proposed roundabout with Streets 6/Street 7. Traffic controls at intersections between these two termini have not yet been determined. Therefore, the anticipated speeds of motorists on Waverly Drive cannot be estimated at this time. However, there are various options available to the City to control speeds if they become excessive. Some examples include, but are not limited to, speed tables, speed humps, stop signs, and raised crosswalks. If a speeding issue is determined to exist, then these potential 'traffic calming' solutions shall be evaluated.

The comment also asks if a block wall will be provided. As described on page 3-14 of the DEIR, a six-foot tall masonry sound wall would be constructed to reduce traffic-noise exposure and provide added privacy for existing residences located adjacent and east of Waverly Drive. The wall would be located at the property line of residences located directly adjacent to Waverly Drive.

I2-2 The comment raises concerns about the safety of children and pets on Tartan Lane and asks that traffic be slowed. Refer to response to comment I2-1 above.

Letter I3	**James McCloud** October 26, 2016

I3-1 The commenter expresses safety concerns for the anticipated traffic increases on Nicolaus Road and requests that the City and developers consider a street light system for Nicolaus Road. These comments will be considered by decision makers, but because they do not identify specific environmental issues or issues related to the adequacy of the DEIR, no detailed response is provided.

I3-2 The commenter notes that he agrees with previous commenter regarding pedestrian improvements for children walking or biking to school and suggests that the developer of the project should be working with the school to provide adequate mitigation for the increased traffic. Regarding potential safety impacts for children walking or biking to school, please refer to response to comment I1-2 above. Also, see page 4.10-22 of the DEIR, 'Mitigation Measure 4.10-3: Impacts to pedestrian facilities'. This measure requires the project applicant to demonstrate to the City's satisfaction that it has coordinated with Western Placer Unified School District to investigate, design, and if feasible, construct a sidewalk that would extend along the south side of Nicolaus Road west of Waverly Drive along the frontage of the Western Placer Unified School District bus yard. In addition, the project applicant would be required to coordinate with the school district on any applicable mitigation related to new subdivisions. No further response is required.

I3-3 The comment notes that there is no reference in the utility plan to remove the temporary loop water system and replace with a connection between the Glenmoor and Brookview developments. He notes that he is concerned about the flow of water available for fire service to his development and the Glenmoor properties.

As described in Chapter 4.9 of this DEIR, the California Water Code Section 10910 requires that the lead agency (City of Lincoln) identify the public water system that would serve the project and assess whether the water supply is sufficient to provide for the region as a whole in both the short- and long-term horizons. This requirement is further supported by the City's General Plan Policies PFS 1.1, 1.3, 2.3, 2.9 and 2.10 which require the City to ensure that the development will be served by an adequate supply of water and reserve water for fire services. This ensures that the City must evaluate any impacts related to the provision of water supply for hydrants in the surrounding developments and within the project.

I3-4 The comment expresses concern that improvements to Waverly Drive should occur with Phase I development. The Applicant has confirmed that improvements to Waverly Drive would be required during Phase 1 development.

Letter
I4

From: Mark Liechty [mailto:mark@liechty.net]
Sent: Thursday, October 06, 2016 10:00 AM
To: Steve Prosser
Cc: Liechty, Tami (Contract Agreement Renewal Specialist (CARS))
Subject: Independence at Lincoln plan -Aberdeen Lane

Steve:

We may have talked about this (I have discussed with many at the City in the past 15 years) but I have not been able to get anything in writing and would very much appreciate getting it in place before construction begins.

When the Glenmoor Subdivision opened I was told that the "Hammerhead" turn around was going to be finished off nicelt like all other properties before the sale on the house closed.

Then the week of the closing I was told I could take or leave the house but the city of Lincoln demanded that the hammerhead stay as an emergency turnaround. I4-1

Multiple people have promised that when the street went through we would get professional landscaping and or driveways put in to deal with the issue as no one wanted us harmed. How to resolve this and at whose cost is always the open question.

As we all know the development has taken a lot of twists and turns and could still have more before it is over. Last conversations with the developers at Allen Cuenca's house in January repeated the idea that we would be taken care of and I am hopeful this is the case.

I would expect that the remediation for both 720 and 721 Aberdeen can be put into the master plan as not doing so has a very high probability of finger pointing and none of us want that.

What was promised was a design that could not be completed without knowing what was going to happen to the sidewalk just past the property.

From the looks of things Irrigation and a finished driveway may be the best answer or maybe something else that can be discussed. I4-2

My hope is a fast response from you and a written agreement before any kind of construction begins. I am guessing you have driven to the end of Aberdeen and can see what I have paid property taxes on (the City refused to put the demand to leave the hammerhead in writing so this is not documented) and we can close this long standing loop as part of the much bigger project.

Thanks for your attention.

Mark and Tami Liechty
721 Aberdeen Lane
916-769-4975

Letter I4	**Mark and Tami Liechty** October 6, 2016

I4-1 The comment describes the history of the "hammerhead" turnaround adjacent to his property at 720 and 721 Aberdeen Lane. The comment does not pertain to the environmental analysis in the DEIR. All comment letters submitted during the DEIR public review period will be reviewed and considered by the City of Lincoln Planning Commission and City Council before a decision on the project is rendered.

I4-2 The comment states that the developer should include landscaping improvements at the "hammerhead" turnaround as part of the masterplan and EIR. This is a project design issues that does not pertain to the environmental analysis in the DEIR. All comment letters submitted during the DEIR public review period will be reviewed and considered by the City of Lincoln Planning Commission and City Council before a decision on the project is rendered.

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3 REVISIONS TO THE DEIR

This chapter presents specific text changes made to the DEIR since its publication and public review. The changes are presented in the order in which they appear in the original DEIR and are identified by the DEIR page number. Text deletions are shown in ~~strikethrough~~, and text additions are shown in <u>underline</u>.

The information contained within this chapter clarifies and expands on information in the DEIR and does not constitute "significant new information" requiring recirculation. (See Public Resources Code Section 21092.1; CEQA Guidelines Section 15088.5.)

Revisions to Chapter 2, Executive Summary

The following amends Table 2-1, page 2-6 of the DEIR to include Mitigation Measure 1. The City shall also include this mitigation measure as a condition of approval for the project.

<u>Mitigation Measure 1: Reduce long-term operation-related ROG and NO_X emissions.</u>

<u>The following measures shall be implemented to reduce long-term operation-related emissions of ROG and NO_X:</u>

- <u>Participate in the PCAPCD Offsite Mitigation Program by paying fees based on the project's contribution of pollutants (ROG and NO_X), as follows:</u>
  - <u>The applicant shall pay $152 per residential unit (both single- and multi-family) to the PCAPCD's Offsite Mitigation Program (total fee due is $95,755.44 based on the current fee rate of $18,260 per ton of NOx and/or ROG), to offset 2.67 tons of ROG and 2.58 tons of NO_X. The payment of the fee shall be apportioned based on the number of residential lots created per each small lot final map and shall be due prior to each final map approval.</u>
- <u>Provide gas outlets, where natural gas is available, in residential backyards for use with outdoor cooking appliances such as gas barbeques.</u>
- <u>Install electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.</u>
- <u>Include a conduit raceway in each single-family home to a spare electric box in the garage that is sized for a future minimum 50-ampere 220-Volt outlet and a 220-Volt breaker space must be available in the electrical panel to promote electric vehicle usage.</u>
- <u>Distribute educational information on how homeowners can increase energy efficiency and conservation in their new homes in the Covenants, Conditions, and Restrictions for the projects within the Plan area. The information shall be delivered as part of a "move-in" packet prior to occupancy of the residence.</u>
- <u>Install electric vehicle charging stations and signage within designated spaces for non-residential developments.</u>
- <u>Install or designate vanpool parking only spaces and preferential parking for carpools to accommodate carpools and vanpools in employment areas (e.g., community commercial, business-professional uses).</u>
- <u>Equip all truck loading and unloading docks within commercial areas with one 110/208-volt power outlet for every two dock doors. Signs shall be posted stating "Diesel trucks are prohibited</u>

from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-volt outlets to run auxiliary equipment."

- Design streets to maximize pedestrian access to transit stops, where feasible.
- Install electric outlets on parks and public/quasi-public lands to promote electric landscape maintenance equipment be utilized to the extent feasible.

Revisions to Chapter 3, Project Description

The following text has been added within Section 3.4.2, Other Community Features, of the DEIR. The City will also include this statement as a condition of approval for the project.

3.4.2 Residential Villages and Community Center

The proposed community includes five residential village neighborhoods, each with distinct single-family, residential lot sizes. Each village would have a range of homes sizes which would be determined by future home buyer demand. Four of the five village neighborhoods are adjacent to and surround a central park (Lot B) with a community center which would be dedicated to the City of Lincoln after project build-out.

To meet regional air quality requirements and standards, no wood burning appliances, including fireplaces and woodstoves, would be installed within the residential and commercial areas, and indoor or outdoor fireplaces or stoves would be fueled by natural gas and clearly delineated on the floor plans for all building permits.

Exhibit 3-2 on page 3-3 of the DEIR is amended as follows to reflect proposed alignment of the southwest roadway connection to the SUD-B project and the northeast pedestrian connection to the Fullerton Ranch project (revised exhibit provided on page 3-3 below):

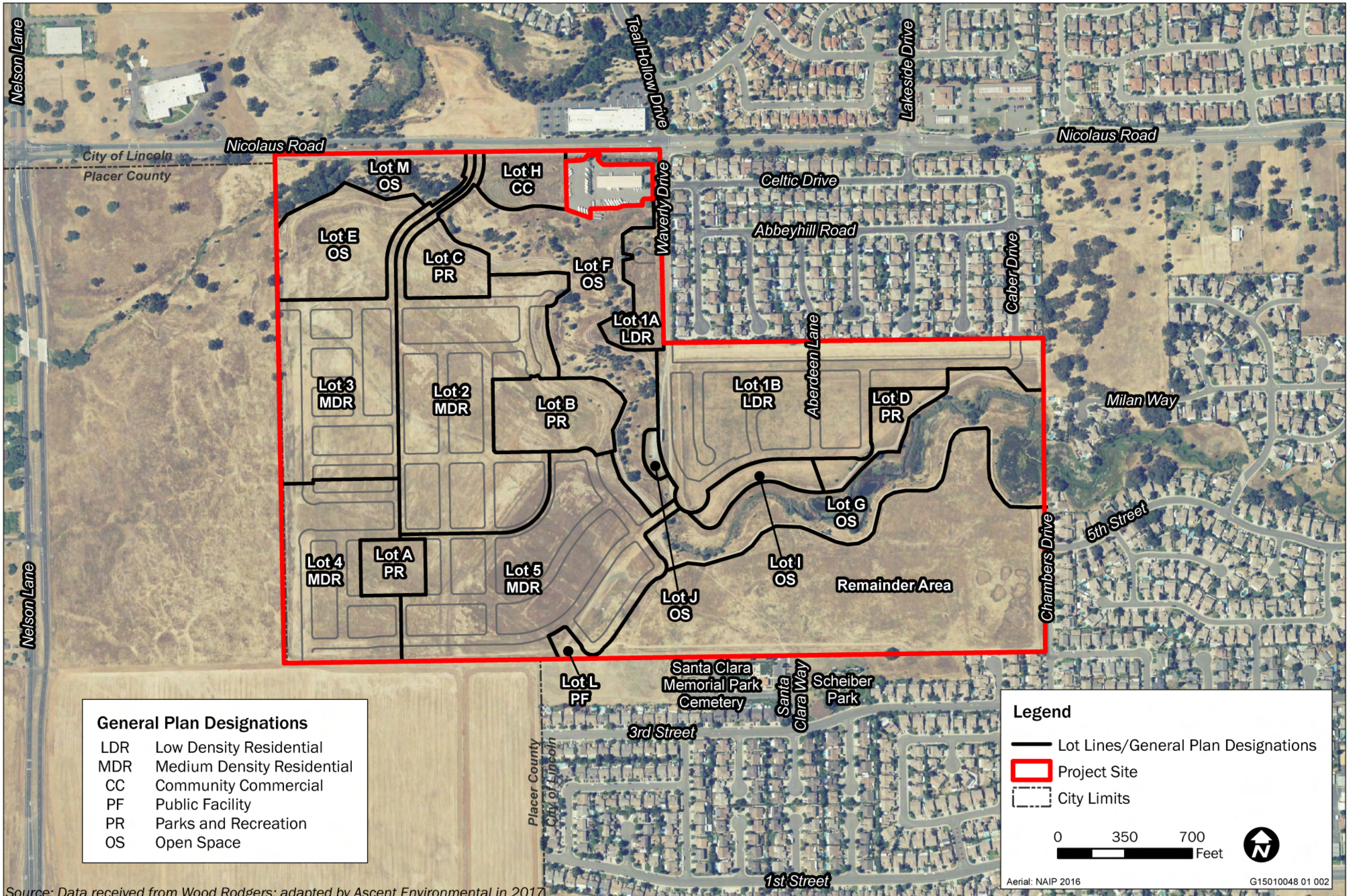

Exhibit 3-2 **Project Location**

Revisions to Section 4.2, Air Quality

The following changes to the DEIR show the revisions to Mitigation Measure 4.2-1b on Page 4.2-15 of the DEIR.

The applicant shall participate in PCAPCD's offsite mitigation program, the Land Use Air Quality Mitigation Fund, by paying the equivalent amount of air quality mitigation fees for the project's contribution of NO_X that exceeds the 82 lb~~s~~/day threshold, or the equivalent as approved by PCAPCD. The air quality mitigation fee shall be paid at the time of approval of the Dust Control Plan required under Mitigation Measure 4.2-1c below. The air quality mitigation shall also be explicitly stated in the project's Conditions of Approval document. As emissions of NO_X would be higher during the initial stages of project implementation (i.e., the first two years of construction ~~2016 and 2017~~), participation in PCAPCD's offsite mitigation program would only be necessary to offset NO_X emissions during that period. Emissions of NO_X in 2017 would be reduced below the PCAPCD threshold through incorporation of onsite reduction measures under Mitigation Measure 4.2-1a. Therefore, payment into the PCAPCD offsite mitigation program would only be necessary for 2016. The current applicable fee rate~~ of the program is~~ $18,260 per ton of pollutant. Based on this fee rate, the air quality mitigation fee amount estimated to be paid by the project would be $22,378. It should be noted that the fee estimate is calculated after accounting for onsite reductions and is provided for disclosure purposes. The actual amount may vary based on detailed fleet information and onsite reduction calculations, to be provided to PCAPCD before grading begins. The actual amount to be paid shall be determined, and satisfied per current guidelines, at the time of approval of the Grading or Improvement Plans.

The following revisions have been made to amend Impact 4.2-5 on page 4.2-22 of the DEIR as follows:

> Implementation of the project would not locate people in close proximity to existing odor sources. There are no sources of objectionable odors, such as landfills or wastewater treatment facilities, within a mile of ~~near~~ the project site. Further from the project site, the Western Regional Sanitary Landfill (WRSL) is located approximately 3.5 miles southwest of the project site; and the City of Lincoln Wastewater Treatment and Reclamation Facility (WTRF) is located approximately 2 miles northwest of the project site. According to PCAPCD, both the WRSL and the WTRF are located beyond the screening distance for odor impacts from these sources (two miles) (PCAPCD 2012: Table 4-2). Additionally, ~~While~~ a sewer lift station is proposed to be constructed on the south side of the project site.~~,~~ However, the wells and pumps would be in a structure below grade, and the electrical controls and mechanical valves will be in a structure above grade, which would provide both noise attenuation and odor control.
>
> Because the project would not result in the frequent exposure of a substantial number of members of the public to objectionable odors, this impact would be **less than significant**.

Revisions to Section 4.4, Biological Resources

The last paragraph on page 4.4-17 of the DEIR has been amended as follows:

> ### Section 1602 Streams and Riparian Areas
>
> Preliminary maps of potentially jurisdictional areas under Section 1602 FGC for portions of the project site were prepared by WRA, Inc. (2015b). The methodology used to delineate CDFW jurisdictional areas and detailed maps are provided in Appendix F of the Responses to Comments Documents for the Final EIR. Potentially jurisdictional areas include a perennial stream, as well as adjacent riparian vegetation and wetlands. The total area of Section 1602 jurisdiction consists of 13.50 acres and is summarized in Table 4.4-5. None of these protected features are located within the area disturbed by proposed construction activities.

Impact 4.4-2 on page 4.4-25 of the DEIR has been amended as follows:

Impact 4.4-2: Impacts to Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors.

Implementation of the project could disturb nesting Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors, potentially resulting in their abandonment, failure, and/or mortality of chicks and eggs. Individual mortality and loss of nests would be a **potentially significant** impact.

The project site contains isolated trees as well as riparian and oak woodland land cover that could be used for nesting by hawks and owls. <u>No Swainson's hawk nest sites have been observed on the project site (WRA 2015a: 26).</u> The non-native grasslands and adjacent agricultural fields provide potential foraging habitat for hawk and other raptors.

According to the CNDDB, the closest documented nesting of Swainson's hawks is about half a mile northeast of the project site in a valley oak in 2003; additionally, there are several other documented nesting occurrences within 5 miles (CDFW 2015). Swainson's hawks were observed soaring over the project site during the August 2015 WRA site visit (WRA, Inc. 2015a). The foraging habitat on the project site is considered low quality for Swainson's hawk because it is mostly disturbed soils from the former wastewater treatment plant and is fragmented and disturbed by adjacent land uses. <u>Swainson's hawk is strongly associated with agricultural areas that provide suitable foraging habitat. The suitability of foraging habitat for Swainson's hawk is based on (1) patch size of the habitat, (2) prey abundance, and (3) prey accessibility. Swainson's hawk tend not to use small patches of foraging habitat and prefer to forage over large areas in non-fragmented landscapes (Estep 2008). Abundance of prey, particularly of meadow vole (Microtus californicus), pocket gopher (Thomomys bottae), as well as other small rodents, including deer mouse (Peromyscus californicus) and house mouse (Mus musculus), is an important component of suitable foraging habitat for Swainson's hawk (Estep 1989). Foraging areas with low vegetative cover is also important so that Swainson's hawks are able to access the ground and capture prey. Agricultural practices or vegetation management can also influence suitability of foraging habitat. Commonly, Swainson's hawks will follow mowers and tractors, capturing prey that is visible after vegetation cover has been reduced or small mammals have been injured (Estep 1989). Although Swainson's hawks may fly over the site and it is possible that they could forage on the site if a prey item was visible, the project site does not meet the criteria of having suitable non-fragmented habitat, prey abundance, and prey accessibility. Conversion of open space and non-native grassland on the project site would not result in a significant loss of foraging habitat for Swainson's hawk.</u> White-tailed kite, a Fully Protected species under the FGC, has also been observed foraging over the project site and could also nest in large trees on or near the project site (WRA, Inc. 2015a). Western burrowing owl, which is designated by CDFW as a species of special concern, nests in burrows and could also nest in the disturbed and non-native grassland habitat on the project site.

Construction and demolition activities for the project may remove nest trees or disturb active raptor nests, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Nest loss or chick mortality would be a **potentially significant** impact for nesting raptors.

Mitigation Measure 4.4-2 on page 4.4-26 and 4.4-27 of the DEIR has been amended as follows.

Mitigation 4.4-2: Impacts to Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors.

Tree-nesting raptors (including Swainson's hawk and white-tailed kite):

- If removal of a known nest tree is required, it shall be removed when no active nests are present, generally between October 1 and February 1.

- If project activity would commence between February ~~2nd~~ 15th and September ~~30th~~1st, a qualified biologist shall be retained to conduct preconstruction surveys for active nests in suitable habitat on and within 0.25 mile of the project site no more than 14 days and no less than seven days before commencement of ~~construction~~ project-related ground disturbance or vegetation removal activities. If this survey does not identify any nesting raptors in the area within the project site that would be disturbed plus the 0.25-mile radius, no further mitigation would be required. If ground-disturbing construction activities cease for a period of two weeks or longer, or if there is a change in severity of construction disturbance, surveys for nesting raptors shall be conducted again.

- If an occupied nest is present, CDFW guidelines recommend implementation of a 0.25- mile buffer for Swainson's hawk (CDFG 1994) and 500 feet for other tree-nesting raptors, but the size of the buffer may be adjusted if a qualified biologist and CDFW determine that it would not be likely to adversely affect the nest and shall be based upon observed behavior of the nesting birds. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the protective buffer shall be increased such that activities are far enough from the nest that the birds no long demonstrate agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active or that the young have fully fledged. Monitoring of the nest by a qualified biologist shall be required if the activity has potential to adversely affect the nest. For Swainson's hawks, no intensive new disturbances or other project-related activities that could cause nest abandonment or forced fledging, shall be initiated within the ¼-mile (buffer zone) of an active nest between March 1 - September 15 (CDFG 1994).

Burrowing owl:

- A qualified biologist shall be retained to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 150 meters of project activities. At least four ~~S~~surveys shall be conducted prior to the start of construction activities during breeding season. Surveys shall be conducted before project activity following updated survey guidelines (CDFG 2012). One survey shall be conducted between 15 February and 15 April, and a minimum of three additional survey visits shall be conducted, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Surveys will not be conducted during inclement weather, when burrowing owls are typically less active and visible. If burrowing owls or evidence of burrowing owls (e.g., whitewash or pellets) are not observed during surveys, no additional mitigation is necessary.

- During the breeding season (February 1 through August 31) occupied burrows shall not be disturbed. The development of a protective buffer shall be supported by a qualified biologist. The protective buffer shall be informed by monitoring the burrowing owls sensitivity and shall be put in place to prevent burrow destruction and disturbance to nest sites (including nest abandonment and loss of eggs or young). The 2012 CDFG Staff report identifies variables to consider for the buffer such as habitual disturbances (visual and audible), existing vegetation, and type and extent of disturbance and impact. The staff report gives general guidelines for buffers during the breeding season. It recommends that, at minimum, the protective buffer during the breeding season be 200 meters; moving up to 500 meters for high levels of disturbance. These guidelines shall be followed. If activities are allowed closer than these recommended setback distances, then a broad-scale, long-term, scientifically-rigorous monitoring program that ensures that the owls are not detrimentally affected by the alternative approach shall be conducted. The protective buffer shall remain until the end of the breeding season unless a qualified biologist approved by the permitting agencies verifies through non-invasive means that either: 1) the birds have not begun egg-laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.

- If occupied burrows cannot be avoided, burrowing owls occupying the project site shall be evicted from the project site during the non-breeding season (September 1 through January 31) by passive relocation to encourage owls to move to alternative burrows outside of the disturbance area. A ~~Passive Relocation~~ Burrowing Owl Exclusion Plan shall be prepared as described in the CDFG Staff Report on Burrowing Owls (2012) and shall include compensatory mitigation for permanent loss of occupied habitat in accordance with the guidance in the CDFG Staff Report on Burrowing Owls (2012). No passive relocation shall occur until CDFW approves the plan. No occupied burrows found by the survey shall be disturbed during the breeding season. After burrowing owls have been confirmed absent or removed from the site, the burrows may be destroyed.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-2 would reduce potentially significant impacts on Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors to **less-than-significant** levels because it would ensure that project activities would not remove an active nest tree or burrow, disturb nest sites, and prevent nest abandonment and loss of eggs, young, or individuals.

The second paragraph under Impact 4.4-3 on page 4.4-27 of the DEIR has been amended as follows:

Tricolored blackbird is designated as a species of special concern and was designated as a candidate for state threatened status by the California Fish and Game Commission on December 10, 2015. As a candidate species, the tricolored blackbird receives the same legal protection afforded to an endangered or threatened species (Fish & Game Code, § 2085). Tricolored blackbirds are colonial nesters that prefer nesting in thick stands of emergent wetland vegetation such as cattails, tules, and blackberries. They require a permanent water source at or adjacent to their nesting area. Tricolored blackbirds have also been observed nesting in riparian vegetation such as willows (*Salix* spp.), thistles (*Cirsium* spp.), wild rose (*Rosa* spp.) when freshwater emergent vegetation is not available. They nest from April through August. Nesting areas are usually within three miles of foraging areas (i.e., rice fields, pond margins, and grasslands). Freshwater marsh and blackberry bushes present in mesic areas within the project site could provide potential nesting habitat for tricolored blackbirds. Non-native grasslands and adjacent agricultural fields could be used for foraging~~.~~, but it is considered low quality because it does not provide an abundant, concentrated supply of insects (such as associated with dairy farms or wastewater treatment plants). Because other non-native grasslands and agricultural areas are available in the region, loss of low quality foraging habitat on the project site is not considered a significant impact and no mitigation is required.

Mitigation Measure 4.4-3 on page 4.4-28 of the DEIR has been amended as follows:

Mitigation 4.4-3: Direct loss or disturbance of special-status bird (non-raptor) nests.

a. To the extent feasible, construction-related vegetation removal shall occur before the nesting season (February 15 – September 15). If vegetation removal or other disturbance related to construction is required during the nesting season, focused surveys for active nests of special-status birds shall be conducted before and within 14 days of initiating ground-disturbance or vegetation removal associated with project construction. A qualified biologist shall conduct preconstruction surveys to identify active nests that could be affected. The appropriate area to be surveyed and timing of the survey may vary depending on the activity and species that could be affected. If no active nests are found during focused surveys, no further mitigation shall be required.

b. If ground-disturbing construction activities cease for a period of two weeks or longer, or if there is a change in type of construction disturbance, surveys for nesting birds shall be conducted again, as described above.

~~b~~c. Should any active tricolored blackbird colonies or other special-status bird be found nesting on the project site, the project applicant, in consultation with the City and CDFW, shall avoid all active colony and nest sites while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season or establishing a buffer around the colony or nest site. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the colony site. The size of the buffer zone shall be determined in consultation with the City and CDFW, and shall be~~, at a minimum, 100 feet~~ based on the behavior of the nesting birds. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the protective buffer shall be increased such that activities are far enough from the nest that the birds no long demonstrate agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. The buffer zone shall be delineated by highly visible temporary construction fencing. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used.

Revisions to Section 4.6, Hydrology and Water Quality

Impact 4.6-2 on pages 4.6-13 and 4.6-14 of the DEIR are amended as follows:

Impact 4.6-2: Impacts to stormwater drainage systems.

The project would add additional impervious surfaces at the project site, which would increase surface runoff on an ongoing basis. This increase could result in an increase in both the total volume and the peak discharge rate of stormwater runoff; however, the drainage study conducted for the project concluded that post-project peak ~~runoff~~ flow rates and ~~water quality~~ runoff volume would be reduced to pre-project conditions through the use of detention basins. Therefore, this impact would be **less than significant.**

The site is currently fallow land that was the previous site of the City of Lincoln wastewater treatment facility, and construction of the project would develop approximately 97 acres of the 159-acre site. Therefore, the project would substantially increase the amount of impervious surfaces onsite. However, a drainage study was completed in 2015 for the project to evaluate and confirm sizing of onsite detention and conduit facilities (Wood Rodgers 2015). To accommodate the increase in impervious surfaces, the project would involve construction of a drainage conveyance system with three detention basins: North Basin, Central Basin, and South Basin. The basins would be 4.4 acres, 0.3 acre, and 1.4 acres, respectively. The onsite drainage system was designed in conformance with Central Valley RWQCB requirements, the Placer County SWMM, and the City of Lincoln's SWMP. LID methods to maintain pre-project runoff levels incorporated into the project design include limiting impervious coverage to 54 percent of the site, providing an open space corridor with parks adjacent to the open space, using the same net collection locations for drainage as in pre-project conditions, and integrating detention facilities into the site design. (Wood Rodgers 2015).

The post-project peak ~~runoff~~ flow rates and ~~water quality~~ runoff volume would be managed through the use of three onsite detention basins to collect stormwater before its discharge into Markham Ravine and the Markham Ravine Lower Tributary. A comparison of peak discharge rates at different outfall locations was modelled and verified that runoff leaving the project would not exceed pre-project flow rates (Wood Rogers 2015:26-27).

Table 4.6- 1 shows the comparison of pre- and post-project flow rate in the 2-year 24-hour storm event at each proposed outfall location.

Table 4.6-1 Pre- and Post-Project Peak Flow Rate in the 2-Year 24-Hour Storm Event at Proposed Outfall Locations

Proposed Drainage Management Areas	Proposed Basin Names	Pre-Project 2-Year 24 Hour (cfs)	Post-Project 2-Year 24 Hour (cfs)
DMA 1	Central Basin	0.49	0.44
DMA 2	South Basin	1.70	1.70
DMA 3	North Basin	5.80	4.33

The project's drainage system would be designed to appropriately accommodate and retained onsite the stormwater runoff generated from the project site to maintain pre-project discharge conditions. In addition, Markham Ravine lower tributary, which is the primary drainage onsite, would not be disturbed by the project. The drainage study concluded that the post-project peak runoff ~~and water~~ volume would be reduced to pre-project levels through the use of detention basins before discharging into Markham Ravine and the lower tributary. The onsite drainage would be consistent with General Plan Policies PFS-4.2, PFS-4.6, PFS-4.7, PFS-4.11, and OSC-4.1 Identify and Protect Aquifers because it would be designed to minimize drainage concentrations and impervious coverage, would provide stormwater detention sufficient to limit outflow and provide retention sufficient for incremental runoff from an eight-day 100-year storm, and would be designed in accordance with the SWMM. Infiltrating bioretention footprints for each drainage management area would be located onsite (Wood Rogers 2015: Appendix N).

With implementation of the project's drainage plan, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in on- or offsite flooding. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

The following addition amends page 4.6-7 of the DEIR:

State Plan of Flood Control

The Central Valley Flood Protection Act of 2008 (authorized by Senate Bill 5) directed the California Department of Water Resources (DWR) and the Central Valley Flood Protection Board to prepare a comprehensive flood protection plan for the Central Valley (DWR 2010). The resulting State Plan of Flood Control is meant to establish a system-wide approach to improving flood management in the areas currently receiving some amount of flood protection from existing federal, state, and local flood control facilities. In addition, the State Plan of Flood Control provides recommended structural and nonstructural means for improving performance and eliminating the deficiencies of flood management facilities, while also addressing ecosystem and other water-related issues. The flood legislation also established the 200-year flood event (flood with a 1-in-200 chance of occurring in any year) as the minimum level of flood protection to be provided in urban and urbanizing areas. Additionally, cities and counties in the Central Valley must incorporate the data, policies, and implementation measures of the State Plan of Flood Control into their general plans. Development within designated floodways and floodplains must acquire an encroachment permit from the Central Valley Flood Protection Board.

Revisions to Section 4.9, Public Utilities, Services, and Water Supply

Text on page 4.9-2 of the DEIR has been amended as follows:

Western Regional Sanitary Landfill and Material Recovery Facility

Refuse from the project area is transported to the Western Placer Waste Management Authority's (WPWMA's) ~~316~~320-acre Western Regional Sanitary Landfill (WRSL) adjacent to the intersection of Athens Avenue and Fiddyment Road, west of State Route 65. The WPWMA is a joint powers authority comprised of the cities of Rocklin, Roseville, and Lincoln, and Placer County. Both the WRSL and the associated Material Recovery Facility (MRF) operate under permits issued by the California Integrated Waste Management Board. The MRF separates and recovers waste products for recycling, reuse, or conversion to energy sources. Materials that cannot be recycled are taken to the landfill. The MRF ~~can accommodate over 2,000~~ is currently permitted to receive and process a maximum of 1,750 tons of garbage per day. Currently, the MRF diverts approximately ~~50~~40 percent of the material received from going to the landfill, helping Placer County comply with a state-mandated recycling rate (~~WPWMA 2016~~Zimmerman, pers. comm., 2016). Total capacity of the WRSL is 36,350,000 cubic yards, and there is ~~23,789,423~~ 24,836,245 cubic yards of capacity remaining as of June 30, 2016 (~~City of Lincoln 2016~~ Zimmerman, pers. comm.,2016). The WRSL does not have an average annual capacity but did receive 248,773 tons of solid waste between July 1, 2015 and June 30,2016 (Zimmerman, pers. comm., 2016). ~~WPWMA's regional landfill has an average annual throughput of 100,000 to 249,999 tons per year and an average annual capacity of 500,000 to 749,000 tons per year (CalRecycle 2015a)~~. ~~It is projected that the landfill has a lifespan extending to 2042 (City of Lincoln 2016)~~ The landfill has a current permitted estimated closure date of January 2058 (Zimmerman, pers. comm., 2016).

Text on page 4.9-10 of the DEIR has been amended as follows:

Solid Waste Disposal

The assessment of solid waste impacts is a quantitative analysis of the existing services available to the project site and a determination of whether project includes adequate provisions to ensure continued service that meets acceptable standards. The solid waste ~~generation~~ disposal rate used in this analysis is based on the ~~statewide average~~ ~~generation~~2015 City of Lincoln's annual per capita disposal rate of ~~4.5~~3.1 pounds per day per resident (CalRecycle ~~2015b~~2017). Because the disposition of Lot H is unknown, it is assumed that this area is built out with the maximum number of residential units (58) allowable at the site, which would provide the most conservative (i.e., highest solid waste generation) that could occur on the site.

Impact 4.9-3 on page 4.9-14 of the DEIR has been amended as follows:

Impact 4.9-3: Generation of solid waste that exceeds the capacity of the Western Regional Sanitary Landfill.

While solid waste would be generated during construction and operation of the project, the WRSL has sufficient capacity to serve the proposed development. This impact would be **less than significant.**

Project construction activities would generate solid waste, including excess construction materials and material removed during site clearing. However, the site is generally vacant, and construction would not require demolition of existing structures or removal of large quantities of waste. It is anticipated that compliance with the construction waste requirements in CALGreen would be sufficient to address the potential for construction of the project to produce excessive quantities of solid waste that could affect the capacity of the local landfill.

During operation of the project, the residences would produce solid waste that would be collected by the City and transferred to the WRSL. Based on ~~a waste generation~~ 2015 City of Lincoln's annual per capita disposal rate of ~~4.5~~3.1 pounds per ~~person per~~ day per resident and 1,639 residents (1,489 for the residential aspect of the project and 150 for Lot H), the project is expected to produce approximately ~~1,221~~927 tons of solid waste annually. Given that the average annual ~~capacity~~ disposal rate at ~~of~~ the landfill ~~is approximately 400,000~~ ranges between 100,000 and 249,999 tons per year and anticipates closure within approximately 40 years~~tons, more than the average annual throughput~~, it is reasonable to conclude that the landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs in compliance with all applicable laws based on the calculated residential waste generation rate.

Solid waste collection services for the City are funded through an enterprise fund. Costs for operation services (containers, bins, trucks, loaders, and street sweepers) are funded by various fees and charges collected by the City through its utility billing for solid waste collection. As development occurs in the service area, revenue is generated to finance the expansion of operational services through fees generated by new utility customers. All new development must participate in the funding of needed facilities and equipment based on adopted program standards. These costs are spread over new development based on an equivalent dwelling unit factor such that capital facilities costs are equally borne by residential and nonresidential development.

Therefore, based on available capacity and the established funding mechanisms in place for continued service, impacts related to generation of solid waste would be **less than significant**.

Mitigation Measures

No mitigation is required.

Revisions to Chapter 5, Other CEQA Considerations

Mitigation Measure 1 text on page 5-6 of the DEIR has been amended as follows. The City shall also include this mitigation measure as a condition of approval for the project.

Mitigation Measure 1: Reduce long-term operation-related ROG and NO_X emissions.

The following measures shall be implemented to reduce long-term operation-related emissions of ROG and NO_X:

- Participate in the PCAPCD Offsite Mitigation Program by paying fees based on the project's contribution of pollutants (ROG and NO_X), as follows:

  - The applicant shall pay $152 per residential unit (both single- and multi-family) to the PCAPCD's Offsite Mitigation Program (total fee due is $95,755.44 based on the current fee rate of $18,260 per ton of NOx and/or ROG), to offset 2.67 tons of ROG and 2.58 tons of NO_X. The payment of the fee shall be apportioned based on the number of residential lots created per each small lot final map and shall be due prior to each final map approval.

- Provide gas outlets, where natural gas is available, in residential backyards for use with outdoor cooking appliances such as gas barbeques.

- Install electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.

- Include a conduit raceway in each single-family home to a spare electric box in the garage that is sized for a future minimum 50-ampere 220-Volt outlet and a 220-Volt breaker space must be available in the electrical panel to promote electric vehicle usage.

- Distribute educational information on how homeowners can increase energy efficiency and conservation in their new homes in the Covenants, Conditions, and Restrictions for the projects within the Plan area. The information shall be delivered as part of a "move-in" packet prior to occupancy of the residence.
- Install electric vehicle charging stations and signage within designated spaces for non-residential developments.
- Install or designate vanpool parking only spaces and preferential parking for carpools to accommodate carpools and vanpools in employment areas (e.g., community commercial, business-professional uses).
- Equip all truck loading and unloading docks within commercial areas with one 110/208-volt power outlet for every two dock doors. Signs shall be posted stating "Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-volt outlets to run auxiliary equipment."
- Design streets to maximize pedestrian access to transit stops, where feasible.
- Install electric outlets on parks and public/quasi-public lands to promote electric landscape maintenance equipment be utilized to the extent feasible.

Revisions to Chapter 7, References

Page 7-6 in Chapter 7, References, of the DEIR has been amended as follows:

Entrix and Hydro Science. 1991 (February). Lincoln Wetland Mitigation Plan (Permit No. 9000104 and Laehr Project). Prepared by ENTRIX, Walnut Creek and Hydro Science, Davis, CA.

Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

Estep Environmental Consulting. 2008 (March). The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (*Buteo swainsoni*) in Yolo County, California. Prepared for Technology Associates International Corporation and Yolo Natural Heritage Program.

Gibson and Skordal. 1999 (August). Mitigation Monitoring Report, Third Year, for the Lincoln Wetland Mitigation, Prepared for City of Lincoln.

Chapter 7, References, page 7-11 of the DEIR has been amended as follows:

~~CalRecycle. 2015b. California's 2014 Per Capita Disposal Rate. Available: http://www.calrecycle.ca.gov/ lgcentral/goalmeasure/disposalrate/MostRecent/default.htm. Last updated: June 25, 2015. Accessed: April 11, 2016.~~

CalRecycle. 2017. City of Lincoln's 2015 Per Capita Disposal Rate. Available: http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx. Accessed: January 4, 2017.

AND

~~Western Placer Waste Management Authority. 2016. Facilities. Available: http://www.wpwma.com/. Accessed April 11, 2016.~~

Zimmerman, Bill. Western Placer Waste Management Authority, Auburn, CA. November 10, 2016—Letter to Steve Prosser of City of Lincoln, regarding Independence at Lincoln Draft Environmental Impact Report.

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ENTRIX and Hydro Science 1991 Entrix and Hydro Science. 1991 (February). Lincoln Wetland Mitigation Plan (Permit No. 9000104 and Laehr Project). Prepared by ENTRIX, Walnut Creek and Hydro Science, Davis, CA

Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

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Placer County 2015 Placer County. 2015 (February 11). Proposed Draft Placer County Conservation Plan Reserve Map. http://www.placer.ca.gov/departments/communitydevelopment/planning/pccp

Wood Rodgers 2015 Wood Rodgers. 2015 (September). *Drainage Study for Independence at Lincoln*. Prepared for Lewis Planned Communities. Sacramento, CA.

WRA 2015a, p. 26 WRA, Inc. 2015a (October). *Biological Resources Assessment, Independence at Lincoln Residential Development Project, Lincoln, Placer County, California*. Prepared for Lewis Operation Corp., 9216 Kiefer Blvd. Sacramento, CA.

WRA 2015b WRA, Inc. 2015b (October). *Delineation of Waters of the U.S. and CDFW Section 1602 Riparian Areas. Independence at Lincoln Residential Development Project, Lincoln, Placer County, California*. Prepared for Lewis Operation Corp., 9216 Kiefer Blvd. Sacramento, CA.

Zimmerman, Bill. Western Placer Waste Management Authority, Auburn, CA. November 10, 2016—Letter to Steve Prosser of City of Lincoln, regarding Independence at Lincoln Draft Environmental Impact Report.

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Appendix A

Delineation of Waters of the U.S. and CDFW Section 1602 Riparian Areas for the Independence at Lincoln Residential Development Project Lincoln, Placer County, California

Delineation of Waters of the U.S. and CDFW Section 1602 Riparian Areas

Independence at Lincoln Residential Development Project

Lincoln, Placer County, California

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LIST OF ACRONYMS

CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife (formerly CDFG)
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
Corps	United States Army Corps of Engineers
CSRL	California Soil Resources Lab
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESD	Environmental Services Division
FAC	Facultative plant species
FACU	Facultative Upland plant species
FACW	Facultative Wetland plant species
HUC	Hydrologic Unit Code
NL/UPL	Not Listed/Upland plant species
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate plant species
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
PI	Prevalence Index
USDA	United States Department Agriculture
USGS	United States Geological Survey
WRA	WRA, Inc.
WRCC	Western Regional Climate Center

1.0 INTRODUCTION

1.1 Study Background

This report presents the results of a delineation of Waters of the U.S. ("waters") under Section 404 of the Clean Water Act (CWA), as well as stream and riparian areas subject to jurisdiction under Section 1602 of California Fish and Game Code (CFGC), at the proposed Independence at Lincoln master-planned residential community in the City of Lincoln, Placer County, California (Study Area).

The Study Area consists of an approximately 159-acre property comprised of four parcels (APNs: 021-262-006, 010, 012 and 038) which was formerly the wastewater treatment plant site for the City of Lincoln. The property is located within the City of Lincoln, approximately two miles west of the downtown area, south of the intersection of Nicolaus Road and Waverly Drive (Figure 1). The Study Area is bordered to the north, south and east by residential development and open space, and to the west by agricultural land and open space. The majority of the Study Area where residential development is proposed consists of previously developed and/or disturbed land, including most of the western portion which was used as a wastewater treatment facility until 2004, when the facility was deactivated. An unnamed tributary of Markham Ravine flows through the property from east to northwest, and joins Markham Ravine in the northwest corner of the property. Both features are perennial United States Geological Survey (USGS) blue-line streams.

In August 2015, WRA, Inc. (WRA), Lewis Land Development, LLC's consultant, conducted a routine wetland delineation in the Study Area to determine the presence of potential wetlands and non-wetland waters subject to federal jurisdiction under Section 404 of the CWA as well as stream and riparian areas subject to jurisdiction under Section 1602 of the CFGC.

1.2 Regulatory Background

1.2.1 Clean Water Act Section 404

Section 404 of the Clean Water Act gives the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters of the United States." Section 502(7) of the Clean Water Act defines navigable waters as "waters of the United States, including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps under the Clean Water Act. A summary of this definition of "waters of the U.S." in 33 CFR 328.3 includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) territorial seas; (4) impoundments of waters; (5) tributaries to the above waters; (6) waters and wetlands adjacent to the above waters; and (7) prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernal pools, and Texas coastal prairie wetlands, provided these features have a significant nexus to the above listed waters; (8) all waters located within the 100-year floodplain of waters listed above in items 1-3 or within 4,000 feet of the high tide line or ordinary high water mark of a water listed above in items 1-5, provided those waters are determined to have a significant nexus to waters identified in items 1-3 above. Therefore, for purposes of the determining Corps jurisdiction under the Clean Water Act, "navigable waters" as defined in the Clean Water Act are the same as "waters of the U.S." defined in the CFR above.

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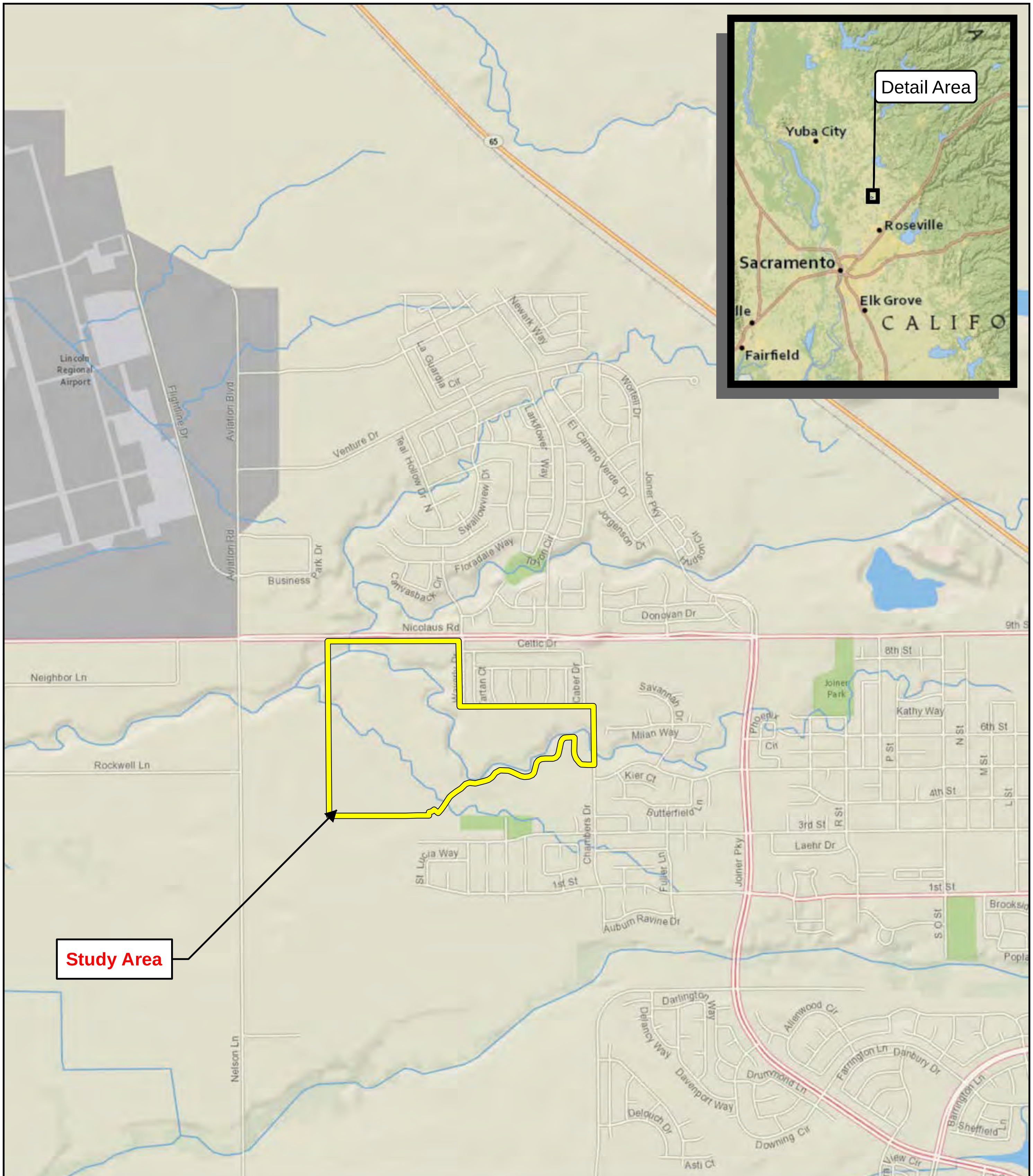

Figure 1. Study Area Location Map

N
W E
S

0 0.25 0.5 1
Miles

Independence at Lincoln
Placer County, California

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\FigX_Location_Map.mxd

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Areas not considered to be “waters of the U.S. as defined in 33 CFR 328.3(b), are summarized as follows: (1) waste treatment systems; (2) prior converted cropland; (3) specific classes of ditches; (4) man-made aquatic features in otherwise dry land such as stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, cooling ponds, reflecting pools, swimming pools, small ornamental waters, depressions incidental to mining and construction activity, erosional features, and puddles; (5) groundwater; (6) stormwater control features; wastewater recycling structures, groundwater recharge basins, percolation ponds for wastewater recycling, and distribution networks for wastewater recycling. These areas are discussed further in Section 3.4 of this report.

The limits of Corps jurisdiction under Section 404 as given in 33 CFR Section 328.4 are as follows: (a) Territorial seas: three nautical miles in a seaward direction from the baseline; (b) Tidal waters of the U.S.: high tide line or to the limit of adjacent non-tidal waters; (c) Non-tidal waters of the U.S.: ordinary high water mark or to the limit of adjacent wetlands; (d) Wetlands: to the limit of the wetland. A discussion of the methodology used to delineate wetlands and waters is presented in Section 3.1.

1.2.2 California Fish and Game Code Section 1602

Streams and lakes, as habitat for aquatic species, are subject to jurisdiction by the California Department of Fish and Wildlife (CDFW) under Sections 1600-1616 of CFGC. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72).

In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife; “riparian” is defined as “on, or pertaining to, the banks of a stream” (CDFW 2015). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

2.0 SUMMARY OF POTENTIAL JURISDICTIONAL AREAS

Areas determined to be jurisdictional under Section 404 of the CWA and Section 1602 of CFGC were delineated based on field surveys conducted by WRA on August 5 and 6, 2015. The results of the delineation are summarized below.

2.1 Waters of the U.S.

Appendix A depicts the extent of Corps jurisdiction within the Study Area based on the wetland delineation mentioned above. The acreage and length of potential jurisdictional areas are summarized in Table 1.

Table 1. Summary of Potential CWA Section 404 Jurisdictional Areas.

Habitat Type (Cowardin et al. 1979)	Area (acres)	Potential Jurisdictional Waters of the U.S. (acres)
Potential Jurisdictional Section 404 Wetlands		
Freshwater Marsh (R2EM5)	3.77	3.77
Seasonal Wetland (PEM2C)	1.90	1.90
Subtotal	**5.67**	**5.67**
Potential Jurisdictional Section 404 Non-wetland Waters		
Perennial Stream (R3UB1)	2.30	2.30
Excavated Stormwater Basin (L2UB3)	1.00	1.00
Subtotal	**3.30**	**3.30**
TOTAL	**8.97**	**8.97**

The Study Area contains 5.67 acres meeting the criteria for wetlands, and 3.30 acres meeting the criteria for non-wetland waters, for a total of 8.97 acres of potential jurisdictional features. All wetlands and non-wetland waters delineated within the Study Area are considered to be potential jurisdictional features under CWA Section 404. The Study Area contains a USGS blue-line stream channel (Markham Ravine and its tributary channel), which was classified as a perennial stream, though flow was discontinuous at the time of the site visit, which was conducted during a period of extreme drought. Wetlands were classified as either seasonal or perennial based on the expected period of inundation and/or saturation. However, due to extreme drought conditions, perennial features were generally dry at the time of the site visit.

2.2 Section 1602 Streams and Riparian Areas

Appendix B depicts the extent of CDFW jurisdiction under CFGC Section 1602 within the Study Area based on the results of the field surveys. This includes a perennial stream, as well as adjacent riparian vegetation and wetlands. The width of the stream was determined using top-of-bank or the ordinary high water mark (OHWM); however, in most instances, due to deeply incised channels, the lateral extent of the top-of-bank and the OHWM is the same. The total area of Section 1602 jurisdiction is summarized in Table 2.

Table 2. Summary of Potential CDFW Section 1602 Jurisdictional Areas.

Resource Group	Resource Type	Area (acres)
Waters	Perennial Stream	2.30
	Excavated Stormwater Basin	1.00
Riparian Area	Freshwater Marsh	3.77
	Seasonal Wetland	1.74
	Riparian Woodland	4.70
TOTAL EXTENT OF POTENTIAL JURISDICTION		**13.51**

3.0 METHODS

Prior to conducting field surveys, reference materials were reviewed, including the *Soil Survey of Placer County, Western Part* (USDA 1980, CSRL 2015), the Lincoln USGS 7.5-minute quadrangle (USGS 1981), National Wetland Inventory (NWI) data (USFWS 2015), and historical aerial photographs (Google Earth 2015). Following the background data search, WRA biologists performed a focused field evaluation of indicators of wetlands and waters at the Study Area on August 5 and 6, 2015.

The methods used in this study to delineate jurisdictional wetlands and non-wetland waters are based on the *U.S. Army Corps of Engineers Wetlands Delineation Manual* ("Corps Manual"; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* ("Arid West Supplement"; Corps 2008a), and the *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States* (Corps 2008b). The routine method for wetland delineation described in the Corps Manual was used to identify areas potentially subject to Corps Section 404 jurisdiction within the Study Area. A general description of the Study Area, including plant communities present, topography, and land use was also generated during the delineation visits. The methods for evaluating the presence of wetlands and non-wetland waters employed during the delineation are described in detail below.

3.1 Potential Section 404 Waters of the U.S.

3.1.1 Wetlands

The Study Area was evaluated for the presence or absence of indicators of the three wetland parameters described in the Corps Manual (Environmental Laboratory 1987) and the Arid West Supplement (Corps 2008).

Section 328.3 of the Federal Code of Regulations defines wetlands 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. Wetlands generally include swamps, marshes, bogs, and similar areas."*

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

The three parameters used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. According to the Corps Manual, for areas not considered "problem areas" or "atypical situations":

> *"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination."*

Data on vegetation, hydrology, and soils collected at sample points during the delineation site visit were reported on Arid West Supplement data forms. Once an area was determined to be a potential jurisdictional wetland, its boundaries were delineated using GPS equipment and mapped on a topographic map. The areas of potential jurisdictional wetlands were measured digitally using ArcGIS software. Indicators described in the Arid West Supplement were used to make wetland determinations at each sample point in the Study Area and are summarized below.

Vegetation

Plant species observed in the Study Area were identified using the Jepson Manual, Second Edition (Baldwin et al. 2012) and the Jepson eFlora (Jepson Flora Project 2014). Plant species identified on the Study Area were assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Lichvar et al. 2014). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL:	Obligate species	Always found in wetlands	>99% frequency
FACW:	Facultative Wetland species	Usually found in wetlands	67-99%
FAC:	Facultative species	Equally found in wetlands & non-wetlands	34-66%
FACU:	Facultative Upland species	Usually found in non-wetlands	1-33%
UPL/NL:	Upland/Not Listed species	Always found in uplands	<1%

The presence of hydrophytic vegetation was then determined based on indicator tests described in the Arid West Supplement. The Arid West Supplement requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the "50/20 rule" (Indicator 1; Dominance Test) described in the manual. To apply the "50/20 rule", dominant species are chosen independently from each stratum of the community. Dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. Dominants are the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total vegetative cover. If greater than 50 percent of the dominant species has an OBL, FACW, or FAC status, ignoring + and - qualifiers, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails Indicator 1 and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator must apply Indicator 2.

Indicator 2 is known as the Prevalence Index (PI). The prevalence index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. The delineator must then organize all species into groups according to their wetland indicator status and calculate the Prevalence Index using the following formula, where A equals total percent cover:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal to or less than 3, the sample point meets the hydrophytic vegetation criterion.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days in the Arid West region). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or secondary indicators such as the FAC-neutral test, presence of a shallow aquitard, or crayfish burrows. The Arid West Supplement contains 16 primary hydrology indicators and 10 secondary hydrology indicators. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

The presence or absence of the primary or secondary indicators described in the Arid West Supplement was utilized to determine if sample points within the Study Area met the wetland hydrology criterion.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

> *"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."*

Federal Register July 13, 1994,
U.S. Department of Agriculture, NRCS

Soils formed over long periods of time under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. Hydric soils can have a hydrogen sulfide (rotten egg) odor, low chroma matrix color, generally designated 0, 1, or 2, used to identify them as hydric, presence of redox concentrations, gleyed or depleted matrix, or high organic matter content.

Specific indicators that can be used to determine whether a soil is hydric for the purposes of wetland delineation are provided in the NRCS *Field Indicators of Hydric Soils in the U.S.* (USDA 2010). The Arid West Supplement provides a list of 23 of these hydric soil indicators which are known to occur in the Arid West region. Soil samples were collected and described according to the methodology provided in the Arid West Supplement. Soil chroma and values were determined by utilizing a standard Munsell soil color chart (Munsell Color 2009).

Hydric soils were determined to be present if any of the soil samples met one or more of the 23 hydric soil indicators described in the Arid West Supplement.

3.1.2 Non-wetland Waters

This study also evaluated the presence of "waters of the U.S." other than wetlands potentially subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the Clean Water Act. Other areas, besides wetlands, subject to Corps jurisdiction include lakes, rivers and streams (including intermittent streams) in addition to all areas below the HTL in areas subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high water mark (OHWM) defined as:

> "*...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics 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.*"

Federal Register Vol. 51, No. 219,
Part 328.3 (e). November 13, 1986

Identification of the ordinary high water mark followed the Corps Regulatory Guidance Letter No. 05-05, *Ordinary High Water Mark Identification* (Corps 2005), and *A Field Guide to the Identification of the Ordinary High Water Mark Identification in the Arid West Region of the United States* (Corps 2008b).

3.2 Areas Potentially Exempt from Section 404 Jurisdiction

Some areas that meet the technical criteria for wetlands or waters may not be jurisdictional under the CWA per Section 404 regulations and the Corps Manual. Included in this category are:

- Some man-induced wetlands, including areas that are maintained only due to the presence of man-induced hydrology (1987 Corps Manual)
- Areas that are isolated from and/or do not have a significant nexus to navigable waters of the U.S. (Corps 2008)
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act are not waters of the United States [33 CFR 328.3(b)]
- Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA. [33 CFR 328.3(b)]
- The following ditches:
    - A. Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
    - B. Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
    - C. Ditches that do not flow, either directly or through another water, into a water identified in paragraphs (o)(1)(i) through (iii) of 33 CFR 328.3(a).
- The following features:
    - A. Artificially irrigated areas that would revert to dry land should application of water to that area cease;
    - B. Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
    - C. Artificial reflecting pools or swimming pools created in dry land;
    - D. Small ornamental waters created in dry land;

E. Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
F. Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways; and
G. Puddles

- Groundwater, including groundwater drained through subsurface drainage systems
- Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land

3.3 Potential Section 1602 Riparian Areas

As described in Section 1.2.2, Section 1602 of the CFGC protects streams that support plants and animals. As a part of the Section 1602 process, it is necessary to define the exact areas that qualify for this protection from CDFW. The guidance for CDFW Section 1602 jurisdiction is typically understood to include all streams and to extend laterally to the top-of-bank. If riparian vegetation is present within the top-of-bank, then CDFW jurisdiction extends to the outer dripline of such vegetation (CDFW 2015). Additionally, seasonal or perennial wetlands, immediately adjacent to the top of bank of a stream are considered riparian wetlands and thus are included within CDFW jurisdiction.

4.0 SITE DESCRIPTION

4.1 Location

The approximately 159-acre Study Area is located in the City of Lincoln, in southwestern Placer County, California. The Study Area resides in the Lincoln USGS 7.5-minute quadrangle (USGS 1981), and is bounded by Nicolaus Road and residential development to the north, residential development, open space, agricultural land and state highway 65 to the south, open space and Nelson Lane to the west, and residential development and open space the east. The Study Area includes the former site of the City of Lincoln municipal wastewater treatment facility, which has been in a long-term decommissioning and demolition process, since the facility closed operations in 2004. The decommissioning process, which is still ongoing, has included and will include major earth work across the majority of the site, including removal of large wastewater treatment basins, berm deconstruction, soil removal, grading, and demolition of old wastewater conveyance facilities. The southeastern Study Area boundary excludes an approximately 35-acre undeveloped area that was used as mitigation land for other previous development activities in the City of Lincoln in the early 1990's. No development activity is proposed for this area, and any future proposal for development, or associated biological studies would be part of a separate project application processed by the City of Lincoln. The Study Area currently contains little infrastructure, except for buildings associated with the former City of Lincoln wastewater treatment plant which are soon to be demolished, and existing roads and levees flanking stream corridor. Access to the Study Area is via Waverly Drive.

4.2 Vegetation

The Study Area's high annual maximum temperatures, high growing season solar radiation and high evapotranspiration potential, soil types, winter cooling, rainfall patterns, and land use history contribute to the existing vegetation structure and species assemblages. Broad vegetation communities include ruderal or weed patches, relatively small patches of riparian woodland, perennial (freshwater) marsh, seasonal wetlands and valley and foothill grasslands typically situated in the interior Mediterranean climate zone of California. Woody vegetation is sparse and composed of riparian and upland species generally confined to the stream corridor. Herbaceous vegetation generally follows micro-topographic, hydrologic, and edaphic gradients, with emergent perennial hydrophytes located within and adjacent to the perennial stream channel; native and non-native annual forbs and infrequent native perennial graminoids confined to seasonal wetlands; and predominantly non-native annual grasses and forbs dominating the majority of the Study Area in upland positions with occasional native forbs, predominantly geophytes. Detailed vegetation community and species assemblage descriptions for wetland features are provided in Section 5, and an observed plant species list is included as Appendix E.

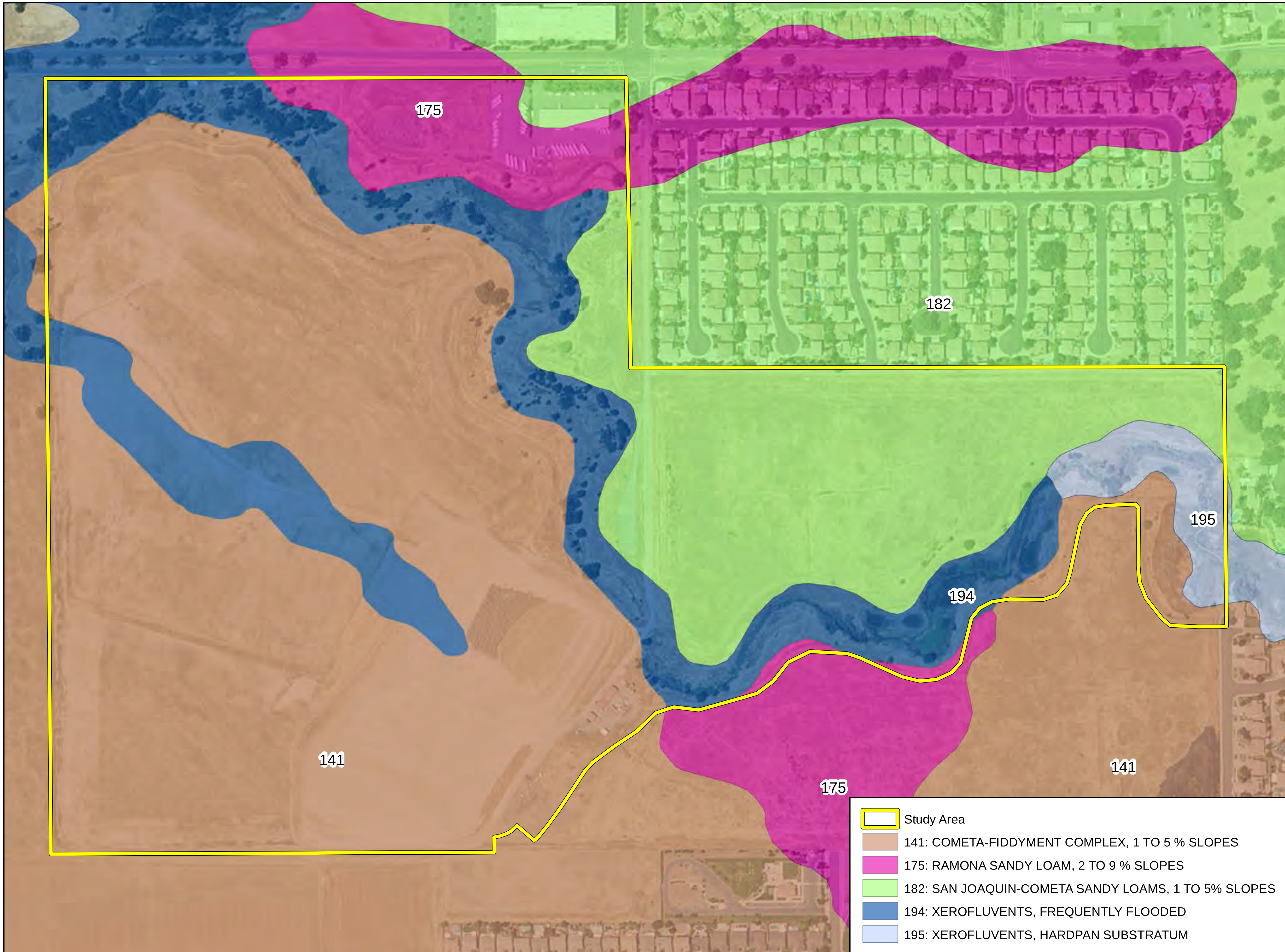
4.3 Soils

The *Soil Survey of Placer County, Western Part* (USDA 1980, CSRL 2013) indicates that the Study Area has five native soil mapping units, including four named soil series and unnamed xerofluvents. The majority of the Study Area has been significantly altered from previous wastewater treatment operations. The northwestern reach of the perennial stream channel, which extends from the culvert underneath Waverly Drive, to the northwest corner of the Study Area, where Markham Ravine flows off the property, appears to be relatively unaltered. The rest of the Study Area appears to have undergone substantial alteration through wastewater treatment operations, and subsequent decommissioning. The wastewater treatment plant was deactivated in 2004, and since then has been under a continuous and active decommissioning process, in accordance with local and state requirements. Observed soils within the previous wastewater treatment operational areas, which comprise the majority of the Study Area, have been significantly altered, whereas, observed soils within the stream corridor appear to be native, with the exception of the levee system. Soil disturbance varies across the Study Area, with the majority of the site, except for the stream corridor, having been significantly altered. Soils within the eastern reach of the perennial stream channel, which extends from the culvert underneath Waverly Road, upstream to the eastern Study Area boundary, appear to have been altered by the construction of artificial ponds adjacent to the stream.

The Study Area's soil mapping units are illustrated in Figure 2 and include Cometa-Fiddyment complex, 1 to 5 percent slopes; Ramona sandy loam, 2 to 9 percent slopes; San Joaquin-Cometa sandy loams 1 to 5 percent slopes; Xerofluvents, frequently flooded; and Xerofluvents hardpan substratum. All the soil mapping units within the Study Area are considered hydric (USDA 2014). The soil series that make up these mapping units are described below.

Cometa Series. The Cometa Series consists of moderately deep sandy loam soils formed in alluvium from granitic rocks located on terraces at elevations ranging from 20 to 600 feet (CSRL 2013, USDA 1980). These soils are moderately well to well drained with slow to medium runoff, and very slow permeability. Utilization includes rice, vineyards, orchards, dry-farmed grains, and livestock grazing. Annual grasses and forbs comprise the native and naturalized vegetation (USDA 1980).

A representative pedon of Cometa sandy loam consists of an A-horizon of slightly acid (pH 6.2) dark brown (10YR 3/3), when moist, sandy loam from approximately 0 to 7 inches depth. This is underlain by an AB-horizon of slightly acid (pH 6.3) brown (7.5YR 4/2), when moist, sandy loam from approximately 7 to 17 inches depth. This is underlain by a Bt-horizon (clay layer) of slightly acid (pH 6.4) dark reddish brown (5YR 3/4), when moist, sandy clay from 17 to 27 .



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Placer County, California

Figure 2.

Soils Map

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

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inches depth. This is underlain by a C-horizon of neutral (pH 7.0) dark yellowish brown (10YR 4/4), when moist, sandy loam from approximately 27 to 60 inches (USDA 1980).

Cometa soils have a moderate to low potential to support sensitive vegetation communities (e.g. native grasslands) and special-status plant species (e.g. native upland grassland plants). Wetlands may be present on Cometa soils where the A- and AB-horizons are shallow and the B-horizon (clay) is near the surface, particularly in depressional areas.

Fiddyment Series. The Fiddyment Series consists of moderately deep fine sandy loam soils formed from weathered consolidated sediments of mixed rock types located on ridges at elevations ranging from 50 to 350 feet (CSRL 2013, USDA 1980). These soils are well drained with slow to medium runoff, and very slow permeability. The native and naturalized vegetation consists of annual grasses and forbs, with few scattered oaks (*Quercus* spp.), and utilization includes rangeland, dry-farmed grains, and urban development (USDA 1980).

A representative pedon of Fiddyment fine sandy loam consists of an A-horizon of slightly acid (pH 6.5) dark yellowish brown to dark brown (10YR 3/4 to 7.5YR 3/4), when moist, fine sandy loam from approximately 0 to 15 inches depth. This is underlain by a Bt-horizon of slightly alkaline (pH 7.8) dark brown (10YR 4/3), when moist, clay loam from approximately 15 to 28 inches depth. This is underlain by a Bqm- and Bq-horizon of moderately alkaline (pH 8.0) very pale brown (10YR 7/4), when moist, indurated and strongly cemented to weakly cemented hardpan from approximately 28 to 40 inches depth. This is underlain by a Cr-horizon (fractured rock) moderately alkaline (pH 8.0) light brownish gray (10YR 6/2), when moist, siltstone from approximately 40 to 64 inches depth (USDA 1980).

Fiddyment soils have a moderate to high potential to support sensitive vegetation communities and wetlands, particularly in areas where the Bq-horizons are near the soils surface, and/or depressions. Additionally, special-status vernal pool and wetland plant species have a moderate to high potential to occur on these soils in areas that are inundated or saturated for a substantial period of the wet season.

Ramona Series. The Ramona Series consists of moderately deep loamy soils formed in alluvium of granitic rock located on terraces at elevations ranging from 250 to 3500 feet (CSRL 2013, USDA 1980). These soils are well drained with slow to rapid runoff, and moderately slow permeability. Native and naturalized vegetation consists of annual grasses, forbs, and chamise (*Adenostoma fasciculatum*), and utilization includes grain and hay production, pasture, irrigated citrus, olive orchards, and deciduous fruits (USDA 1980).

A representative pedon for the Ramona find sandy loam consists of an A-horizon of moderately to slightly acid (pH 6.0 to 6.5) dark brown (10YR 3/3), when moist, sandy loam to fine sandy loam from 0 to 23 inches. There is often an Ap-horizon, or evidence of historical or contemporary plowing. This is underlain by a B-horizon of slightly acid to neutral (pH 6.5 to 6.8) dark reddish brown (5YR 3/4) to yellowish red (5YR 4/6), when moist, loam to sandy clay loam from 23 to 68 inches. This is underlain by a C-horizon of neutral (pH 7.0) dark brown 7.5YR 4/4), when moist, find sandy loam from 68 to 74 inches or greater.

The evidence of plowing (Ap-horizon) in the upper profile and a clay layer (Bt-horizon) suggest the potential for episaturated conditions thereby potentially supporting wetland habitat.

San Joaquin Series. The San Joaquin Series consists of moderately deep to duripan loamy soils formed in alluvium from mixed and granitic rock types located on terraces at elevations ranging from 20 to 500 feet (CSRL 2013, USDA 1980). These soils are well to moderately well drained, with medium to very high runoff, and very slow permeability. Utilization includes cropland, livestock grazing, vineyards, dry-farmed grain, rice, and irrigated pasture, and native and naturalized vegetation consists of annual grasses and forbs (USDA 1980).

A representative pedon for the San Joaquin loam consists of an Ap-horizon (plowed) of neutral (pH 7.3) dark brown (7.5YR 3/4), when moist, loam from approximately 0 to 6 inches depth. This is underlain by a Bt-horizon (clay layer) of moderately acid to neutral (pH 5.7 to 7.3) reddish brown to dark brown (5YR 4/4 to 7.5YR 4/4), when moist, loam to clay from approximately 6 to 26 inches depth. This is underlain by a Bqm- and Bq-horizon (hardpan) of moderately alkaline (pH 8.0) light brown to dark brown (7.5YR 6/4 to 7.5YR 3/4), when moist, duripan from approximately 26 to 60 inches depth (USDA 1980).

4.4 Hydrology

The Study Area is entirely within the Auburn Ravine-Coon Creek watershed (HUC 18020161). Markham Ravine is the dominant drainage within the Study Area, with the majority of waters eventually flowing into this drainage, either on- or off-site. Markham Ravine is a named blue-line stream on the Lincoln USGS 7.5-minute quadrangle (USGS 1981) and generally supports perennial flows; however, water was only present in isolated pools under current drought conditions. An unnamed tributary of Markham Ravine flows through the property from east to northwest, and joins Markham Ravine in the northwest corner of the property, south of Nicolaus Road.

Substantial modifications to the hydrology have occurred within the Study Area. The stream channel is flanked by approximately 20-foot tall levees on both sides of the stream throughout the majority of the Study Area; however, a narrow floodplain remains between the levees. Intentional channelization and artificial pond construction is evident within the eastern reach of the stream. Former wastewater treatment operations and subsequent decommissioning activities have included large-scale earth moving work and have altered the local hydrology.

Precipitation in the region falls predominantly as rainfall with an annual average of 19.77 inches recorded at the nearest weather station, the Nicolaus station (#6194) in Sutter County, California, which located approximately 11 miles west of the Study Area (USDA 2015). Fog is common in the Study Area with low-lying, fall and winter convection, or “tule” fog. A WETS analysis for Nicolaus (Station #6194) was performed prior to and immediately following completion of the field investigations (Appendix F). Observed rainfall data for the 2015 water year was not available from the Nicolaus station, but was instead obtained from the Verona station (CIMIS #235; UCANR 2015) in Sutter County, California, approximately 17 miles southwest of the Study Area. As of August 6, 2015, there has been 12.64 inches of precipitation, or 66 percent of the average annual rainfall, which is considered below normal for the year. The three-month period preceding initiation of field studies (May-July 2015) has also been dry, with only 0.01 inch of precipitation recorded during this time.

5.0 RESULTS

Areas within the Study Area that are potentially jurisdictional under Section 404 of the Clean Water Act are summarized in Table 1 and depicted in Appendix A. Areas within the Study Area that are potentially jurisdictional under Section 1602 of the CFGC are depicted in Appendix B. Standard Corps Arid West wetland delineation data forms are included in Appendix C. Photographs of representative portions of the Study Area and sample points are presented in

Appendix D. A list of all plant species observed during the site visits is included in Appendix E. Finally, rainfall data and WETS analysis for Nicolaus is included in Appendix F.

5.1 Potential Section 404 Waters of the U.S.

5.1.1 Wetlands

The Study Area contains 34 wetland features totaling approximately 5.67 acres. These features are illustrated in Appendix A. Two distinct wetland types were classified and mapped in the Study Area: seasonal wetland, and freshwater marsh. Wetland boundaries were delineated based on changes in plant species composition and structure, topographic changes, and changes in soil characteristics.

A total of twelve representative sample points were documented in the Study Area, including six wetland and six upland points (Appendix C). At each sample point, data on vegetation, soils, and hydrology were recorded. Because these sample points are representative of the types of wetlands observed in the Study Area, formal sample points were not recorded in every feature. Instead, numerous undocumented sample points were taken to confirm the boundaries of delineated features. All wetlands mapped and presented in this report are likely to be considered jurisdictional by the Corps under 33 CFR 328.3(b) as organized under the final rule revising the definition of "waters of the U.S.", issued on June 29, 2015, and adopted on August 28, 2015. All wetlands within the Study Area meet the distance determinations under the final rule, as being either within 100 feet of the OHWM of a jurisdictional water or within 1500 feet of the OHWM and within the 100-year floodplain of a jurisdictional water.

Upland areas. The majority of the Study Area is composed of areas mapped as upland. These areas generally lack wetland hydrology indicators, hydrophytic vegetation, or hydric soils. The dominant vegetation type is non-native annual grasses dominated by a range of non-native annual species including slender oat (*Avena barbata*, NL), soft chess (*Bromus hordeaceus*, FACU), ripgut brome (*B. diandrus*, NL), Medusa head (*Elymus caput-medusae*, NL), Italian rye grass (*Festuca perennis*, FAC), and mouse barley (*Hordeum murinum*, FACU). Frequently, upland areas were delineated from wetlands based on the prevalence or dominance of Medusa head and soft chess.

Seasonal wetland (PEM2C). Within the Study Area seasonal wetlands are located in slightly concave depressions adjacent to or within the floodplain of the perennial stream channel, and on mild slopes along the levee bank where potential seeps occur. Approximately 1.90 acres of seasonal wetlands are present within the Study Area. The vegetation is dominated by a mixture of native and non-native FAC to OBL herbs. The most frequently observed species include iris-leaf rush (*Juncus xiphioides*, FACW), pennyroyal (*Mentha pulegium*, OBL), fringed willowherb (*Epilobium ciliatum* ssp. *ciliatum*, FACW), common spikerush (*Eleocharis macrostachya*, OBL), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*, FAC), and Italian rye grass (*Festuca perennis*, FAC).

Seasonal wetland depressions are situated on loam to clay loam soils. Soils were typically brown (7.5YR 3/4) to very dark grayish brown (10YR 3/2) with distinct to prominent redoximorphic mottles of yellowish red (5YR 4/6) to strong brown (5YR 3/4), and qualify as hydric soils under criteria (F6) Redox Dark Surface or (F3) Redox Depressions (Corps 2008, USDA 2010).

These features are characterized by episaturated conditions; hydrology sources include direct precipitation and under- and over-land sheet flow, which forms a perched water table within the upper portion of the soil profile. These features are likely saturated for the majority of the wet season during a normal rainfall year. Observed wetland hydrology indicators include (C3) Oxidized Rhizospheres along Living Roots, (D5) FAC-Neutral Test and (C9) Saturation Visible on Aerial Imagery. Boundaries of seasonal wetland were mapped primarily based on subtle to distinct changes in topography and vegetation composition.

Freshwater marsh (R2EM1). Within the Study Area, freshwater marshes are composed of slightly concave features abutting the perennial stream channel. Freshwater marshes within the western half of the Study Area appear to have formed by natural processes of sediment deposition, and colonization by perennial hydrophytic species, whereas the freshwater marshes in the eastern half of the Study Area occur on the fringe of man-made excavated stormwater basins along the stream channel. Approximately 3.77 acres of freshwater marshes are present within the Study Area. The vegetation is dominated by native and non-native FACW to OBL species. The most frequently observed species include common cattail (*Typha latifolia*, OBL), narrowleaf cattail (*T. angustifolia*, OBL), tule (*Schoenoplectus acutus* var. *occidentalis*, OBL), and California bulrush (*S. californicus*, OBL).

Freshwater marshes are situated on sandy clay loam to loam soils. Soils were typically very dark grayish brown (10YR 3/2) with distinct to prominent redoximorphic mottles of yellowish red (5YR 5/8) to strong brown (7.5YR 4/6) and qualify as hydric soils under criterion (F6) Redox Dark Surface (Corps 2008, USDA 2010). Observed wetland hydrology indicators include (C3) Oxidized Rhizospheres along Living Roots, and (C9) Saturation Visible on Aerial Imagery, and (D5) FAC-Neutral Test.

5.1.2 Non-wetland Waters

The Study Area contains six non-wetland waters features, totaling approximately 3.30 acres, which include the perennial stream, and excavated stormwater basins in line with the stream. . These features are illustrated in Appendix A. Two distinct non-wetland water types were characterized and mapped in the Study Area: perennial stream, and excavated stormwater basin. Characterization was based on the hydroperiod and the presence of OHWM. Classification followed the *Ordinary High Water Mark Identification* (Corps 2005) and the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979). The boundary between non-wetland waters and upland communities was mapped at the OHWM.

Perennial stream (R3UB1). An unnamed tributary of Markham Ravine flows through the property from east to northwest, and joins Markham Ravine in the northwest corner of the property. Both features are perennial USGS blue-line streams. The streams occupy 2.30 acres, and appear to flow nine to twelve months in a normal rainfall year. During the site visit (August 5 and 6, 2015), surface water was observed in isolated pools within the stream banks and soils in the streambed were generally saturated. The bed of the channel is composed of rock and cobble mixed with sands and silts. The most frequent OHWM indicators used to delineate these features include presence of a bed and bank, scouring, wrack, sediment deposition, and water stains on the banks.

The stream channels are flanked by levees on both sides throughout the Study Area. An approximately 15 to 30 feet wide riparian forest canopy is present intermittently. Woody species observed on the streambanks include valley oak (*Quercus lobata*, FACU), Fremont cottonwood (*Populus fremontii*, FACW), sandbar willow (*Salix exigua*, FACW), and black willow (*S. gooddingii*, FACW). Shrubby and herbaceous vegetation located on the banks and dependent upon riparian hydrology include Himalayan blackberry (*Rubus armeniacus,* FACU), Iris-leaf rush, Baltic rush (*Juncus balticus* ssp. *ater*, FACW) and tall flatsedge (*Cyperus eragrostis*, FACW).

Excavated stormwater basins (L2UB3). There are five man-made excavated stormwater management basins in the eastern portion of the Study Area, occupying approximately 1.00 acre. The excavated stormwater basins are located adjacent to or in-line with the stream channel. Surface water appears to be present throughout the majority of the year, but draws-down in late summer. The excavated stormwater basins were constructed to capture and treat stormwater runoff.

Hydrologic sources include surface run-off, direct precipitation, and channelized flow. Observed topographic indicators include defined bed and bank. The vegetation within the excavated stormwater basins is less than five percent across the delineated features and is composed of perennial hydrophytes that are densest in shallower waters, including tule and cattails. The most frequent OHWM indicators used to delineate these features include wrack, sediment deposition, reduced vegetation, and a clear water stain.

5.2 Areas Potentially Exempt from CWA

Approximately 103.3 acres of the Study Area consist of former wastewater treatment facilities. As per 33 CFR 328.3(b), "waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act are not waters of the United States".

5.3 Potential CFGC Stream and Riparian Areas

The Study Area contains a stream and adjacent riparian areas that are potentially jurisdictional under Section 1602 of CFGC. The stream delineated within the Study Area (Appendix A) is assumed to provide benefits for plants and animals, and is therefore assumed to be a Section 1602 jurisdictional feature. The lateral extent of jurisdiction from each stream was estimated using the following guidelines.

1. Areas containing typical riparian vegetation communities, sandbar willow or valley oak, or wetlands directly adjacent to the stream, were considered to be Section 1602 jurisdictional areas. These areas sometimes extended beyond the top-of-bank of the adjacent stream, and included vegetation that was clearly dependent on or strongly influenced by water within the stream system.

2. Where streams had a substantial amount of woody vegetation within or near the top-of-bank, the outer dripline of this vegetation was used as the lateral extent of Section 1602 jurisdiction.

3. For areas lacking riparian vegetation, the top-of-bank was used as the lateral extent of Section 1602 jurisdiction.

6.0 POTENTIAL JURISDICTIONAL AREAS

The conclusions of this report are based on conditions observed at the time of the field delineation conducted on August 5 and 6, 2015.

6.1 Potential Corps of Engineers Jurisdiction

Based on the findings of the wetland delineation, the Study Area contains approximately 5.67 acres of potential jurisdictional wetlands and 3.30 acres of potential jurisdictional non-wetland waters. The two wetland types delineated within the Study Area include freshwater marsh, and seasonal wetland, while the two non-wetland types delineated include perennial stream, and excavated stormwater basin. Wetlands were distinguished from non-wetland waters based on the abundance of vegetative cover; areas with greater than five percent absolute cover of hydrophytes were mapped as wetlands. Non-wetland waters were determined based on the presence of an OHWM and hydrology indicators. All delineated features (wetland and non-wetland waters) are tributary to a “navigable waters of the U.S.” and therefore meet the definition of non-wetland waters under Section 404 of the Clean Water Act.

6.2 Potential California Department of Fish and Wildlife Jurisdiction

Based on the findings of the field surveys, the Study Area contains 2.30 acres of stream, 1.00 acre of excavated stormwater basin, and 10.21 acres of riparian vegetation (inclusive of riparian woodland, freshwater marsh and seasonal wetland adjacent to the stream) that are jurisdictional under Section 1602 of the CFGC. These areas were determined to meet the definition of “streams” provided by CDFW and have the capacity to support aquatic wildlife and/or riparian vegetation.

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APPENDIX A -- Preliminary Section 404 Jurisdiction Map

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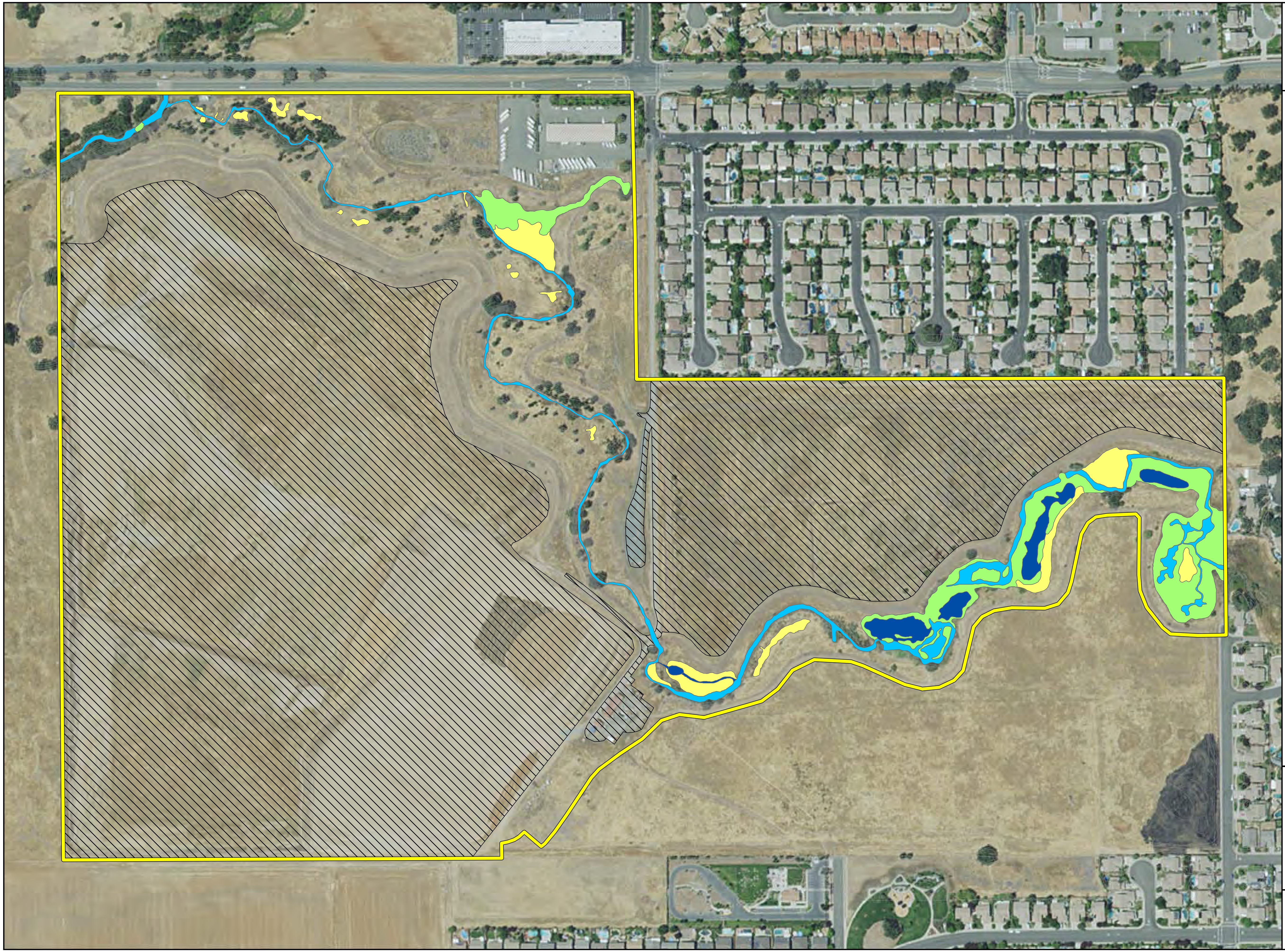

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Placer County, California

Appendix A.

Potential Section 404 Jurisdiction Map

Overview

- Study Area
- Excavated Basin - 1.00 acre
- Freshwater Marsh - 3.77 acres
- Perennial Stream - 2.30 acres
- Seasonal Wetland - 1.90 acres
- Former Wastewater Treatment Facility - 103.3 acres

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Independence at Lincoln

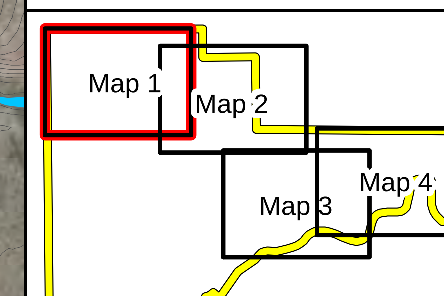
Placer County, California

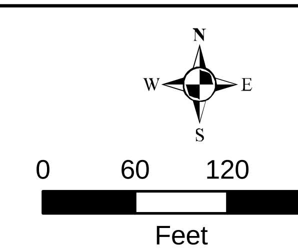
Appendix A.

Potential Section 404 Jurisdiction Map

Map 1

Study Area
Sample Point
Excavated Basin - 1.00 acre
Freshwater Marsh - 3.77 acres
Perennial Stream - 2.30 acres
Seasonal Wetland - 1.90 acres
Former Wastewater Treatment Facility - 103.3 acres





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Independence at Lincoln

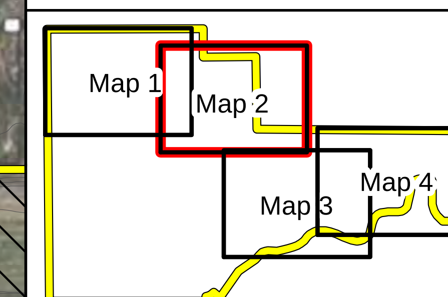
Placer County, California

Appendix A.

Potential Section 404 Jurisdiction Map

Map 2

Study Area
Sample Point
Excavated Basin - 1.00 acre
Freshwater Marsh - 3.77 acres
Perennial Stream - 2.30 acres
Seasonal Wetland - 1.90 acres
Former Wastewater Treatment Facility - 103.3 acres



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Data Source(s): WRA

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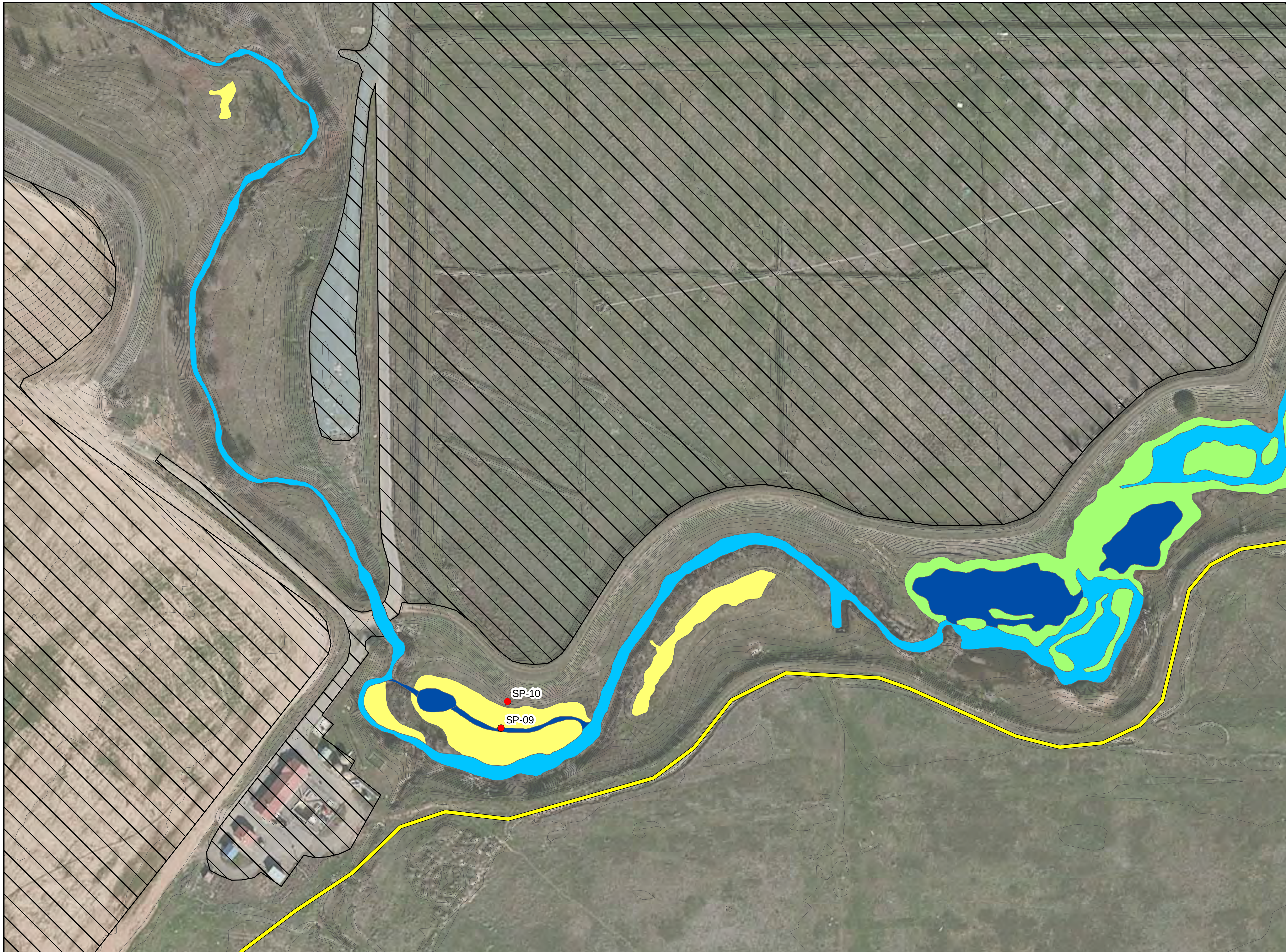


ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

Appendix A.

Potential Section 404 Jurisdiction Map

Map 3

Study Area
Sample Point
Excavated Basin - 1.00 acre
Freshwater Marsh - 3.77 acres
Perennial Stream - 2.30 acres
Seasonal Wetland - 1.90 acres
Former Wastewater Treatment Facility - 103.3 acres

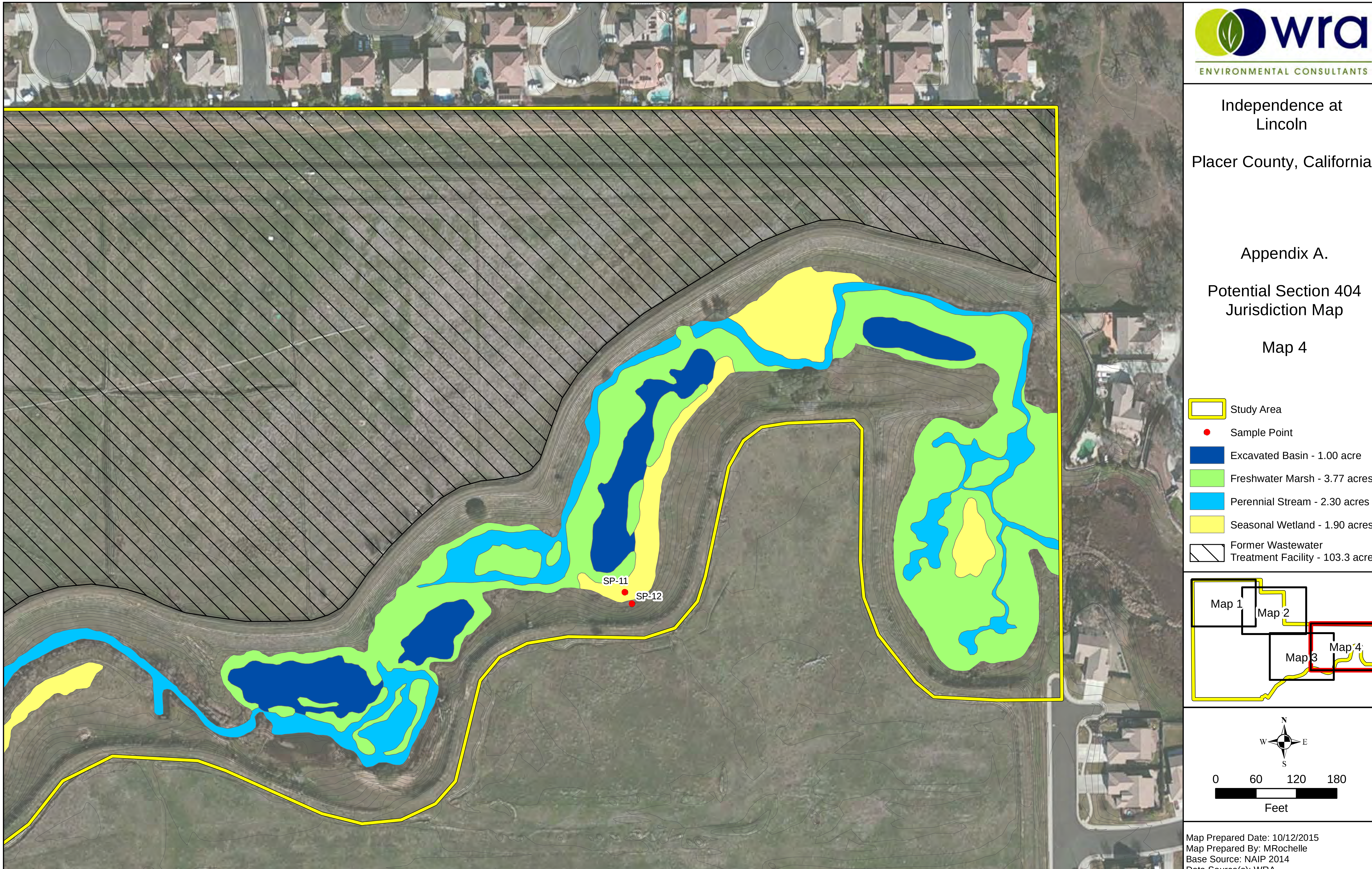
N
W E
S

0 60 120 180

Feet

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\Delin_20150828.mxd


SP-11
SP-12
wra
ENVIRONMENTAL CONSULTANTS
Independence at Lincoln
Placer County, California
Appendix A.
Potential Section 404 Jurisdiction Map
Map 4
Study Area
Sample Point
Excavated Basin - 1.00 acre
Freshwater Marsh - 3.77 acres
Perennial Stream - 2.30 acres
Seasonal Wetland - 1.90 acres
Former Wastewater Treatment Facility - 103.3 acres
Map 1
Map 2
Map 3
Map 4
N
W
E
S
0
60
120
180
Feet
Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

APPENDIX B -- Preliminary Section 1602 CDFW Jurisdiction Map

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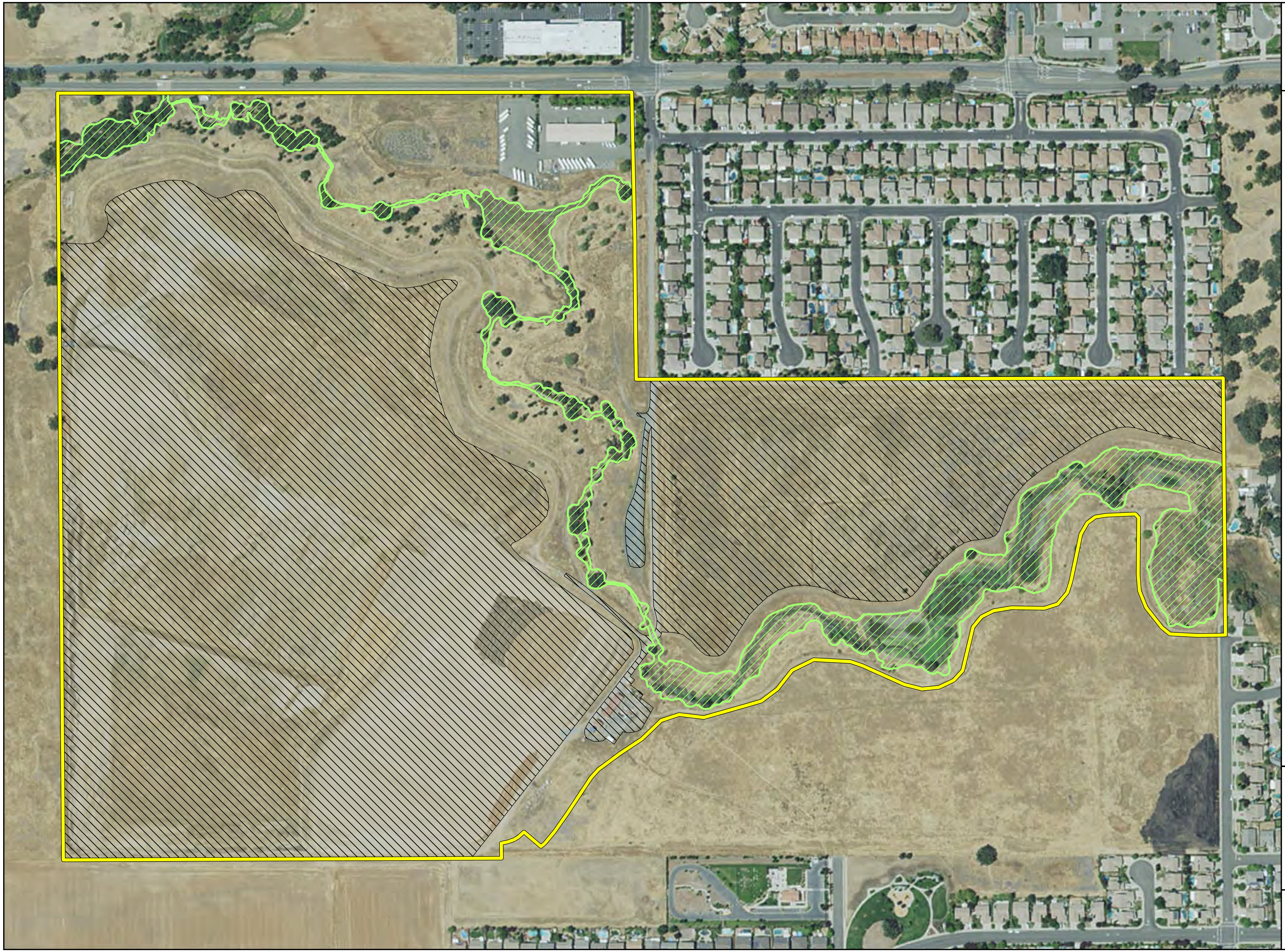


WRA ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

Appendix B.

Potential Section 1602 CDFW Jurisdiction

Overview

Study Area

CDFW Jurisdiction - 13.51 acres

Former Wastewater Treatment Facility - 103.3 acres

N
W E
S

0 200 400 600

Feet

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\CDFW_Jurisdiction_Overview_AppB.mxd

ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

Appendix B.

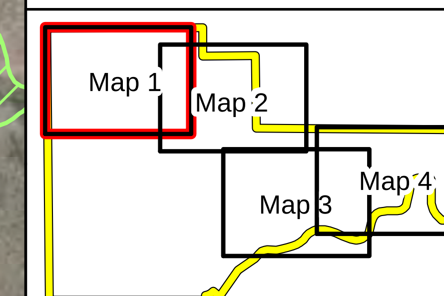
Potential Section 1602 CDFW Jurisdiction

Map 1

Study Area

CDFW Jurisdiction - 13.51 acres

Former Wastewater Treatment Facility - 103.3 acres



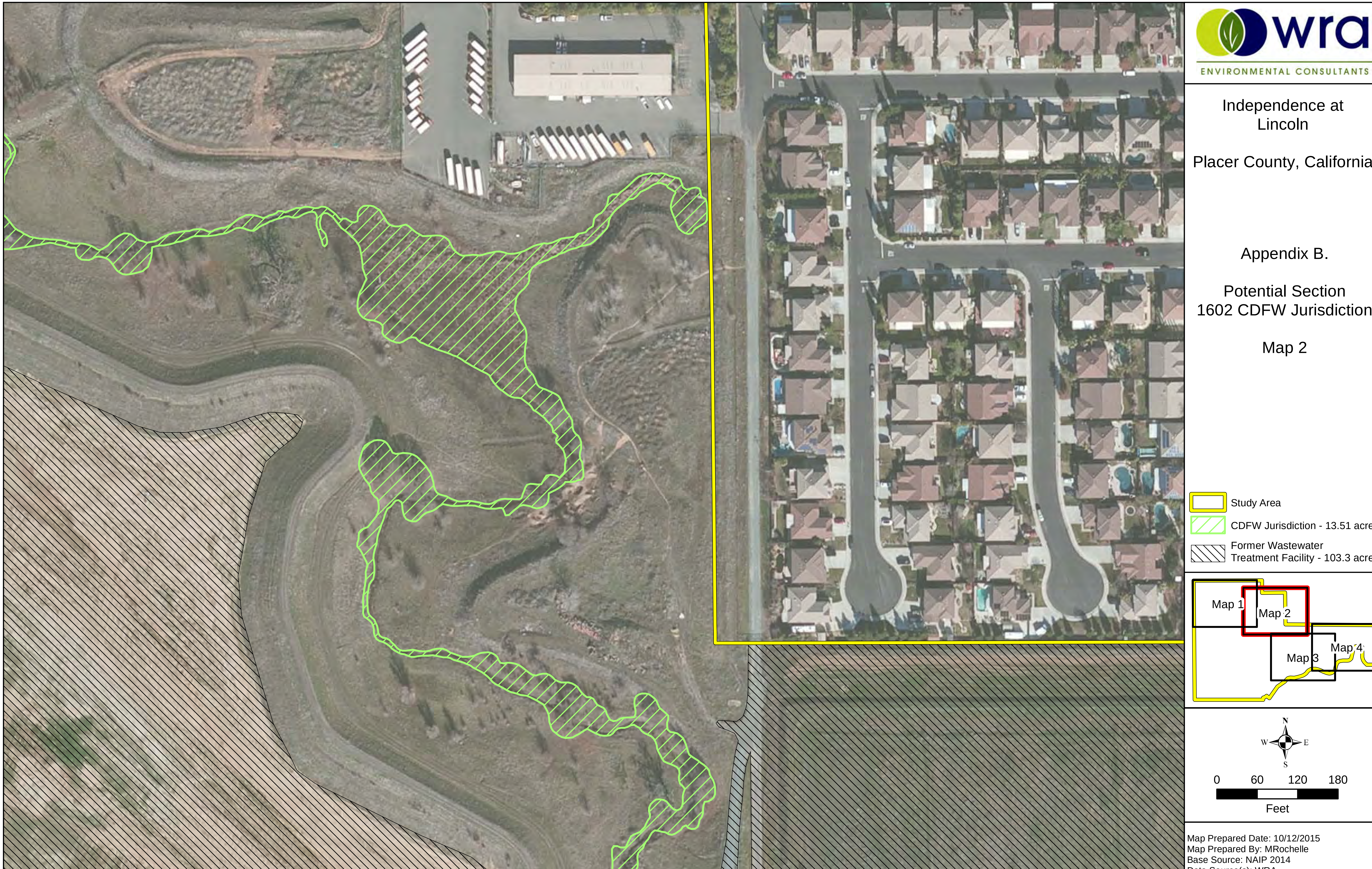
N
W
E
S

0 60 120 180

Feet

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\CDFW_Jurisdiction_20150828.mxd



wra ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

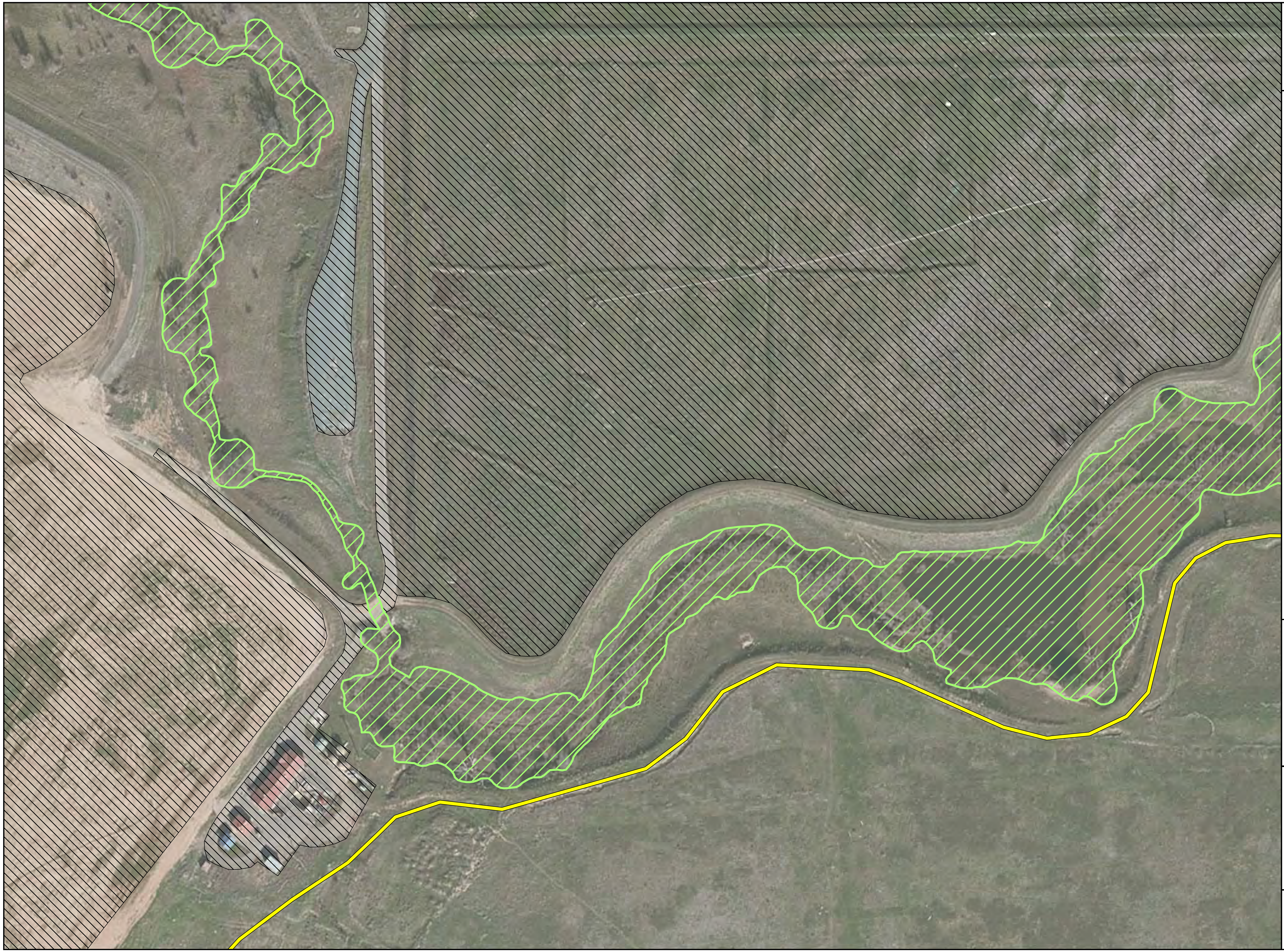
Appendix B.

Potential Section 1602 CDFW Jurisdiction

Map 2

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\CDFW_Jurisdiction_20150828.mxd



ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

Appendix B.

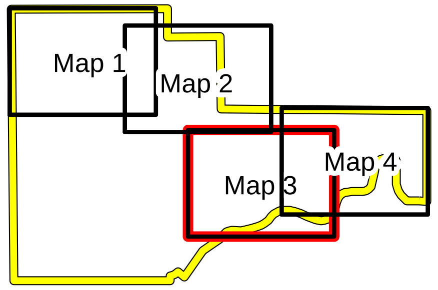
Potential Section 1602 CDFW Jurisdiction

Map 3

Study Area

CDFW Jurisdiction - 13.51 acres

Former Wastewater Treatment Facility - 103.3 acres



N
W E
S

0 60 120 180

Feet

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\CDFW_Jurisdiction_20150828.mxd

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ENVIRONMENTAL CONSULTANTS

Independence at Lincoln

Placer County, California

Appendix B.

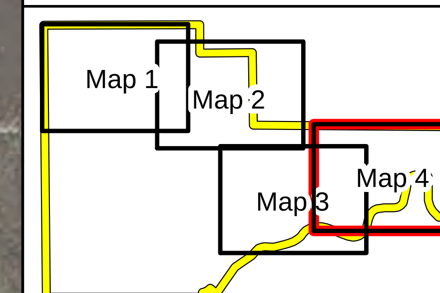
Potential Section 1602 CDFW Jurisdiction

Map 4

Study Area

CDFW Jurisdiction - 13.51 acres

Former Wastewater Treatment Facility - 103.3 acres



N W E S

0 60 120 180

Feet

Map Prepared Date: 10/12/2015
Map Prepared By: MRochelle
Base Source: NAIP 2014
Data Source(s): WRA

Path: L:\Acad 2000 Files\24000\24323-3\GIS\ArcMap\CDFW_Jurisdiction_20150828.mxd

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APPENDIX C -- Arid West Wetland Delineation Data Sheets

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-5-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP1
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Stream Fringe Local Relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR): California Lat: 38°53'48.99"N Long: 121°20'1.20"W Datum: WGS84
Soil Map Unit Name: Xerofluvents, frequently flooded. NWI classification None.
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *25' radius*)			
1. *Quercus lobata*	10	X	FACU
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Juncus xiphioides*	80	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	80		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	80	x 2 =	160
FAC species		x 3 =	
FACU species	10	x 4 =	40
UPL Species		x 5 =	
Column totals	90 (A)		200 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Thatch covers remaining 15%.

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	95	5YR 4/6	5	C	M, RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

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)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-5-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP2

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): Stream fringe hillslope Local Relief (concave, convex, none): Slope Slope (%): 10

Subregion (LRR): California Lat: 38°53'48.78"N Long: 121°20'1.35"W Datum: WGS84

Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?		X
Wetland Hydrology Present?		X
Is the Sampled Area within a Wetland?		X

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

Tree Stratum (Plot size: *25' radius*)	Absolute Cover %	Dominant Species?	Indicator Status
1. *Quercus lobata*	10	X	FACU
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Elymus caput-medusae*	30	X	UPL
2. *Bromus hordeaceus*	20	X	FACU
3. *Erodium botrys*	5		FACU
4. *Avena barbata*	5		NL
5. *Acmispon americanus* var. *americanus*	tr		NL
6.			
7.			
8.			
Total Cover:	60		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks: Thatch covers remaining 25%.

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	99	5 YR 4/6	1	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR C)**
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes ______ **No X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ______ No X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? Yes ______ No X Depth (inches): ______
(includes capillary fringe)

Wetland Hydrology Present? Yes ______ **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-5-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP3

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): Broad Swale Local Relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): California Lat: 38°53'45.94"N Long: 121°19'48.86"W Datum: WGS84

Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Mentha pulegium*	65	X	OBL
2. *Epilobium ciliatum* ssp. *ciliatum*	5		FACW
3. *Dittrichia graveolens*	5		NL
4. *Carduus pycnocephalus*	tr		NL
5. *Epilobium densiflorum*	tr		FACW
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Thatch covers remaining 20%.

SOIL

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	95	5YR 5/8	5	C	M, RC	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

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)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP4
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Swale Local Relief (concave, convex, none): concave Slope (%): 0-5
Subregion (LRR): California Lat: ______ Long: ______ Datum: WGS84
Soil Map Unit Name: Corning-Redding gravelly loams, 0 to 5 percent NWI classification N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____		
Hydric Soil Present? Yes X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Wetland Hydrology Present? Yes X No ____		

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

Tree Stratum (Plot size: *N/A*)	Absolute Cover %	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Typha latifolia*	60	X	OBL
2. *Epilobium ciliatum* ssp. *ciliatum*	5		FACW
3. *Epilobium densiflorum*	tr		FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	65		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	95	7.5YR 4/6	5	C	M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
_X_ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes _X_ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
_X_ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
_X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): ____
Water Table Present? Yes ____ No ____ Depth (inches): ____
Saturation Present? Yes ____ No ____ Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? Yes _X_ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP5
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Near Toe of Hillslope Local Relief (concave, convex, none): Concave Slope (%): 3-5
Subregion (LRR): California Lat: 38°53'45.63"N Long: 121°19'45.57"W Datum: WGS84
Soil Map Unit Name: Ramona sandy loam, 2 to 9 percent slopes NWI classification N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?		X
Wetland Hydrology Present?		X
Is the Sampled Area within a Wetland?		X

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Bromus hordeaceus*	40	X	FACU
2. *Acmispon americanus* var. *americanus*	20	X	NL
3. *Elymus caput-medusae*	10		NL
4. *Chicorium intybus*	5		FACU
5. *Carduus pycnocephalus*	tr		NL
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ___ **No** **X**

Remarks:
Thatch covers remaining 10%.

SOIL

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? **Yes** ______ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

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)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ______	No X	Depth (inches): ______
Water Table Present?	Yes ______	No X	Depth (inches): ______
Saturation Present? (includes capillary fringe)	Yes ______	No X	Depth (inches): ______

Wetland Hydrology Present? **Yes** ______ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP6

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): California Lat: 38°53'42.87"N Long: 121°19'46.24"W Datum: WGS84

Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Plagiobothrys trachycarpus*	70	X	FACW
2. *Centromadia fitchii*	10		FACU
3. *Festuca perennis*	5		FAC
4. *Phalaris lemmonii*	3		FACW
5.			
6.			
7.			
8.			
Total Cover:	88		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: SP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	85	5YR 4/6	15	C	M, RC	Clay loam	Prominent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- _X_ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes _X_ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- _X_ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

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)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- _X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No _X_	Depth (inches): ___
Water Table Present?	Yes ___	No _X_	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No _X_	Depth (inches): ___

Wetland Hydrology Present? Yes _X_ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP7

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): edge of depression Local Relief (concave, convex, none): Convex Slope (%): 0-2

Subregion (LRR): California Lat: 38°53'42.76"N Long: 121°19'46.35"W Datum: WGS84

Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?	X	
Wetland Hydrology Present?		X
Is the Sampled Area within a Wetland?		X

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Elymus caput-medusae*	75	X	NL
2. *Bromus hordeaceus*	5		FACU
3. *Festuca perennis*	5		FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	80		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks:
Thatch covers remaining 10%.

SOIL

Sampling Point: SP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	90%	5YR 4/6	10	C	M, RC	Clay loam	Prominent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ________

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:

Hydric soil is likely a relic of occasional flooding events and not representative of inundation in a normal year. Historical aerial images were analyzed and there was no evidence of saturation or inundation in this area on any photograph.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No _X_ Depth (inches): ___
Water Table Present? Yes ___ No _X_ Depth (inches): ___
Saturation Present? Yes ___ No _X_ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ **No** _X_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP8

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): California Lat: 38°53'42.68"N Long: 121°19'47.06"W Datum: WGS84

Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?		X
Wetland Hydrology Present?		X
Is the Sampled Area within a Wetland?		X

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

Tree Stratum (Plot size: *N/A*)	Absolute Cover %	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Elymus caput-medusae*	30	X	NL
2. *Erodium botrys*	10		FACU
3. *Avena barbata*	10		NL
4. *Bromus diandrus*	5		NL
5. *Trifolium hirtum*	5		NL
6.			
7.			
8.	60		
Total Cover:			
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ___ % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks:

SOIL

Sampling Point: SP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-10	10YR 3/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR C)**
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? Yes ______ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ______	No X	Depth (inches): ______
Water Table Present?	Yes ______	No X	Depth (inches): ______
Saturation Present? (includes capillary fringe)	Yes ______	No X	Depth (inches): ______

Wetland Hydrology Present? Yes ______ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP9
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Swale Local Relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR): California Lat: 38°53'29.78"N Long: 121°19'39.81"W Datum: WGS84
Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

Tree Stratum (Plot size: *N/A*)	Absolute Cover %	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Festuca perennis*	55	X	FAC
2. *Polypogon monspeliensis*	15		FACW
3. *Eleocharis macrostachya*	10		OBL
4.			
5.			
6.			
7.			
8.			
Total Cover:	80		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Thatch covers remaining 15%.

SOIL

Sampling Point: SP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	75	5YR 4/6	25	C	M, RC	Sandy clay loam	Prominent

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR C)**
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):
Type: N/A
Depth (inches): ______

Hydric Soil Present? Yes _X_ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
_X_ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
_X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No _X_ Depth (inches): ___
Water Table Present? Yes ___ No _X_ Depth (inches): ___
Saturation Present? Yes ___ No _X_ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No _X_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP10
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Levee Local Relief (concave, convex, none): Convex Slope (%): 5
Subregion (LRR): California Lat: 38°53'42.76"N Long: 121°19'46.35"W Datum: WGS84
Soil Map Unit Name: San Joaquin-Cometa sandy loams, 1 to 5 percent slopes NWI classification N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X	Is the Sampled Area within a Wetland?	Yes ____ No X
Hydric Soil Present?	Yes ____	No X		
Wetland Hydrology Present?	Yes ____	No X		

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum (Plot size: *5' radius*)			
1. *Elymus caput-medusae*	25	X	NL
2. *Erodium botrys*	20	X	FACU
3. *Acmispon americanus* var. *americanus*	5		NL
4. *Avena barbata*	5		NL
5. *Trifolium hirtum*	5		NL
6.			
7.			
8.			
Total Cover:	55		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: SP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 4/3	99	5YR 4/6	1	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR C)**
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: Clay hardpan

Depth (inches): 6

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15
Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP11
Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E
Landform (hillslope, terrace, etc.): Stream fringe depression Local Relief (concave, convex, none): Concave Slope (%): 0-3
Subregion (LRR): California Lat: 38°53'32.85"N Long: 121°19'25.26"W Datum: WGS84
Soil Map Unit Name: Cometa-Fiddyment complex, 1 to 5 percent slopes NWI classification N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

Tree Stratum (Plot size: *N/A*)	Absolute Cover %	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *15' radius*)			
1. *Salix exigua* var. *hindsiana*	5	X	FACW
2.			
3.			
4.			
5.			
Total Cover:	5		
Herb Stratum (Plot size: *5' radius*)			
1. *Eleocharis macrostachya*	45	X	OBL
2. *Deschampsia danthonioides*	10		FACW
3. *Typha angustifolia*	5		OBL
4. *Festuca perennis*	5		FAC
5. *Epilobium ciliatum* ssp. *ciliatum*	tr		FACW
6. *Elymus caput-medusae*	tr		NL
7.			
8.			
Total Cover:	65		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Thatch covers remaining 10%.

SOIL

Sampling Point: SP11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	95	7.5YR 4/6	5	C	M, RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

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)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Independence at Lincoln (24323-3) City/County: Lincoln, Placer County Sampling Date: 8-6-15

Applicant/Owner: Lewis Operating Corp. State: California Sampling Point: SP12

Investigator(s): Chris Gurney, Michael Josselyn, WRA Staff Section/Township/Range: S17, T12N, R6E

Landform (hillslope, terrace, etc.): Levee above toe of slop Local Relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): California Lat: 38°53'32.68"N Long: 121°19'25.13"W Datum: WGS84

Soil Map Unit Name: Cometa-Fiddyment complex, 1 to 5 percent slopes NWI classification N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X 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.

	Yes	No
Hydrophytic Vegetation Present?		X
Hydric Soil Present?		X
Wetland Hydrology Present?		X
Is the Sampled Area within a Wetland?		X

Remarks:
Rainfall has been below normal for two out of the three preceding months. May and June were dry months, and July was normal.

VEGETATION

	Absolute Cover %	Dominant Species?	Indicator Status
Tree Stratum (Plot size: *N/A*)			
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum (Plot size: *15' radius*)			
1. *Salix exigua* var. *hindsiana*	5	X	FACW
2. *Baccharis pilularis* ssp. *consanguinea*	1		
3.			
4.			
5.			
Total Cover:	6		
Herb Stratum (Plot size: *5' radius*)			
1. *Elymus caput-medusae*	30	X	NL
2. *Raphanus raphanistrum*	10		NL
3. *Avena barbata*	10		NL
4. *Bromus diandrus*	10		NL
5.			
6.			
7.			
8.			
Total Cover:	60		
Woody Vine Stratum (Plot size: *N/A*)			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL Species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks:
Thatch covers remaining 25%.

SOIL

Sampling Point: SP12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/2	99	7.5YR 4/6	1	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR C)**
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: N/A

Depth (inches): ______

Hydric Soil Present? **Yes** ______ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Thin Muck Surface (C7)
Other (Explain in Remarks)

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)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ______ No X Depth (inches): ______
Water Table Present? Yes ______ No X Depth (inches): ______
Saturation Present? (includes capillary fringe) Yes ______ No X Depth (inches): ______

Wetland Hydrology Present? Yes ______ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX D -- Representative Photographs of the Study Area

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Photograph 1. Representative seasonal wetland dominated by iris-leaf rush (*Juncus xiphioides*, OBL) in foreground at sample point SP1. Markham Ravine, a perennial stream, is visible on the right in background.

Photograph 2. Representative upland area dominated by Medusa head (*Elymus caput-medusae*, NL), slender oat (*Avena barbata*, NL), and valley oak (*Quercus lobata*, FACU) at sample point SP2.

Photograph 3. Markham Ravine, a perennial stream, was mostly dry at the time of the site visit, but likely flows year-round in a normal rainfall year.

Photograph 4. Representative seasonal wetland dominated by pennyroyal (*Mentha pulegium*, OBL) and denseflower willowherb (*Epilobium densiflorum*, FACW) in foreground. Representative freshwater marsh dominated by common cattail (*Typha latifolia*, OBL) is visible in the in background.

Photograph 5. Representative hydric soil sample at sample point SP4 meeting Redox Dark Surface (F6) hydric soil indicator, and Oxidized Rhizospheres along Living Roots (C3) hydrology indicator.

Photograph 6. Representative excavated basin with water present. Riparian vegetation including freshwater marsh dominated by tule (*Schoenoplectus acutus* var. *occidentalis,* OBL), and sandbar willow (*Salix exigua* var. *hindsiana,* FACW), and levee dominated by non-native upland grasses are visible background.

Photograph 7. Representative bed and bank of Markham Ravine. Non-riparian upland grasses and forbs are visible in the foreground, and riparian vegetation dominated by Himalayan blackberry (*Rubus armeniacus*, FACU) and Fremont cottonwood (*Populus fremontii* ssp. *fremontii*, FACW) on bank are visible in the background.

Photograph 8. Representative bed and bank of Markham Ravine, depicting scour as indicator of OHWM.

APPENDIX E -- List of All Plant Species Observed within the Study Area

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Appendix E. Plant Species Observed in the Study Area.

Family	Scientific Name	Common Name	Phenology	Origin	Invasive Status	Wetland Indicator Status
Alismataceae	*Alisma triviale* [*A. Plantago-aquatica*]	northern water plantain	perennial	native	--	OBL
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen	native	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual	non-native	moderate	NL
Asteraceae	*Centaurea solstitialis*	yellow star thistle	annual	non-native	high	NL
Asteraceae	*Centromadia fitchii* [*Hemizonia f.*]	Fitch's tarweed	annual	native	--	FACU
Asteraceae	*Cichorium intybus*	chicory	perennial	non-native	--	FACU
Asteraceae	*Cirsium vulgare*	bull thistle	perennial	non-native	moderate	FACU
Asteraceae	*Dittrichia graveolens*	stinkwort	annual	non-native	moderate	NL
Asteraceae	*Holocarpha virgata* ssp. *virgata*	yellowflower tarweed	annual	native	--	NL
Asteraceae	*Lactuca serriola*	prickly lettuce	annual	non-native	assessed	FACU
Asteraceae	*Silybum marianum*	milk thistle	perennial	non-native	limited	NL
Asteraceae	*Sonchus asper* ssp. *asper*	prickly sow thistle	annual	non-native	assessed	FAC
Asteraceae	*Xanthium strumarium*	rough cocklebur	annual	native	--	FAC
Boraginaceae	*Plagiobothrys trachycarpus*	roughfruit popcornflower	annual	native	--	FACW
Brassicaceae	*Hirschfeldia incana*	short podded mustard	perennial	non-native	moderate	NL
Brassicaceae	*Nasturtium officinale* [*Rorippa nasturtium-aquaticum*]	watercress	perennial	native	--	OBL
Brassicaceae	*Raphanus raphanistrum*	wild radish	perennial	non-native	--	NL
Cannabaceae	*Cannabis sativa*	hemp	annual	non-native	--	FACU
Convulvulaceae [Cuscutaceae]	*Cuscuta campestris* [*C. pentagona*]	field dodder	annual	vine	--	NL
Cyperaceae	*Cyperus eragrostis*	tall flatsedge	perennial	native	--	FACW
Cyperaceae	*Eleocharis macrostachya*	common spikerush	perennial	native	--	OBL
Cyperaceae	*Schoenoplectus acutus* var. *occidentalis* [*Scirpus a.* v. *o.*]	tule	perennial	native	--	OBL
Cyperaceae	*Schoenoplectus*	California bulrush	perennial	native	--	OBL

Family	Scientific Name	Common Name	Phenology	Origin	Invasive Status	Wetland Indicator Status
	californicus [*Scirpus c.*]					
Euphorbiaceae	*Croton setiger* [*Eremocarpus setigerus*]	turkey mullein	annual	native	--	NL
Fabaceae	*Acmispon americanus* var. *americanus* [*Lotus purshianus* var. *purshianus*]	American lotus	annual	native	--	NL
Fabaceae	*Trifolium hirtum*	rose clover	annual	non-native	moderate	NL
Fagaceae	*Quercus douglasii*	blue oak	deciduous	native	--	NL
Fagaceae	*Quercus lobata*	valley oak	deciduous	native	--	FACU
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	evergreen	native	--	NL
Gentianaceae	*Zeltnera muehlenbergii* [*Centaurium m.*]	Monterey centaury	annual	native	--	FACW
Geraniaceae	*Erodium botrys*	longbeak stork's bill	annual	non-native	assessed	FACU
Juncaceae	*Juncus balticus* ssp. *ater*	Baltic rush	perennial	native	--	FACW
Juncaceae	*Juncus xiphioides*	iris-leaf rush	perennial	native	--	OBL
Lamiaceae	*Mentha pulegium*	pennyroyal	perennial	non-native	moderate	OBL
Lamiaceae	*Trichostema lanceolatum*	vinegarweed	annual	native	--	FACU
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	annual	non-native	moderate	OBL
Moraceae	*Ficus carica*	common fig	deciduous	non-native	moderate	FACU
Moraceae	*Morus alba*	white mulberry	deciduous	non-native	--	FACU
Onagraceae	*Epilobium ciliatum* ssp. *ciliatum*	fringed willowherb	perennial	native	--	FACW
Onagraceae	*Epilobium densiflorum*	denseflower willowherb	annual	native	--	FACW
Onagraceae	*Ludwigia peploides* ssp. *peploides*	floating primrose willow	perennial	native	--	OBL
Phrymaceae [Scrophulariaceae]	*Mimulus guttatus*	common yellow monkeyflower	perennial	native	--	OBL
Plantaginaceae	*Plantago lanceolata*	English plantain	perennial	non-native	limited	FAC
Poaceae	*Agrostis avenacea*	Pacific bentgrass	perennial	non-native	limited	NL
Poaceae	*Avena barbata*	slender oat	annual	non-native	moderate	NL
Poaceae	*Bromus diandrus*	ripgut brome	annual	non-native	moderate	NL

Family	Scientific Name	Common Name	Phenology	Origin	Invasive Status	Wetland Indicator Status
Poaceae	*Bromus hordeaceus*	soft chess	annual	non-native	limited	FACU
Poaceae	*Deschampsia danthonioides*	annual hairgrass	annual	native	--	FACW
Poaceae	*Echinochloa crus-galli*	water grass	annual	non-native	--	FACW
Poaceae	*Elymus caput-medusae* [*Taeniatherum c-m*]	Medusa head	perennial	non-native	high	NL
Poaceae	*Festuca perennis* [*Lolium multiflorum; L. perenne*]	Italian rye grass	annual	non-native	moderate	FAC
Poaceae	*Hordeum marinum* ssp. *gussoneanum*	Mediterranean barley	annual	non-native	moderate	FAC
Poaceae	*Paspalum dilatatum*	dallis grass	perennial	non-native	--	FAC
Poaceae	*Phalaris lemmonii*	Lemmon's canarygrass	annual	native	--	FACW
Poaceae	*Polypogon monspeliensis*	rabbit's-foot grass	annual	non-native	limited	FACW
Polygonaceae	*Persicaria amphibia* [*Polygonum amphibium*]	water smartweed	perennial	native	--	OBL
Polygonaceae	*Persicaria lapathifolia* [*Polygonum lapathifolium*]	ladysthumb	annual	native	--	FACW
Polygonaceae	*Polygonum aviculare* [*P. a.* ssp. *a.*; *P. arenastrum*]	dooryard knotweed	perennial	non-native	--	FACW
Polygonaceae	*Rumex crispus*	curly dock	perennial	non-native	limited	FAC
Rosaceae	*Pyrus communis*	common pear	deciduous	non-native	--	NL
Rosaceae	*Rubus armeniacus* [*R. discolor*]	Himalayan blackberry	evergreen	non-native	high	FACU
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	deciduous	native	--	FACW
Salicaceae	*Salix exigua* var. *hindsiana*	sandbar willow	deciduous	native	--	FACW
Salicaceae	*Salix gooddingii*	Goodding's willow	deciduous	native	--	FACW
Typhaceae	*Typha angustifolia*	narrowleaf cattail	perennial	non-native	--	OBL
Typhaceae	*Typha latifolia*	common cattail	perennial	native	--	OBL

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APPENDIX F -- Rainfall Data and WETS Analysis for Nicolaus, WETS Station #6194

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Appendix F. WETS Tables for Nicolaus, Sutter County, California

Rainfall totals for Water Year 2015 to date (October 1, 2014 through July 31, 2015) have been 66 percent of normal, which is considered below normal. Rainfall has been below normal for two out of the three preceding months prior to initiating field surveys. May and June were dry months, and July was normal.

Table B-1. WETS Table for Nicolaus, Sutter County (NCDC #6194)

Month	Precipitation (inches)				Percent Normal
	Below normal	Normal	Above normal	Observed Rainfall	
OCT 2014	0.44	1.12	1.39	0.02	2%
NOV 2014	1.06	2.57	3.15	1.24	48%
DEC 2014	1.37	2.90	3.54	7.92	273%
JAN 2015	1.90	3.89	4.75	0.08	2%
FEB 2015	1.33	3.45	4.18	1.96	57%
MAR 2015	1.60	3.19	3.90	0.13	4%
APR 2015	0.52	1.26	1.54	1.28	102%
MAY 2015	0.07	0.59	0.67	0.00	0%
JUN 2015	0.00	0.25	0.29	0.00	0%
JUL 2015	0.00	0.06	0.00	0.01	17%
TOTAL	13.70	17.77	20.41	10.24	66%

Table B-2. WETS Analysis for May-July, 3 months prior to field surveys, for Nicolaus, Sutter County (NCDC #6194)

Month Prior	Month	Below Normal	Normal	Above Normal	Observed Rainfall	Condition	Condition Value	Weighted Factor	Product
3rd	July	0	0.06	0	0.01	Normal	2	3	6
2nd	June	0	0.25	0.29	0	Dry	1	2	2
1st	May	0.07	0.59	0.67	0	Dry	1	1	1
								SUM:	**9**
								Condition:	**Below Normal**

Appendix B

Letter A5 Placer County Air Pollution Control District Attachment

Attachment 1

PCAPCD Analysis for
Independence at Lincoln Mobile Source Emission Estimation

PCAPCD Analysis for
Independence at Lincoln Mobile Source Emission Estimation

Background:
The EMission FACtors (**EMFAC**) **model** was developed by California Air Resources Board (CARB) and used to calculate emissions from all motor vehicles operating on highways, freeways and local roads in California. EMFAC2014 is the most recent version of this model.

Mobile source emissions are calculated by multiplying emission rates with vehicle activities data from all motor vehicles, such as passenger cars to heavy-duty trucks. EMFAC2014 can calculate emissions by selecting statewide, regional, or local (such as air basin or county areas). The model can also generate vehicle miles traveled (VMT) data, vehicle population, vehicle trips, and emission factor profiles for exhaust emissions, evaporative emissions, as well as tire and brake emissions based on the user's selection. In addition to run the model through a personal computer by users, CARB also develops an EMFAC2014 Web Database[1] which can provide a quick and easy way to obtain commonly used EMFAC emissions and emission rates data through internet access.

The Draft Environmental Impact Report (DEIR) states that the mobile source emissions for the Independence at Lincoln (Project) were estimated using the emissions factors provided by CARB's EMFAC214 model and the Project-related vehicle trips and VMT from the Project's traffic study. In order to verify the mobile source emissions estimated by the DEIR analysis, District staff conducted the following methods to calculate the Project's related mobile source emissions at the buildout.

Special Vehicle Activity Data for the Project:
The DEIR states that the Project would generate a peak daily VMT of 48,325 (47,933 from residential development and 392 from the sport fields) at buildout and this VMT (48,325) is used to calculate the Project's daily mobile source emissions for a conservative estimation. Appendix C of the DEIR includes data showing that mobile source emissions are estimated by the total daily VMT distributed by vehicle speeds and the emission rates generated from EMFAC2014. District staff replicated the calculation for validation.

Mobile Source Emission Calculation:
District staff used the following equations to calculate the Project's mobile source emissions for NOx and CO_2. Emissions from mobile sources are calculated with the VMT for each vehicle and emission rate per speed as shown below:

$$\text{Emissions}_{\text{pollutant, CY}} = \sum_{LDV}^{HDV} \left(\sum_{0\,mph}^{75\,mph} \text{VMT}_{\text{vehicle class, speed, CY}} * \text{ER}_{\text{vehicle class, speed, pollutant, CY}} \right)$$

Where: $\text{Emissions}_{\text{pollutant, CY}}$ is the running emissions calculated for a pollutant at a given calendar year (CY).
$\text{VMT}_{\text{vehicle class, speed, CY}}$ is the miles traveled by a vehicle class at a speed in a given calendar year.
$\text{ER}_{\text{vehicle class, speed, pollutant, CY}}$ is the emission rate of a pollutant for a vehicle class at a speed in a given calendar year.

---

[1] CARB EMFAC Web Database https://www.arb.ca.gov/emfac/

The $VMT_{vehicle\ class,\ speed,\ CY}$ can be calculated as follows:

$$VMT_{vehicle\ class,\ speed,\ CY} = VMT_{speed,\ CY} * Fleet\ Mix_{vehicle\ class,\ CY}$$

Where: $VMT_{speed,\ CY}$ is the Project's daily VMT distributed by each speed at full buildout in 2020.
$Fleet\ Mix_{vehicle\ class,\ CY}$ is the % of VMT contributed by a vehicle class at the calendar year of 2020.
Calendar year (CY) is 2020 for this emission calculation.

VMT$_{speed,\ CY}$ is provided by the Project's DEIR. Appendix C of the DEIR provides the Project's total daily VMT distributed by vehicle speeds with a range from 0 mph to 75 mph at the projected buildout year in 2020. **Fleet Mix** is derived from EMFAC2014 by selecting the "Calendar Year" as 2020 and "Sub-Area" as Placer – SV (Sacramento Valley) in order to generate the local VMT contribution from each vehicle class in the Sacramento Valley Air Basin portion of Placer County. **ER**$_{vehicle\ class,\ speed,\ pollutant,\ CY}$ is generated from EMFAC2014 by selecting the "Calendar Year" as 2020, "Sub-Area" as Placer-SV, and "All Speeds". The outputs from EMFAC2014 include the emission rates (gram per mile) of pollutants for each vehicle class and speed with a range from 0 mph to 90 mph.

The following tables summarize the Project's daily VMT, by speed, as provided by the DEIR within Appendix C and the Fleet Mix generated from EMFAC2014.

Fleet Mix derived from EMFAC2014 Emission Inventory for Placer-SV area

Region	CalYr	VehClass	Fuel	VMT	% of total VMT
Placer (SV)	2020	All Other Buses	DSL	2,167	0.0330%
Placer (SV)	2020	LDA	DSL	34,025	0.5179%
Placer (SV)	2020	LDT1	DSL	270	0.0041%
Placer (SV)	2020	LDT2	DSL	2,645	0.0402%
Placer (SV)	2020	LHD1	DSL	98,777	1.5034%
Placer (SV)	2020	LHD2	DSL	30,893	0.4702%
Placer (SV)	2020	MDV	DSL	16,325	0.2485%
Placer (SV)	2020	MH	DSL	2,305	0.0351%
Placer (SV)	2020	Motor Coach	DSL	1,699	0.0259%
Placer (SV)	2020	PTO	DSL	5,299	0.0806%
Placer (SV)	2020	SBUS	DSL	5,419	0.0825%
Placer (SV)	2020	T6 Ag	DSL	3,080	0.0469%
Placer (SV)	2020	T6 CAIRP heavy	DSL	460	0.0070%
Placer (SV)	2020	T6 CAIRP small	DSL	1,413	0.0215%
Placer (SV)	2020	T6 instate construction heavy	DSL	2,251	0.0343%
Placer (SV)	2020	T6 instate construction small	DSL	12,221	0.1860%
Placer (SV)	2020	T6 instate heavy	DSL	54,663	0.8320%
Placer (SV)	2020	T6 instate small	DSL	150,531	2.2911%
Placer (SV)	2020	T6 OOS heavy	DSL	264	0.0040%
Placer (SV)	2020	T6 OOS small	DSL	809	0.0123%
Placer (SV)	2020	T6 Public	DSL	4,931	0.0750%
Placer (SV)	2020	T6 utility	DSL	483	0.0073%
Placer (SV)	2020	T7 Ag	DSL	1,134	0.0173%
Placer (SV)	2020	T7 CAIRP	DSL	34,829	0.5301%
Placer (SV)	2020	T7 CAIRP construction	DSL	1,597	0.0243%
Placer (SV)	2020	T7 NNOOS	DSL	43,187	0.6573%
Placer (SV)	2020	T7 NOOS	DSL	13,757	0.2094%
Placer (SV)	2020	T7 other port	DSL	424	0.0065%
Placer (SV)	2020	T7 POAK	DSL	846	0.0129%
Placer (SV)	2020	T7 Public	DSL	5,800	0.0883%
Placer (SV)	2020	T7 Single	DSL	26,685	0.4061%
Placer (SV)	2020	T7 single construction	DSL	4,131	0.0629%
Placer (SV)	2020	T7 SWCV	DSL	5,417	0.0824%
Placer (SV)	2020	T7 tractor	DSL	23,338	0.3552%
Placer (SV)	2020	T7 tractor construction	DSL	3,080	0.0469%
Placer (SV)	2020	T7 utility	DSL	123	0.0019%
Placer (SV)	2020	UBUS	DSL	4,264	0.0649%
Placer (SV)	2020	LDA	ELEC	96,345	1.4664%
Placer (SV)	2020	LDT1	ELEC	173	0.0026%
Placer (SV)	2020	LDA	GAS	3,032,053	46.1478%
Placer (SV)	2020	LDT1	GAS	277,122	4.2178%
Placer (SV)	2020	LDT2	GAS	1,528,815	23.2685%
Placer (SV)	2020	LHD1	GAS	66,245	1.0082%
Placer (SV)	2020	LHD2	GAS	12,394	0.1886%
Placer (SV)	2020	MCY	GAS	35,009	0.5328%
Placer (SV)	2020	MDV	GAS	897,444	13.6591%
Placer (SV)	2020	MH	GAS	6,655	0.1013%
Placer (SV)	2020	OBUS	GAS	5,320	0.0810%
Placer (SV)	2020	SBUS	GAS	1,159	0.0176%
Placer (SV)	2020	T6TS	GAS	7,993	0.1216%
Placer (SV)	2020	T7IS	GAS	823	0.0125%
Placer (SV)	2020	UBUS	GAS	3,217	0.049%
			Total VMT	**6,570,307**	**100%**

Independence at Lincoln
Daily VMT by Speed

Speed (mph)	Daily VMT	% of Total VMT
0-5	25	0.05%
5-10	36	0.08%
10-15	120	0.25%
15-20	2,565	5.31%
20-25	1,209	2.50%
25-30	2,519	5.21%
30-35	6,874	14.23%
35-40	5,402	11.18%
40-45	8,812	18.23%
45-50	5,117	10.59%
50-55	4,851	10.04%
55-60	5,445	11.27%
60-65	5,335	11.04%
65-70	15	0.03%
70-75	0	0.00%
>75	0	0.00%
Total Project VMT	**48,325**	**100%**

The following table presents an example how NOx and CO2 running emissions were calculated for medium heavy-duty construction diesel trucks.

Vehicle Class: T6 instate construction truck-small (GVWR <=26,000 lbs)
Fuel: Diesel
Fleet Mix: 0.1860%
Calendar Year: 2020

Speed (mph)	Project Daily VMT by Speed (miles/day)	EMFAC2014 Emission Rates		Emissions	
		NOx (g/mile)	CO2 (g/mile)	NOx (g/day)	CO2 (g/day)
0-5	25	10.1294	2,230.0050	0.4749	104.5413
5-10	36	8.1217	1,983.9198	0.5483	133.9272
10-15	120	5.4821	1,661.8347	1.2233	370.8317
15-20	2,565	3.7482	1,442.7603	17.8805	6,882.6133
20-25	1,209	2.7550	1,325.4787	6.1941	2,980.1219
25-30	2,519	2.2434	1,251.5153	10.5107	5,863.5187
30-35	6,874	1.9223	1,192.7481	24.5778	15,250.3537
35-40	5,402	1.7039	1,144.7669	17.1194	11,501.6951
40-45	8,812	1.5475	1,104.9506	25.3631	18,110.1242
45-50	5,117	1.4409	1,071.6240	13.7124	10,198.1301
50-55	4,851	1.3704	1,043.6562	12.3654	9,417.2728
55-60	5,445	1.3459	1,031.4231	13.6315	10,446.0744
60-65	5,335	1.3423	1,031.4231	13.3187	10,234.2983
65-70	15	0	0	0	0
70-75	0	0	0	0	0
>75	0	0	0	0	0
Total Emissions (g/day)				**156.92**	**101493.50**
Total Emissions for NOx (lbs/day)				**0.35**	
Total Emissions for CO2 (MT/day)					**0.10**

There are 52 types of vehicle classes listed in EMFAC modeling outputs. Emissions from each vehicle class are calculated based on its emission rates at each speed and the Project's daily VMT by speed. The sum of emissions from each vehicle class presents the total running exhaust emissions from vehicle operation. The following table shows the total running exhaust emissions for NOx and CO2 at Project buildout in 2020.

Calendar Year	NOx (lbs/day)	CO2 (MT/year)
2020	32.24	6892.52

All Excel spreadsheets for emission calculation are attached.

Independence at Lincoln
Daily Trip and VMT by Speed

Daily Trip and Total VMT

Land Use	Quantity	Unit	Daily Trips	Daily VMT	Average Trip Length (mile)
Single Family Residential	575	du	5,276	45,260	8.6
Multi-family Residential	54	du	359	2,674	7.4
Sport Fields	2	soccer fields	70	392	5.6
Total	**629**		**5,705**	**48,325**	

Independence at Lincoln
Daily VMT by Speed
(conbined with all lahd use categories)

Speed (mph)	Daily VMT	% of Total VMT
0-5	25	0.05%
5-10	36	0.08%
10-15	120	0.25%
15-20	2,565	5.31%
20-25	1,209	2.50%
25-30	2,519	5.21%
30-35	6,874	14.23%
35-40	5,402	11.18%
40-45	8,812	18.23%
45-50	5,117	10.59%
50-55	4,851	10.04%
55-60	5,445	11.27%
60-65	5,335	11.04%
65-70	15	0.03%
70-75	0	0.00%
>75	0	0.00%
Total Project VMT	**48,325**	**100%**

Data Source: Daily trip and VMT by speed are provided by DEIR Appendix C on page 260, 306, & 307

Fleet Mix from EMFAC2014

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Region	CalYr	VehClass	Fuel	VMT	% of total VMT
Placer (SV)	2020	All Other Buses	DSL	2,167	0.0330%
Placer (SV)	2020	LDA	DSL	34,025	0.5179%
Placer (SV)	2020	LDT1	DSL	270	0.0041%
Placer (SV)	2020	LDT2	DSL	2,645	0.0402%
Placer (SV)	2020	LHD1	DSL	98,777	1.5034%
Placer (SV)	2020	LHD2	DSL	30,893	0.4702%
Placer (SV)	2020	MDV	DSL	16,325	0.2485%
Placer (SV)	2020	MH	DSL	2,305	0.0351%
Placer (SV)	2020	Motor Coach	DSL	1,699	0.0259%
Placer (SV)	2020	PTO	DSL	5,299	0.0806%
Placer (SV)	2020	SBUS	DSL	5,419	0.0825%
Placer (SV)	2020	T6 Ag	DSL	3,080	0.0469%
Placer (SV)	2020	T6 CAIRP heavy	DSL	460	0.0070%
Placer (SV)	2020	T6 CAIRP small	DSL	1,413	0.0215%
Placer (SV)	2020	T6 instate construction heavy	DSL	2,251	0.0343%
Placer (SV)	2020	T6 instate construction small	DSL	12,221	0.1860%
Placer (SV)	2020	T6 instate heavy	DSL	54,663	0.8320%
Placer (SV)	2020	T6 instate small	DSL	150,531	2.2911%
Placer (SV)	2020	T6 OOS heavy	DSL	264	0.0040%
Placer (SV)	2020	T6 OOS small	DSL	809	0.0123%
Placer (SV)	2020	T6 Public	DSL	4,931	0.0750%
Placer (SV)	2020	T6 utility	DSL	483	0.0073%
Placer (SV)	2020	T7 Ag	DSL	1,134	0.0173%
Placer (SV)	2020	T7 CAIRP	DSL	34,829	0.5301%
Placer (SV)	2020	T7 CAIRP construction	DSL	1,597	0.0243%
Placer (SV)	2020	T7 NNOOS	DSL	43,187	0.6573%
Placer (SV)	2020	T7 NOOS	DSL	13,757	0.2094%
Placer (SV)	2020	T7 other port	DSL	424	0.0065%
Placer (SV)	2020	T7 POAK	DSL	846	0.0129%
Placer (SV)	2020	T7 Public	DSL	5,800	0.0883%
Placer (SV)	2020	T7 Single	DSL	26,685	0.4061%
Placer (SV)	2020	T7 single construction	DSL	4,131	0.0629%
Placer (SV)	2020	T7 SWCV	DSL	5,417	0.0824%
Placer (SV)	2020	T7 tractor	DSL	23,338	0.3552%
Placer (SV)	2020	T7 tractor construction	DSL	3,080	0.0469%
Placer (SV)	2020	T7 utility	DSL	123	0.0019%
Placer (SV)	2020	UBUS	DSL	4,264	0.0649%
Placer (SV)	2020	LDA	ELEC	96,345	1.4664%
Placer (SV)	2020	LDT1	ELEC	173	0.0026%
Placer (SV)	2020	LDA	GAS	3,032,053	46.1478%
Placer (SV)	2020	LDT1	GAS	277,122	4.2178%
Placer (SV)	2020	LDT2	GAS	1,528,815	23.2685%
Placer (SV)	2020	LHD1	GAS	66,245	1.0082%
Placer (SV)	2020	LHD2	GAS	12,394	0.1886%
Placer (SV)	2020	MCY	GAS	35,009	0.5328%
Placer (SV)	2020	MDV	GAS	897,444	13.6591%
Placer (SV)	2020	MH	GAS	6,655	0.1013%
Placer (SV)	2020	OBUS	GAS	5,320	0.0810%
Placer (SV)	2020	SBUS	GAS	1,159	0.0176%
Placer (SV)	2020	T6TS	GAS	7,993	0.1216%
Placer (SV)	2020	T7IS	GAS	823	0.0125%
Placer (SV)	2020	UBUS	GAS	3,217	0.049%
			Total VMT	**6,570,307**	**100%**

EMFAC2014 (v1.0.7) Emission rates by speed

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

						Emission rate (g/mile)	
Region	CalYr	VehClass	MdlYr	Speed	Fuel	NOx_RUNEX	CO2_RUNEX
Placer (SV)	2020	All Other Buses	Aggregated	5	DSL	11.74841834	2314.952932
Placer (SV)	2020	All Other Buses	Aggregated	10	DSL	9.690442336	2060.332136
Placer (SV)	2020	All Other Buses	Aggregated	15	DSL	7.015530371	1731.54806
Placer (SV)	2020	All Other Buses	Aggregated	20	DSL	5.315708253	1510.38986
Placer (SV)	2020	All Other Buses	Aggregated	25	DSL	4.382948313	1383.9465
Placer (SV)	2020	All Other Buses	Aggregated	30	DSL	3.861961985	1300.939923
Placer (SV)	2020	All Other Buses	Aggregated	35	DSL	3.513291585	1235.473386
Placer (SV)	2020	All Other Buses	Aggregated	40	DSL	3.263360862	1182.164903
Placer (SV)	2020	All Other Buses	Aggregated	45	DSL	3.071585847	1137.831383
Placer (SV)	2020	All Other Buses	Aggregated	50	DSL	2.932397084	1100.446843
Placer (SV)	2020	All Other Buses	Aggregated	55	DSL	2.82785286	1068.648716
Placer (SV)	2020	All Other Buses	Aggregated	60	DSL	2.784812987	1054.534191
Placer (SV)	2020	All Other Buses	Aggregated	65	DSL	2.777216114	1054.534191
Placer (SV)	2020	All Other Buses	Aggregated	70	DSL	0	0
Placer (SV)	2020	All Other Buses	Aggregated	75	DSL	0	0
Placer (SV)	2020	All Other Buses	Aggregated	80	DSL	0	0
Placer (SV)	2020	All Other Buses	Aggregated	85	DSL	0	0
Placer (SV)	2020	All Other Buses	Aggregated	90	DSL	0	0
Placer (SV)	2020	LDA	Aggregated	10	DSL	0.185825936	560.267451
Placer (SV)	2020	LDA	Aggregated	15	DSL	0.152323005	460.8183841
Placer (SV)	2020	LDA	Aggregated	20	DSL	0.130387136	378.020701
Placer (SV)	2020	LDA	Aggregated	25	DSL	0.122367013	316.8726984
Placer (SV)	2020	LDA	Aggregated	30	DSL	0.12002004	274.4699011
Placer (SV)	2020	LDA	Aggregated	35	DSL	0.119787282	248.1152619
Placer (SV)	2020	LDA	Aggregated	40	DSL	0.12085279	232.1803648
Placer (SV)	2020	LDA	Aggregated	45	DSL	0.12264611	224.2683961
Placer (SV)	2020	LDA	Aggregated	50	DSL	0.125047645	224.8392893
Placer (SV)	2020	LDA	Aggregated	55	DSL	0.127713938	235.2766114
Placer (SV)	2020	LDA	Aggregated	60	DSL	0.131319551	255.0680998
Placer (SV)	2020	LDA	Aggregated	65	DSL	0.135940295	286.7481666
Placer (SV)	2020	LDT1	Aggregated	10	DSL	0.794656595	761.4709406
Placer (SV)	2020	LDT1	Aggregated	15	DSL	0.816229512	631.3849069
Placer (SV)	2020	LDT1	Aggregated	20	DSL	0.843801366	518.7309042
Placer (SV)	2020	LDT1	Aggregated	25	DSL	0.878229223	434.9371639
Placer (SV)	2020	LDT1	Aggregated	30	DSL	0.915750686	376.09756
Placer (SV)	2020	LDT1	Aggregated	35	DSL	0.954545309	339.4425024
Placer (SV)	2020	LDT1	Aggregated	40	DSL	0.994743462	316.8086555
Placer (SV)	2020	LDT1	Aggregated	45	DSL	1.03513919	305.4572903
Placer (SV)	2020	LDT1	Aggregated	50	DSL	1.076699702	305.9647238
Placer (SV)	2020	LDT1	Aggregated	55	DSL	1.117696314	319.9110441
Placer (SV)	2020	LDT1	Aggregated	60	DSL	1.160166347	346.5291491
Placer (SV)	2020	LDT1	Aggregated	65	DSL	1.206485457	389.2302188

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	LDT2	Aggregated	10	DSL	0.143564758	717.8533943
Placer (SV)	2020	LDT2	Aggregated	15	DSL	0.104855895	595.2187724
Placer (SV)	2020	LDT2	Aggregated	20	DSL	0.078465245	489.0176636
Placer (SV)	2020	LDT2	Aggregated	25	DSL	0.066922101	410.0236828
Placer (SV)	2020	LDT2	Aggregated	30	DSL	0.061408736	354.5544493
Placer (SV)	2020	LDT2	Aggregated	35	DSL	0.058133135	319.999017
Placer (SV)	2020	LDT2	Aggregated	40	DSL	0.056183294	298.6616515
Placer (SV)	2020	LDT2	Aggregated	45	DSL	0.055022525	287.9604998
Placer (SV)	2020	LDT2	Aggregated	50	DSL	0.054443384	288.4388672
Placer (SV)	2020	LDT2	Aggregated	55	DSL	0.054200751	301.5863332
Placer (SV)	2020	LDT2	Aggregated	60	DSL	0.054881703	326.679736
Placer (SV)	2020	LDT2	Aggregated	65	DSL	0.056385197	366.934861
Placer (SV)	2020	LHD1	Aggregated	5	DSL	3.432061801	1278.164921
Placer (SV)	2020	LHD1	Aggregated	10	DSL	3.556300604	1074.497047
Placer (SV)	2020	LHD1	Aggregated	15	DSL	3.66480093	701.7364873
Placer (SV)	2020	LHD1	Aggregated	20	DSL	3.791642241	598.1243885
Placer (SV)	2020	LHD1	Aggregated	25	DSL	3.959973753	530.4793684
Placer (SV)	2020	LHD1	Aggregated	30	DSL	4.124722181	481.7326156
Placer (SV)	2020	LHD1	Aggregated	35	DSL	4.316754332	481.7326156
Placer (SV)	2020	LHD1	Aggregated	40	DSL	4.510453148	468.5445891
Placer (SV)	2020	LHD1	Aggregated	45	DSL	4.686578585	457.0283789
Placer (SV)	2020	LHD1	Aggregated	50	DSL	4.864653988	479.1331673
Placer (SV)	2020	LHD1	Aggregated	55	DSL	5.071777871	500.6771567
Placer (SV)	2020	LHD2	Aggregated	5	DSL	2.148959204	1325.379965
Placer (SV)	2020	LHD2	Aggregated	10	DSL	2.172332891	1177.906584
Placer (SV)	2020	LHD2	Aggregated	15	DSL	2.159385856	784.0969929
Placer (SV)	2020	LHD2	Aggregated	20	DSL	2.178574875	668.7770512
Placer (SV)	2020	LHD2	Aggregated	25	DSL	2.247881259	595.9849912
Placer (SV)	2020	LHD2	Aggregated	30	DSL	2.32586442	537.483397
Placer (SV)	2020	LHD2	Aggregated	35	DSL	2.423203903	537.483397
Placer (SV)	2020	LHD2	Aggregated	40	DSL	2.523727606	517.851949
Placer (SV)	2020	LHD2	Aggregated	45	DSL	2.615860883	497.7829188
Placer (SV)	2020	LHD2	Aggregated	50	DSL	2.71007189	516.1171016
Placer (SV)	2020	LHD2	Aggregated	55	DSL	2.821136544	534.2060592
Placer (SV)	2020	MDV	Aggregated	10	DSL	0.137142531	904.355225
Placer (SV)	2020	MDV	Aggregated	15	DSL	0.098113036	766.9539612
Placer (SV)	2020	MDV	Aggregated	20	DSL	0.071391845	636.952228
Placer (SV)	2020	MDV	Aggregated	25	DSL	0.059509475	538.60865
Placer (SV)	2020	MDV	Aggregated	30	DSL	0.053650667	465.1901405
Placer (SV)	2020	MDV	Aggregated	35	DSL	0.050026226	422.0957235
Placer (SV)	2020	MDV	Aggregated	40	DSL	0.047719884	394.8124898
Placer (SV)	2020	MDV	Aggregated	45	DSL	0.046203604	379.9500087
Placer (SV)	2020	MDV	Aggregated	50	DSL	0.045260813	381.8539279
Placer (SV)	2020	MDV	Aggregated	55	DSL	0.044660592	402.9892902

EMFAC2014 (v1.0.7) Emission rates by speed

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	MDV	Aggregated	60	DSL	0.044974305	436.3563093
Placer (SV)	2020	MDV	Aggregated	65	DSL	0.04607989	489.9669743
Placer (SV)	2020	MH	Aggregated	5	DSL	16.6613845	2100.591592
Placer (SV)	2020	MH	Aggregated	10	DSL	13.90022995	1907.346195
Placer (SV)	2020	MH	Aggregated	15	DSL	9.690147658	1566.096563
Placer (SV)	2020	MH	Aggregated	20	DSL	7.263504916	1285.168485
Placer (SV)	2020	MH	Aggregated	25	DSL	6.457737421	1152.743898
Placer (SV)	2020	MH	Aggregated	30	DSL	6.01405153	1082.024458
Placer (SV)	2020	MH	Aggregated	35	DSL	5.68680962	1023.336091
Placer (SV)	2020	MH	Aggregated	40	DSL	5.449973885	976.6787964
Placer (SV)	2020	MH	Aggregated	45	DSL	5.28182753	942.0525742
Placer (SV)	2020	MH	Aggregated	50	DSL	5.198538927	919.4574246
Placer (SV)	2020	MH	Aggregated	55	DSL	5.185005867	908.8933474
Placer (SV)	2020	MH	Aggregated	60	DSL	5.244707743	910.3603427
Placer (SV)	2020	MH	Aggregated	65	DSL	5.362026439	923.8584106
Placer (SV)	2020	Motor Coach	Aggregated	5	DSL	18.65258403	3297.054997
Placer (SV)	2020	Motor Coach	Aggregated	10	DSL	15.19260507	2932.520928
Placer (SV)	2020	Motor Coach	Aggregated	15	DSL	10.73250686	2464.276067
Placer (SV)	2020	Motor Coach	Aggregated	20	DSL	7.83544633	2150.690963
Placer (SV)	2020	Motor Coach	Aggregated	25	DSL	6.175558781	1972.892869
Placer (SV)	2020	Motor Coach	Aggregated	30	DSL	5.291952321	1856.503286
Placer (SV)	2020	Motor Coach	Aggregated	35	DSL	4.72200982	1764.686121
Placer (SV)	2020	Motor Coach	Aggregated	40	DSL	4.32840615	1689.828871
Placer (SV)	2020	Motor Coach	Aggregated	45	DSL	4.01838541	1627.424904
Placer (SV)	2020	Motor Coach	Aggregated	50	DSL	3.805909758	1574.60346
Placer (SV)	2020	Motor Coach	Aggregated	55	DSL	3.640481896	1529.432436
Placer (SV)	2020	Motor Coach	Aggregated	60	DSL	3.56662936	1509.275478
Placer (SV)	2020	Motor Coach	Aggregated	65	DSL	3.551133175	1509.275478
Placer (SV)	2020	Motor Coach	Aggregated	70	DSL	0	0
Placer (SV)	2020	Motor Coach	Aggregated	75	DSL	0	0
Placer (SV)	2020	Motor Coach	Aggregated	80	DSL	0	0
Placer (SV)	2020	Motor Coach	Aggregated	85	DSL	0	0
Placer (SV)	2020	Motor Coach	Aggregated	90	DSL	0	0
Placer (SV)	2020	PTO	Aggregated	20	DSL	6.210237285	2034.943415
Placer (SV)	2020	SBUS	Aggregated	5	DSL	18.13983598	2313.051743
Placer (SV)	2020	SBUS	Aggregated	10	DSL	14.77083818	2075.969097
Placer (SV)	2020	SBUS	Aggregated	15	DSL	10.10935942	1725.270897
Placer (SV)	2020	SBUS	Aggregated	20	DSL	7.594640971	1464.101996
Placer (SV)	2020	SBUS	Aggregated	25	DSL	6.826020304	1329.515126
Placer (SV)	2020	SBUS	Aggregated	30	DSL	6.447685247	1249.500371
Placer (SV)	2020	SBUS	Aggregated	35	DSL	6.194568868	1185.027167
Placer (SV)	2020	SBUS	Aggregated	40	DSL	6.025996423	1133.179948
Placer (SV)	2020	SBUS	Aggregated	45	DSL	5.925713496	1092.232906
Placer (SV)	2020	SBUS	Aggregated	50	DSL	5.882056033	1061.090803

EMFAC2014 (v1.0.7) Emission rates by speed
Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	SBUS	Aggregated	55	DSL	5.915445091	1039.023775
Placer (SV)	2020	SBUS	Aggregated	60	DSL	5.936694374	1030.978653
Placer (SV)	2020	SBUS	Aggregated	65	DSL	0	0
Placer (SV)	2020	SBUS	Aggregated	70	DSL	0	0
Placer (SV)	2020	SBUS	Aggregated	75	DSL	0	0
Placer (SV)	2020	SBUS	Aggregated	80	DSL	0	0
Placer (SV)	2020	SBUS	Aggregated	85	DSL	0	0
Placer (SV)	2020	SBUS	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 Ag	Aggregated	5	DSL	17.32358757	2359.617266
Placer (SV)	2020	T6 Ag	Aggregated	10	DSL	14.26377492	2111.485232
Placer (SV)	2020	T6 Ag	Aggregated	15	DSL	10.02172046	1756.996086
Placer (SV)	2020	T6 Ag	Aggregated	20	DSL	7.620296942	1499.307943
Placer (SV)	2020	T6 Ag	Aggregated	25	DSL	6.610940561	1368.478671
Placer (SV)	2020	T6 Ag	Aggregated	30	DSL	6.039298642	1290.722268
Placer (SV)	2020	T6 Ag	Aggregated	35	DSL	5.654185331	1228.090584
Placer (SV)	2020	T6 Ag	Aggregated	40	DSL	5.392646805	1177.408255
Placer (SV)	2020	T6 Ag	Aggregated	45	DSL	5.216127037	1136.785884
Placer (SV)	2020	T6 Ag	Aggregated	50	DSL	5.131787238	1105.016599
Placer (SV)	2020	T6 Ag	Aggregated	55	DSL	5.119804631	1081.288476
Placer (SV)	2020	T6 Ag	Aggregated	60	DSL	5.134717666	1072.137071
Placer (SV)	2020	T6 Ag	Aggregated	65	DSL	5.120710334	1072.137071
Placer (SV)	2020	T6 Ag	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 Ag	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 Ag	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 Ag	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 Ag	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	5	DSL	9.184816361	2215.046961
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	10	DSL	7.277241947	1966.197394
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	15	DSL	4.848300032	1650.425254
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	20	DSL	3.26024565	1441.134433
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	25	DSL	2.298648859	1327.276235
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	30	DSL	1.801410527	1246.35676
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	35	DSL	1.500190577	1181.456006
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	40	DSL	1.300377274	1127.54917
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	45	DSL	1.157580094	1081.641563
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	50	DSL	1.055409507	1041.813418
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	55	DSL	0.979189977	1013.226736
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	60	DSL	0.947963366	1000.304012
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	65	DSL	0.945377355	1000.304012
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 CAIRP heavy	Aggregated	90	DSL	0	0

Placer (SV)	2020	T6 CAIRP small	Aggregated	5	DSL	9.032919664	2191.198538
Placer (SV)	2020	T6 CAIRP small	Aggregated	10	DSL	7.09568006	1946.619056
Placer (SV)	2020	T6 CAIRP small	Aggregated	15	DSL	4.590156925	1631.512995
Placer (SV)	2020	T6 CAIRP small	Aggregated	20	DSL	2.943751061	1419.954263
Placer (SV)	2020	T6 CAIRP small	Aggregated	25	DSL	1.989936454	1307.189702
Placer (SV)	2020	T6 CAIRP small	Aggregated	30	DSL	1.524122942	1235.903957
Placer (SV)	2020	T6 CAIRP small	Aggregated	35	DSL	1.248645227	1179.329543
Placer (SV)	2020	T6 CAIRP small	Aggregated	40	DSL	1.069955144	1133.023305
Placer (SV)	2020	T6 CAIRP small	Aggregated	45	DSL	0.9464916	1094.341155
Placer (SV)	2020	T6 CAIRP small	Aggregated	50	DSL	0.863075746	1061.591334
Placer (SV)	2020	T6 CAIRP small	Aggregated	55	DSL	0.807163181	1033.630864
Placer (SV)	2020	T6 CAIRP small	Aggregated	60	DSL	0.787157361	1021.185334
Placer (SV)	2020	T6 CAIRP small	Aggregated	65	DSL	0.785010023	1021.185334
Placer (SV)	2020	T6 CAIRP small	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 CAIRP small	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 CAIRP small	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 CAIRP small	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 CAIRP small	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 instate construction heavy	Aggregated	5	DSL	11.5562955	2268.607194
Placer (SV)	2020	T6 instate construction heavy	Aggregated	10	DSL	9.38342846	2020.110468
Placer (SV)	2020	T6 instate construction heavy	Aggregated	15	DSL	6.529763782	1694.149267
Placer (SV)	2020	T6 instate construction heavy	Aggregated	20	DSL	4.742134252	1471.987927
Placer (SV)	2020	T6 instate construction heavy	Aggregated	25	DSL	3.816391564	1348.995144
Placer (SV)	2020	T6 instate construction heavy	Aggregated	30	DSL	3.33338102	1270.010472
Placer (SV)	2020	T6 instate construction heavy	Aggregated	35	DSL	3.023052168	1207.461392
Placer (SV)	2020	T6 instate construction heavy	Aggregated	40	DSL	2.808745911	1156.546858
Placer (SV)	2020	T6 instate construction heavy	Aggregated	45	DSL	2.651418023	1114.422708
Placer (SV)	2020	T6 instate construction heavy	Aggregated	50	DSL	2.545083452	1079.27684
Placer (SV)	2020	T6 instate construction heavy	Aggregated	55	DSL	2.474110259	1049.890301
Placer (SV)	2020	T6 instate construction heavy	Aggregated	60	DSL	2.447979465	1037.035581
Placer (SV)	2020	T6 instate construction heavy	Aggregated	65	DSL	2.441301462	1037.035581
Placer (SV)	2020	T6 instate construction heavy	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 instate construction heavy	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 instate construction heavy	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 instate construction heavy	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 instate construction heavy	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 instate construction small	Aggregated	5	DSL	10.12944592	2230.005038
Placer (SV)	2020	T6 instate construction small	Aggregated	10	DSL	8.121676145	1983.919789
Placer (SV)	2020	T6 instate construction small	Aggregated	15	DSL	5.482073464	1661.834696
Placer (SV)	2020	T6 instate construction small	Aggregated	20	DSL	3.748172501	1442.760282
Placer (SV)	2020	T6 instate construction small	Aggregated	25	DSL	2.754956504	1325.478739
Placer (SV)	2020	T6 instate construction small	Aggregated	30	DSL	2.243413972	1251.51533
Placer (SV)	2020	T6 instate construction small	Aggregated	35	DSL	1.922260233	1192.748083
Placer (SV)	2020	T6 instate construction small	Aggregated	40	DSL	1.70389774	1144.766885

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T6 instate construction small	Aggregated	45	DSL	1.547474434	1104.950606
Placer (SV)	2020	T6 instate construction small	Aggregated	50	DSL	1.440904467	1071.623965
Placer (SV)	2020	T6 instate construction small	Aggregated	55	DSL	1.370378368	1043.656171
Placer (SV)	2020	T6 instate construction small	Aggregated	60	DSL	1.345946394	1031.423093
Placer (SV)	2020	T6 instate construction small	Aggregated	65	DSL	1.342274699	1031.423093
Placer (SV)	2020	T6 instate construction small	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 instate construction small	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 instate construction small	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 instate construction small	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 instate construction small	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 instate heavy	Aggregated	5	DSL	9.500916442	2229.376106
Placer (SV)	2020	T6 instate heavy	Aggregated	10	DSL	7.61763381	1979.864465
Placer (SV)	2020	T6 instate heavy	Aggregated	15	DSL	5.213699719	1662.603611
Placer (SV)	2020	T6 instate heavy	Aggregated	20	DSL	3.644323305	1451.956313
Placer (SV)	2020	T6 instate heavy	Aggregated	25	DSL	2.702493951	1335.842209
Placer (SV)	2020	T6 instate heavy	Aggregated	30	DSL	2.203965166	1252.853605
Placer (SV)	2020	T6 instate heavy	Aggregated	35	DSL	1.89357214	1186.374229
Placer (SV)	2020	T6 instate heavy	Aggregated	40	DSL	1.682753775	1131.234281
Placer (SV)	2020	T6 instate heavy	Aggregated	45	DSL	1.528539873	1084.355918
Placer (SV)	2020	T6 instate heavy	Aggregated	50	DSL	1.416893362	1043.767649
Placer (SV)	2020	T6 instate heavy	Aggregated	55	DSL	1.332591027	1014.682812
Placer (SV)	2020	T6 instate heavy	Aggregated	60	DSL	1.297681384	1001.566113
Placer (SV)	2020	T6 instate heavy	Aggregated	65	DSL	1.294141355	1001.566113
Placer (SV)	2020	T6 instate heavy	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 instate heavy	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 instate heavy	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 instate heavy	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 instate heavy	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 instate small	Aggregated	5	DSL	9.399953854	2202.508425
Placer (SV)	2020	T6 instate small	Aggregated	10	DSL	7.429776701	1957.658416
Placer (SV)	2020	T6 instate small	Aggregated	15	DSL	4.864459569	1640.091953
Placer (SV)	2020	T6 instate small	Aggregated	20	DSL	3.17828136	1425.695486
Placer (SV)	2020	T6 instate small	Aggregated	25	DSL	2.206559631	1311.691923
Placer (SV)	2020	T6 instate small	Aggregated	30	DSL	1.725003011	1239.875498
Placer (SV)	2020	T6 instate small	Aggregated	35	DSL	1.434763787	1182.827327
Placer (SV)	2020	T6 instate small	Aggregated	40	DSL	1.2436615	1136.168617
Placer (SV)	2020	T6 instate small	Aggregated	45	DSL	1.110313759	1097.293861
Placer (SV)	2020	T6 instate small	Aggregated	50	DSL	1.020423983	1064.536133
Placer (SV)	2020	T6 instate small	Aggregated	55	DSL	0.961147902	1036.769319
Placer (SV)	2020	T6 instate small	Aggregated	60	DSL	0.940554061	1024.500076
Placer (SV)	2020	T6 instate small	Aggregated	65	DSL	0.937988262	1024.500076
Placer (SV)	2020	T6 instate small	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 instate small	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 instate small	Aggregated	80	DSL	0	0

Placer (SV)	2020	T6 instate small	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 instate small	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 OOS heavy	Aggregated	5	DSL	9.324736203	2218.777432
Placer (SV)	2020	T6 OOS heavy	Aggregated	10	DSL	7.404444157	1969.92928
Placer (SV)	2020	T6 OOS heavy	Aggregated	15	DSL	4.950411796	1653.152521
Placer (SV)	2020	T6 OOS heavy	Aggregated	20	DSL	3.348897299	1442.622076
Placer (SV)	2020	T6 OOS heavy	Aggregated	25	DSL	2.38305737	1328.372294
Placer (SV)	2020	T6 OOS heavy	Aggregated	30	DSL	1.880351416	1247.344194
Placer (SV)	2020	T6 OOS heavy	Aggregated	35	DSL	1.573737862	1182.322088
Placer (SV)	2020	T6 OOS heavy	Aggregated	40	DSL	1.369432488	1128.325578
Placer (SV)	2020	T6 OOS heavy	Aggregated	45	DSL	1.223199013	1082.385313
Placer (SV)	2020	T6 OOS heavy	Aggregated	50	DSL	1.119025802	1042.596837
Placer (SV)	2020	T6 OOS heavy	Aggregated	55	DSL	1.042126036	1014.16004
Placer (SV)	2020	T6 OOS heavy	Aggregated	60	DSL	1.011025959	1001.34556
Placer (SV)	2020	T6 OOS heavy	Aggregated	65	DSL	1.008267915	1001.34556
Placer (SV)	2020	T6 OOS heavy	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 OOS heavy	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 OOS heavy	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 OOS heavy	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 OOS heavy	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 OOS small	Aggregated	5	DSL	9.032919664	2191.198538
Placer (SV)	2020	T6 OOS small	Aggregated	10	DSL	7.09568006	1946.619056
Placer (SV)	2020	T6 OOS small	Aggregated	15	DSL	4.590156925	1631.512995
Placer (SV)	2020	T6 OOS small	Aggregated	20	DSL	2.943751061	1419.954263
Placer (SV)	2020	T6 OOS small	Aggregated	25	DSL	1.989936454	1307.189702
Placer (SV)	2020	T6 OOS small	Aggregated	30	DSL	1.524122942	1235.903957
Placer (SV)	2020	T6 OOS small	Aggregated	35	DSL	1.248645227	1179.329543
Placer (SV)	2020	T6 OOS small	Aggregated	40	DSL	1.069955144	1133.023305
Placer (SV)	2020	T6 OOS small	Aggregated	45	DSL	0.9464916	1094.341155
Placer (SV)	2020	T6 OOS small	Aggregated	50	DSL	0.863075746	1061.591334
Placer (SV)	2020	T6 OOS small	Aggregated	55	DSL	0.807163181	1033.630864
Placer (SV)	2020	T6 OOS small	Aggregated	60	DSL	0.787157361	1021.185334
Placer (SV)	2020	T6 OOS small	Aggregated	65	DSL	0.785010023	1021.185334
Placer (SV)	2020	T6 OOS small	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 OOS small	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 OOS small	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 OOS small	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 OOS small	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 Public	Aggregated	5	DSL	11.20175061	2274.197036
Placer (SV)	2020	T6 Public	Aggregated	10	DSL	9.173275214	2031.516361
Placer (SV)	2020	T6 Public	Aggregated	15	DSL	6.385511073	1696.861626
Placer (SV)	2020	T6 Public	Aggregated	20	DSL	4.721285928	1459.794927
Placer (SV)	2020	T6 Public	Aggregated	25	DSL	3.984097383	1334.002877
Placer (SV)	2020	T6 Public	Aggregated	30	DSL	3.601050774	1256.290795

Placer (SV)	2020	T6 Public	Aggregated	35	DSL	3.348269038	1194.191405
Placer (SV)	2020	T6 Public	Aggregated	40	DSL	3.174880044	1143.813953
Placer (SV)	2020	T6 Public	Aggregated	45	DSL	3.053552715	1102.851184
Placer (SV)	2020	T6 Public	Aggregated	50	DSL	2.986707978	1069.831659
Placer (SV)	2020	T6 Public	Aggregated	55	DSL	2.961958613	1043.76458
Placer (SV)	2020	T6 Public	Aggregated	60	DSL	2.962349938	1033.08557
Placer (SV)	2020	T6 Public	Aggregated	65	DSL	2.95426875	1033.08557
Placer (SV)	2020	T6 Public	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 Public	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 Public	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 Public	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 Public	Aggregated	90	DSL	0	0
Placer (SV)	2020	T6 utility	Aggregated	5	DSL	5.699991777	2240.187357
Placer (SV)	2020	T6 utility	Aggregated	10	DSL	4.425646326	1986.335371
Placer (SV)	2020	T6 utility	Aggregated	15	DSL	2.816397628	1666.519691
Placer (SV)	2020	T6 utility	Aggregated	20	DSL	1.760277487	1455.862489
Placer (SV)	2020	T6 utility	Aggregated	25	DSL	1.100586377	1343.666688
Placer (SV)	2020	T6 utility	Aggregated	30	DSL	0.767119943	1272.249599
Placer (SV)	2020	T6 utility	Aggregated	35	DSL	0.573114415	1215.70043
Placer (SV)	2020	T6 utility	Aggregated	40	DSL	0.449089017	1169.262672
Placer (SV)	2020	T6 utility	Aggregated	45	DSL	0.363674193	1130.102491
Placer (SV)	2020	T6 utility	Aggregated	50	DSL	0.30310562	1096.404953
Placer (SV)	2020	T6 utility	Aggregated	55	DSL	0.257980488	1066.942828
Placer (SV)	2020	T6 utility	Aggregated	60	DSL	0.239440374	1053.519295
Placer (SV)	2020	T6 utility	Aggregated	65	DSL	0.238787189	1053.519295
Placer (SV)	2020	T6 utility	Aggregated	70	DSL	0	0
Placer (SV)	2020	T6 utility	Aggregated	75	DSL	0	0
Placer (SV)	2020	T6 utility	Aggregated	80	DSL	0	0
Placer (SV)	2020	T6 utility	Aggregated	85	DSL	0	0
Placer (SV)	2020	T6 utility	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 Ag	Aggregated	5	DSL	32.12728984	3497.54275
Placer (SV)	2020	T7 Ag	Aggregated	10	DSL	26.25883158	3134.921711
Placer (SV)	2020	T7 Ag	Aggregated	15	DSL	18.48928357	2598.41964
Placer (SV)	2020	T7 Ag	Aggregated	20	DSL	14.20134195	2197.823249
Placer (SV)	2020	T7 Ag	Aggregated	25	DSL	12.43255656	1997.493692
Placer (SV)	2020	T7 Ag	Aggregated	30	DSL	11.41175577	1881.202012
Placer (SV)	2020	T7 Ag	Aggregated	35	DSL	10.69965927	1787.430326
Placer (SV)	2020	T7 Ag	Aggregated	40	DSL	10.21584666	1712.336352
Placer (SV)	2020	T7 Ag	Aggregated	45	DSL	9.936596444	1653.635401
Placer (SV)	2020	T7 Ag	Aggregated	50	DSL	9.788335158	1609.88594
Placer (SV)	2020	T7 Ag	Aggregated	55	DSL	9.779454718	1580.149308
Placer (SV)	2020	T7 Ag	Aggregated	60	DSL	9.833923658	1569.121671
Placer (SV)	2020	T7 Ag	Aggregated	65	DSL	9.83540564	1569.121671
Placer (SV)	2020	T7 Ag	Aggregated	70	DSL	0	0

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T7 Ag	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 Ag	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 Ag	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 Ag	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 CAIRP	Aggregated	5	DSL	21.8900707	3113.736851
Placer (SV)	2020	T7 CAIRP	Aggregated	10	DSL	17.49126627	2765.206955
Placer (SV)	2020	T7 CAIRP	Aggregated	15	DSL	11.99334151	2322.135311
Placer (SV)	2020	T7 CAIRP	Aggregated	20	DSL	8.397707078	2028.008429
Placer (SV)	2020	T7 CAIRP	Aggregated	25	DSL	6.127248041	1865.85538
Placer (SV)	2020	T7 CAIRP	Aggregated	30	DSL	4.899038953	1749.702166
Placer (SV)	2020	T7 CAIRP	Aggregated	35	DSL	4.127229702	1656.63164
Placer (SV)	2020	T7 CAIRP	Aggregated	40	DSL	3.602597627	1579.412813
Placer (SV)	2020	T7 CAIRP	Aggregated	45	DSL	3.231957104	1513.740625
Placer (SV)	2020	T7 CAIRP	Aggregated	50	DSL	2.946543389	1456.857468
Placer (SV)	2020	T7 CAIRP	Aggregated	55	DSL	2.724732547	1416.246099
Placer (SV)	2020	T7 CAIRP	Aggregated	60	DSL	2.639808374	1397.927499
Placer (SV)	2020	T7 CAIRP	Aggregated	65	DSL	2.640206195	1397.927499
Placer (SV)	2020	T7 CAIRP	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 CAIRP	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 CAIRP	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 CAIRP	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 CAIRP	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 CAIRP construction	Aggregated	5	DSL	21.64165124	3107.388264
Placer (SV)	2020	T7 CAIRP construction	Aggregated	10	DSL	17.24024588	2762.940056
Placer (SV)	2020	T7 CAIRP construction	Aggregated	15	DSL	11.68247964	2318.852226
Placer (SV)	2020	T7 CAIRP construction	Aggregated	20	DSL	8.051177984	2020.507696
Placer (SV)	2020	T7 CAIRP construction	Aggregated	25	DSL	5.908042354	1855.778213
Placer (SV)	2020	T7 CAIRP construction	Aggregated	30	DSL	4.816210097	1749.584867
Placer (SV)	2020	T7 CAIRP construction	Aggregated	35	DSL	4.141343576	1665.586958
Placer (SV)	2020	T7 CAIRP construction	Aggregated	40	DSL	3.687855105	1597.019884
Placer (SV)	2020	T7 CAIRP construction	Aggregated	45	DSL	3.373241625	1539.871146
Placer (SV)	2020	T7 CAIRP construction	Aggregated	50	DSL	3.135149517	1491.580657
Placer (SV)	2020	T7 CAIRP construction	Aggregated	55	DSL	2.956803201	1450.423193
Placer (SV)	2020	T7 CAIRP construction	Aggregated	60	DSL	2.89380028	1432.115946
Placer (SV)	2020	T7 CAIRP construction	Aggregated	65	DSL	2.894236378	1432.115946
Placer (SV)	2020	T7 CAIRP construction	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 CAIRP construction	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 CAIRP construction	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 CAIRP construction	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 CAIRP construction	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 NNOOS	Aggregated	5	DSL	17.76966031	2885.254652
Placer (SV)	2020	T7 NNOOS	Aggregated	10	DSL	13.71888676	2559.691099
Placer (SV)	2020	T7 NNOOS	Aggregated	15	DSL	8.664627197	2147.739211
Placer (SV)	2020	T7 NNOOS	Aggregated	20	DSL	5.344296196	1875.365399

EMFAC2014 (v1.0.7) Emission rates by speed

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T7 NNOOS	Aggregated	25	DSL	3.335074653	1729.205082
Placer (SV)	2020	T7 NNOOS	Aggregated	30	DSL	2.370057999	1626.341863
Placer (SV)	2020	T7 NNOOS	Aggregated	35	DSL	1.819922168	1543.784181
Placer (SV)	2020	T7 NNOOS	Aggregated	40	DSL	1.474752247	1475.137761
Placer (SV)	2020	T7 NNOOS	Aggregated	45	DSL	1.245305794	1416.587836
Placer (SV)	2020	T7 NNOOS	Aggregated	50	DSL	1.080247661	1365.687189
Placer (SV)	2020	T7 NNOOS	Aggregated	55	DSL	0.95886288	1328.780865
Placer (SV)	2020	T7 NNOOS	Aggregated	60	DSL	0.912763335	1312.043126
Placer (SV)	2020	T7 NNOOS	Aggregated	65	DSL	0.912900889	1312.043126
Placer (SV)	2020	T7 NNOOS	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 NNOOS	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 NNOOS	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 NNOOS	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 NNOOS	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 NOOS	Aggregated	5	DSL	22.05954941	3119.549191
Placer (SV)	2020	T7 NOOS	Aggregated	10	DSL	17.64132034	2770.818178
Placer (SV)	2020	T7 NOOS	Aggregated	15	DSL	12.10756942	2326.273527
Placer (SV)	2020	T7 NOOS	Aggregated	20	DSL	8.493000444	2030.476063
Placer (SV)	2020	T7 NOOS	Aggregated	25	DSL	6.214130906	1867.89951
Placer (SV)	2020	T7 NOOS	Aggregated	30	DSL	4.977013018	1751.701113
Placer (SV)	2020	T7 NOOS	Aggregated	35	DSL	4.197317804	1658.544481
Placer (SV)	2020	T7 NOOS	Aggregated	40	DSL	3.666509964	1581.2618
Placer (SV)	2020	T7 NOOS	Aggregated	45	DSL	3.291644469	1515.583968
Placer (SV)	2020	T7 NOOS	Aggregated	50	DSL	3.003650005	1458.775109
Placer (SV)	2020	T7 NOOS	Aggregated	55	DSL	2.781008847	1418.365221
Placer (SV)	2020	T7 NOOS	Aggregated	60	DSL	2.696484962	1400.186258
Placer (SV)	2020	T7 NOOS	Aggregated	65	DSL	2.696891325	1400.186258
Placer (SV)	2020	T7 NOOS	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 NOOS	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 NOOS	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 NOOS	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 NOOS	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 other port	Aggregated	5	DSL	20.89289127	3235.615845
Placer (SV)	2020	T7 other port	Aggregated	10	DSL	16.9712502	2875.401845
Placer (SV)	2020	T7 other port	Aggregated	15	DSL	12.10523336	2421.094166
Placer (SV)	2020	T7 other port	Aggregated	20	DSL	8.916866501	2121.566998
Placer (SV)	2020	T7 other port	Aggregated	25	DSL	6.991739006	1946.652503
Placer (SV)	2020	T7 other port	Aggregated	30	DSL	5.959707946	1829.797138
Placer (SV)	2020	T7 other port	Aggregated	35	DSL	5.292962162	1737.993187
Placer (SV)	2020	T7 other port	Aggregated	40	DSL	4.826297378	1663.114145
Placer (SV)	2020	T7 other port	Aggregated	45	DSL	4.488513385	1600.354375
Placer (SV)	2020	T7 other port	Aggregated	50	DSL	4.214199419	1546.655523
Placer (SV)	2020	T7 other port	Aggregated	55	DSL	3.98952206	1499.960916
Placer (SV)	2020	T7 other port	Aggregated	60	DSL	3.902743065	1478.77177

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T7 other port	Aggregated	65	DSL	3.903331212	1478.77177
Placer (SV)	2020	T7 other port	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 other port	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 other port	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 other port	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 other port	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 POAK	Aggregated	5	DSL	21.74326512	3300.190131
Placer (SV)	2020	T7 POAK	Aggregated	10	DSL	17.82402647	2934.172368
Placer (SV)	2020	T7 POAK	Aggregated	15	DSL	12.96322217	2472.390902
Placer (SV)	2020	T7 POAK	Aggregated	20	DSL	9.78011797	2167.847904
Placer (SV)	2020	T7 POAK	Aggregated	25	DSL	7.876077579	1986.705004
Placer (SV)	2020	T7 POAK	Aggregated	30	DSL	6.83748924	1864.61365
Placer (SV)	2020	T7 POAK	Aggregated	35	DSL	6.150559371	1768.830197
Placer (SV)	2020	T7 POAK	Aggregated	40	DSL	5.66081574	1690.802075
Placer (SV)	2020	T7 POAK	Aggregated	45	DSL	5.301957787	1625.478144
Placer (SV)	2020	T7 POAK	Aggregated	50	DSL	5.005489169	1569.647315
Placer (SV)	2020	T7 POAK	Aggregated	55	DSL	4.759639474	1521.152269
Placer (SV)	2020	T7 POAK	Aggregated	60	DSL	4.664955102	1499.164684
Placer (SV)	2020	T7 POAK	Aggregated	65	DSL	4.665658116	1499.164684
Placer (SV)	2020	T7 POAK	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 POAK	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 POAK	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 POAK	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 POAK	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 Public	Aggregated	5	DSL	25.79906244	3447.723041
Placer (SV)	2020	T7 Public	Aggregated	10	DSL	21.2068741	3096.621883
Placer (SV)	2020	T7 Public	Aggregated	15	DSL	14.94932584	2568.572354
Placer (SV)	2020	T7 Public	Aggregated	20	DSL	11.45192999	2170.682716
Placer (SV)	2020	T7 Public	Aggregated	25	DSL	10.13649085	1968.457845
Placer (SV)	2020	T7 Public	Aggregated	30	DSL	9.421290084	1849.992191
Placer (SV)	2020	T7 Public	Aggregated	35	DSL	8.909904104	1754.350514
Placer (SV)	2020	T7 Public	Aggregated	40	DSL	8.555301199	1677.695391
Placer (SV)	2020	T7 Public	Aggregated	45	DSL	8.349588809	1617.754339
Placer (SV)	2020	T7 Public	Aggregated	50	DSL	8.23807661	1573.090565
Placer (SV)	2020	T7 Public	Aggregated	55	DSL	8.23202619	1542.75696
Placer (SV)	2020	T7 Public	Aggregated	60	DSL	8.281880857	1532.053043
Placer (SV)	2020	T7 Public	Aggregated	65	DSL	8.283128945	1532.053043
Placer (SV)	2020	T7 Public	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 Public	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 Public	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 Public	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 Public	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 Single	Aggregated	5	DSL	16.10159606	3137.725643
Placer (SV)	2020	T7 Single	Aggregated	10	DSL	12.89475213	2792.006792

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T7 Single	Aggregated	15	DSL	8.800201843	2341.005845
Placer (SV)	2020	T7 Single	Aggregated	20	DSL	6.217923234	2034.943415
Placer (SV)	2020	T7 Single	Aggregated	25	DSL	4.815810118	1867.090422
Placer (SV)	2020	T7 Single	Aggregated	30	DSL	4.103594145	1759.705753
Placer (SV)	2020	T7 Single	Aggregated	35	DSL	3.656899718	1674.651041
Placer (SV)	2020	T7 Single	Aggregated	40	DSL	3.355989461	1605.346397
Placer (SV)	2020	T7 Single	Aggregated	45	DSL	3.152091661	1547.889421
Placer (SV)	2020	T7 Single	Aggregated	50	DSL	3.001297319	1499.792052
Placer (SV)	2020	T7 Single	Aggregated	55	DSL	2.895506025	1459.380468
Placer (SV)	2020	T7 Single	Aggregated	60	DSL	2.863501785	1441.572417
Placer (SV)	2020	T7 Single	Aggregated	65	DSL	2.863933318	1441.572417
Placer (SV)	2020	T7 Single	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 Single	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 Single	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 Single	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 Single	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 single construction	Aggregated	5	DSL	17.00394597	3181.590202
Placer (SV)	2020	T7 single construction	Aggregated	10	DSL	13.67466778	2832.651771
Placer (SV)	2020	T7 single construction	Aggregated	15	DSL	9.411569265	2374.348008
Placer (SV)	2020	T7 single construction	Aggregated	20	DSL	6.753919421	2061.52512
Placer (SV)	2020	T7 single construction	Aggregated	25	DSL	5.346883586	1889.524835
Placer (SV)	2020	T7 single construction	Aggregated	30	DSL	4.62160701	1779.578132
Placer (SV)	2020	T7 single construction	Aggregated	35	DSL	4.158249279	1692.485253
Placer (SV)	2020	T7 single construction	Aggregated	40	DSL	3.842625798	1621.630743
Placer (SV)	2020	T7 single construction	Aggregated	45	DSL	3.628648615	1563.093739
Placer (SV)	2020	T7 single construction	Aggregated	50	DSL	3.470620925	1514.376954
Placer (SV)	2020	T7 single construction	Aggregated	55	DSL	3.361716174	1473.803207
Placer (SV)	2020	T7 single construction	Aggregated	60	DSL	3.330018339	1456.014933
Placer (SV)	2020	T7 single construction	Aggregated	65	DSL	3.330520176	1456.014933
Placer (SV)	2020	T7 single construction	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 single construction	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 single construction	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 single construction	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 single construction	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	5	DSL	15.39511541	7220.714696
Placer (SV)	2020	T7 SWCV	Aggregated	10	DSL	12.77803196	6460.354714
Placer (SV)	2020	T7 SWCV	Aggregated	15	DSL	9.110089725	5377.839644
Placer (SV)	2020	T7 SWCV	Aggregated	20	DSL	7.074597861	4591.90639
Placer (SV)	2020	T7 SWCV	Aggregated	25	DSL	6.381578406	4185.887846
Placer (SV)	2020	T7 SWCV	Aggregated	30	DSL	5.976907897	3941.847897
Placer (SV)	2020	T7 SWCV	Aggregated	35	DSL	5.670482888	3746.051868
Placer (SV)	2020	T7 SWCV	Aggregated	40	DSL	5.447559428	3588.107826
Placer (SV)	2020	T7 SWCV	Aggregated	45	DSL	5.300528148	3461.848202
Placer (SV)	2020	T7 SWCV	Aggregated	50	DSL	5.225171028	3363.353669

Placer (SV)	2020	T7 SWCV	Aggregated	55	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	60	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	65	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 SWCV	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 tractor	Aggregated	5	DSL	21.34989246	3189.182866
Placer (SV)	2020	T7 tractor	Aggregated	10	DSL	17.31798941	2835.350655
Placer (SV)	2020	T7 tractor	Aggregated	15	DSL	12.25662529	2382.644976
Placer (SV)	2020	T7 tractor	Aggregated	20	DSL	8.982205809	2080.44614
Placer (SV)	2020	T7 tractor	Aggregated	25	DSL	7.012176202	1909.635093
Placer (SV)	2020	T7 tractor	Aggregated	30	DSL	5.934649284	1786.38443
Placer (SV)	2020	T7 tractor	Aggregated	35	DSL	5.234949744	1687.870187
Placer (SV)	2020	T7 tractor	Aggregated	40	DSL	4.74678499	1606.411344
Placer (SV)	2020	T7 tractor	Aggregated	45	DSL	4.397598637	1537.443454
Placer (SV)	2020	T7 tractor	Aggregated	50	DSL	4.121622231	1478.04689
Placer (SV)	2020	T7 tractor	Aggregated	55	DSL	3.904315471	1435.736495
Placer (SV)	2020	T7 tractor	Aggregated	60	DSL	3.82382457	1416.766846
Placer (SV)	2020	T7 tractor	Aggregated	65	DSL	3.824400824	1416.766846
Placer (SV)	2020	T7 tractor	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 tractor	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 tractor	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 tractor	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 tractor	Aggregated	90	DSL	0	0
Placer (SV)	2020	T7 tractor construction	Aggregated	5	DSL	22.17800054	3207.892989
Placer (SV)	2020	T7 tractor construction	Aggregated	10	DSL	17.95426767	2856.946138
Placer (SV)	2020	T7 tractor construction	Aggregated	15	DSL	12.54891758	2395.734266
Placer (SV)	2020	T7 tractor construction	Aggregated	20	DSL	9.08444393	2080.896347
Placer (SV)	2020	T7 tractor construction	Aggregated	25	DSL	7.141311535	1906.527352
Placer (SV)	2020	T7 tractor construction	Aggregated	30	DSL	6.116449089	1794.592127
Placer (SV)	2020	T7 tractor construction	Aggregated	35	DSL	5.451437066	1705.942893
Placer (SV)	2020	T7 tractor construction	Aggregated	40	DSL	4.989874533	1633.810459
Placer (SV)	2020	T7 tractor construction	Aggregated	45	DSL	4.667165723	1574.185361
Placer (SV)	2020	T7 tractor construction	Aggregated	50	DSL	4.421328555	1524.513648
Placer (SV)	2020	T7 tractor construction	Aggregated	55	DSL	4.241751018	1483.078001
Placer (SV)	2020	T7 tractor construction	Aggregated	60	DSL	4.18393364	1464.98031
Placer (SV)	2020	T7 tractor construction	Aggregated	65	DSL	4.184564163	1464.98031
Placer (SV)	2020	T7 tractor construction	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 tractor construction	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 tractor construction	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 tractor construction	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 tractor construction	Aggregated	90	DSL	0	0

Placer (SV)	2020	T7 utility	Aggregated	5	DSL	8.826820888	3104.324239
Placer (SV)	2020	T7 utility	Aggregated	10	DSL	6.885467972	2752.550593
Placer (SV)	2020	T7 utility	Aggregated	15	DSL	4.472398449	2309.368212
Placer (SV)	2020	T7 utility	Aggregated	20	DSL	2.888021673	2017.451441
Placer (SV)	2020	T7 utility	Aggregated	25	DSL	1.864953756	1861.97688
Placer (SV)	2020	T7 utility	Aggregated	30	DSL	1.330843951	1763.01114
Placer (SV)	2020	T7 utility	Aggregated	35	DSL	1.011746796	1684.648518
Placer (SV)	2020	T7 utility	Aggregated	40	DSL	0.803898154	1620.297714
Placer (SV)	2020	T7 utility	Aggregated	45	DSL	0.660947584	1566.031762
Placer (SV)	2020	T7 utility	Aggregated	50	DSL	0.555119066	1519.335631
Placer (SV)	2020	T7 utility	Aggregated	55	DSL	0.474735621	1478.508693
Placer (SV)	2020	T7 utility	Aggregated	60	DSL	0.442798416	1459.907124
Placer (SV)	2020	T7 utility	Aggregated	65	DSL	0.442865146	1459.907124
Placer (SV)	2020	T7 utility	Aggregated	70	DSL	0	0
Placer (SV)	2020	T7 utility	Aggregated	75	DSL	0	0
Placer (SV)	2020	T7 utility	Aggregated	80	DSL	0	0
Placer (SV)	2020	T7 utility	Aggregated	85	DSL	0	0
Placer (SV)	2020	T7 utility	Aggregated	90	DSL	0	0
Placer (SV)	2020	UBUS	Aggregated	5	DSL	21.69580364	3551.071918
Placer (SV)	2020	UBUS	Aggregated	10	DSL	17.89837624	3224.388565
Placer (SV)	2020	UBUS	Aggregated	15	DSL	12.28966139	2647.502517
Placer (SV)	2020	UBUS	Aggregated	20	DSL	9.332134023	2172.590681
Placer (SV)	2020	UBUS	Aggregated	25	DSL	8.589733996	1948.72554
Placer (SV)	2020	UBUS	Aggregated	30	DSL	8.227992273	1829.173592
Placer (SV)	2020	UBUS	Aggregated	35	DSL	7.972501717	1729.960297
Placer (SV)	2020	UBUS	Aggregated	40	DSL	7.801169288	1651.085656
Placer (SV)	2020	UBUS	Aggregated	45	DSL	7.697809626	1592.549667
Placer (SV)	2020	UBUS	Aggregated	50	DSL	7.686552802	1554.352332
Placer (SV)	2020	UBUS	Aggregated	55	DSL	7.7451414	1536.49365
Placer (SV)	2020	UBUS	Aggregated	60	DSL	7.872483778	1538.973621
Placer (SV)	2020	UBUS	Aggregated	65	DSL	8.060648145	1561.792245
Placer (SV)	2020	LDA	Aggregated	10	GAS	0.089539345	674.636379
Placer (SV)	2020	LDA	Aggregated	15	GAS	0.07851707	519.3326071
Placer (SV)	2020	LDA	Aggregated	20	GAS	0.070252747	414.8846138
Placer (SV)	2020	LDA	Aggregated	25	GAS	0.064111543	343.5493118
Placer (SV)	2020	LDA	Aggregated	30	GAS	0.059522531	295.6893935
Placer (SV)	2020	LDA	Aggregated	35	GAS	0.056045248	264.0660852
Placer (SV)	2020	LDA	Aggregated	40	GAS	0.053860788	244.3638109
Placer (SV)	2020	LDA	Aggregated	45	GAS	0.05236063	235.5829952
Placer (SV)	2020	LDA	Aggregated	50	GAS	0.052076702	234.9572214
Placer (SV)	2020	LDA	Aggregated	55	GAS	0.052214922	243.8759717
Placer (SV)	2020	LDA	Aggregated	60	GAS	0.053657979	261.7008709
Placer (SV)	2020	LDA	Aggregated	65	GAS	0.057858385	287.158122
Placer (SV)	2020	LDT1	Aggregated	10	GAS	0.18919209	797.2576232

Placer (SV)	2020	LDT1	Aggregated	15	GAS	0.16334911	613.7277976
Placer (SV)	2020	LDT1	Aggregated	20	GAS	0.144628317	490.2993171
Placer (SV)	2020	LDT1	Aggregated	25	GAS	0.131204497	406.0278369
Placer (SV)	2020	LDT1	Aggregated	30	GAS	0.12155349	349.4649654
Placer (SV)	2020	LDT1	Aggregated	35	GAS	0.114623662	312.0958077
Placer (SV)	2020	LDT1	Aggregated	40	GAS	0.11072224	288.8387322
Placer (SV)	2020	LDT1	Aggregated	45	GAS	0.108503262	278.4348
Placer (SV)	2020	LDT1	Aggregated	50	GAS	0.109203638	277.71607
Placer (SV)	2020	LDT1	Aggregated	55	GAS	0.11116698	288.2400538
Placer (SV)	2020	LDT1	Aggregated	60	GAS	0.116527735	309.3495214
Placer (SV)	2020	LDT1	Aggregated	65	GAS	0.12904025	339.7468297
Placer (SV)	2020	LDT2	Aggregated	10	GAS	0.137367318	915.791391
Placer (SV)	2020	LDT2	Aggregated	15	GAS	0.11997745	704.9743269
Placer (SV)	2020	LDT2	Aggregated	20	GAS	0.107001941	563.1936021
Placer (SV)	2020	LDT2	Aggregated	25	GAS	0.097402297	466.38308
Placer (SV)	2020	LDT2	Aggregated	30	GAS	0.090258117	401.4119365
Placer (SV)	2020	LDT2	Aggregated	35	GAS	0.084879821	358.4861962
Placer (SV)	2020	LDT2	Aggregated	40	GAS	0.081530206	331.7626327
Placer (SV)	2020	LDT2	Aggregated	45	GAS	0.07927163	319.8208599
Placer (SV)	2020	LDT2	Aggregated	50	GAS	0.078926521	318.9883878
Placer (SV)	2020	LDT2	Aggregated	55	GAS	0.079290707	331.0822874
Placer (SV)	2020	LDT2	Aggregated	60	GAS	0.081737135	355.3154292
Placer (SV)	2020	LDT2	Aggregated	65	GAS	0.088552809	390.1284576
Placer (SV)	2020	LHD1	Aggregated	5	GAS	0.578535981	1393.071563
Placer (SV)	2020	LHD1	Aggregated	10	GAS	0.508820591	1370.201922
Placer (SV)	2020	LHD1	Aggregated	15	GAS	0.455083819	951.8616575
Placer (SV)	2020	LHD1	Aggregated	20	GAS	0.416348887	826.4255805
Placer (SV)	2020	LHD1	Aggregated	25	GAS	0.390838128	757.5567821
Placer (SV)	2020	LHD1	Aggregated	30	GAS	0.367295314	687.530525
Placer (SV)	2020	LHD1	Aggregated	35	GAS	0.357995987	687.530525
Placer (SV)	2020	LHD1	Aggregated	40	GAS	0.356003063	684.9465799
Placer (SV)	2020	LHD1	Aggregated	45	GAS	0.344784092	681.8011039
Placer (SV)	2020	LHD1	Aggregated	50	GAS	0.332300728	719.0097835
Placer (SV)	2020	LHD1	Aggregated	55	GAS	0.352439939	757.5567821
Placer (SV)	2020	LHD2	Aggregated	5	GAS	0.326974086	1466.266293
Placer (SV)	2020	LHD2	Aggregated	10	GAS	0.285203587	1521.92173
Placer (SV)	2020	LHD2	Aggregated	15	GAS	0.252844285	1070.609467
Placer (SV)	2020	LHD2	Aggregated	20	GAS	0.22919348	936.965027
Placer (SV)	2020	LHD2	Aggregated	25	GAS	0.213122745	847.2556095
Placer (SV)	2020	LHD2	Aggregated	30	GAS	0.198478564	765.788724
Placer (SV)	2020	LHD2	Aggregated	35	GAS	0.191746962	765.788724
Placer (SV)	2020	LHD2	Aggregated	40	GAS	0.1891431	748.2963069
Placer (SV)	2020	LHD2	Aggregated	45	GAS	0.182030699	730.6608009
Placer (SV)	2020	LHD2	Aggregated	50	GAS	0.174655003	761.7387555

Placer (SV)	2020	LHD2	Aggregated	55	GAS	0.184398334	796.4202729
Placer (SV)	2020	MCY	Aggregated	10	GAS	1.403021552	406.7105755
Placer (SV)	2020	MCY	Aggregated	15	GAS	1.303834121	313.1026143
Placer (SV)	2020	MCY	Aggregated	20	GAS	1.233922142	250.1744874
Placer (SV)	2020	MCY	Aggregated	25	GAS	1.187972196	207.4698054
Placer (SV)	2020	MCY	Aggregated	30	GAS	1.15823207	178.5766887
Placer (SV)	2020	MCY	Aggregated	35	GAS	1.140840537	159.5322734
Placer (SV)	2020	MCY	Aggregated	40	GAS	1.139308671	147.9206678
Placer (SV)	2020	MCY	Aggregated	45	GAS	1.142249293	142.3522824
Placer (SV)	2020	MCY	Aggregated	50	GAS	1.161636275	142.1855889
Placer (SV)	2020	MCY	Aggregated	55	GAS	1.18215188	147.4019665
Placer (SV)	2020	MCY	Aggregated	60	GAS	1.220724979	158.601046
Placer (SV)	2020	MCY	Aggregated	65	GAS	1.305756593	177.1188819
Placer (SV)	2020	MDV	Aggregated	10	GAS	0.254257933	1239.023578
Placer (SV)	2020	MDV	Aggregated	15	GAS	0.222130255	953.7985563
Placer (SV)	2020	MDV	Aggregated	20	GAS	0.198467576	761.9773906
Placer (SV)	2020	MDV	Aggregated	25	GAS	0.181218918	631.009646
Placer (SV)	2020	MDV	Aggregated	30	GAS	0.168598019	543.1050116
Placer (SV)	2020	MDV	Aggregated	35	GAS	0.1592982	485.0292887
Placer (SV)	2020	MDV	Aggregated	40	GAS	0.153799022	448.8845497
Placer (SV)	2020	MDV	Aggregated	45	GAS	0.150334532	432.716509
Placer (SV)	2020	MDV	Aggregated	50	GAS	0.150494007	431.5989264
Placer (SV)	2020	MDV	Aggregated	55	GAS	0.152021737	447.9547788
Placer (SV)	2020	MDV	Aggregated	60	GAS	0.157591652	480.7598581
Placer (SV)	2020	MDV	Aggregated	65	GAS	0.171732027	527.9914992
Placer (SV)	2020	MH	Aggregated	5	GAS	0.879784895	3906.757847
Placer (SV)	2020	MH	Aggregated	10	GAS	0.783164744	3335.056093
Placer (SV)	2020	MH	Aggregated	15	GAS	0.703500872	2298.860251
Placer (SV)	2020	MH	Aggregated	20	GAS	0.647668653	1616.291284
Placer (SV)	2020	MH	Aggregated	25	GAS	0.605417041	1411.365468
Placer (SV)	2020	MH	Aggregated	30	GAS	0.577034863	1296.987323
Placer (SV)	2020	MH	Aggregated	35	GAS	0.558016905	1197.433795
Placer (SV)	2020	MH	Aggregated	40	GAS	0.546969442	1114.035553
Placer (SV)	2020	MH	Aggregated	45	GAS	0.538708275	1035.106971
Placer (SV)	2020	MH	Aggregated	50	GAS	0.546146784	968.2942512
Placer (SV)	2020	MH	Aggregated	55	GAS	0.558029929	941.6053402
Placer (SV)	2020	MH	Aggregated	60	GAS	0.570693311	947.4553689
Placer (SV)	2020	MH	Aggregated	65	GAS	0.581674515	965.019003
Placer (SV)	2020	OBUS	Aggregated	5	GAS	0.555018482	3820.813277
Placer (SV)	2020	OBUS	Aggregated	10	GAS	0.483256565	3261.688361
Placer (SV)	2020	OBUS	Aggregated	15	GAS	0.424173738	2248.28774
Placer (SV)	2020	OBUS	Aggregated	20	GAS	0.38115773	1580.734573
Placer (SV)	2020	OBUS	Aggregated	25	GAS	0.347754478	1380.31691
Placer (SV)	2020	OBUS	Aggregated	30	GAS	0.323633807	1268.454964

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	OBUS	Aggregated	35	GAS	0.306056136	1171.091509
Placer (SV)	2020	OBUS	Aggregated	40	GAS	0.294049974	1089.527941
Placer (SV)	2020	OBUS	Aggregated	45	GAS	0.28486065	1012.335705
Placer (SV)	2020	OBUS	Aggregated	50	GAS	0.284718613	946.9927946
Placer (SV)	2020	OBUS	Aggregated	55	GAS	0.288094744	920.8910117
Placer (SV)	2020	OBUS	Aggregated	60	GAS	0.293289091	926.6123459
Placer (SV)	2020	OBUS	Aggregated	65	GAS	0.299275528	943.7895984
Placer (SV)	2020	SBUS	Aggregated	5	GAS	1.547226509	1824.937563
Placer (SV)	2020	SBUS	Aggregated	10	GAS	1.338458309	1557.882361
Placer (SV)	2020	SBUS	Aggregated	15	GAS	1.181786426	1073.851155
Placer (SV)	2020	SBUS	Aggregated	20	GAS	1.059775098	755.0072956
Placer (SV)	2020	SBUS	Aggregated	25	GAS	0.966894923	659.2816753
Placer (SV)	2020	SBUS	Aggregated	30	GAS	0.896307404	605.8529805
Placer (SV)	2020	SBUS	Aggregated	35	GAS	0.847329472	559.3492092
Placer (SV)	2020	SBUS	Aggregated	40	GAS	0.812800248	520.3919482
Placer (SV)	2020	SBUS	Aggregated	45	GAS	0.791112777	483.5225697
Placer (SV)	2020	SBUS	Aggregated	50	GAS	0.77725098	452.3127925
Placer (SV)	2020	SBUS	Aggregated	55	GAS	0.799006461	439.8457807
Placer (SV)	2020	SBUS	Aggregated	60	GAS	0.810283493	442.5784654
Placer (SV)	2020	T6TS	Aggregated	5	GAS	1.118387431	3802.156817
Placer (SV)	2020	T6TS	Aggregated	10	GAS	0.975282567	3245.762024
Placer (SV)	2020	T6TS	Aggregated	15	GAS	0.857446276	2237.309687
Placer (SV)	2020	T6TS	Aggregated	20	GAS	0.771847046	1573.016082
Placer (SV)	2020	T6TS	Aggregated	25	GAS	0.70547237	1373.577029
Placer (SV)	2020	T6TS	Aggregated	30	GAS	0.657732254	1262.261288
Placer (SV)	2020	T6TS	Aggregated	35	GAS	0.623088079	1165.373244
Placer (SV)	2020	T6TS	Aggregated	40	GAS	0.5995952	1084.207938
Placer (SV)	2020	T6TS	Aggregated	45	GAS	0.581626167	1007.392621
Placer (SV)	2020	T6TS	Aggregated	50	GAS	0.582020489	942.3687702
Placer (SV)	2020	T6TS	Aggregated	55	GAS	0.589401375	916.3944384
Placer (SV)	2020	T6TS	Aggregated	60	GAS	0.600254047	922.0878362
Placer (SV)	2020	T6TS	Aggregated	65	GAS	0.612432817	939.1812148
Placer (SV)	2020	T7IS	Aggregated	5	GAS	6.47979736	4002.537512
Placer (SV)	2020	T7IS	Aggregated	10	GAS	5.597431493	3395.195923
Placer (SV)	2020	T7IS	Aggregated	15	GAS	4.94147711	2449.195132
Placer (SV)	2020	T7IS	Aggregated	20	GAS	4.470962737	1978.791216
Placer (SV)	2020	T7IS	Aggregated	25	GAS	4.06406111	1861.589301
Placer (SV)	2020	T7IS	Aggregated	30	GAS	3.76038147	1772.43126
Placer (SV)	2020	T7IS	Aggregated	35	GAS	3.537752321	1699.902927
Placer (SV)	2020	T7IS	Aggregated	40	GAS	3.39116915	1638.397787
Placer (SV)	2020	T7IS	Aggregated	45	GAS	3.322812618	1602.364199
Placer (SV)	2020	T7IS	Aggregated	50	GAS	3.281642699	1582.465047
Placer (SV)	2020	T7IS	Aggregated	55	GAS	3.273897934	1552.668772
Placer (SV)	2020	T7IS	Aggregated	60	GAS	3.364139687	1530.939566

EMFAC2014 (v1.0.7) Emission rates by speed

Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2011 Categories

Placer (SV)	2020	T7IS	Aggregated	65	GAS	3.495700145	1526.764276
Placer (SV)	2020	UBUS	Aggregated	5	GAS	1.113560664	3839.232815
Placer (SV)	2020	UBUS	Aggregated	10	GAS	0.967507824	3277.412446
Placer (SV)	2020	UBUS	Aggregated	15	GAS	0.853535528	2259.12638
Placer (SV)	2020	UBUS	Aggregated	20	GAS	0.766690226	1588.355045
Placer (SV)	2020	UBUS	Aggregated	25	GAS	0.688018389	1386.9712
Placer (SV)	2020	UBUS	Aggregated	30	GAS	0.639560543	1274.569985
Placer (SV)	2020	UBUS	Aggregated	35	GAS	0.60499024	1176.737156
Placer (SV)	2020	UBUS	Aggregated	40	GAS	0.580081473	1094.780383
Placer (SV)	2020	UBUS	Aggregated	45	GAS	0.561374115	1017.216015
Placer (SV)	2020	UBUS	Aggregated	50	GAS	0.562505727	951.5580973
Placer (SV)	2020	UBUS	Aggregated	55	GAS	0.569173768	925.3304817
Placer (SV)	2020	UBUS	Aggregated	60	GAS	0.580748842	931.0793977
Placer (SV)	2020	UBUS	Aggregated	65	GAS	0.594477255	948.339459

Independence at Lincoln

NOx and CO2 Mobile Source Emissions by Vehicle Class and Speed

RUNEX Emissions (g/day) for NOx and CO_2

Emissions are calculated based on the Project's daily VMT by speed and EMFAC2014 emission rates by speed

					RUNEX_Emissions (g/day)		RUNEX_Emissions by Vehicle Class (g/day)	
Region	**CalYr**	**VehClass**	**Speed**	**Fuel**	**NOx_RUNEX**	**CO2_RUNEX**	**NOx_RUNEX**	**CO2_RUNEX**
Placer (SV)	2020	All Other Buses	5	DSL	0.097681801	19.24759275		
Placer (SV)	2020	All Other Buses	10	DSL	0.116022	24.66800254		
Placer (SV)	2020	All Other Buses	15	DSL	0.277652583	68.52921524		
Placer (SV)	2020	All Other Buses	20	DSL	4.497513661	1277.910432		
Placer (SV)	2020	All Other Buses	25	DSL	1.747751885	551.8648482		
Placer (SV)	2020	All Other Buses	30	DSL	3.209092979	1081.014569		
Placer (SV)	2020	All Other Buses	35	DSL	7.967050055	2801.668485		
Placer (SV)	2020	All Other Buses	40	DSL	5.815165202	2106.565746		
Placer (SV)	2020	All Other Buses	45	DSL	8.928805929	3307.566876		
Placer (SV)	2020	All Other Buses	50	DSL	4.94940591	1857.374003		
Placer (SV)	2020	All Other Buses	55	DSL	4.525605297	1710.231236		
Placer (SV)	2020	All Other Buses	60	DSL	5.002239255	1894.214207		
Placer (SV)	2020	All Other Buses	65	DSL	4.887458208	1855.812286		
Placer (SV)	2020	All Other Buses	70	DSL	0	0		
Placer (SV)	2020	All Other Buses	75	DSL	0	0		
Placer (SV)	2020	All Other Buses	80	DSL	0	0		
Placer (SV)	2020	All Other Buses	85	DSL	0	0		
Placer (SV)	2020	All Other Buses	90	DSL	0	0	52.02144477	18556.6675
Placer (SV)	2020	LDA	10	DSL	0.034927264	105.3061238		
Placer (SV)	2020	LDA	15	DSL	0.094638575	286.3073465		
Placer (SV)	2020	LDA	20	DSL	1.731839285	5020.97922		
Placer (SV)	2020	LDA	25	DSL	0.76601853	1983.625758		
Placer (SV)	2020	LDA	30	DSL	1.565631532	3580.391508		
Placer (SV)	2020	LDA	35	DSL	4.264376565	8832.798357		
Placer (SV)	2020	LDA	40	DSL	3.380766085	6495.071441		
Placer (SV)	2020	LDA	45	DSL	5.596879955	10234.35058		
Placer (SV)	2020	LDA	50	DSL	3.313349863	5957.499085		
Placer (SV)	2020	LDA	55	DSL	3.208630063	5910.988428		
Placer (SV)	2020	LDA	60	DSL	3.703047661	7192.602472		
Placer (SV)	2020	LDA	65	DSL	3.755632383	7922.012383	31.41573776	63521.9327
Placer (SV)	2020	LDT1	10	DSL	0.001184219	1.134764993		
Placer (SV)	2020	LDT1	15	DSL	0.004020771	3.110221016		
Placer (SV)	2020	LDT1	20	DSL	0.088860228	54.62724818		
Placer (SV)	2020	LDT1	25	DSL	0.043589026	21.58717417		
Placer (SV)	2020	LDT1	30	DSL	0.094712523	38.89830424		
Placer (SV)	2020	LDT1	35	DSL	0.269423668	95.80880376		
Placer (SV)	2020	LDT1	40	DSL	0.220629661	70.26674595		
Placer (SV)	2020	LDT1	45	DSL	0.37452889	110.5190308		
Placer (SV)	2020	LDT1	50	DSL	0.226193819	64.27728113		
Placer (SV)	2020	LDT1	55	DSL	0.222638123	63.7242813		
Placer (SV)	2020	LDT1	60	DSL	0.259384808	77.47543862		
Placer (SV)	2020	LDT1	65	DSL	0.264272102	85.25812511	2.069437838	686.6874193
Placer (SV)	2020	LDT2	10	DSL	0.002097258	10.48672277		

Placer (SV)	2020	LDT2	15	DSL	0.00506339	28.74253768		
Placer (SV)	2020	LDT2	20	DSL	0.081002043	504.8277055		
Placer (SV)	2020	LDT2	25	DSL	0.032560441	199.493915		
Placer (SV)	2020	LDT2	30	DSL	0.062260377	359.4715519		
Placer (SV)	2020	LDT2	35	DSL	0.160847523	885.3995064		
Placer (SV)	2020	LDT2	40	DSL	0.122155053	649.3572588		
Placer (SV)	2020	LDT2	45	DSL	0.195154479	1021.341374		
Placer (SV)	2020	LDT2	50	DSL	0.112119896	594.006717		
Placer (SV)	2020	LDT2	55	DSL	0.105835765	588.8962704		
Placer (SV)	2020	LDT2	60	DSL	0.120282732	715.9750714		
Placer (SV)	2020	LDT2	65	DSL	0.12107257	787.8973427	1.120451528	6345.895974
Placer (SV)	2020	LHD1	5	DSL	1.300475088	484.3215925		
Placer (SV)	2020	LHD1	10	DSL	1.94047429	586.2929282		
Placer (SV)	2020	LHD1	15	DSL	6.610042916	1265.691748		
Placer (SV)	2020	LHD1	20	DSL	146.2013519	23062.98661		
Placer (SV)	2020	LHD1	25	DSL	71.96451772	9640.390136		
Placer (SV)	2020	LHD1	30	DSL	156.2002374	18242.86476		
Placer (SV)	2020	LHD1	35	DSL	446.1217175	49785.40943		
Placer (SV)	2020	LHD1	40	DSL	366.2940077	38050.51725		
Placer (SV)	2020	LHD1	45	DSL	620.8680495	60546.15601		
Placer (SV)	2020	LHD1	50	DSL	374.1923725	36855.23721		
Placer (SV)	2020	LHD1	55	DSL	369.9071891	36516.59919	2561.600436	275036.4669
Placer (SV)	2020	LHD2	5	DSL	0.254671019	157.0694622		
Placer (SV)	2020	LHD2	10	DSL	0.370715057	201.0132553		
Placer (SV)	2020	LHD2	15	DSL	1.218115755	442.3113628		
Placer (SV)	2020	LHD2	20	DSL	26.2724724	8065.101098		
Placer (SV)	2020	LHD2	25	DSL	12.77626456	3387.395083		
Placer (SV)	2020	LHD2	30	DSL	27.54709461	6365.850846		
Placer (SV)	2020	LHD2	35	DSL	78.32319763	17372.62732		
Placer (SV)	2020	LHD2	40	DSL	64.0997793	13152.84406		
Placer (SV)	2020	LHD2	45	DSL	108.3833247	20624.70832		
Placer (SV)	2020	LHD2	50	DSL	65.19708894	12416.39851		
Placer (SV)	2020	LHD2	55	DSL	64.35185525	12185.56793	448.7945792	94370.88724
Placer (SV)	2020	MDV	10	DSL	0.01236777	81.55644533		
Placer (SV)	2020	MDV	15	DSL	0.029247612	228.6298819		
Placer (SV)	2020	MDV	20	DSL	0.45496967	4059.202373		
Placer (SV)	2020	MDV	25	DSL	0.178740117	1617.741933		
Placer (SV)	2020	MDV	30	DSL	0.335793217	2911.570403		
Placer (SV)	2020	MDV	35	DSL	0.854483309	7209.693313		
Placer (SV)	2020	MDV	40	DSL	0.640499546	5299.20021		
Placer (SV)	2020	MDV	45	DSL	1.011647159	8319.163758		
Placer (SV)	2020	MDV	50	DSL	0.575406985	4854.561918		
Placer (SV)	2020	MDV	55	DSL	0.538352621	4857.757814		
Placer (SV)	2020	MDV	60	DSL	0.608492704	5903.807289		
Placer (SV)	2020	MDV	65	DSL	0.610811636	6494.753564	5.850812346	51837.6389
Placer (SV)	2020	MH	5	DSL	0.147350199	18.57724309		
Placer (SV)	2020	MH	10	DSL	0.177020726	24.29023187		
Placer (SV)	2020	MH	15	DSL	0.407921869	65.92727579		
Placer (SV)	2020	MH	20	DSL	6.536766537	1156.583006		

Placer (SV)	2020	MH	25	DSL	2.739045191	488.935586		
Placer (SV)	2020	MH	30	DSL	5.315533214	956.3497947		
Placer (SV)	2020	MH	35	DSL	13.71694588	2468.351627		
Placer (SV)	2020	MH	40	DSL	10.32991536	1851.203237		
Placer (SV)	2020	MH	45	DSL	16.33128384	2912.803929		
Placer (SV)	2020	MH	50	DSL	9.332907886	1650.696776		
Placer (SV)	2020	MH	55	DSL	8.82621502	1547.170499		
Placer (SV)	2020	MH	60	DSL	10.02063175	1739.350636		
Placer (SV)	2020	MH	65	DSL	10.03708765	1729.355115	93.91862512	16609.59496
Placer (SV)	2020	Motor Coach	5	DSL	0.121588523	21.4921454		
Placer (SV)	2020	Motor Coach	10	DSL	0.142609455	27.52689274		
Placer (SV)	2020	Motor Coach	15	DSL	0.333013398	76.46274593		
Placer (SV)	2020	Motor Coach	20	DSL	5.19749903	1426.621245		
Placer (SV)	2020	Motor Coach	25	DSL	1.930674287	616.7884833		
Placer (SV)	2020	Motor Coach	30	DSL	3.447541885	1209.453988		
Placer (SV)	2020	Motor Coach	35	DSL	8.395171236	3137.401811		
Placer (SV)	2020	Motor Coach	40	DSL	6.047060093	2360.798958		
Placer (SV)	2020	Motor Coach	45	DSL	9.158021037	3708.950234		
Placer (SV)	2020	Motor Coach	50	DSL	5.036259539	2083.631037		
Placer (SV)	2020	Motor Coach	55	DSL	4.567705173	1918.975742		
Placer (SV)	2020	Motor Coach	60	DSL	5.022798171	2125.476282		
Placer (SV)	2020	Motor Coach	65	DSL	4.899589133	2082.385922		
Placer (SV)	2020	Motor Coach	70	DSL	0	0		
Placer (SV)	2020	Motor Coach	75	DSL	0	0		
Placer (SV)	2020	Motor Coach	80	DSL	0	0		
Placer (SV)	2020	Motor Coach	85	DSL	0	0		
Placer (SV)	2020	Motor Coach	90	DSL	0	0	54.29953096	20795.96549
Placer (SV)	2020	PTO	20	DSL	12.84513391	4209.037348	12.84513391	4209.037348
Placer (SV)	2020	SBUS	5	DSL	0.377063941	48.08028065		
Placer (SV)	2020	SBUS	10	DSL	0.442129282	62.13910911		
Placer (SV)	2020	SBUS	15	DSL	1.000258467	170.7048637		
Placer (SV)	2020	SBUS	20	DSL	16.06445485	3096.920645		
Placer (SV)	2020	SBUS	25	DSL	6.805004178	1325.421781		
Placer (SV)	2020	SBUS	30	DSL	13.39446972	2595.721448		
Placer (SV)	2020	SBUS	35	DSL	35.11897453	6718.294655		
Placer (SV)	2020	SBUS	40	DSL	26.84560626	5048.277592		
Placer (SV)	2020	SBUS	45	DSL	43.06443621	7937.676085		
Placer (SV)	2020	SBUS	50	DSL	24.82028942	4477.444736		
Placer (SV)	2020	SBUS	55	DSL	23.66762522	4157.121723		
Placer (SV)	2020	SBUS	60	DSL	26.66002217	4629.834723		
Placer (SV)	2020	SBUS	65	DSL	0	0		
Placer (SV)	2020	SBUS	70	DSL	0	0		
Placer (SV)	2020	SBUS	75	DSL	0	0		
Placer (SV)	2020	SBUS	80	DSL	0	0		
Placer (SV)	2020	SBUS	85	DSL	0	0		
Placer (SV)	2020	SBUS	90	DSL	0	0	218.2603342	40267.63764
Placer (SV)	2020	T6 Ag	5	DSL	0.204691192	27.88064935		
Placer (SV)	2020	T6 Ag	10	DSL	0.24269358	35.92624767		
Placer (SV)	2020	T6 Ag	15	DSL	0.563651356	98.81868395		

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Placer (SV)	2020	T6 Ag	20	DSL	9.16242246	1802.724077		
Placer (SV)	2020	T6 Ag	25	DSL	3.746310296	775.4941509		
Placer (SV)	2020	T6 Ag	30	DSL	7.131614758	1524.172677		
Placer (SV)	2020	T6 Ag	35	DSL	18.22134593	3957.681265		
Placer (SV)	2020	T6 Ag	40	DSL	13.65607825	2981.611782		
Placer (SV)	2020	T6 Ag	45	DSL	21.5479495	4696.090539		
Placer (SV)	2020	T6 Ag	50	DSL	12.30909148	2650.489931		
Placer (SV)	2020	T6 Ag	55	DSL	11.64394963	2459.169725		
Placer (SV)	2020	T6 Ag	60	DSL	13.10726429	2736.817262		
Placer (SV)	2020	T6 Ag	65	DSL	12.80650588	2681.33302		
Placer (SV)	2020	T6 Ag	70	DSL	0	0		
Placer (SV)	2020	T6 Ag	75	DSL	0	0		
Placer (SV)	2020	T6 Ag	80	DSL	0	0		
Placer (SV)	2020	T6 Ag	85	DSL	0	0		
Placer (SV)	2020	T6 Ag	90	DSL	0	0	124.3435686	26428.21001
Placer (SV)	2020	T6 CAIRP heavy	5	DSL	0.016212712	3.909922227		
Placer (SV)	2020	T6 CAIRP heavy	10	DSL	0.018497562	4.997753005		
Placer (SV)	2020	T6 CAIRP heavy	15	DSL	0.040736304	13.86717493		
Placer (SV)	2020	T6 CAIRP heavy	20	DSL	0.585615554	258.8610891		
Placer (SV)	2020	T6 CAIRP heavy	25	DSL	0.19459738	112.3636074		
Placer (SV)	2020	T6 CAIRP heavy	30	DSL	0.317788317	219.8708242		
Placer (SV)	2020	T6 CAIRP heavy	35	DSL	0.722238622	568.7898391		
Placer (SV)	2020	T6 CAIRP heavy	40	DSL	0.491945795	426.5631856		
Placer (SV)	2020	T6 CAIRP heavy	45	DSL	0.714385615	667.5211302		
Placer (SV)	2020	T6 CAIRP heavy	50	DSL	0.37818319	373.3113252		
Placer (SV)	2020	T6 CAIRP heavy	55	DSL	0.33268847	344.2527606		
Placer (SV)	2020	T6 CAIRP heavy	60	DSL	0.361502166	381.4620691		
Placer (SV)	2020	T6 CAIRP heavy	65	DSL	0.353207162	373.7285847		
Placer (SV)	2020	T6 CAIRP heavy	70	DSL	0	0		
Placer (SV)	2020	T6 CAIRP heavy	75	DSL	0	0		
Placer (SV)	2020	T6 CAIRP heavy	80	DSL	0	0		
Placer (SV)	2020	T6 CAIRP heavy	85	DSL	0	0		
Placer (SV)	2020	T6 CAIRP heavy	90	DSL	0	0	4.527598847	3749.499265
Placer (SV)	2020	T6 CAIRP small	5	DSL	0.048945953	11.87327071		
Placer (SV)	2020	T6 CAIRP small	10	DSL	0.055366256	15.18910215		
Placer (SV)	2020	T6 CAIRP small	15	DSL	0.11839221	42.08100764		
Placer (SV)	2020	T6 CAIRP small	20	DSL	1.623180511	782.9609362		
Placer (SV)	2020	T6 CAIRP small	25	DSL	0.51713868	339.7085149		
Placer (SV)	2020	T6 CAIRP small	30	DSL	0.825370022	669.2885778		
Placer (SV)	2020	T6 CAIRP small	35	DSL	1.845341703	1742.901778		
Placer (SV)	2020	T6 CAIRP small	40	DSL	1.242558694	1315.800914		
Placer (SV)	2020	T6 CAIRP small	45	DSL	1.793089116	2073.183971		
Placer (SV)	2020	T6 CAIRP small	50	DSL	0.949365818	1167.728939		
Placer (SV)	2020	T6 CAIRP small	55	DSL	0.8418517	1078.052024		
Placer (SV)	2020	T6 CAIRP small	60	DSL	0.921476725	1195.438884		
Placer (SV)	2020	T6 CAIRP small	65	DSL	0.900332582	1171.203426		
Placer (SV)	2020	T6 CAIRP small	70	DSL	0	0		
Placer (SV)	2020	T6 CAIRP small	75	DSL	0	0		
Placer (SV)	2020	T6 CAIRP small	80	DSL	0	0		

Placer (SV)	2020	T6 CAIRP small	85	DSL	0	0		
Placer (SV)	2020	T6 CAIRP small	90	DSL	0	0	11.68240997	11605.41135
Placer (SV)	2020	T6 instate construction heavy	5	DSL	0.099783765	19.58847163		
Placer (SV)	2020	T6 instate construction heavy	10	DSL	0.116671636	25.11764154		
Placer (SV)	2020	T6 instate construction heavy	15	DSL	0.268377233	69.63055745		
Placer (SV)	2020	T6 instate construction heavy	20	DSL	4.166699593	1293.369435		
Placer (SV)	2020	T6 instate construction heavy	25	DSL	1.580423027	558.6384292		
Placer (SV)	2020	T6 instate construction heavy	30	DSL	2.876512432	1095.944595		
Placer (SV)	2020	T6 instate construction heavy	35	DSL	7.119278512	2843.567847		
Placer (SV)	2020	T6 instate construction heavy	40	DSL	5.197762134	2140.263183		
Placer (SV)	2020	T6 instate construction heavy	45	DSL	8.004162944	3364.245419		
Placer (SV)	2020	T6 instate construction heavy	50	DSL	4.461072816	1891.777879		
Placer (SV)	2020	T6 instate construction heavy	55	DSL	4.111931841	1744.900956		
Placer (SV)	2020	T6 instate construction heavy	60	DSL	4.566497098	1934.501511		
Placer (SV)	2020	T6 instate construction heavy	65	DSL	4.461714562	1895.282834		
Placer (SV)	2020	T6 instate construction heavy	70	DSL	0	0		
Placer (SV)	2020	T6 instate construction heavy	75	DSL	0	0		
Placer (SV)	2020	T6 instate construction heavy	80	DSL	0	0		
Placer (SV)	2020	T6 instate construction heavy	85	DSL	0	0		
Placer (SV)	2020	T6 instate construction heavy	90	DSL	0	0	47.03088759	18876.82876
Placer (SV)	2020	T6 instate construction small	5	DSL	0.474862401	104.54131		
Placer (SV)	2020	T6 instate construction small	10	DSL	0.548264661	133.9271711		
Placer (SV)	2020	T6 instate construction small	15	DSL	1.223302597	370.831714		
Placer (SV)	2020	T6 instate construction small	20	DSL	17.88046308	6882.613311		
Placer (SV)	2020	T6 instate construction small	25	DSL	6.194068655	2980.121935		
Placer (SV)	2020	T6 instate construction small	30	DSL	10.51069815	5863.51874		
Placer (SV)	2020	T6 instate construction small	35	DSL	24.57782059	15250.35368		
Placer (SV)	2020	T6 instate construction small	40	DSL	17.1193914	11501.69514		
Placer (SV)	2020	T6 instate construction small	45	DSL	25.36308322	18110.12417		
Placer (SV)	2020	T6 instate construction small	50	DSL	13.71239514	10198.13013		
Placer (SV)	2020	T6 instate construction small	55	DSL	12.36540081	9417.272758		
Placer (SV)	2020	T6 instate construction small	60	DSL	13.63151186	10446.07436		
Placer (SV)	2020	T6 instate construction small	65	DSL	13.3187241	10234.29825		
Placer (SV)	2020	T6 instate construction small	70	DSL	0	0		
Placer (SV)	2020	T6 instate construction small	75	DSL	0	0		
Placer (SV)	2020	T6 instate construction small	80	DSL	0	0		
Placer (SV)	2020	T6 instate construction small	85	DSL	0	0		
Placer (SV)	2020	T6 instate construction small	90	DSL	0	0	156.9199867	101493.5027
Placer (SV)	2020	T6 instate heavy	5	DSL	1.992272563	467.4838345		
Placer (SV)	2020	T6 instate heavy	10	DSL	2.300201272	597.8348231		
Placer (SV)	2020	T6 instate heavy	15	DSL	5.203987236	1659.506385		
Placer (SV)	2020	T6 instate heavy	20	DSL	77.76376015	30982.3177		
Placer (SV)	2020	T6 instate heavy	25	DSL	27.17860491	13434.37887		
Placer (SV)	2020	T6 instate heavy	30	DSL	46.18788031	26255.70188		
Placer (SV)	2020	T6 instate heavy	35	DSL	108.2964462	67850.6565		
Placer (SV)	2020	T6 instate heavy	40	DSL	75.62519882	50839.17725		
Placer (SV)	2020	T6 instate heavy	45	DSL	112.061517	79497.15366		
Placer (SV)	2020	T6 instate heavy	50	DSL	60.3137677	44430.69689		
Placer (SV)	2020	T6 instate heavy	55	DSL	53.78556685	40954.26813		

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Placer (SV)	2020	T6 instate heavy	60	DSL	58.78756862	45372.95311		
Placer (SV)	2020	T6 instate heavy	65	DSL	57.43863301	44453.09487		
Placer (SV)	2020	T6 instate heavy	70	DSL	0	0		
Placer (SV)	2020	T6 instate heavy	75	DSL	0	0		
Placer (SV)	2020	T6 instate heavy	80	DSL	0	0		
Placer (SV)	2020	T6 instate heavy	85	DSL	0	0		
Placer (SV)	2020	T6 instate heavy	90	DSL	0	0	686.9354047	446795.2239
Placer (SV)	2020	T6 instate small	5	DSL	5.428053769	1271.850303		
Placer (SV)	2020	T6 instate small	10	DSL	6.178124743	1627.862907		
Placer (SV)	2020	T6 instate small	15	DSL	13.37087936	4508.100297		
Placer (SV)	2020	T6 instate small	20	DSL	186.7617172	83776.51536		
Placer (SV)	2020	T6 instate small	25	DSL	61.11013771	36326.99198		
Placer (SV)	2020	T6 instate small	30	DSL	99.55161889	71554.43341		
Placer (SV)	2020	T6 instate small	35	DSL	225.9685093	186289.7087		
Placer (SV)	2020	T6 instate small	40	DSL	153.9158376	140612.4934		
Placer (SV)	2020	T6 instate small	45	DSL	224.1612869	221532.6991		
Placer (SV)	2020	T6 instate small	50	DSL	119.6176083	124788.5862		
Placer (SV)	2020	T6 instate small	55	DSL	106.8302518	115235.467		
Placer (SV)	2020	T6 instate small	60	DSL	117.3373703	127809.9259		
Placer (SV)	2020	T6 instate small	65	DSL	114.6449549	125218.8005		
Placer (SV)	2020	T6 instate small	70	DSL	0	0		
Placer (SV)	2020	T6 instate small	75	DSL	0	0		
Placer (SV)	2020	T6 instate small	80	DSL	0	0		
Placer (SV)	2020	T6 instate small	85	DSL	0	0		
Placer (SV)	2020	T6 instate small	90	DSL	0	0	1434.876351	1240553.435
Placer (SV)	2020	T6 OOS heavy	5	DSL	0.009430786	2.244011393		
Placer (SV)	2020	T6 OOS heavy	10	DSL	0.010783662	2.868959682		
Placer (SV)	2020	T6 OOS heavy	15	DSL	0.023831951	7.958499513		
Placer (SV)	2020	T6 OOS heavy	20	DSL	0.344659493	148.4707798		
Placer (SV)	2020	T6 OOS heavy	25	DSL	0.115591258	64.43328907		
Placer (SV)	2020	T6 OOS heavy	30	DSL	0.190059853	126.0775258		
Placer (SV)	2020	T6 OOS heavy	35	DSL	0.434103018	326.1341037		
Placer (SV)	2020	T6 OOS heavy	40	DSL	0.296834684	244.5729665		
Placer (SV)	2020	T6 OOS heavy	45	DSL	0.43251872	382.7275084		
Placer (SV)	2020	T6 OOS heavy	50	DSL	0.229745734	214.0542024		
Placer (SV)	2020	T6 OOS heavy	55	DSL	0.202869694	197.4255798		
Placer (SV)	2020	T6 OOS heavy	60	DSL	0.220906143	218.7910047		
Placer (SV)	2020	T6 OOS heavy	65	DSL	0.215837245	214.3553951		
Placer (SV)	2020	T6 OOS heavy	70	DSL	0	0		
Placer (SV)	2020	T6 OOS heavy	75	DSL	0	0		
Placer (SV)	2020	T6 OOS heavy	80	DSL	0	0		
Placer (SV)	2020	T6 OOS heavy	85	DSL	0	0		
Placer (SV)	2020	T6 OOS heavy	90	DSL	0	0	2.727172241	2150.113826
Placer (SV)	2020	T6 OOS small	5	DSL	0.028044192	6.802937902		
Placer (SV)	2020	T6 OOS small	10	DSL	0.031722784	8.702784704		
Placer (SV)	2020	T6 OOS small	15	DSL	0.067834287	24.11083591		
Placer (SV)	2020	T6 OOS small	20	DSL	0.930021431	448.6071915		
Placer (SV)	2020	T6 OOS small	25	DSL	0.296301029	194.6402123		
Placer (SV)	2020	T6 OOS small	30	DSL	0.472906004	383.4772022		

Placer (SV)	2020	T6 OOS small	35	DSL	1.057311445	998.617218		
Placer (SV)	2020	T6 OOS small	40	DSL	0.711939434	753.904474		
Placer (SV)	2020	T6 OOS small	45	DSL	1.027372676	1187.856502		
Placer (SV)	2020	T6 OOS small	50	DSL	0.543950935	669.0647969		
Placer (SV)	2020	T6 OOS small	55	DSL	0.482349386	617.6832947		
Placer (SV)	2020	T6 OOS small	60	DSL	0.527971533	684.9415542		
Placer (SV)	2020	T6 OOS small	65	DSL	0.515856734	671.0555474		
Placer (SV)	2020	T6 OOS small	70	DSL	0	0		
Placer (SV)	2020	T6 OOS small	75	DSL	0	0		
Placer (SV)	2020	T6 OOS small	80	DSL	0	0		
Placer (SV)	2020	T6 OOS small	85	DSL	0	0		
Placer (SV)	2020	T6 OOS small	90	DSL	0	0	6.693581869	6649.464552
Placer (SV)	2020	T6 Public	5	DSL	0.21187153	43.01449135		
Placer (SV)	2020	T6 Public	10	DSL	0.2498467	55.33112737		
Placer (SV)	2020	T6 Public	15	DSL	0.574896041	152.7707053		
Placer (SV)	2020	T6 Public	20	DSL	9.087074815	2809.672178		
Placer (SV)	2020	T6 Public	25	DSL	3.614063862	1210.103851		
Placer (SV)	2020	T6 Public	30	DSL	6.807003871	2374.744717		
Placer (SV)	2020	T6 Public	35	DSL	17.27253749	6160.411717		
Placer (SV)	2020	T6 Public	40	DSL	12.86994599	4636.655116		
Placer (SV)	2020	T6 Public	45	DSL	20.19243039	7292.897108		
Placer (SV)	2020	T6 Public	50	DSL	11.46767833	4107.69497		
Placer (SV)	2020	T6 Public	55	DSL	10.78329033	3799.923626		
Placer (SV)	2020	T6 Public	60	DSL	12.10478921	4221.406424		
Placer (SV)	2020	T6 Public	65	DSL	11.82703353	4135.824701		
Placer (SV)	2020	T6 Public	70	DSL	0	0		
Placer (SV)	2020	T6 Public	75	DSL	0	0		
Placer (SV)	2020	T6 Public	80	DSL	0	0		
Placer (SV)	2020	T6 Public	85	DSL	0	0		
Placer (SV)	2020	T6 Public	90	DSL	0	0	117.0624621	41000.45073
Placer (SV)	2020	T6 utility	5	DSL	0.010556722	4.148959544		
Placer (SV)	2020	T6 utility	10	DSL	0.011803045	5.297487328		
Placer (SV)	2020	T6 utility	15	DSL	0.024828803	14.69170706		
Placer (SV)	2020	T6 utility	20	DSL	0.33175165	274.3799121		
Placer (SV)	2020	T6 utility	25	DSL	0.097759319	119.3508682		
Placer (SV)	2020	T6 utility	30	DSL	0.141990138	235.4871593		
Placer (SV)	2020	T6 utility	35	DSL	0.289497811	614.0878757		
Placer (SV)	2020	T6 utility	40	DSL	0.178258395	464.1193165		
Placer (SV)	2020	T6 utility	45	DSL	0.235485305	731.7608326		
Placer (SV)	2020	T6 utility	50	DSL	0.113958017	412.2131907		
Placer (SV)	2020	T6 utility	55	DSL	0.091966006	380.34842		
Placer (SV)	2020	T6 utility	60	DSL	0.09580461	421.532943		
Placer (SV)	2020	T6 utility	65	DSL	0.093606284	412.9870908		
Placer (SV)	2020	T6 utility	70	DSL	0	0		
Placer (SV)	2020	T6 utility	75	DSL	0	0		
Placer (SV)	2020	T6 utility	80	DSL	0	0		
Placer (SV)	2020	T6 utility	85	DSL	0	0		
Placer (SV)	2020	T6 utility	90	DSL	0	0	1.717266107	4090.405763
Placer (SV)	2020	T7 Ag	5	DSL	0.13971806	15.21042988		

Placer (SV)	2020	T7 Ag	10	DSL	0.164443362	19.63214027		
Placer (SV)	2020	T7 Ag	15	DSL	0.382741446	53.78915226		
Placer (SV)	2020	T7 Ag	20	DSL	6.284705619	972.6314718		
Placer (SV)	2020	T7 Ag	25	DSL	2.593092892	416.6228138		
Placer (SV)	2020	T7 Ag	30	DSL	4.959877786	817.6245846		
Placer (SV)	2020	T7 Ag	35	DSL	12.69104836	2120.101597		
Placer (SV)	2020	T7 Ag	40	DSL	9.521722559	1595.99025		
Placer (SV)	2020	T7 Ag	45	DSL	15.10819491	2514.286061		
Placer (SV)	2020	T7 Ag	50	DSL	8.641384431	1421.247135		
Placer (SV)	2020	T7 Ag	55	DSL	8.186131313	1322.702553		
Placer (SV)	2020	T7 Ag	60	DSL	9.239308275	1474.243582		
Placer (SV)	2020	T7 Ag	65	DSL	9.053361406	1444.35584		
Placer (SV)	2020	T7 Ag	70	DSL	0	0		
Placer (SV)	2020	T7 Ag	75	DSL	0	0		
Placer (SV)	2020	T7 Ag	80	DSL	0	0		
Placer (SV)	2020	T7 Ag	85	DSL	0	0		
Placer (SV)	2020	T7 Ag	90	DSL	0	0	86.96573041	14188.43761
Placer (SV)	2020	T7 CAIRP	5	DSL	2.924651042	416.0148155		
Placer (SV)	2020	T7 CAIRP	10	DSL	3.365198093	532.0066042		
Placer (SV)	2020	T7 CAIRP	15	DSL	7.62735647	1476.79892		
Placer (SV)	2020	T7 CAIRP	20	DSL	114.1733413	27572.3476		
Placer (SV)	2020	T7 CAIRP	25	DSL	39.26191938	11955.94874		
Placer (SV)	2020	T7 CAIRP	30	DSL	65.41507349	23363.13242		
Placer (SV)	2020	T7 CAIRP	35	DSL	150.3954251	60367.32574		
Placer (SV)	2020	T7 CAIRP	40	DSL	103.1585787	45225.69489		
Placer (SV)	2020	T7 CAIRP	45	DSL	150.9694069	70709.0215		
Placer (SV)	2020	T7 CAIRP	50	DSL	79.91637376	39512.99898		
Placer (SV)	2020	T7 CAIRP	55	DSL	70.07068778	36420.94647		
Placer (SV)	2020	T7 CAIRP	60	DSL	76.19622606	40350.20147		
Placer (SV)	2020	T7 CAIRP	65	DSL	74.66272927	39532.17084		
Placer (SV)	2020	T7 CAIRP	70	DSL	0	0		
Placer (SV)	2020	T7 CAIRP	75	DSL	0	0		
Placer (SV)	2020	T7 CAIRP	80	DSL	0	0		
Placer (SV)	2020	T7 CAIRP	85	DSL	0	0		
Placer (SV)	2020	T7 CAIRP	90	DSL	0	0	938.1369674	397434.609
Placer (SV)	2020	T7 CAIRP construction	5	DSL	0.132561729	19.03370296		
Placer (SV)	2020	T7 CAIRP construction	10	DSL	0.152066557	24.37034745		
Placer (SV)	2020	T7 CAIRP construction	15	DSL	0.340619692	67.60951058		
Placer (SV)	2020	T7 CAIRP construction	20	DSL	5.018388648	1259.404885		
Placer (SV)	2020	T7 CAIRP construction	25	DSL	1.735603594	545.1713348		
Placer (SV)	2020	T7 CAIRP construction	30	DSL	2.948310643	1071.032945		
Placer (SV)	2020	T7 CAIRP construction	35	DSL	6.918598412	2782.557659		
Placer (SV)	2020	T7 CAIRP construction	40	DSL	4.841325872	2096.528595		
Placer (SV)	2020	T7 CAIRP construction	45	DSL	7.223899361	3297.680814		
Placer (SV)	2020	T7 CAIRP construction	50	DSL	3.898361071	1854.686655		
Placer (SV)	2020	T7 CAIRP construction	55	DSL	3.486067532	1710.047256		
Placer (SV)	2020	T7 CAIRP construction	60	DSL	3.82939785	1895.134838		
Placer (SV)	2020	T7 CAIRP construction	65	DSL	3.752328819	1856.714253		
Placer (SV)	2020	T7 CAIRP construction	70	DSL	0	0		

Placer (SV)	2020	T7 CAIRP construction	75	DSL	0	0		
Placer (SV)	2020	T7 CAIRP construction	80	DSL	0	0		
Placer (SV)	2020	T7 CAIRP construction	85	DSL	0	0		
Placer (SV)	2020	T7 CAIRP construction	90	DSL	0	0	44.27752978	18479.97279
Placer (SV)	2020	T7 NNOOS	5	DSL	2.943934463	478.005795		
Placer (SV)	2020	T7 NNOOS	10	DSL	3.272882208	610.6594218		
Placer (SV)	2020	T7 NNOOS	15	DSL	6.832912292	1693.70399		
Placer (SV)	2020	T7 NNOOS	20	DSL	90.09830693	31616.37026		
Placer (SV)	2020	T7 NNOOS	25	DSL	26.49925997	13739.61898		
Placer (SV)	2020	T7 NNOOS	30	DSL	39.24172011	26927.80187		
Placer (SV)	2020	T7 NNOOS	35	DSL	82.23390642	69756.50174		
Placer (SV)	2020	T7 NNOOS	40	DSL	52.36375459	52377.44299		
Placer (SV)	2020	T7 NNOOS	45	DSL	72.13092318	82051.96575		
Placer (SV)	2020	T7 NNOOS	50	DSL	36.33024984	45929.98304		
Placer (SV)	2020	T7 NNOOS	55	DSL	30.57673633	42372.8804		
Placer (SV)	2020	T7 NNOOS	60	DSL	32.66941568	46960.34627		
Placer (SV)	2020	T7 NNOOS	65	DSL	32.01192322	46008.30638		
Placer (SV)	2020	T7 NNOOS	70	DSL	0	0		
Placer (SV)	2020	T7 NNOOS	75	DSL	0	0		
Placer (SV)	2020	T7 NNOOS	80	DSL	0	0		
Placer (SV)	2020	T7 NNOOS	85	DSL	0	0		
Placer (SV)	2020	T7 NNOOS	90	DSL	0	0	507.2059252	460523.5869
Placer (SV)	2020	T7 NOOS	5	DSL	1.164180444	164.6324724		
Placer (SV)	2020	T7 NOOS	10	DSL	1.340655643	210.5688777		
Placer (SV)	2020	T7 NOOS	15	DSL	3.041498332	584.3746841		
Placer (SV)	2020	T7 NOOS	20	DSL	45.61019272	10904.32117		
Placer (SV)	2020	T7 NOOS	25	DSL	15.72835252	4727.770049		
Placer (SV)	2020	T7 NOOS	30	DSL	26.25019229	9238.973431		
Placer (SV)	2020	T7 NOOS	35	DSL	60.4149764	23872.60874		
Placer (SV)	2020	T7 NOOS	40	DSL	41.47049626	17885.04933		
Placer (SV)	2020	T7 NOOS	45	DSL	60.73416334	27964.05417		
Placer (SV)	2020	T7 NOOS	50	DSL	32.17873936	15628.16704		
Placer (SV)	2020	T7 NOOS	55	DSL	28.24955706	14407.7892		
Placer (SV)	2020	T7 NOOS	60	DSL	30.74367876	15964.07068		
Placer (SV)	2020	T7 NOOS	65	DSL	30.12494296	15640.42672		
Placer (SV)	2020	T7 NOOS	70	DSL	0	0		
Placer (SV)	2020	T7 NOOS	75	DSL	0	0		
Placer (SV)	2020	T7 NOOS	80	DSL	0	0		
Placer (SV)	2020	T7 NOOS	85	DSL	0	0		
Placer (SV)	2020	T7 NOOS	90	DSL	0	0	377.0516261	157192.8066
Placer (SV)	2020	T7 other port	5	DSL	0.034005697	5.266354561		
Placer (SV)	2020	T7 other port	10	DSL	0.039776766	6.739290552		
Placer (SV)	2020	T7 other port	15	DSL	0.093784974	18.75736266		
Placer (SV)	2020	T7 other port	20	DSL	1.476870802	351.3880523		
Placer (SV)	2020	T7 other port	25	DSL	0.545779883	151.9570131		
Placer (SV)	2020	T7 other port	30	DSL	0.969433826	297.6433168		
Placer (SV)	2020	T7 other port	35	DSL	2.349638368	771.5255373		
Placer (SV)	2020	T7 other port	40	DSL	1.683565122	580.1467977		
Placer (SV)	2020	T7 other port	45	DSL	2.554183741	910.6799455		

Placer (SV)	2020	T7 other port	50	DSL	1.392400794	511.0257402		
Placer (SV)	2020	T7 other port	55	DSL	1.249854972	469.9143358		
Placer (SV)	2020	T7 other port	60	DSL	1.372325934	519.9821811		
Placer (SV)	2020	T7 other port	65	DSL	1.344707015	509.4404407		
Placer (SV)	2020	T7 other port	70	DSL	0	0		
Placer (SV)	2020	T7 other port	75	DSL	0	0		
Placer (SV)	2020	T7 other port	80	DSL	0	0		
Placer (SV)	2020	T7 other port	85	DSL	0	0		
Placer (SV)	2020	T7 other port	90	DSL	0	0	15.10632789	5104.466368
Placer (SV)	2020	T7 POAK	5	DSL	0.070568456	10.7108717		
Placer (SV)	2020	T7 POAK	10	DSL	0.083301758	13.7130472		
Placer (SV)	2020	T7 POAK	15	DSL	0.200265331	38.19530175		
Placer (SV)	2020	T7 POAK	20	DSL	3.230033656	715.9649518		
Placer (SV)	2020	T7 POAK	25	DSL	1.225956373	309.2419591		
Placer (SV)	2020	T7 POAK	30	DSL	2.217800933	604.8041537		
Placer (SV)	2020	T7 POAK	35	DSL	5.444394234	1565.745219		
Placer (SV)	2020	T7 POAK	40	DSL	3.937563542	1176.092089		
Placer (SV)	2020	T7 POAK	45	DSL	6.016149108	1844.435447		
Placer (SV)	2020	T7 POAK	50	DSL	3.29783118	1034.151045		
Placer (SV)	2020	T7 POAK	55	DSL	2.973346505	950.2637348		
Placer (SV)	2020	T7 POAK	60	DSL	3.270901701	1051.16131		
Placer (SV)	2020	T7 POAK	65	DSL	3.205072755	1029.85083		
Placer (SV)	2020	T7 POAK	70	DSL	0	0		
Placer (SV)	2020	T7 POAK	75	DSL	0	0		
Placer (SV)	2020	T7 POAK	80	DSL	0	0		
Placer (SV)	2020	T7 POAK	85	DSL	0	0		
Placer (SV)	2020	T7 POAK	90	DSL	0	0	35.17318553	10344.32996
Placer (SV)	2020	T7 Public	5	DSL	0.574064472	76.71655944		
Placer (SV)	2020	T7 Public	10	DSL	0.679510069	99.22187207		
Placer (SV)	2020	T7 Public	15	DSL	1.583380554	272.0542425		
Placer (SV)	2020	T7 Public	20	DSL	25.93059779	4915.075493		
Placer (SV)	2020	T7 Public	25	DSL	10.81741654	2100.690345		
Placer (SV)	2020	T7 Public	30	DSL	20.95111653	4114.022773		
Placer (SV)	2020	T7 Public	35	DSL	54.07280146	10646.87632		
Placer (SV)	2020	T7 Public	40	DSL	40.79949154	8000.784228		
Placer (SV)	2020	T7 Public	45	DSL	64.95585514	12585.36425		
Placer (SV)	2020	T7 Public	50	DSL	37.21162284	7105.694151		
Placer (SV)	2020	T7 Public	55	DSL	35.25730395	6607.541063		
Placer (SV)	2020	T7 Public	60	DSL	39.81254067	7364.863745		
Placer (SV)	2020	T7 Public	65	DSL	39.01128834	7215.553856		
Placer (SV)	2020	T7 Public	70	DSL	0	0		
Placer (SV)	2020	T7 Public	75	DSL	0	0		
Placer (SV)	2020	T7 Public	80	DSL	0	0		
Placer (SV)	2020	T7 Public	85	DSL	0	0		
Placer (SV)	2020	T7 Public	90	DSL	0	0	371.6569899	71104.4589
Placer (SV)	2020	T7 Single	5	DSL	1.648258141	321.1968439		
Placer (SV)	2020	T7 Single	10	DSL	1.900779733	411.5619959		
Placer (SV)	2020	T7 Single	15	DSL	4.288010975	1140.685059		
Placer (SV)	2020	T7 Single	20	DSL	64.77072474	21197.5534		

Placer (SV)	2020	T7 Single	25	DSL	23.64312245	9166.442694		
Placer (SV)	2020	T7 Single	30	DSL	41.98177085	18002.64867		
Placer (SV)	2020	T7 Single	35	DSL	102.0982852	46755.17862		
Placer (SV)	2020	T7 Single	40	DSL	73.62742148	35219.87097		
Placer (SV)	2020	T7 Single	45	DSL	112.8110419	55397.82375		
Placer (SV)	2020	T7 Single	50	DSL	62.36793437	31166.16661		
Placer (SV)	2020	T7 Single	55	DSL	57.05141038	28754.80599		
Placer (SV)	2020	T7 Single	60	DSL	63.32685629	31880.63292		
Placer (SV)	2020	T7 Single	65	DSL	62.05236362	31234.30817		
Placer (SV)	2020	T7 Single	70	DSL	0	0		
Placer (SV)	2020	T7 Single	75	DSL	0	0		
Placer (SV)	2020	T7 Single	80	DSL	0	0		
Placer (SV)	2020	T7 Single	85	DSL	0	0		
Placer (SV)	2020	T7 Single	90	DSL	0	0	671.5679801	310648.8757
Placer (SV)	2020	T7 single construction	5	DSL	0.269433643	50.41344164		
Placer (SV)	2020	T7 single construction	10	DSL	0.312019246	64.63351675		
Placer (SV)	2020	T7 single construction	15	DSL	0.70985738	179.0826173		
Placer (SV)	2020	T7 single construction	20	DSL	10.89018054	3324.052205		
Placer (SV)	2020	T7 single construction	25	DSL	4.063329203	1435.932038		
Placer (SV)	2020	T7 single construction	30	DSL	7.318720632	2818.118278		
Placer (SV)	2020	T7 single construction	35	DSL	17.97056459	7314.355997		
Placer (SV)	2020	T7 single construction	40	DSL	13.04947084	5507.021553		
Placer (SV)	2020	T7 single construction	45	DSL	20.10219545	8659.316228		
Placer (SV)	2020	T7 single construction	50	DSL	11.1636272	4871.157099		
Placer (SV)	2020	T7 single construction	55	DSL	10.25294812	4494.974308		
Placer (SV)	2020	T7 single construction	60	DSL	11.39942381	4984.276242		
Placer (SV)	2020	T7 single construction	65	DSL	11.17000326	4883.228652		
Placer (SV)	2020	T7 single construction	70	DSL	0	0		
Placer (SV)	2020	T7 single construction	75	DSL	0	0		
Placer (SV)	2020	T7 single construction	80	DSL	0	0		
Placer (SV)	2020	T7 single construction	85	DSL	0	0		
Placer (SV)	2020	T7 single construction	90	DSL	0	0	118.6717739	48586.56218
Placer (SV)	2020	T7 SWCV	5	DSL	0.319922573	150.0521147		
Placer (SV)	2020	T7 SWCV	10	DSL	0.382374038	193.3217826		
Placer (SV)	2020	T7 SWCV	15	DSL	0.901138494	531.9572544		
Placer (SV)	2020	T7 SWCV	20	DSL	14.96031684	9710.286841		
Placer (SV)	2020	T7 SWCV	25	DSL	6.360177245	4171.850118		
Placer (SV)	2020	T7 SWCV	30	DSL	12.41305125	8186.567501		
Placer (SV)	2020	T7 SWCV	35	DSL	32.13890482	21231.70228		
Placer (SV)	2020	T7 SWCV	40	DSL	24.26200076	15980.49107		
Placer (SV)	2020	T7 SWCV	45	DSL	38.51035746	25151.64678		
Placer (SV)	2020	T7 SWCV	50	DSL	22.04237988	14188.30481		
Placer (SV)	2020	T7 SWCV	55	DSL	0	0		
Placer (SV)	2020	T7 SWCV	60	DSL	0	0		
Placer (SV)	2020	T7 SWCV	65	DSL	0	0		
Placer (SV)	2020	T7 SWCV	70	DSL	0	0		
Placer (SV)	2020	T7 SWCV	75	DSL	0	0		
Placer (SV)	2020	T7 SWCV	80	DSL	0	0		
Placer (SV)	2020	T7 SWCV	85	DSL	0	0		

Placer (SV)	2020	T7 SWCV	90	DSL	0	0	152.2906234	99496.18056
Placer (SV)	2020	T7 tractor	5	DSL	1.91137827	285.5159501		
Placer (SV)	2020	T7 tractor	10	DSL	2.23259997	365.5276392		
Placer (SV)	2020	T7 tractor	15	DSL	5.223105694	1015.353431		
Placer (SV)	2020	T7 tractor	20	DSL	81.82971765	18953.28651		
Placer (SV)	2020	T7 tractor	25	DSL	30.10807211	8199.370557		
Placer (SV)	2020	T7 tractor	30	DSL	53.09896568	15983.28073		
Placer (SV)	2020	T7 tractor	35	DSL	127.8240471	41213.46122		
Placer (SV)	2020	T7 tractor	40	DSL	91.07794301	30822.68128		
Placer (SV)	2020	T7 tractor	45	DSL	137.6458151	48122.32195		
Placer (SV)	2020	T7 tractor	50	DSL	74.90575302	26861.80564		
Placer (SV)	2020	T7 tractor	55	DSL	67.2793	24740.66122		
Placer (SV)	2020	T7 tractor	60	DSL	73.95764618	27402.07852		
Placer (SV)	2020	T7 tractor	65	DSL	72.46920221	26846.54872		
Placer (SV)	2020	T7 tractor	70	DSL	0	0		
Placer (SV)	2020	T7 tractor	75	DSL	0	0		
Placer (SV)	2020	T7 tractor	80	DSL	0	0		
Placer (SV)	2020	T7 tractor	85	DSL	0	0		
Placer (SV)	2020	T7 tractor	90	DSL	0	0	819.563546	270811.8934
Placer (SV)	2020	T7 tractor construction	5	DSL	0.26200839	37.89768494		
Placer (SV)	2020	T7 tractor construction	10	DSL	0.30543795	48.60235949		
Placer (SV)	2020	T7 tractor construction	15	DSL	0.705677107	134.7219642		
Placer (SV)	2020	T7 tractor construction	20	DSL	10.92114707	2501.614323		
Placer (SV)	2020	T7 tractor construction	25	DSL	4.046224379	1080.226988		
Placer (SV)	2020	T7 tractor construction	30	DSL	7.221579954	2118.842214		
Placer (SV)	2020	T7 tractor construction	35	DSL	17.56519219	5496.75515		
Placer (SV)	2020	T7 tractor construction	40	DSL	12.634124	4136.73005		
Placer (SV)	2020	T7 tractor construction	45	DSL	19.27713554	6501.972797		
Placer (SV)	2020	T7 tractor construction	50	DSL	10.60331432	3656.117658		
Placer (SV)	2020	T7 tractor construction	55	DSL	9.645474372	3372.425865		
Placer (SV)	2020	T7 tractor construction	60	DSL	10.6785372	3739.028408		
Placer (SV)	2020	T7 tractor construction	65	DSL	10.46362495	3663.226067		
Placer (SV)	2020	T7 tractor construction	70	DSL	0	0		
Placer (SV)	2020	T7 tractor construction	75	DSL	0	0		
Placer (SV)	2020	T7 tractor construction	80	DSL	0	0		
Placer (SV)	2020	T7 tractor construction	85	DSL	0	0		
Placer (SV)	2020	T7 tractor construction	90	DSL	0	0	114.3294774	36488.16153
Placer (SV)	2020	T7 utility	5	DSL	0.004155282	1.461380513		
Placer (SV)	2020	T7 utility	10	DSL	0.004667585	1.865924377		
Placer (SV)	2020	T7 utility	15	DSL	0.010021753	5.174833398		
Placer (SV)	2020	T7 utility	20	DSL	0.138348286	96.64434		
Placer (SV)	2020	T7 utility	25	DSL	0.042105951	42.03874038		
Placer (SV)	2020	T7 utility	30	DSL	0.062612843	82.94521605		
Placer (SV)	2020	T7 utility	35	DSL	0.129902398	216.2990614		
Placer (SV)	2020	T7 utility	40	DSL	0.081107304	163.4759071		
Placer (SV)	2020	T7 utility	45	DSL	0.108782673	257.7467941		
Placer (SV)	2020	T7 utility	50	DSL	0.053049149	145.1931064		
Placer (SV)	2020	T7 utility	55	DSL	0.043016361	133.9694358		
Placer (SV)	2020	T7 utility	60	DSL	0.045033579	148.4757858		

Placer (SV)	2020	T7 utility	65	DSL	0.04412725	145.4656958		
Placer (SV)	2020	T7 utility	70	DSL	0	0		
Placer (SV)	2020	T7 utility	75	DSL	0	0		
Placer (SV)	2020	T7 utility	80	DSL	0	0		
Placer (SV)	2020	T7 utility	85	DSL	0	0		
Placer (SV)	2020	T7 utility	90	DSL	0	0	0.766930412	1440.756221
Placer (SV)	2020	UBUS	5	DSL	0.354891532	58.08705558		
Placer (SV)	2020	UBUS	10	DSL	0.421595552	75.95034644		
Placer (SV)	2020	UBUS	15	DSL	0.956900463	206.1404545		
Placer (SV)	2020	UBUS	20	DSL	15.53380898	3616.38705		
Placer (SV)	2020	UBUS	25	DSL	6.7387413	1528.796734		
Placer (SV)	2020	UBUS	30	DSL	13.45097669	2990.300736		
Placer (SV)	2020	UBUS	35	DSL	35.56834114	7718.006242		
Placer (SV)	2020	UBUS	40	DSL	27.34905331	5788.315565		
Placer (SV)	2020	UBUS	45	DSL	44.02339497	9107.713288		
Placer (SV)	2020	UBUS	50	DSL	25.52393016	5161.374857		
Placer (SV)	2020	UBUS	55	DSL	24.38567917	4837.670387		
Placer (SV)	2020	UBUS	60	DSL	27.82055809	5438.576467		
Placer (SV)	2020	UBUS	65	DSL	27.90801731	5407.322614	250.0358887	51934.64179
Placer (SV)	2020	LDA	10	GAS	1.499700829	11299.53247		
Placer (SV)	2020	LDA	15	GAS	4.347096334	28752.84148		
Placer (SV)	2020	LDA	20	GAS	83.15122175	491057.8447		
Placer (SV)	2020	LDA	25	GAS	35.76379776	191644.5545		
Placer (SV)	2020	LDA	30	GAS	69.19100912	343719.3823		
Placer (SV)	2020	LDA	35	GAS	177.793598	837702.7622		
Placer (SV)	2020	LDA	40	GAS	134.2652516	609155.0039		
Placer (SV)	2020	LDA	45	GAS	212.9264251	958006.8956		
Placer (SV)	2020	LDA	50	GAS	122.9611002	554770.1194		
Placer (SV)	2020	LDA	55	GAS	116.8983737	545987.6871		
Placer (SV)	2020	LDA	60	GAS	134.8331588	657608.7187		
Placer (SV)	2020	LDA	65	GAS	142.4405552	706949.6032	1236.071289	5936654.945
Placer (SV)	2020	LDT1	10	GAS	0.289619076	1220.458088		
Placer (SV)	2020	LDT1	15	GAS	0.82658101	3105.592321		
Placer (SV)	2020	LDT1	20	GAS	15.64559653	53039.58091		
Placer (SV)	2020	LDT1	25	GAS	6.689437362	20701.25528		
Placer (SV)	2020	LDT1	30	GAS	12.91424968	37128.32787		
Placer (SV)	2020	LDT1	35	GAS	33.23418795	90489.6121		
Placer (SV)	2020	LDT1	40	GAS	25.22663131	65808.17209		
Placer (SV)	2020	LDT1	45	GAS	40.32746877	103486.0193		
Placer (SV)	2020	LDT1	50	GAS	23.56648659	59931.99656		
Placer (SV)	2020	LDT1	55	GAS	22.746947	58979.57481		
Placer (SV)	2020	LDT1	60	GAS	26.762407	71046.92964		
Placer (SV)	2020	LDT1	65	GAS	29.03528001	76446.2585	237.2648923	641383.7774
Placer (SV)	2020	LDT2	10	GAS	1.160091402	7734.020983		
Placer (SV)	2020	LDT2	15	GAS	3.349290948	19680.06605		
Placer (SV)	2020	LDT2	20	GAS	63.85796139	336109.748		
Placer (SV)	2020	LDT2	25	GAS	27.39647405	131180.1907		
Placer (SV)	2020	LDT2	30	GAS	52.90206411	235275.4594		
Placer (SV)	2020	LDT2	35	GAS	135.7687587	573413.389		

Placer (SV)	2020	LDT2	40	GAS	102.4772681	417000.3953		
Placer (SV)	2020	LDT2	45	GAS	162.5401132	655766.994		
Placer (SV)	2020	LDT2	50	GAS	93.96482184	379766.9869		
Placer (SV)	2020	LDT2	55	GAS	89.50642249	373738.5139		
Placer (SV)	2020	LDT2	60	GAS	103.5618689	450188.6408		
Placer (SV)	2020	LDT2	65	GAS	109.9227956	484276.1183	946.4079309	4064130.523
Placer (SV)	2020	LHD1	5	GAS	0.147018857	354.0104597		
Placer (SV)	2020	LHD1	10	GAS	0.186195782	501.4062369		
Placer (SV)	2020	LHD1	15	GAS	0.550479327	1151.39265		
Placer (SV)	2020	LHD1	20	GAS	10.76656517	21370.93468		
Placer (SV)	2020	LHD1	25	GAS	4.763418801	9232.876623		
Placer (SV)	2020	LHD1	30	GAS	9.328205501	17461.22473		
Placer (SV)	2020	LHD1	35	GAS	24.8124655	47652.28673		
Placer (SV)	2020	LHD1	40	GAS	19.38916484	37304.57265		
Placer (SV)	2020	LHD1	45	GAS	30.63277613	60575.47624		
Placer (SV)	2020	LHD1	50	GAS	17.14233579	37091.42383		
Placer (SV)	2020	LHD1	55	GAS	17.23905259	37054.71419	134.9576783	269750.319
Placer (SV)	2020	LHD2	5	GAS	0.015545973	69.71358797		
Placer (SV)	2020	LHD2	10	GAS	0.019526395	104.1980027		
Placer (SV)	2020	LHD2	15	GAS	0.057222217	242.2939759		
Placer (SV)	2020	LHD2	20	GAS	1.108878444	4533.201914		
Placer (SV)	2020	LHD2	25	GAS	0.485974589	1931.960362		
Placer (SV)	2020	LHD2	30	GAS	0.943101083	3638.761589		
Placer (SV)	2020	LHD2	35	GAS	2.486463975	9930.306335		
Placer (SV)	2020	LHD2	40	GAS	1.927337572	7625.018238		
Placer (SV)	2020	LHD2	45	GAS	3.025838135	12145.54096		
Placer (SV)	2020	LHD2	50	GAS	1.685705305	7352.019907		
Placer (SV)	2020	LHD2	55	GAS	1.68751323	7288.405058	13.44310692	54861.41993
Placer (SV)	2020	MCY	10	GAS	0.271329194	78.65342648		
Placer (SV)	2020	MCY	15	GAS	0.833487296	200.1535679		
Placer (SV)	2020	MCY	20	GAS	16.86298856	3418.926832		
Placer (SV)	2020	MCY	25	GAS	7.651650776	1336.29937		
Placer (SV)	2020	MCY	30	GAS	15.54552257	2396.814953		
Placer (SV)	2020	MCY	35	GAS	41.78724396	5843.423169		
Placer (SV)	2020	MCY	40	GAS	32.79244457	4257.564629		
Placer (SV)	2020	MCY	45	GAS	53.63237848	6683.910015		
Placer (SV)	2020	MCY	50	GAS	31.66911251	3876.335055		
Placer (SV)	2020	MCY	55	GAS	30.55825685	3810.294791		
Placer (SV)	2020	MCY	60	GAS	35.41780886	4601.61103		
Placer (SV)	2020	MCY	65	GAS	37.11684401	5034.700911	304.1390676	41538.68775
Placer (SV)	2020	MDV	10	GAS	1.260479988	6142.441289		
Placer (SV)	2020	MDV	15	GAS	3.640102554	15630.12908		
Placer (SV)	2020	MDV	20	GAS	69.52894106	266942.7527		
Placer (SV)	2020	MDV	25	GAS	29.9213827	104187.1417		
Placer (SV)	2020	MDV	30	GAS	58.00847769	186862.7826		
Placer (SV)	2020	MDV	35	GAS	149.5749669	455424.1015		
Placer (SV)	2020	MDV	40	GAS	113.478928	331204.5614		
Placer (SV)	2020	MDV	45	GAS	180.9481594	520833.4708		
Placer (SV)	2020	MDV	50	GAS	105.1754055	301630.563		

Independence at Lincoln
NOx and CO2 Mobile Source Emissions by Vehicle Class and Speed

Placer (SV)	2020	MDV	55	GAS	100.737287	296837.4795		
Placer (SV)	2020	MDV	60	GAS	117.2104488	357570.2006		
Placer (SV)	2020	MDV	65	GAS	125.138047	384737.9319	1054.622627	3228003.556
Placer (SV)	2020	MH	5	GAS	0.022461653	99.74283412		
Placer (SV)	2020	MH	10	GAS	0.028792597	122.6113985		
Placer (SV)	2020	MH	15	GAS	0.08549423	279.3731952		
Placer (SV)	2020	MH	20	GAS	1.682655415	4199.155334		
Placer (SV)	2020	MH	25	GAS	0.74130858	1728.159698		
Placer (SV)	2020	MH	30	GAS	1.472337299	3309.336981		
Placer (SV)	2020	MH	35	GAS	3.885631953	8338.075372		
Placer (SV)	2020	MH	40	GAS	2.992891517	6095.747407		
Placer (SV)	2020	MH	45	GAS	4.808563191	9239.46691		
Placer (SV)	2020	MH	50	GAS	2.830548689	5018.438455		
Placer (SV)	2020	MH	55	GAS	2.742258005	4627.215584		
Placer (SV)	2020	MH	60	GAS	3.147763986	5225.864452		
Placer (SV)	2020	MH	65	GAS	3.143289432	5214.830552	27.58399655	53498.01817
Placer (SV)	2020	OBUS	5	GAS	0.011326957	77.97612032		
Placer (SV)	2020	OBUS	10	GAS	0.014201887	95.85411569		
Placer (SV)	2020	OBUS	15	GAS	0.041205628	218.4060447		
Placer (SV)	2020	OBUS	20	GAS	0.791566924	3282.780607		
Placer (SV)	2020	OBUS	25	GAS	0.340375047	1351.026264		
Placer (SV)	2020	OBUS	30	GAS	0.660084812	2587.145843		
Placer (SV)	2020	OBUS	35	GAS	1.703554351	6518.470968		
Placer (SV)	2020	OBUS	40	GAS	1.286144175	4765.482528		
Placer (SV)	2020	OBUS	45	GAS	2.032519589	7223.153321		
Placer (SV)	2020	OBUS	50	GAS	1.179553671	3923.272927		
Placer (SV)	2020	OBUS	55	GAS	1.131688114	3617.425977		
Placer (SV)	2020	OBUS	60	GAS	1.293111241	4085.432692		
Placer (SV)	2020	OBUS	65	GAS	1.292754742	4076.806701	11.77808714	41823.23411
Placer (SV)	2020	SBUS	5	GAS	0.006881983	8.117227316		
Placer (SV)	2020	SBUS	10	GAS	0.008572886	9.97830673		
Placer (SV)	2020	SBUS	15	GAS	0.025021057	22.7358261		
Placer (SV)	2020	SBUS	20	GAS	0.47967878	341.7338065		
Placer (SV)	2020	SBUS	25	GAS	0.20626149	140.64033		
Placer (SV)	2020	SBUS	30	GAS	0.398434312	269.319002		
Placer (SV)	2020	SBUS	35	GAS	1.027924233	678.5655708		
Placer (SV)	2020	SBUS	40	GAS	0.77482964	496.0814258		
Placer (SV)	2020	SBUS	45	GAS	1.230253379	751.9222193		
Placer (SV)	2020	SBUS	50	GAS	0.701805898	408.408344		
Placer (SV)	2020	SBUS	55	GAS	0.68406221	376.570017		
Placer (SV)	2020	SBUS	60	GAS	0.778629507	425.288995	6.322355374	3929.36107
Placer (SV)	2020	T6TS	5	GAS	0.034289973	116.574857		
Placer (SV)	2020	T6TS	10	GAS	0.043059385	143.3025878		
Placer (SV)	2020	T6TS	15	GAS	0.125137864	326.5185972		
Placer (SV)	2020	T6TS	20	GAS	2.408148202	4907.780461		
Placer (SV)	2020	T6TS	25	GAS	1.037370873	2019.793917		
Placer (SV)	2020	T6TS	30	GAS	2.015412999	3867.801519		
Placer (SV)	2020	T6TS	35	GAS	5.210428047	9745.160668		
Placer (SV)	2020	T6TS	40	GAS	3.939995399	7124.430426		

Independence at Lincoln
NOx and CO2 Mobile Source Emissions by Vehicle Class and Speed

Placer (SV)	2020	T6TS	45	GAS	6.234695868	10798.66582		
Placer (SV)	2020	T6TS	50	GAS	3.622506535	5865.321056		
Placer (SV)	2020	T6TS	55	GAS	3.478336716	5408.07768		
Placer (SV)	2020	T6TS	60	GAS	3.975979455	6107.751062		
Placer (SV)	2020	T6TS	65	GAS	3.974407971	6094.855145	36.09976929	62526.03379
Placer (SV)	2020	T7IS	5	GAS	0.020460689	12.63846234		
Placer (SV)	2020	T7IS	10	GAS	0.025451308	15.43782668		
Placer (SV)	2020	T7IS	15	GAS	0.074271564	36.81197922		
Placer (SV)	2020	T7IS	20	GAS	1.436603686	635.8225114		
Placer (SV)	2020	T7IS	25	GAS	0.615457732	281.9173969		
Placer (SV)	2020	T7IS	30	GAS	1.186672237	559.3302128		
Placer (SV)	2020	T7IS	35	GAS	3.046739667	1463.969551		
Placer (SV)	2020	T7IS	40	GAS	2.294938127	1108.768505		
Placer (SV)	2020	T7IS	45	GAS	3.668268774	1768.953965		
Placer (SV)	2020	T7IS	50	GAS	2.103517646	1014.352706		
Placer (SV)	2020	T7IS	55	GAS	1.989800674	943.6767524		
Placer (SV)	2020	T7IS	60	GAS	2.294917179	1044.361958		
Placer (SV)	2020	T7IS	65	GAS	2.336318915	1020.398807	21.0934182	9906.440633
Placer (SV)	2020	UBUS	5	GAS	0.01374142	47.37641371		
Placer (SV)	2020	UBUS	10	GAS	0.017192329	58.23865334		
Placer (SV)	2020	UBUS	15	GAS	0.050135608	132.6982554		
Placer (SV)	2020	UBUS	20	GAS	0.962752729	1994.538476		
Placer (SV)	2020	UBUS	25	GAS	0.40718986	820.8510368		
Placer (SV)	2020	UBUS	30	GAS	0.788750134	1571.887538		
Placer (SV)	2020	UBUS	35	GAS	2.036175448	3960.466051		
Placer (SV)	2020	UBUS	40	GAS	1.534155669	2895.392472		
Placer (SV)	2020	UBUS	45	GAS	2.421957886	4388.614086		
Placer (SV)	2020	UBUS	50	GAS	1.409096448	2383.686192		
Placer (SV)	2020	UBUS	55	GAS	1.351911367	2197.860947		
Placer (SV)	2020	UBUS	60	GAS	1.548247026	2482.210561		
Placer (SV)	2020	UBUS	65	GAS	1.552716261	2476.969617	14.09402218	25410.7903
		Total emissions from RUNEX by speed (g/day)			**14,623**	**18,882,828**		
				lbs/day for NOx	**32.24**			
				MT/day for CO2		**18.88**		

unit factors:

1 pound = 453.59 grams

1 metric ton = 1,000,000 grams

Independence at Lincoln

Total NOx and CO2 Running Exhaust Emissions by Vehicle Class

Calendar Year: 2020
Vehicle Classification; EMFAC2011 cetegories

				Running Exhaust Emissions	
Region	CalYr	VehClass	Fuel	NOx (lbs/day)	CO2 (MT/day)
Placer (SV)	2020	All Other Buses	DSL	0.114692556	0.018557447
Placer (SV)	2020	LDA	DSL	0.069262748	0.063524609
Placer (SV)	2020	LDT1	DSL	0.004562519	0.000686716
Placer (SV)	2020	LDT2	DSL	0.002470277	0.006346164
Placer (SV)	2020	LHD1	DSL	5.647584433	0.275047145
Placer (SV)	2020	LHD2	DSL	0.989461661	0.094374585
Placer (SV)	2020	MDV	DSL	0.012899381	0.051839822
Placer (SV)	2020	MH	DSL	0.207063937	0.016610292
Placer (SV)	2020	Motor Coach	DSL	0.119715085	0.020796839
Placer (SV)	2020	PTO	DSL	0.028318696	0.004209037
Placer (SV)	2020	SBUS	DSL	0.481198943	0.040269092
Placer (SV)	2020	T6 Ag	DSL	0.274142252	0.026429318
Placer (SV)	2020	T6 CAIRP heavy	DSL	0.009982072	0.003749657
Placer (SV)	2020	T6 CAIRP small	DSL	0.025756394	0.011605898
Placer (SV)	2020	T6 instate construction heavy	DSL	0.103689767	0.018877622
Placer (SV)	2020	T6 instate construction small	DSL	0.3459641	0.101497763
Placer (SV)	2020	T6 instate heavy	DSL	1.514498033	0.446814048
Placer (SV)	2020	T6 instate small	DSL	3.163494972	1.240605494
Placer (SV)	2020	T6 OOS heavy	DSL	0.006012642	0.002150204
Placer (SV)	2020	T6 OOS small	DSL	0.014757446	0.006649744
Placer (SV)	2020	T6 Public	DSL	0.258089481	0.041002172
Placer (SV)	2020	T6 utility	DSL	0.003786084	0.004090577
Placer (SV)	2020	T7 Ag	DSL	0.191734739	0.014189032
Placer (SV)	2020	T7 CAIRP	DSL	2.068326723	0.397451355
Placer (SV)	2020	T7 CAIRP construction	DSL	0.097619402	0.018480749
Placer (SV)	2020	T7 NNOOS	DSL	1.118244565	0.460542974
Placer (SV)	2020	T7 NOOS	DSL	0.83129222	0.157199429
Placer (SV)	2020	T7 other port	DSL	0.033305178	0.005104681
Placer (SV)	2020	T7 POAK	DSL	0.077546922	0.010344765
Placer (SV)	2020	T7 Public	DSL	0.819398101	0.07110744
Placer (SV)	2020	T7 Single	DSL	1.480616846	0.310661921
Placer (SV)	2020	T7 single construction	DSL	0.261637598	0.048588603
Placer (SV)	2020	T7 SWCV	DSL	0.33575903	0.099500777
Placer (SV)	2020	T7 tractor	DSL	1.806905734	0.27082331
Placer (SV)	2020	T7 tractor construction	DSL	0.252064108	0.036489694
Placer (SV)	2020	T7 utility	DSL	0.001690864	0.001440817
Placer (SV)	2020	UBUS	DSL	0.551258089	0.05193682
Placer (SV)	2020	LDA	GAS	2.725187804	5.93690472
Placer (SV)	2020	LDT1	GAS	0.523102	0.641410766
Placer (SV)	2020	LDT2	GAS	2.086562003	4.064301529

Independence at Lincoln

Total NOx and CO2 Running Exhaust Emissions by Vehicle Class

				Running Exhaust Emissions	
Region	**CalYr**	**VehClass**	**Fuel**	**NOx (lbs/day)**	**CO2 (MT/day)**
Placer (SV)	2020	LHD1	GAS	0.297542886	0.269760688
Placer (SV)	2020	LHD2	GAS	0.029638192	0.054863554
Placer (SV)	2020	MCY	GAS	0.670540298	0.04154044
Placer (SV)	2020	MDV	GAS	2.325144659	3.228139385
Placer (SV)	2020	MH	GAS	0.060814871	0.053500295
Placer (SV)	2020	OBUS	GAS	0.025967342	0.041825014
Placer (SV)	2020	SBUS	GAS	0.013938912	0.003929507
Placer (SV)	2020	T6TS	GAS	0.079589752	0.062528694
Placer (SV)	2020	T7IS	GAS	0.046505014	0.009906854
Placer (SV)	2020	UBUS	GAS	0.031073321	0.025411872
			Total	**32.24041065**	**18.88361993**
			Total for NOx (lbs/day)	**32.24**	
			Total for CO2 (MT/day)		**18.88**
			Total for CO2 (MT/yr)		**6892.52**

factor:
1 pound = 453.59 grams
1 metric ton = 1,000,000 grams
1 year = 365 days

Attachment 2

CalEEMod2016 Modeling Results for
Independence at Lincoln Mobile Source Emissions

Independence at LIncoln-Mobile Source Emissions Only
Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	575.00	Dwelling Unit	186.69	1,035,000.00	1645
Condo/Townhouse	54.00	Dwelling Unit	3.38	54,000.00	154
User Defined Recreational	2.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	488	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - reflecting 33% RPS achievement at 2020

Land Use - based on Project's proposal

Construction Phase - no construction phases

Vehicle Trips - modify the trip rate and trip length based on Appendix C assumption: trip rate for single family: 9.18; Condo: 6.65, soccer field: 35 and trip length for single family: 8.58 miles; Condo: 7.44 miles; soccer field: 35 miles

Fleet Mix - default Fleet Mix

Area Mitigation -

Woodstoves - Only natural gas fireplaces in residential units

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MH	1.3330e-003	6.2400e-003
tblFleetMix	MH	1.3330e-003	6.2400e-003

tblFleetMix	MH	1.3330e-003	6.2400e-003
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblProjectCharacteristics	CO2IntensityFactor	641.35	488
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	5.60
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	5.60
tblVehicleTrips	CW_TL	14.70	5.60
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	7.45
tblVehicleTrips	HO_TL	7.90	8.58
tblVehicleTrips	HO_TTP	36.40	0.00
tblVehicleTrips	HO_TTP	36.40	0.00
tblVehicleTrips	HS_TL	7.10	7.45

tblVehicleTrips	HS_TL	7.10	8.58
tblVehicleTrips	HS_TTP	21.00	0.00
tblVehicleTrips	HS_TTP	21.00	0.00
tblVehicleTrips	HW_TL	16.80	7.45
tblVehicleTrips	HW_TL	16.80	8.58
tblVehicleTrips	HW_TTP	42.60	100.00
tblVehicleTrips	HW_TTP	42.60	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	6.65
tblVehicleTrips	ST_TR	9.91	9.18
tblVehicleTrips	ST_TR	0.00	35.00
tblVehicleTrips	SU_TR	4.84	6.65
tblVehicleTrips	SU_TR	8.62	9.18
tblVehicleTrips	SU_TR	0.00	35.00
tblVehicleTrips	WD_TR	5.81	6.65
tblVehicleTrips	WD_TR	9.52	9.18
tblVehicleTrips	WD_TR	0.00	35.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Maximum	**0.0000**	**0.0000**				**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Maximum	**0.0000**	**0.0000**				**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	44.5446	0.8250				6.8565	6.8565		6.8565	6.8565			929.8469			960.2524
Energy	0.1065	0.9105				0.0736	0.0736		0.0736	0.0736			2,273.5888			2,286.1329
Mobile	3.6808	8.2904				0.0836	6.5628		0.0786	1.8161			6,876.9364			6,888.0944
Waste						0.0000	0.0000		0.0000	0.0000			125.2535			310.3104
Water						0.0000	0.0000		0.0000	0.0000			82.1038			125.2409
Total	**48.3319**	**10.0258**				**7.0137**	**13.4929**		**7.0088**	**8.7462**			**10,287.7294**			**10,570.0309**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1223	0.4392				0.0569	0.0569		0.0569	0.0569			453.5176			456.3533
Energy	0.1065	0.9105				0.0736	0.0736		0.0736	0.0736			2,273.5888			2,286.1329
Mobile	3.6808	8.2904				0.0836	6.5628		0.0786	1.8161			6,876.9364			6,888.0944
Waste						0.0000	0.0000		0.0000	0.0000			125.2535			310.3104
Water						0.0000	0.0000		0.0000	0.0000			82.1038			125.2409
Total	**8.9096**	**9.6401**				**0.2141**	**6.6933**		**0.2092**	**1.9466**			**9,811.4001**			**10,066.1318**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**81.57**	**3.85**	**0.00**	**0.00**	**0.00**	**96.95**	**50.39**	**0.00**	**97.02**	**77.74**	**0.00**	**0.00**	**4.63**	**0.00**	**0.00**	**4.77**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/14/2016	11/13/2016	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,205,225; Residential Outdoor: 735,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	49.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.6808	8.2904				0.0836	6.5628		0.0786	1.8161			6,876.9364			6,888.0944
Unmitigated	3.6808	8.2904				0.0836	6.5628		0.0786	1.8161			6,876.9364			6,888.0944

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	359.00	359.00	359.00	973,137	973,137
Single Family Housing	5,275.97	5,275.97	5275.97	16,474,223	16,474,223
User Defined Recreational	70.00	70.00	70.00	142,688	142,688
Total	5,704.97	5,704.97	5,704.97	17,590,048	17,590,048

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	7.45	7.45	7.45	100.00	0.00	0.00	100	0	0
Single Family Housing	8.58	8.58	8.58	100.00	0.00	0.00	100	0	0
User Defined Recreational	5.60	5.60	5.60	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240
Condo/Townhouse	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240
User Defined Recreational	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			1,219.161 4			1,225.439 6
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			1,219.161 4			1,225.439 6
NaturalGas Mitigated	0.1065	0.9105				0.0736	0.0736		0.0736	0.0736			1,054.427 4			1,060.693 4
NaturalGas Unmitigated	0.1065	0.9105				0.0736	0.0736		0.0736	0.0736			1,054.427 4			1,060.693 4

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.3662e+006	7.3700e-003	0.0630				5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003			72.9056			73.3388
Single Family Housing	1.8393e+007	0.0992	0.8475				0.0685	0.0685		0.0685	0.0685			981.5219			987.3546
User Defined Recreational	0	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.1066**	**0.9105**				**0.0736**	**0.0736**		**0.0736**	**0.0736**			**1,054.4274**			**1,060.6934**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.3662e+006	7.3700e-003	0.0630				5.0900e-003	5.0900e-003		5.0900e-003	5.0900e-003			72.9056			73.3388
Single Family Housing	1.8393e+007	0.0992	0.8475				0.0685	0.0685		0.0685	0.0685			981.5219			987.3546
User Defined Recreational	0	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.1066**	**0.9105**				**0.0736**	**0.0736**		**0.0736**	**0.0736**			**1,054.4274**			**1,060.6934**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	299314	66.2542			66.5954
Single Family Housing	5.20845e+006	1,152.9072			1,158.8442
User Defined Recreational	0	0.0000			0.0000
Total		**1,219.1614**			**1,225.4396**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	299314	66.2542			66.5954
Single Family Housing	5.20845e+006	1,152.9072			1,158.8442
User Defined Recreational	0	0.0000			0.0000
Total		**1,219.1614**			**1,225.4396**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1223	0.4392				0.0569	0.0569		0.0569	0.0569			453.5176			456.3533
Unmitigated	44.5446	0.8250				6.8565	6.8565		6.8565	6.8565			929.8469			960.2524

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	39.4674	0.7708				6.8308	6.8308		6.8308	6.8308			922.2179			952.4373
Landscaping	0.1427	0.0542				0.0258	0.0258		0.0258	0.0258			7.6291			7.8150
Total	**44.5446**	**0.8250**				**6.8565**	**6.8565**		**6.8565**	**6.8565**			**929.8469**			**960.2524**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.6814					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.2531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0451	0.3850				0.0311	0.0311		0.0311	0.0311			445.8886			448.5383
Landscaping	0.1427	0.0542				0.0258	0.0258		0.0258	0.0258			7.6291			7.8150
Total	**5.1222**	**0.4392**				**0.0569**	**0.0569**		**0.0569**	**0.0569**			**453.5176**			**456.3533**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	82.1038			125.2409
Unmitigated	82.1038			125.2409

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	3.51832 / 2.21807	7.0487			10.7520
Single Family Housing	37.4636 / 23.6183	75.0551			114.4889
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**82.1038**			**125.2409**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	3.51832 / 2.21807	7.0487			10.7520
Single Family Housing	37.4636 / 23.6183	75.0551			114.4889
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**82.1038**			**125.2409**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	125.2535			310.3104
Unmitigated	125.2535			310.3104

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	24.84	5.0423			12.4921
Single Family Housing	592.2	120.2113			297.8183
User Defined Recreational	0	0.0000			0.0000
Total		**125.2536**			**310.3104**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	24.84	5.0423			12.4921
Single Family Housing	592.2	120.2113			297.8183
User Defined Recreational	0	0.0000			0.0000
Total		**125.2536**			**310.3104**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Independence at LIncoln-Mobile Source Emissions Only

Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	575.00	Dwelling Unit	186.69	1,035,000.00	1645
Condo/Townhouse	54.00	Dwelling Unit	3.38	54,000.00	154
User Defined Recreational	2.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	488	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - reflecting 33% RPS achievement at 2020

Land Use - based on Project's proposal

Construction Phase - no construction phases

Vehicle Trips - modify the trip rate and trip length based on Appendix C assumption: trip rate for single family: 9.18; Condo: 6.65, soccer field: 35 and trip length for single family: 8.58 miles; Condo: 7.44 miles; soccer field: 35 miles

Fleet Mix - default Fleet Mix

Area Mitigation -

Woodstoves - Only natural gas fireplaces in residential units

Independence at LIncoln-Mobile Source Emissions Only - Placer-Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	HHD	0.05	7.4500e-003
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDA	0.49	0.48
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LDT2	0.22	0.22
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD1	0.03	0.03
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	LHD2	6.5860e-003	6.6700e-003
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MCY	6.1020e-003	0.03
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MDV	0.13	0.15
tblFleetMix	MH	1.3330e-003	6.2400e-003
tblFleetMix	MH	1.3330e-003	6.2400e-003

tblFleetMix	MH	1.3330e-003	6.2400e-003
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	OBUS	1.4670e-003	6.5000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	SBUS	7.8300e-004	9.4000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblFleetMix	UBUS	1.2290e-003	3.6000e-004
tblProjectCharacteristics	CO2IntensityFactor	641.35	488
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	CC_TL	6.60	5.60
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	5.60
tblVehicleTrips	CW_TL	14.70	5.60
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.90	7.45
tblVehicleTrips	HO_TL	7.90	8.58
tblVehicleTrips	HO_TTP	36.40	0.00
tblVehicleTrips	HO_TTP	36.40	0.00
tblVehicleTrips	HS_TL	7.10	7.45

tblVehicleTrips	HS_TL	7.10	8.58
tblVehicleTrips	HS_TTP	21.00	0.00
tblVehicleTrips	HS_TTP	21.00	0.00
tblVehicleTrips	HW_TL	16.80	7.45
tblVehicleTrips	HW_TL	16.80	8.58
tblVehicleTrips	HW_TTP	42.60	100.00
tblVehicleTrips	HW_TTP	42.60	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	5.67	6.65
tblVehicleTrips	ST_TR	9.91	9.18
tblVehicleTrips	ST_TR	0.00	35.00
tblVehicleTrips	SU_TR	4.84	6.65
tblVehicleTrips	SU_TR	8.62	9.18
tblVehicleTrips	SU_TR	0.00	35.00
tblVehicleTrips	WD_TR	5.81	6.65
tblVehicleTrips	WD_TR	9.52	9.18
tblVehicleTrips	WD_TR	0.00	35.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000				0.2009	0.0000		0.2005	0.0000			0.0000			0.0000
Maximum	**0.0000**	**0.0000**				**0.2009**	**0.0000**		**0.2005**	**0.0000**			**0.0000**			**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000				0.2009	0.0000		0.2005	0.0000			0.0000			0.0000
Maximum	**0.0000**	**0.0000**				**0.2009**	**0.0000**		**0.2005**	**0.0000**			**0.0000**			**0.0000**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	991.2423	19.4010				166.8900	166.8900		166.8900	166.8900			24,887.8585			25,702.6065
Energy	0.5838	4.9889				0.4034	0.4034		0.4034	0.4034			6,368.8070			6,406.6536
Mobile	23.4352	42.4200				0.4590	37.6781		0.4319	10.3757			44,812.9219			44,879.7983
Total	**1,015.2613**	**66.8099**				**167.7524**	**204.9714**		**167.7253**	**177.6690**			**76,069.5874**			**76,989.0583**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	29.7228	9.9928				1.0455	1.0455		1.0455	1.0455			12,081.4399			12,154.9564
Energy	0.5838	4.9889				0.4034	0.4034		0.4034	0.4034			6,368.8070			6,406.6536
Mobile	23.4352	42.4200				0.4590	37.6781		0.4319	10.3757			44,812.9219			44,879.7983
Total	**53.7418**	**57.4017**				**1.9079**	**39.1270**		**1.8808**	**11.8246**			**63,263.1687**			**63,441.4083**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	94.71	14.08	0.00	0.00	0.00	98.86	80.91	0.00	98.88	93.34	0.00	0.00	16.84	0.00	0.00	17.60

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/14/2016	11/13/2016	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,205,225; Residential Outdoor: 735,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	49.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	23.4352	42.4200				0.4590	37.6781		0.4319	10.3757			44,812.9219			44,879.7983
Unmitigated	23.4352	42.4200				0.4590	37.6781		0.4319	10.3757			44,812.9219			44,879.7983

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	359.00	359.00	359.00	973,137	973,137
Single Family Housing	5,275.97	5,275.97	5275.97	16,474,223	16,474,223
User Defined Recreational	70.00	70.00	70.00	142,688	142,688
Total	5,704.97	5,704.97	5,704.97	17,590,048	17,590,048

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	7.45	7.45	7.45	100.00	0.00	0.00	100	0	0
Single Family Housing	8.58	8.58	8.58	100.00	0.00	0.00	100	0	0
User Defined Recreational	5.60	5.60	5.60	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240
Condo/Townhouse	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240
User Defined Recreational	0.477900	0.043850	0.215730	0.152870	0.030310	0.006670	0.022500	0.007450	0.000650	0.000360	0.034270	0.000940	0.006240

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5838	4.9889				0.4034	0.4034		0.4034	0.4034			6,368.807 0			6,406.653 6
NaturalGas Unmitigated	0.5838	4.9889				0.4034	0.4034		0.4034	0.4034			6,368.807 0			6,406.653 6

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	3743.01	0.0404	0.3449				0.0279	0.0279		0.0279	0.0279			440.3540			442.9708
Single Family Housing	50391.8	0.5434	4.6440				0.3755	0.3755		0.3755	0.3755			5,928.4529			5,963.6828
User Defined Recreational	0	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.5838**	**4.9889**				**0.4034**	**0.4034**		**0.4034**	**0.4034**			**6,368.8070**			**6,406.6536**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	3.74301	0.0404	0.3449				0.0279	0.0279		0.0279	0.0279			440.3540			442.9708
Single Family Housing	50.3918	0.5434	4.6440				0.3755	0.3755		0.3755	0.3755			5,928.4529			5,963.6828
User Defined Recreational	0	0.0000	0.0000				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.5838**	**4.9889**				**0.4034**	**0.4034**		**0.4034**	**0.4034**			**6,368.8070**			**6,406.6536**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	29.7228	9.9928				1.0455	1.0455		1.0455	1.0455			12,081.4399			12,154.9564
Unmitigated	991.2423	19.4010				166.8900	166.8900		166.8900	166.8900			24,887.8585			25,702.6065

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.3046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	962.6184	18.7988				166.6037	166.6037		166.6037	166.6037			24,794.41 86			25,606.88 88
Landscaping	1.5855	0.6022				0.2863	0.2863		0.2863	0.2863			93.4399			95.7177
Total	**991.2423**	**19.4010**				**166.8900**	**166.8900**		**166.8900**	**166.8900**			**24,887.85 85**			**25,702.60 65**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.7338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	23.3046					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.0989	9.3906				0.7592	0.7592		0.7592	0.7592			11,988.0000			12,059.2387
Landscaping	1.5855	0.6022				0.2863	0.2863		0.2863	0.2863			93.4399			95.7177
Total	**29.7228**	**9.9928**				**1.0455**	**1.0455**		**1.0455**	**1.0455**			**12,081.4399**			**12,154.9564**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C

Letter O1 Lincoln Open Space Committee Attachment

LIST OF ATTACHMENTS TO NOVEMBER 8TH LOSC LETTER

July 10,2013 hand delivered transmittal to Lincoln Public Works (prior to sale of the property)

Lincoln City Council minutes of November 22, 2005 adopting Markham Ravine Natural Area Master Plan

Color map of Wastewater Treatment Plant Site Segment Concept Plan

Conceptual Master Plan Site Plan, Markham Ravine Nature Area- North & South Branches

Existing Conditions Map July 27, 2007

Markham Ravine Nature Area Master Plan (Note according to the City Clerk no changes were made to the draft plan)

Delineation of Waters of the United States, Markham Ravine, Sept 29, 2006

Nature Preserve Sign taken from Chambers Drive in June of 2013

Markham Ravine Nature Area Master Plan

Senior Civil Engineer, Carl Walker presented the Council with a staff report. He then introduced Ms. Kit Veerkamp of Foothill Associates who provided the Council with an overview of the master plan.

Mayor Pro Tem Sprague wanted to confirm that we would have to place some type of retaining wall in. Ms. Veerkamp stated that a retaining wall would be installed.

Councilman Santini wanted to know how many useable acres there are. Ms. Veerkamp responded that the area has about 100 acres.

Mr. Bill Plumb, representing the Markham Ravine Neighborhood group encouraged the Council to approve the plan. He also thanked the City Council and City staff for all their support.

Motioned by Mayor Pro Tem Sprague and seconded by Councilman Santini adopting the Markham Ravine Nature Area Master Plan and authorization to proceed with the acquisition of resource agency permitting and preparation of construction documents for the Foskett Ranch and Teal Hollow planning area segments.

APPROVED BY COUNCIL.

Acceptance of the Nevada Irrigation District/City of Lincoln area water treatment plan planning and site study

Director of Public Works/Engineer, John Pedri presented the Council with a staff report. He informed the Council that the City Council and the NID Board of Directors commissioned Eco:Logic to prepare the Planning and Site Study in February 2004. The purpose was to determine the feasibility of siting a gravity-fed water treatment facility near the proposed City sphere of influence based on the City's proposed General Plan. Twelve potential water treatment plant sites were identified and nine of those sites were eliminated. The three sites remaining are the Cramer Road site, the Mears Road site and the Valley View site. The Valley View site ranked as the number one site. If the Council accepts the study the NID Board and the City of Lincoln will complete a number of tasks that must be completed to define, implement and construct the facilities. Mr. Jean Walker, Valley View property owner addressed the Council. He would like to receive notification and be kept in the loop during this process. Motioned by Councilman Short and seconded by Councilman Nakata to accept the Nevada Irrigation District/City of Lincoln area water treatment plant planning site study.

APPROVED BY COUNCIL.

LEGEND OF PROPOSED IMPROVEMENTS

Trails
- Designated Crosswalk
- Multi-use trail
- Foot Path
- Boardwalk
- Class II Bike Lane
- Potential Bridge
- Hydrologic Connection

Habitats
- Created Seasonal Wetland/Swale
- Valley Oak Woodland
- Blue Oak Savanna
- Riparian
- Vernal Pool
- Channeling Widening

Trail Amenities
- Interpretive Sign
- Kiosk
- Public Access & Acknowledgement Signage
- Access Point
- Picnic Area
- Parking
- Nature Center

RESTORATION RESOURCES
3868 CINNCINNATI AVENUE
ROCKLIN, CA 95765
TEL 916.408.2990
FAX 916.408.2999
www.restoration-resources.net
CA LIC. #429252

WASTEWATER TREATMENT PLANT SITE SEGMENT CONCEPT PLAN

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING· PLANNING· LANDSCAPE ARCHITECTURE
655 MENLO DRIVE, SUITE 100
ROCKLIN, CALIFORNIA 95765
(916) 435-1202

400 0 400 800
Scale In Feet

FIGURE 7-5

July 10, 2013

Mr. Mark Miller

600 Sixth Street

Lincoln, ca. 95648

RE: Hand delivered documents On July 10, 2013

Mark, the following is a list of items I am hand delivering to you at our meeting at 4:30 today at City Hall.

1. The minutes of Lincoln City Council of November 22,2005 adopting the Markham Ravine Area Master Plan
2. The Markham Ravine Nature Area Master Plan (Note: the reason this document says Draft, is according to Dia Dix in the City Manager's Office, that there were no changes to the Draft and so they did not reprint it.)
3. A color map entitled "WASTEWATER TREATMENT PLANT SITE SEGMENT CONCEPT PLAN"
4. A color "CONCEPTUAL MASTER SITE PLAN" of the entire planning area.
5. A map of the locations of the Nature Preserve sign found adjacent to Assessor's Parcel Book 21, Page 26 on the boundaries of both parcel 12 and 10.
6. A color picture of the sign found on Chambers Drive and Thomsen Street. All 4 signs shown on the above map were still in place as of today.
7. A color picture of the no trespassing signs in site areas outside the preserve.
8. The cover page of the report "Delineation of Waters of the United States" This report is in city files.
9. A map entitled "Figure 3-3: Existing Conditions" which shows the floodplain and wetlands on the site.
10. Excerpts from the ALUC Compatibility Plan.

Having recently sold property in California, I am aware that disclosure of information is required by a seller of land. Since these documents come from City files, I presume that any buyer of this site has been told about the Nature Preserve, The Markham Preserve plan, the ALUC restrictions and other relevant documents.

Sincerely yours,

Jim Cutler

Jim Cutler


NATURE PRESERVE
NO TRESPASSING
This property is patrolled by
Preserve Managers.
Trespassers will be prosecuted
to the full extent of the law
and held liable for any damages

Delineation of Waters of the United States

Markham Ravine ±205.76-Acre Site
Placer County, California

Prepared for: U.S. Army Corps of Engineers

Contracted by: City of Lincoln Public Works Department

September 29, 2006

Submitted by:
FOOTHILL ASSOCIATES

4.0 RESULTS

4.1 Site Location and Land Use

4.1.1 Site Location

The ±205.76-acre site is located in Placer County, within the City of Lincoln. Nicolaus Road, which travels in an east-west direction, bisects the site. The site is approximately 0.25 mile southeast of the Lincoln Airport and 0.43 mile west of State Highway 65. The site is located within Section 8, Township 12 North, Range 6 East, of the *Lincoln, California* USGS 7.5-minute quadrangle (**Figure 1**).

4.1.2 Land Use

With the exception of a wastewater treatment basin at the southwestern end of the site, the site is currently undeveloped and consists of riparian and wetland habitats with adjacent oak woodland and annual grassland in upland areas. Currently, Markham Ravine serves as a flood control basin. Land uses surrounding the site include single family residential housing, commercial buildings, parking lots, and roads. There are additional wastewater treatment facilities just southwest of the site.

4.2 Physical Features

4.2.1 Soils

The Natural Resources Conservation Service (NRCS) has identified and mapped eight soils occurring on the site (**Figure 2**): **Cometa-Fiddyment complex, 1 to 5 percent slopes; Cometa-Ramona sandy loams, 1 to 5 percent slopes; Exchequer very stony loam, 2 to 15 percent slopes; Ramona sandy loam, 2 to 9 percent slopes; San Joaquin sandy loam, 1 to 5 percent slopes; San Joaquin-Cometa sandy loams, 1 to 5 percent slopes; Xerofluvents, frequently flooded**; and **Xerofluvents, hardpan substratum**. General characteristics and properties associated with these soils are described below.

- **Cometa-Fiddyment complex, 1 to 5 percent slopes:** This undulating soil unit occurs on low terraces between elevations of 75 and 200 feet above mean sea level (MSL). The main components of this complex consist of 35 percent Cometa and 35 percent Fiddyment soil, as described below. Inclusions within this soil unit consist of 10 percent San Joaquin sandy loam, 10 percent Kaseberg loam, 5 percent Ramona sandy loam on scattered narrow ridges, and 5 percent Alamo clay in some drainageways and basins. This soil unit is used for winter grains and rice in flatter areas, and limited rangeland. Typically, vegetation on this soil unit consists mainly of non-native grasses and herbaceous plant species. The hydric soils list for Placer County identifies one hydric inclusion occurring within this soil type: Alamo, within depressions.

- Cometa is deep, well drained claypan soil that formed in alluvium mainly from granitic sources. Permeability is very slow and available water capacity is very low.
- Fiddyment is a moderately deep, well drained soil over a hardpan formed in old valley siltstone. Permeability is very slow and the available water capacity is low.

- **Cometa-Ramona sandy loams, 1 to 5 percent slopes:** This undulating soil unit occurs on low terraces between elevations of 75 and 200 feet above MSL. The unit is 50 percent Cometa and 30 percent Ramona soil. The Cometa soil is found on side slopes and bottoms. The Ramona soil is found on fingerlike ridges and younger land surfaces. Inclusions within this unit consists of 10 percent San Joaquin sandy loam, 5 percent Fiddyment loam, and 5 percent Alamo clay and Xerofluvents in narrow drainageways. Cometa is a deep, well drained claypan soil that formed in alluvium, mainly from granitic sources. Permeability is very slow and available water capacity is very low. The Ramona soil is deep and well drained. It formed in alluvium predominately from granitic sources. Permeability is moderately slow and available water capacity is very low. This soil unit is used for winter grain, annual rangeland and irrigated pasture. Typically, vegetation on this soil unit consists of annual grasses, herbaceous plant species and scattered oak. The hydric soils list for Placer County identifies Xerofluvent and Alamo hydric inclusions occurring within this soil unit. Xerofluvents occur within drainageways and Alamo soils occur within depressions.

- **Exchequer very stony loam, 2 to 15 percent slopes:** This shallow soil occurs on long, broad volcanic ridges between elevations of 100 and 2,000 feet above MSL. This soil type is formed in residuum from volcanic rocks. Permeability is moderate and the available water capacity is very low. This soil unit is typically used for annual rangeland. The vegetation in uncultivated areas consists of annual grasses and forbs, scattered blue oaks, and dense shrubs. The hydric soils list for Placer County does identify two unnamed hydric inclusions occurring within this soil unit. The two inclusions are unnamed and are located in drainageways and depressional land forms.

- **Ramona sandy loam 2 to 9 percent slopes:** This is an undulating, very deep, very well drained soil is found on low terraces between elevations of 100 and 200 feet above MSL. It formed in alluvium from predominately granitic sources. Permeability is moderately slow and available water capacity is very low. This soil unit is used for irrigated pasture, deciduous orchards and grain fields. Typically, vegetation on this soil unit consists of annual grasses, herbaceous plants and scattered valley oak. The hydric soils list for Placer County identifies one unnamed hydric inclusion occurring within this soil unit located in drainageways.

- **San Joaquin sandy loam, 1 to 5 percent slopes:** This moderately deep soil unit occurs on low terraces at elevations ranging between 50 and 200 feet above MSL. It forms in alluvium primarily from granitic sources. Permeability is very slow and the available water capacity is very low to low. This soil unit is typically used for winter grain. Vegetation in uncultivated areas consists of annual grasses and forbs. The hydric soils list for Placer County identifies one Alamo hydric inclusion occurring within this soil unit in depressional landforms.

- **San Joaquin-Cometa sandy loams 1 to 5 percent slopes:** This is an undulating soil unit is found on low terraces between elevations of 50 and 200 feet above MSL. The unit is 40 percent San Joaquin soil and 30 percent Cometa soil. Both soil types have a claypan. The San Joaquin is a well drained claypan soil moderately deep over a hardpan. It formed in alluvium mainly from granitic sources. Permeability is very slow and the available water capacity is very low to low. The Cometa soil is a deep well drained claypan soil formed in alluvium predominately from granitic sources. Permeability is very slow and the available water capacity is very low. This soil unit is primarily used for winter grain, often as annual rangeland. Typically, vegetation on this soil unit consists of annual grasses and herbaceous plants. The hydric soils list for Placer County identifies one Alamo hydric inclusion occurring within this soil unit in depressional landforms.

- **Xerofluvents, frequently flooded:** This soil unit consists of narrow stringers of somewhat poorly drained recent alluvium adjacent to stream channels. Permeability is variable and the available water capacity is very low. Based on the frequent flooding, most of this soil type is idle and provides cover and nesting habitat for wildlife. Typically, vegetation on this soil type consists of annual grasses, sedges, herbaceous plants, valley oak, and willow. The hydric soils list for Placer County identifies this soil unit as a hydric soil and also lists one unnamed hydric inclusion occurring within this soil type. Both are found in drainageway landforms.

- **Xerofluvents, hardpan substratum:** This soil unit is a hardpan substratum composed of relatively poorly drained loamy alluvium in minor drainageways and is found on terraces. Permeability is moderately slow and the available water capacity is very low to low. This soil type is typically used for cultivation of winter grains, irrigated pasture, and rice. Vegetation in uncultivated areas consists of annual grasses and forbs. The hydric soils list for Placer County identifies three hydric inclusions as occurring within this soil type: Alamo, which is found in depressional landforms, and two unnamed inclusions which are both found in drainageways.

In summary, and according to the hydric soils list and soil survey for Placer County, the following hydric soil components/inclusions and the landform types they are associated with are listed as occurring on site: Alamo soils within depressions, unnamed soils found in drainageways and depressions, and Xerofluvent soils found within and adjacent to stream channels.

4.2.2 Topography

Moderate rolling hills and extensive flatlands typify the topography of the site and the surrounding area. Slopes are dominantly convex and incised by many shallow drainageways and depressions. The slopes throughout the site range from approximately

0 to 8 percent. The elevation on the site ranges from approximately 110 to 130 feet above MSL.

4.2.3 Regional Hydrology

The site is located northeast of the American Basin and approximately 12 miles northeast of the Sacramento River within the northern Sacramento Valley portion of the Great Central Valley. Historically, the Sacramento River and many of its main tributaries flooded seasonally, creating areas that remained inundated for substantial periods during the rainy season. As a result, large-scale flood-control projects, diversion dams, and water-control structures were built on tributary rivers entering the valley in the 1930's. As a result of the construction of these fortified structures, natural flooding events were reduced in frequency and intensity. As the demand for agricultural production processes in the region increased, the development of a complex system of canals and ditches to maximize water conveyance and storage ensued.

4.2.4 Site-Specific Hydrology

The hydrologic regime on the site is dominated by Markham Ravine, a perennial drainage and marsh that flows through the central portion of the site, with extensions to the northern and southern segments of the site. The hydrologic regime on site is also dominated by seasonal storm water run off and precipitation, primarily between November and March. Much of the seasonal surface run off throughout the site is conveyed through Markham Ravine, the south branch of Markham Ravine, and Clay Creek. Clay Creek is a perennial drainage located in the northwest segment of the site; this feature flows southwest into Markham Ravine. Markham Ravine eventually drains to the East Side Canal approximately 11 miles southwest of the site.

Hydrologic features identified and mapped onsite include: depressional seasonal wetlands, vernal pools, depressional seasonal and perennial marshes, riverine seasonal wetlands, riverine perennial marshes, ephemeral drainages, perennial drainages, ditches, ponds, and excavated basins (**Figures 3** and **4**). Diagnostic characteristics of the features mapped on the site are defined and discussed in Section 4.4.

The depressional and riverine seasonal wetlands on the site are characterized by saturation rather than inundation. The vernal pools on the site are predominantly re-charged by precipitation as well as the natural sheeting effect of rainfall conducted by surrounding upland topography. The depressional seasonal marshes are seasonally inundated or saturated, but inundation/saturation persists for some period into the warm season. The depressional perennial marshes are depressions that typically remain inundated or saturated throughout the year. The riverine perennial marshes and perennial drainages maintain flow of water throughout the year. The impoundment dam between the perennial drainage and marsh portions of Markham Ravine has been breached, allowing year round flow to continue.

4.3 Vegetation

The vegetation assemblages occurring on the site include the following: California annual grassland alliance, Bulrush-cattail alliance, and Cattail alliance. Habitat types on the site include Northern hardpan vernal pool, seasonal wetland (including seasonal marsh), and perennial marsh. The vegetation found on site typifies that of upland and seasonal and perennial wetlands with the Great Central Valley and vicinity. A description of the alliances and habitats occurring on site is provided below.

4.3.1 California Annual Grassland Alliance

California annual grassland alliance consists of a myriad of native and non-native annual plant species and occurs in a majority of the state at elevations from sea level to approximately 4,000 feet above MSL. Composition of this vegetation community varies depending on distribution, geographic location and land use. Additional major influences on this vegetation community include soil type, annual precipitation and fall temperatures. Dominant plant species within the California annual grassland on the site include the following: soft brome (*Bromus hordeaceus*), wild oat (*Avena barbata*), filaree (*Erodium* sp.), hawkbit (*Leontodon taraxacoides*), smooth cat's-ear (*Hypochaeris glabra*), mouse-tail grass (*Vulpia myuros*), clover (*Trifolium* sp.), tarweed (*Holocarpha virgata*), barley (*Hordeum murinum* ssp. *murinum*), and medusahead (*Taeniatherum caput-medusae*). California annual grassland alliance can be found throughout the site where wetland features do not dominate.

4.3.2 Bulrush-Cattail Alliance

Bulrush-cattail alliance occurs throughout the state of California in brackish, alkali, or freshwater marshes from sea level to approximately 6,500 feet above MSL. Typically, Bulrush-cattail alliance occurs in semi or permanently flooded wetlands. The dominant component of this alliance on the site is California bulrush (*Scirpus californicus*). Broad leaved cattail (*Typha latifolia*), duckweed (*Lemna* sp.) and knotweed (*Polygonum* sp.) occur as well. This vegetation alliance occurs in the western central portion of the site associated with the depressional perennial marsh.

4.3.3 Cattail Alliance

Cattail alliance occurs throughout the state of California in brackish, alkali, or freshwater marshes from sea level to approximately 6,000 feet above MSL. Cattail alliance occurs in semi or permanently flooded wetlands. In this alliance, cattails are the dominant or sole plants emerging from water. Cattails observed within this alliance include broad-leaved cattail and narrow leaved cattail (*T. angustifolia*). This vegetation alliance can be found sporadically throughout Markham Ravine, but was most notable at the western central portion of the site.

4.3.4 Northern Hardpan Vernal Pools

Northern hardpan vernal pools occur within depressions on cemented soils such as the Corning, Red Bluff, Redding, and San Joaquin soil series within and around the Great Central Valley. Elevational distribution is from sea level to approximately 350 feet above MSL. Plant species occurring in vernal pools are those that have adapted to seasonally aquatic or saturated soils conditions. Typically, dominant plant species (at least temporally) within Northern hardpan vernal pools are perennial plant species that have adapted to withstand such extended conditions. For short periods throughout the year, these features are dominated by a succession of short-lived vegetation communities composed of annual plant species. Dominant plant species occurring within the Northern hardpan vernal pools on the site include the following: mannagrass (*Glyceria* sp.), coyote thistle (*Eryngium vaseyi*), spikerush (*Eleocharis macrostachya*), hedge-hyssop (*Gratiola ebracteata*), annual hairgrass (*Deschampsia danthonioides*), and woolly marbles (*Psilocarphus brevissimus*). Northern hardpan vernal pools are concentrated in the central portion of the site.

4.3.5 Seasonal Wetlands

Seasonal wetlands are those depressions or topographic folds within the topography that inundate or flow for short periods of time following intense rains but do not maintain seasonal aquatic or saturated soils conditions for durations long enough for colonization by perennial, obligate plant species. As such, plant species in seasonal wetlands are generally of two types: species that can tolerate short periods of inundation but have not adapted to withstand sustained aquatic or saturated soils conditions, and short-lived (primarily annual) species that take advantage of ephemeral aquatic and/or saturated soils conditions. The seasonal wetlands are concentrated in the central portion of the site.

Plant species observed occurring within the depressional seasonal wetlands include: barley, mediterranean barley (*H. marinum* ssp. *gussoneanum*), cocklebur (*Xanthium strumarium*), fiddle doc (*Rumex pulcher*), curly dock (*R. crispus*), rattlesnake grass (*Briza minor*), rush (*Juncus effusus*), smartweed (*Polygonum* spp.), cranesbill (*Geranium dissectum*), Bermuda grass (*Cynodon dactylon*), and nutsedge (*Cyperus eragrostis).*

Plant species observed occurring within the depressional seasonal marsh include: downingia (*Downingia* sp.), hedge-hyssop, broad-leaved cattail, narrow leaved cattail, and Johnson grass (*Sorghum halepense*).

Plant species observed occurring within the riverine seasonal wetlands include: canary grass (*Phalaris paradoxa*), hairy waterclover (*Marsilea vestita*), shortpod mustard (*Hirschfeldia incana*), annual beard grass (*Polypogon monspeliensis*), and dallis grass (*Paspalum dilatatum*).

4.3.6 Perennial Marsh

Perennial marsh is located throughout much of the site as Markham Ravine and is represented by a channelized natural feature that conveys water throughout the year. Plant species observed occurring within the riverine perennial marsh include: narrow and broad leaved cattails, water primrose (*Ludwigia peploides*), Himalayan blackberry (*Rubus discolor*), Johnson grass, and tule (*Scirpus acutus* var. *occidentalis*). Portions of this feature may best be classified within the Cattail alliance.

Along portions of Markham Ravine and Clay Creek, plant species observed include: narrow-leaved willow (*Salix exigua*), red willow (*S. laevigata*), Fremont cottonwood (*Populus fremontii*), and valley oak (*Quercus lobata*).

4.4 Classification of Waters of the United States

Jurisdictional waters of the U.S. are classified into multiple types based on topography, edaphics (soils), vegetation, and hydrologic regime. Primarily, the Corps establishes two distinctions: wetland and nonwetland waters of the U.S. Nonwetland waters are commonly referred to as other waters of the U.S. Potential jurisdictional wetland types mapped within the site include the following: depressional seasonal wetland, vernal pool, depressional seasonal marsh, depressional perennial marsh, riverine seasonal wetland, and riverine perennial marsh. Other waters of the U.S. delineated within the site include the following: ephemeral drainage, perennial drainage, ditch/canal, and pond. In addition, the waste-water treatment basin and another ditch on the site were identified as excavated in uplands and interpreted as potentially non-jurisdictional features. A description of all of the features delineated within the site is provided in the following sections.

4.4.1 Depressional Seasonal Wetland

A total of **6.61** acres of depressional seasonal wetland have been delineated within the site. Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands were identified on the site as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Plant species in depressional seasonal wetlands are adapted to withstand short periods of saturation or saturated soils conditions but will not withstand prolonged periods of inundation, as is common in vernal pools. Depressional seasonal wetlands are located throughout the site (**Figures 3** and **4**).

4.4.2 Vernal Pool

A total of **0.09** acre of vernal pool has been delineated within the site. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. These layers include hardpans, claypans, or thick clay layers. Vernal pools were identified on the site as depressions within the topography with a hydrologic regime dominated by inundation and capable of supporting hydrophytic plant species and hydric soils. Plant species found within vernal pools are those that require extended periods of inundation and, as such, are commonly associated with these seasonal wetland features. Vernal pools are located in the central portion of the site (**Figures 3** and **4**).

4.4.3 *Depressional Seasonal Marsh*

A total of **0.10** acre of depressional seasonal marsh has been delineated within the site. Depressional seasonal marshes are wetlands that are seasonally inundated or saturated, but inundation/saturation persists for some period into the warm season. The persistence of inundation/saturation into the warm season permits the growth of primarily perennial herbaceous plant species capable of withstanding extended periods of inundation or saturated soil conditions. Within the Great Central Valley, these features are typically located on the fringes of naturally occurring or artificially created impoundments, such as ponds or reservoirs. These features are also associated with slow moving riverine systems where natural and/or artificial flows persist into the warm season. One depressional seasonal marsh is located in the western central segment of the site just south of Markham Ravine and east of Teal Hollow Drive South (**Figures 3** and **4**).

4.4.4 *Depressional Perennial Marsh*

A total of **0.55** acre of depressional perennial marsh has been delineated within the site. Depressional perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. Depressional perennial marshes are dominated by inundation. Typically, depressional perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species. Within the Great Central Valley, depressional perennial marshes typically occur in association with the lowland terminus of local riverine watersheds or as the result of artificial excavation activities in low lying areas exhibiting historic hydric soils conditions, often resulting in artificially created impoundments, such as ponds or reservoirs. A depressional perennial marsh is located in the western central portion of the site within a larger depressional seasonal marsh area (**Figures 3** and **4**).

4.4.5 *Riverine Seasonal Wetland*

A total of **0.59** acre of riverine seasonal wetland has been delineated within the site. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Riverine seasonal wetlands may have a moderately defined bed and bank and often exhibit sufficient gradient to convey water off of the site. As in depressional seasonal wetlands, plant species found within riverine seasonal wetlands are typically adapted to a hydrologic regime dominated by saturation rather than inundation. Riverine seasonal wetlands are located sporadically throughout the site (**Figures 3** and **4**).

4.4.6 *Riverine Perennial Marsh*

A total of **36.81** acres of riverine perennial marsh have been delineated within the site. As with depressional perennial marshes, riverine perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. Riverine perennial marshes are dominated by unidirectional flow of water. Typically, riverine perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species. Riverine perennial marsh occurs in association with perennial, flowing features such as creeks and streams, typically on the fringes of such features. Markham Ravine is largely characterized as riverine perennial marsh and is found throughout much of the site (**Figures 3** and **4**).

4.4.7 Ephemeral Drainage

A total of **0.08** acre of ephemeral drainage has been delineated within the site. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an OHWM. Ephemeral drainages are primarily fed by storm water run off. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Within ephemeral drainages, topographic depressions in the bed of the feature may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel, bed and bank. Ephemeral drainages are located in the central and southern portions of the site (**Figures 3** and **4**).

4.4.8 Perennial Drainage

A total of **5.34** acres of perennial drainage have been delineated within the site. Perennial drainages are features that may not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an OHWM. Perennial drainages generally convey unidirectional water flows throughout the entire year. Perennial drainages typically consist of a channel, bed, and bank and are devoid of vegetation due to the scouring effect of flowing water. Perennial drainages are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows and soil types. Clay Creek is found in the northwest segment of the site. Portions of Markham Ravine are more characteristic of a perennial drainage throughout the site (**Figures 3** and **4**).

4.4.9 Ditch/Canal

Approximately **0.01** acre of non-jurisdictional ditch/canal has been delineated within the very southwestern tip of the site. This feature was not connected to any other water conveyance feature on or off of the site. As this ditch/canal is not tributary to waters of the U.S., it is not likely regulated by the Corps. However, the Corps reviews these situations on a case by case basis.

An additional **0.05** acre of jurisdictional ditch has been delineated within the southern portion of the site. This feature does convey water between jurisdictional wetland features (**Figures 3** and **4**).

4.4.10 Pond

A total of **3.21** acres of pond have been delineated within the site. Ponds are typically the result of the deliberate impoundment of water through artificial damming. When ponds occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting pond becomes jurisdictional to the limits of the OHWM. Conversely, ponds wholly excavated in uplands and supplied by surface run off or groundwater are not jurisdictional features. The ponds identified on the site are part of the Markham Ravine drainage system. As such, these features would be subject to Corps jurisdiction. The ponds are located sporadically within the central and southern portions of the site (**Figures 3** and **4**).

4.4.11 Excavated Basin

A total of **14.54** acres of wastewater treatment basin have been delineated within the southern portion of the site. Excavated basins are typically the result of the deliberate impoundment of water through artificial damming. When basins occur as the result of the construction of artificial impoundment features that restrict or stop the flow of jurisdictional waters of the U.S., the resulting basin becomes jurisdictional to the limits of the OHWM or wetland boundary. Conversely, basins wholly excavated in uplands and supplied by surface run off or groundwater are not jurisdictional features. The basins identified on the site are excavated and are not the result of the impoundment of a natural drainageway. Nor are the excavated basins tributary to or from any waters of the U.S. The hydrology of the basins is supplied by seasonal precipitation. Therefore, the Corps will not likely assert jurisdiction over these features. The excavated basins are located in the southern portion of the site (**Figures 3** and **4**).

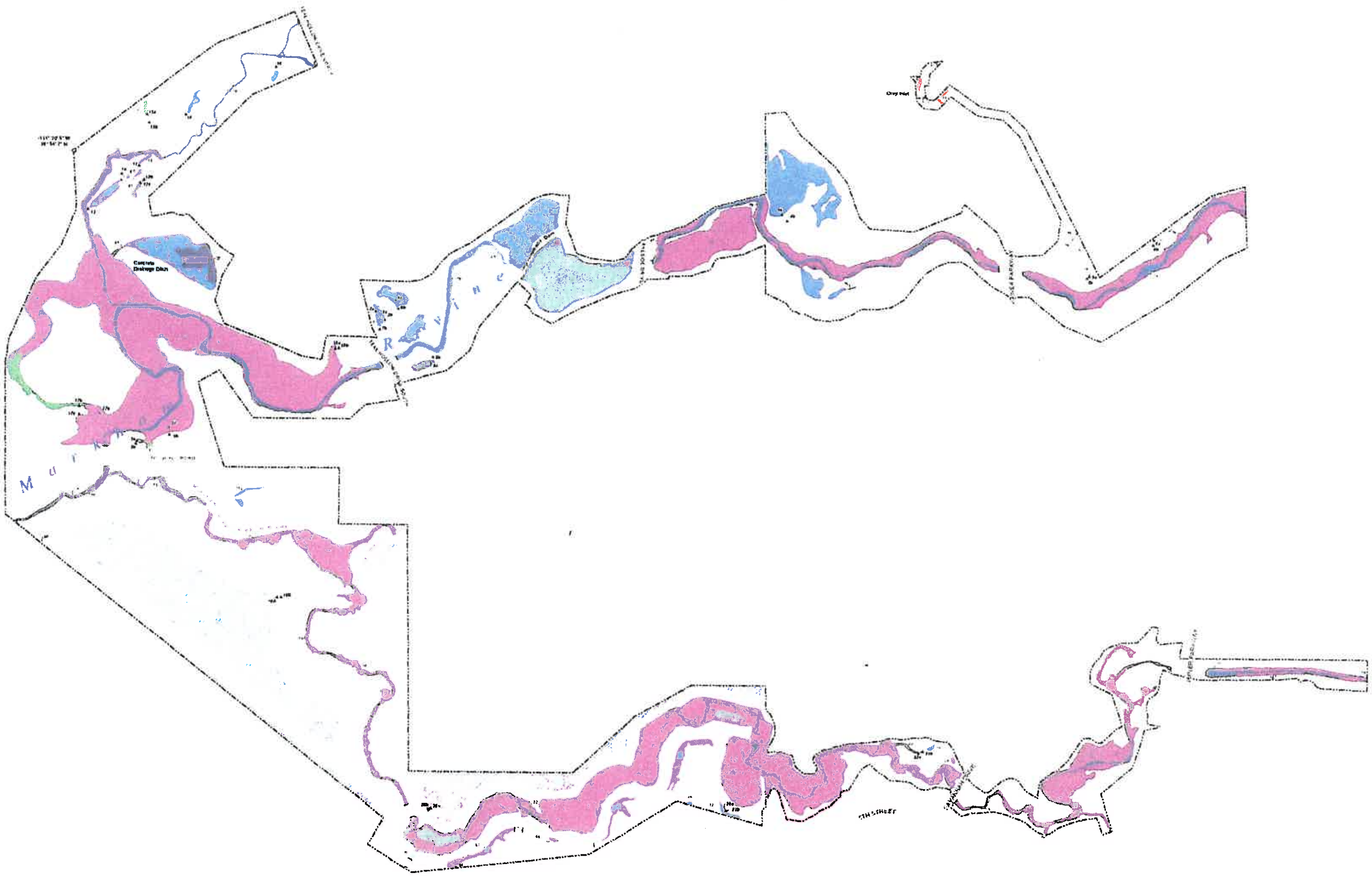
5.0 CONCLUSION

The waters of the U.S, including wetlands, mapped within the site include: depressional seasonal wetland, vernal pool, depressional seasonal marsh, depressional perennial marsh, riverine seasonal wetland, riverine perennial marsh, ephemeral drainage, perennial drainage, ditch/canal, pond, and excavated basin. With the exception of the excavated basins and one ditch, these features are likely considered jurisdictional by the Corps. The excavated basins and ditch are likely considered non-jurisdictional by the Corps because they are isolated and not tributary to a water of the U.S. Furthermore, these features were constructed in uplands and are not within a 100-year floodplain. However, the Corps' determination of jurisdiction is on a case-by-case basis and will be determined during the verification process.

Table 1 below provides acreage per class and summarizes the total acreage of wetlands and waters on the site.

Table 1 — Waters of the U.S: Acreage According to Feature

CLASS	TOTAL ACREAGE	JURISDITIONAL	NON-JURISDITIONAL
Depressional Seasonal Wetland	6.61	6.61	0.00
Vernal Pool	0.09	0.09	0.00
Depressional Seasonal Marsh	0.10	0.10	0.00
Depressional Perennial Marsh	0.55	0.55	0.00
Riverine Seasonal Wetland	0.59	0.59	0.00
Riverine Perennial Marsh	36.81	36.81	0.00
Ephemeral Drainage	0.08	0.08	0.00
Perennial Drainage	5.34	5.34	0.00
Ditch/Canal	0.05	0.05	<0.01
Pond	3.21	3.21	0.00
Excavated Basin	0.00	0.0	14.54
TOTAL	53.43	53.43	14.54



INDIVIDUAL WOUS FEATURE ACREAGES

WATERS OF THE U.S.	
CLASSIFICATION	ACREAGE
DEPRESSIONAL WETLANDS	
Seasonal Wetland	4.41
Vernal Pool	0.08
Seasonal Marsh	0.10
Perennial Marsh	0.55
RIVERINE WETLANDS	
Seasonal Wetland	0.58
Perennial Marsh	38.81
OTHER WATERS OF THE U.S.	
Ditch/Canal	0.05
Ephemeral Drainage	0.02
Perennial Drainage	5.34
Pond	3.21
TOTAL	53.43

OTHER FEATURES

- Data Points
- Culvert
- Non-Jurisdictional Ditch (<0.01 ac.)
- Non-Jurisdictional Ponds (14.54 ac.)
- Project Boundary

NOTES

- Waters of the U.S. subject to U.S. Army Corps of Engineers verification.
- Digital base data provided by [illegible] and Morton & Pitalo. Contour interval is 1 foot.
- The Hydrologic Unit Code for the site is [illegible].
- This delineation utilizes the Corps' 1987 three-parameter methodology to delineate jurisdictional waters of the U.S.
- Wetlands and other waters of the U.S. were mapped using a Trimble GPS (Global Positioning System) or by interpreting features from aerial photography.
- Coordinate System Datum: NAD 83

0 200 400
SCALE IN FEET

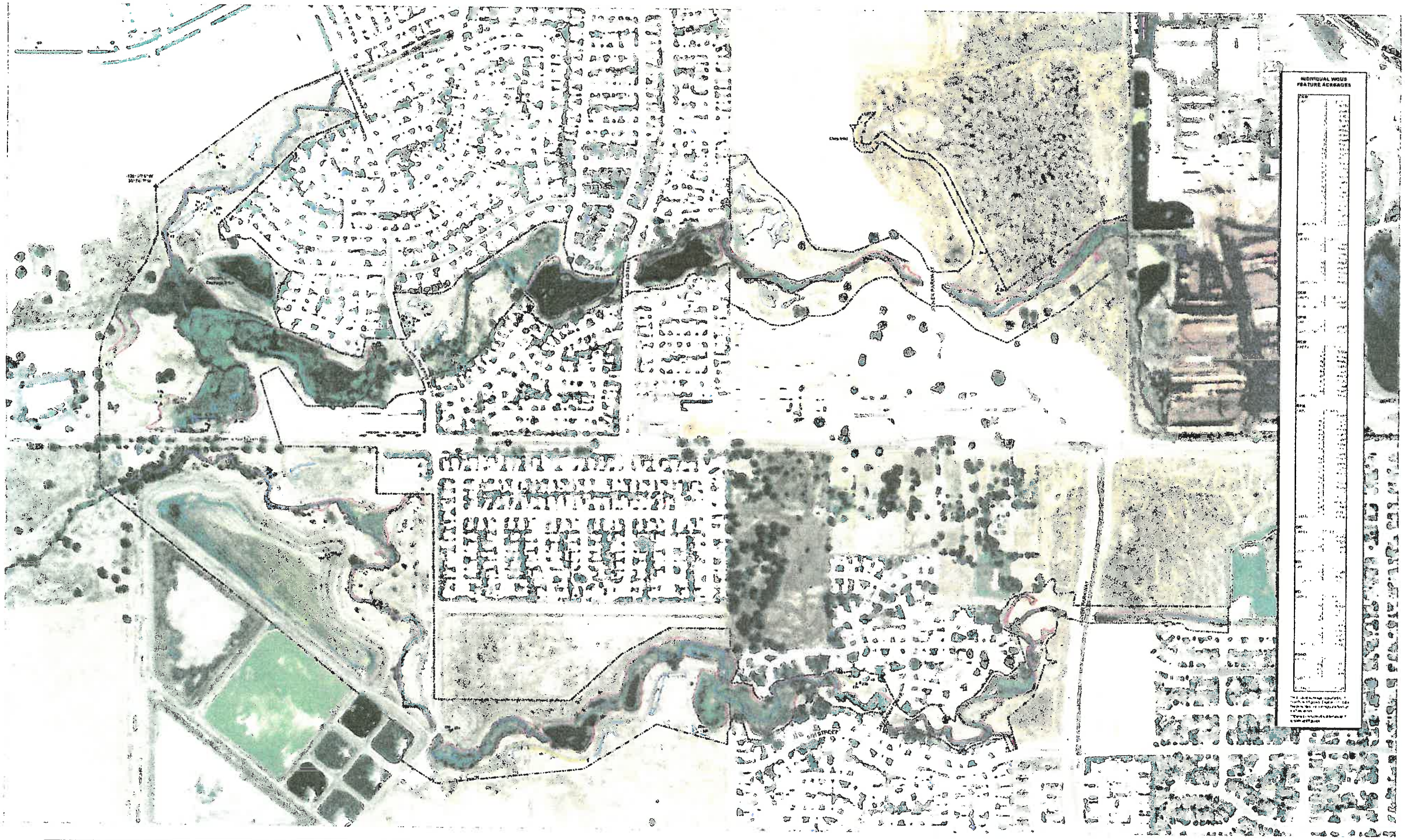
FIGURE 3

MARKHAM RAVINE

DELINEATED WATERS OF THE U.S.

FOOTHILL ASSOCIATES

ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE



WATERS OF THE U.S.

CLASSIFICATION	ACREAGE
DEPRESSIONAL WETLANDS	
Seasonal Wetland	6.81
Vernal Pool	0.02
Seasonal Marsh	0.10
Perennial Marsh	0.55
RIVERINE WETLANDS	
Seasonal Wetland	0.59
Perennial Marsh	38.81
OTHER WATERS OF THE U.S.	
Ditch/Canal	0.05
Ephemeral Drainage	0.08
Perennial Drainage	5.34
Pond	1.21
TOTAL	53.43

OTHER FEATURES

- Data Points
- Culvert
- Non-Jurisdictional Ditch (<0.01 ac.)
- Non-Jurisdictional Ponds (14.54 ac.)
- Project Boundary

NOTES

- Waters of the U.S. subject to U.S. Army Corps of Engineers verification.
- The Hydrologic Unit Code for the site is [illegible]
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- Wetlands and other waters of the U.S. were mapped using a Trimble GPS (Global Positioning System) or by interpreting features from aerial photography.
- Coordinate System Datum: NAD 83
- USDA, NAIP for Aerial Imagery: Placer County, 2005

0 200 400
SCALE IN FEET

FIGURE 4

MARKHAM RAVINE

DELINEATED WATERS OF THE U.S.

FOOTHILL ASSOCIATES

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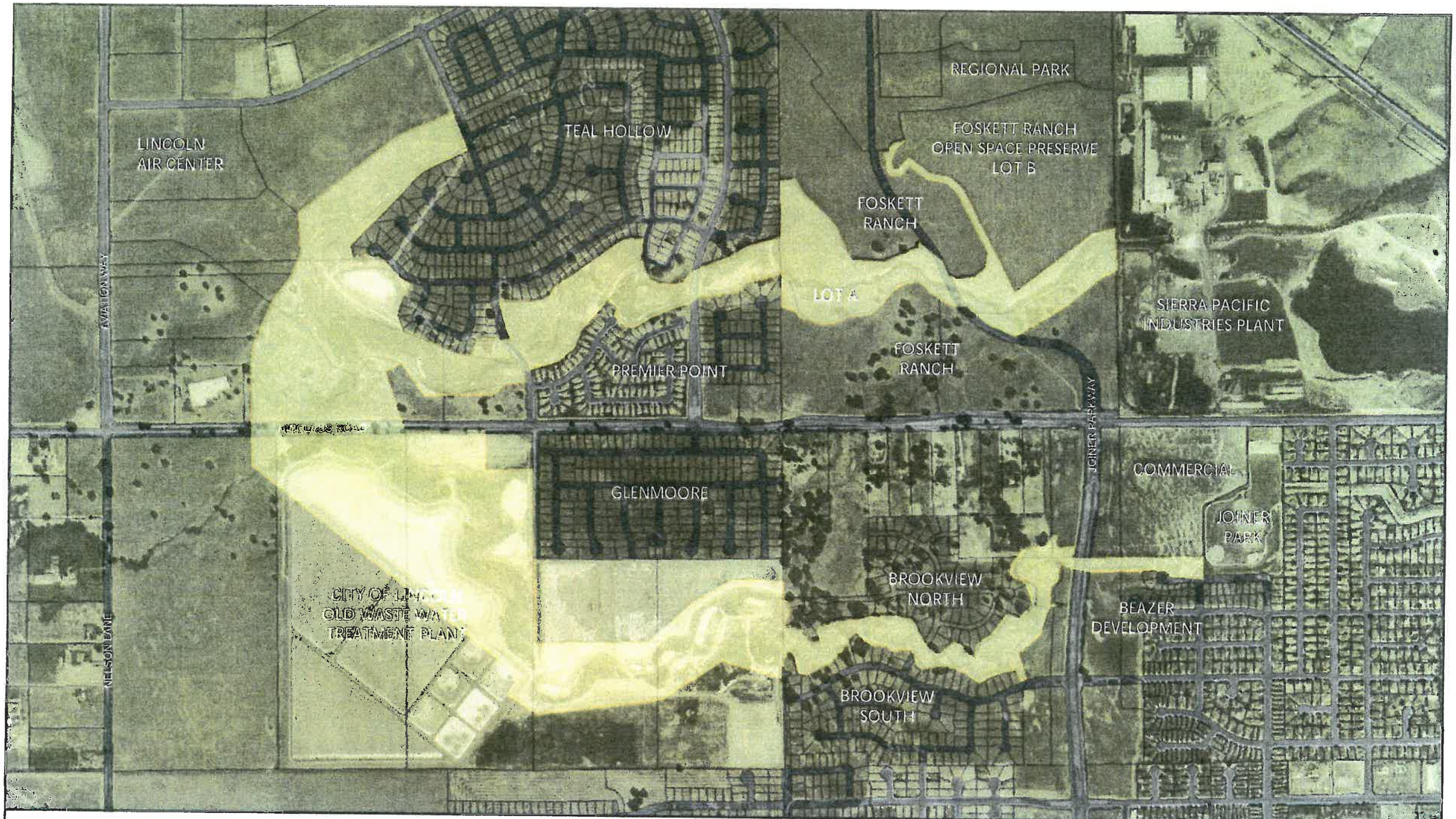

SITE AND VICINITY

FOOTHILL ASSOCIATES ENVIRONMENTAL CONSULTING • PLANNING LANDSCAPE ARCHITECTURE	3.75 min DOQQ provided by USGS for Lincoln SE & SW.	N	0 750 1500 SCALE IN FEET	Drawn By: AH Date: 08/29/05	FIGURE X

MARKHAM RAVINE NATURE AREA

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Figure 3-3: Existing Conditions Map

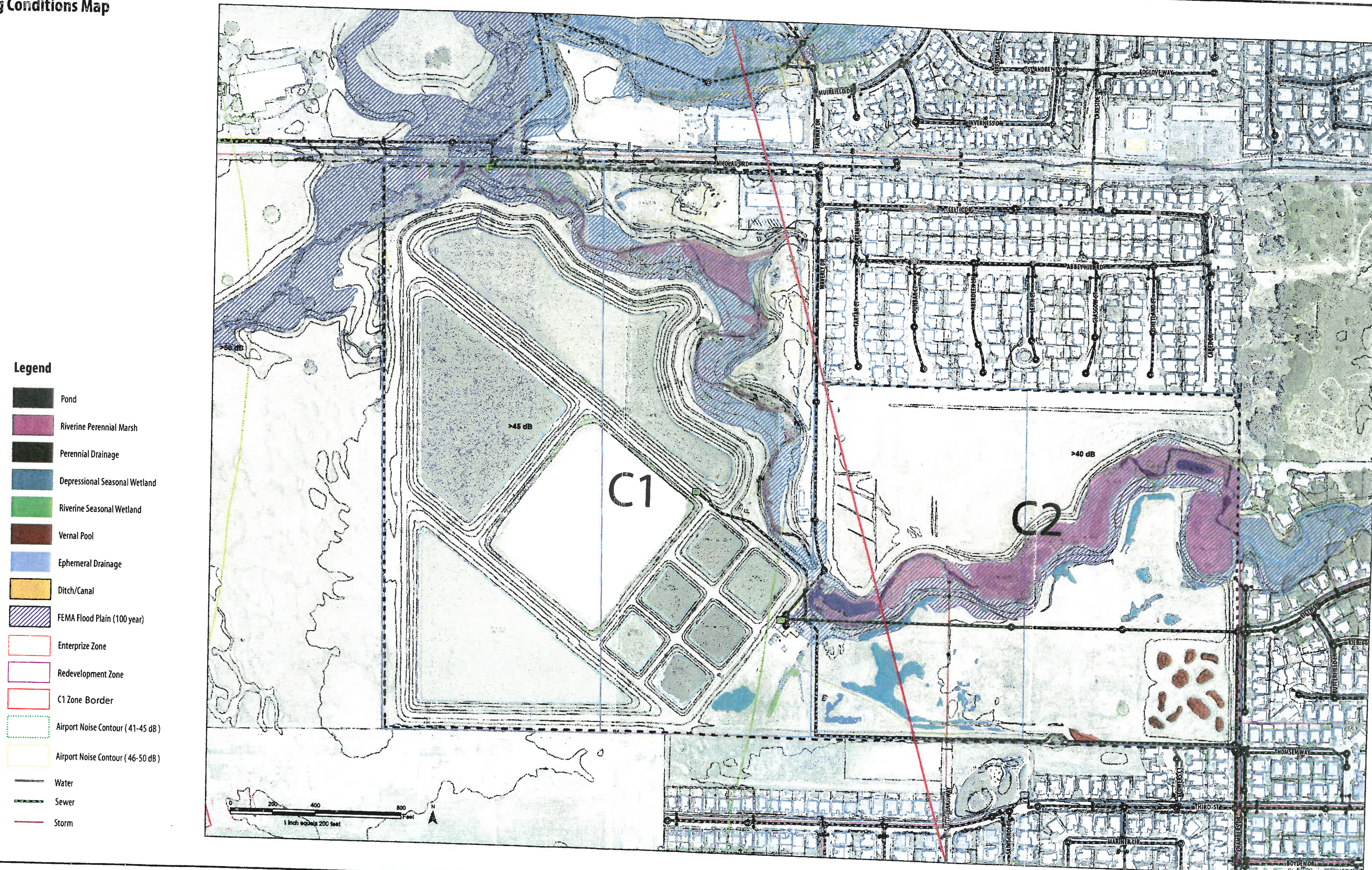

Figure 3-3: Existing Conditions Map