

Auburn Lake Trails Water Treatment Plant Project

Initial Study / Mitigated Negative Declaration

Prepared for:



Georgetown Divide Public Utility District

February 19, 2016

Prepared by:



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**NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION**

for the

Auburn Lake Trails Water Treatment Plant Project

Public Notice is hereby given that a Mitigated Negative Declaration (Environmental Report) is available for public review for the Auburn Lake Trails Water Treatment Plant Project.

Project Location: The Auburn Lake Trails Water Treatment Plant site is located at 3650 Sweetwater Trail between State Route (SR) 193 and the Auburn Lake Trails residential community in the Town of Cool, El Dorado County, California, (Assessor's Parcel Number 0734420410), within a portion of Section 21, Township 12 North, Range 9 East, Latitude 38° 54' 46.092" North, Longitude 120° 55' 38.750" West, NAD 83 State Plane CA Zone II, and can be located on the *Greenwood* USGS 7.5 Minute Topographic Quadrangle.

Project Description: The Georgetown Divide Public Utility District (District) proposes the construction of several new water treatment plant facilities, including the filter building, raw water pump station, and sludge drying beds. Additionally, the Backwash Water Recovery Basin would be retrofitted to ensure compliance with State regulations.

Document Review and Availability: The public review and comment period will extend for 30 calendar days in accordance with CEQA Guidelines Section 15105 starting February 19, 2016 and ending March 25, 2016. The Initial Study/Mitigated Negative Declaration (IS/MND) is available for public review at the following location:

Georgetown Divide Public Utility District Office
6425 Main Street
Georgetown, California 95634

The IS/MND can also be viewed and/or downloaded at the Georgetown Divide Public Utility District website via the following: <http://www.gd-pud.org/#Projects>.

Comments/Questions: Comments and/or questions regarding the IS/MND may be directed to: Kyrsten Shields, Senior Regulatory Specialist, Foothill Associates, 590 Menlo Drive, Suite 5, Rocklin, California, 95765, Phone: (916) 435-1202, Email: ALTWTP@foothill.com.

Public Meetings: The IS/MND is tentatively scheduled for consideration and possible adoption by the Georgetown Divide Public Utility District Board of Directors on April 12, 2016, at the GDPUD office located at 6425 Main Street, Georgetown, California. Interested parties should contact Barbara Brenner, Partner at Churchwell White LLP prior to the meeting date, during regular business hours (9:00 A.M. to 5:00 P.M.) by phoning (916) 468-0625 for further information.

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TABLE OF CONTENTS

1.0	Mitigated Negative Declaration Information Sheet	1-1
2.0	Introduction	2-1
2.1.	Introduction and Regulatory Guidance.....	2-1
2.2.	Lead Agency	2-1
2.3.	Purpose and Document Organization	2-2
2.4.	Thresholds of Significance.....	2-3
2.5.	Terminology Used in this Document.....	2-3
2.6.	Required Permit Approvals	2-4
3.0	Project Description	3-1
3.1.	Project Location.....	3-1
3.2.	Environmental Setting.....	3-1
3.3.	General Plan Land Use Designation and Zoning Designation	3-1
3.4.	Surrounding Land Uses.....	3-1
3.5.	Project History.....	3-1
3.5.1.	No Project Alternative	3-5
3.5.2.	Alternative One: Direct Filtration Process Components	3-5
3.5.3.	Alternative Two: Contact Clarification Process Components.....	3-5
3.5.4.	Current Design Options.....	3-7
3.6.	Project Purpose and Objectives	3-8
3.7.	Project Components.....	3-8
3.7.1.	Filter Building	3-8
3.7.2.	Equipment Parking.....	3-8
3.7.3.	Finish Water Clearwell	3-15
3.7.4.	Backwash Water Recovery Basin	3-15
3.7.5.	Raw Water Pump Station.....	3-15
3.7.6.	Filter- to-Waste Tank	3-15
3.7.7.	Control Building	3-15
3.7.8.	Raw Water Pipeline.....	3-15
3.7.9.	Extend Existing Access Road	3-16
3.7.10.	Additional Site Alterations	3-16
3.8.	Project Construction	3-16

3.8.1.	Earthwork.....	3-16
3.8.2.	Construction Timeframe	3-16
3.9.	Construction Staging Areas	3-17
4.0	Initial Study Checklist.....	4-1
4.1.	Aesthetics	4-1
4.1.1.	Environmental Setting	4-1
4.1.2.	Regulatory Setting.....	4-2
4.1.3.	Impact Analysis	4-2
4.1.4.	Mitigation Measures.....	4-4
4.2.	Agriculture and Forestry Resources	4-5
4.2.1.	Environmental Setting	4-5
4.2.2.	Regulatory Setting.....	4-6
4.2.3.	Impact Analysis	4-6
4.2.4.	Mitigation Measures.....	4-8
4.3.	Air Quality.....	4-9
4.3.1.	Environmental Setting	4-9
4.3.2.	Regulatory Setting.....	4-12
4.3.3.	Impact Analysis	4-13
4.3.4.	Mitigation Measures.....	4-17
4.4.	Biological Resources.....	4-19
4.4.1.	Environmental Setting	4-20
4.4.2.	Regulatory Setting.....	4-22
4.4.3.	Regional Regulations.....	4-25
4.4.4.	Impact Analysis	4-29
4.4.5.	Mitigation Measures.....	4-40
4.5.	Cultural Resources.....	4-45
4.5.1.	Environmental Setting	4-45
4.5.2.	Regulatory Setting.....	4-51
4.5.3.	Impact Analysis	4-52
4.5.4.	Mitigation Measures.....	4-54
4.6.	Geology and Soils	4-57
4.6.1.	Environmental Setting	4-58
4.6.2.	Regulatory Setting.....	4-60

4.6.3.	Impact Analysis	4-61
4.6.4.	Mitigation Measures.....	4-63
4.7.	Greenhouse Gas Emissions	4-65
4.7.1.	Environmental Setting	4-65
4.7.2.	Regulatory Setting.....	4-65
4.7.3.	Impact Analysis	4-66
4.7.4.	Mitigation Measures.....	4-67
4.8.	Hazards and Hazardous Materials.....	4-69
4.8.1.	Environmental Setting	4-70
4.8.2.	Regulatory Setting.....	4-70
4.8.3.	Impact Analysis	4-71
4.8.4.	Mitigation Measures.....	4-75
4.9.	Hydrology and Water Quality.....	4-77
4.9.1.	Environmental Setting	4-78
4.9.2.	Regulatory Setting.....	4-78
4.9.3.	Impact Analysis	4-80
4.9.4.	Mitigation Measures.....	4-84
4.10.	Land Use and Planning	4-85
4.10.1.	Environmental Setting.....	4-85
4.10.2.	Impact Analysis.....	4-86
4.10.3.	Mitigation Measures	4-87
4.11.	Mineral Resources	4-89
4.11.1.	Environmental Setting.....	4-89
4.11.2.	Impact Analysis.....	4-90
4.11.3.	Mitigation Measures	4-90
4.12.	Noise	4-91
4.12.1.	Environmental Setting.....	4-91
4.12.2.	Regulatory Setting.....	4-92
4.12.3.	Impact Analysis.....	4-93
4.12.4.	Mitigation Measures	4-94
4.13.	Population and Housing	4-96
4.13.1.	Environmental Setting.....	4-97
4.13.2.	Impact Analysis.....	4-98

4.13.3.	Mitigation Measures	4-99
4.14.	Public Services	4-101
4.14.1.	Environmental Setting.....	4-101
4.14.2.	Impact Analysis.....	4-102
4.14.3.	Mitigation Measures	4-104
4.15.	Recreation.....	4-105
4.15.1.	Environmental Setting.....	4-105
4.15.2.	Impact Analysis.....	4-105
4.15.3.	Mitigation Measures	4-106
4.16.	Transportation / Traffic	4-107
4.16.1.	Environmental Setting.....	4-107
4.16.2.	Regulatory Setting.....	4-107
4.16.3.	Impact Analysis.....	4-108
4.16.4.	Mitigation Measures	4-110
4.17.	Utilities and Service Systems	4-111
4.17.1.	Environmental Setting.....	4-112
4.17.2.	Regulatory Setting.....	4-112
4.17.3.	Impact Analysis.....	4-114
4.17.4.	Mitigation Measures	4-117
4.18.	Mandatory Findings of Significance	4-119
4.18.1.	Impact Anaysis.....	4-119
5.0	CEQA Determination.....	5-1
6.0	Report Preparation	6-1
6.1.	Lead Agency	6-1
6.2.	Consultant Staff.....	6-1
6.2.1.	Foothill Associates	6-1
6.2.2.	PSOMAS	6-1
6.2.3.	Genesis Society	6-1
6.2.4.	KD Anderson & Associates.....	6-1
7.0	References	7-1
7.1.	Personal Communication	7-4

List of Tables

Table 2.6-1 — Potential Resource Agency Permitting Requirements	2-4
Table 3.8-1 — Auburn Lake Trails Water Treatment Plant Construction Schedule	3-17
Table 4.3-1 — Estimated Maximum Unmitigated Project Construction Emissions	4-15
Table 4.4-1 — Biological Communities within the Project Site	4-33
Table 4.6-1 — Auburn Lake Trails Soil Map Units.....	4-58
Table 4.7-1 — Projected Estimated Annual Construction-Related GHG Emissions	4-66

List of Figures

Figure 3.5-1 — Site and Vicinity.....	3-2
Figure 3.5-2 — El Dorado County General Plan Land Use Designations	3-3
Figure 3.5-3 — El Dorado County Zoning Districts	3-4
Figure 3.7-1A — Proposed Project Design.....	3-11
Figure 3.7-1B — Proposed Project Design.....	3-13
Figure 4.2-1 — Farmland	4-7
Figure 4.4-1 — CNDDDB.....	4-31
Figure 4.4-2 — Biological Communities.....	4-35
Figure 4.6-1 — Soils	4-59
Figure 4.9-1 — FEMA Floodplain Location.....	4-83

List of Appendices

Appendix A — Mitigation Monitoring and Reporting Program

Appendix B — Auburn Lake Trails Water Treatment Plant Air Quality Analysis

Appendix C — *Biological Letter Report Revised Site Plan for the Auburn Lake Trails Water Treatment Plant, El Dorado County, California*

Appendix D — U.S. Fish and Wildlife Service Concurrence Letter

Appendix E — *Archaeological Inventory Survey [for the] Auburn Lake Trails Water Treatment Project, El Dorado County, California*

Appendix F — State Historic Preservation Officer Concurrence Letter

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1.0 MITIGATED NEGATIVE DECLARATION INFORMATION SHEET

Project Title: Auburn Lake Trails Water Treatment Plant Project

Project Location: The Auburn Lake Trails Water Treatment Plant site is located at 3650 Sweetwater Trail between State Route (SR) 193 and the Auburn Lake Trails residential community in the Town of Cool, El Dorado County, California, (Assessor's Parcel Number: 0734420410) within a portion of Section 21, Township 12 North, Range 9 East, Latitude 38° 54' 46.092" North, Longitude 120° 55' 38.750" West, NAD 83 State Plane CA Zone II, and can be located on the *Greenwood* USGS 7.5 Minute Topographic Quadrangle.

Date of Completion: February 19, 2016

Project Applicant: Georgetown Divide Public Utility District

Lead Agency: Georgetown Divide Public Utility District

Project Description: The Georgetown Divide Public Utility District (District) proposes the construction of several new water treatment plant facilities, including the filter building, raw water pump station, and sludge drying beds. Additionally, the Backwash Water Recovery Basin would be retrofitted to ensure compliance with State regulations.

Declaration:

The District has determined that implementation of the Proposed Project will not result in significant effects on the environment and therefore this project does not require evaluation through the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA). This determination is based on the attached Initial Study in support of the following findings:

- The project will not degrade environmental quality, substantially reduce habitat, cause a wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of special-status species, or eliminate important examples of California history or prehistory;
- The project does not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals;
- The project will not have impacts that are individually limited, but cumulatively considerable;
- The project will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly; and
- No substantial evidence exists that the project will have a negative or adverse effect on the environment.

The project incorporates all applicable mitigation measures identified in the attached Initial Study.

This Mitigated Negative Declaration (MND) reflects the independent judgment of the Lead Agency.

Written comments shall be submitted no later than 30 days from the posting date. The District's determination on the draft MND shall be final.

Submit comments in writing to:

Kyrsten Shields
Senior Regulatory Specialist
Foothill Associates
590 Menlo Drive, Suite 5
Rocklin, California 95765
Phone: (916) 435-1202
Fax: (916) 435-1205
Email: ALTWTP@foothill.com

2.0 INTRODUCTION

2.1. *Introduction and Regulatory Guidance*

This document is an Initial Study (IS) supporting a Mitigated Negative Declaration (MND) determination for the Auburn Lake Trails Water Treatment Plant Project (Proposed Project). This MND evaluates the potential impacts resulting from implementation of the Proposed Project. This MND has been prepared in accordance with CEQA, Public Resources Code Section 21000 *et. seq.*, and the State CEQA Guidelines, 14 California Code of Regulations (CCR) Section 15000 *et. seq.*

An Initial Study is prepared by a Lead Agency to determine if a project has the potential to result in significant impacts on the environment (CEQA Guidelines Section 15063). An EIR must be prepared if an IS indicates that the proposed project under review may result in significant impacts to the environment. A Negative Declaration (ND) may be prepared instead, if the Lead Agency prepares a written statement describing the reasons why a proposed project would not have a significant effect on the environment, and therefore does not require the preparation of an EIR. According to CEQA Guidelines Section 15070, a Negative Declaration or Mitigated Negative Declaration shall be prepared for a project subject to CEQA when either:

- A. The Initial Study documents that there is no substantial evidence, in light of the whole record before the agency, that the proposed project may result in any significant effect on the environment, or
- B. The Initial Study identifies potentially significant effects, but:
 - 1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid potentially significant impacts or mitigate potential impacts to less than significant levels, and
 - 2) There is no substantial evidence, in light of the whole record before the agency that the proposed project as revised, may result in significant impacts to the environment.

2.2. *Lead Agency*

The Lead Agency is the public agency that has the principal responsibility for carrying out or approving a proposed project. CEQA Guidelines Section 15051 states that if a project will be carried out by a public agency that agency shall be the Lead Agency, even if the project would be located within the jurisdiction of another public agency. The Georgetown Divide Public Utility District (District) is the Lead Agency for the proposed Auburn Lake Trails Water Treatment Plant Project for the purposes of CEQA.

2.3. Purpose and Document Organization

The purpose of this Initial Study is to document if implementation of the Proposed Project may result in potentially significant impacts on the environment.

This document is divided into the following sections:

Section 1.0 Mitigated Negative Declaration Information Sheet

Pursuant to CEQA Guidelines 15071, Section 1 includes a brief description of the project, the project location, and the Georgetown Divide Public Utility District's proposed findings. Section 1 references the attached Initial Study, including proposed mitigating measures included by individual resource issue area as applicable to development of the Proposed Project.

Section 2.0 Introduction

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

Section 3.0 Project Description

This section provides a detailed description of the Proposed Project including the location of the project.

Section 4.0 Initial Study Checklist

This section describes the environmental setting for each of the environmental subject areas, the regulatory setting, where relevant, and evaluates a range of impacts in response to the environmental checklist. Impacts are classified as "no impact", "less than significant impact," "less than significant with mitigation incorporated," or "potentially significant impact." Where appropriate, mitigation measures are provided that mitigate potentially significant impacts to a less than significant level.

Section 5.0 CEQA Determination

This section provides the environmental determination for the project.

Section 6.0 Report Preparation

This section identifies a list of staff and consultants responsible for preparation of this document, and persons and agencies consulted.

Section 7.0 References

This section identifies the references used in preparation of the MND.

Appendix A Mitigation Monitoring and Reporting Program

This appendix identifies mitigation measures included in the Initial Study and the responsible entity for implementation of the mitigation measures, as required by Section 15097 of the CEQA Guidelines.

Appendix B Auburn Lake Trails Water Treatment Plant Air Quality Analysis

Appendix C *Biological Letter Report Revised Site Plan for the Auburn Lake Trails Water Treatment Plant, El Dorado County, California*

Appendix D U.S. Fish and Wildlife Service Concurrence Letter

Appendix E *Archaeological Inventory Survey [for the] Auburn Lake Trails Water Treatment Project, El Dorado County, California*

Appendix F State Historic Preservation Officer Concurrence Letter

2.4. *Thresholds of Significance*

A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment (CEQA Guidelines Section 15358). Environment as used in this definition includes the land, air, water, minerals, flora, fauna, ambient noise, and objects which are historical or aesthetic in nature. The guidelines in the following Initial Study focus on these elements and are used as tools to determine the potential of whether or not an activity is considered significant (CEQA Guidelines Section 15065). Effects are also recognized as to whether they would occur either directly or indirectly as a result of the project.

2.5. *Terminology Used in this Document*

This Environmental Checklist in this document utilizes the following terminology to describe the levels of significance associated with project-related impacts:

Potentially Significant Impact: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382); the existence of a potentially significant impact requires the preparation of an EIR with respect to such an impact.

Less Than Significant With Mitigation Incorporated: A potentially significant impact that could be mitigated to a level of less than significant through the incorporation of mitigation measures.

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

No Impact: Utilized for checklist items where development of the project would not have any impact and does not require the implementation of mitigation measures.

2.6. Required Permits and Approvals

Implementation of the Proposed Project is anticipated to require permits and authorizations as summarized in **Table 2.6-1** below.

TABLE 2.6-1 — POTENTIAL RESOURCE AGENCY PERMITTING REQUIREMENTS

Approving Agency	Permit/ Approval
Federal Agencies	
U.S. Environmental Protection Agency (USEPA)	National Environmental Policy Act (NEPA) Review – Categorical Exclusion Determination – October 25, 2012
State Agencies	
State Water Resources Control Board, Regional Water Quality Control Board (SWRCB, RWQCB)	Coverage under the General Construction Activity Storm Water Permit (§ 402 of the Clean Water Act, 40 CFR Part 122)
Local Agencies	
Georgetown Divide Public Utility District	Board of Directors project approval and Initial Study/Mitigated Negative Declaration Adoption

3.0 PROJECT DESCRIPTION

3.1. *Project Location*

The two-acre Auburn Lake Trails Water Treatment Plant site is located at 3650 Sweetwater Trail between State Route (SR) 193 and the Auburn Lake Trails residential community in the Town of Cool, El Dorado County, California, within a portion of Section 21, Township 12 North, Range 9 East, Latitude 38° 54' 46.092" North, Longitude 120° 55' 38.750" West, NAD 83 State Plane CA Zone II, and can be located on the *Greenwood* USGS 7.5 Minute Topographic Quadrangle (Project Site), as shown on **Figure 3.5-1**.

3.2. *Environmental Setting*

The approximately two-acre project site is currently operational as a Water Treatment Plant with a capacity of three Million Gallons/Day (MGD).

3.3. *General Plan Land Use Designation and Zoning Designation*

The Project Site is designated in the *El Dorado County General Plan, Land Use Element* as Medium Density Residential (El Dorado County 2004) (**Figure 3.5-2**). As shown on **Figure 3.5-3**, the Project Site is located within the Single Family Residential Zoning District.

Land use to the north and south of the Project Site is designated as Open Space and Low Density Residential. The land uses to the east and west of the Project Site are designated as Open Space and Medium Density Residential (El Dorado County 2004) (**Figure 3.5-2**). The zoning designations surrounding the Project Site include Open Space, Single Family Residential, and Estate Residential (**Figure 3.5-3**).

3.4. *Surrounding Land Uses*

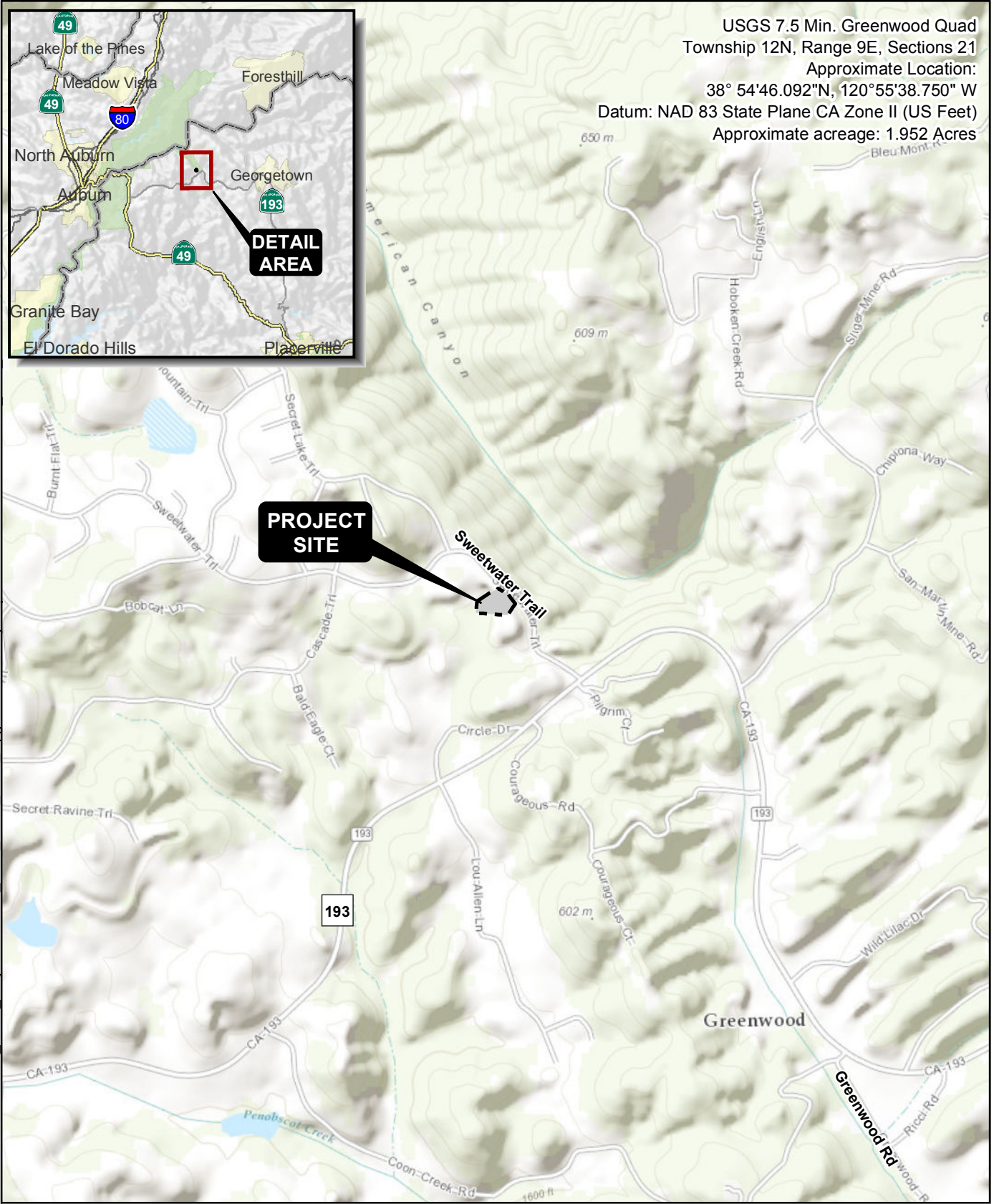
The Project Site is located approximately four miles east of the Town of Cool. Hoboken Canyon and associated hiking trails are located to the north and east of the Project Site. State Highway 193 is approximately ¼ mile to the south of the Project Site, and to the west and northwest is the residential community of Auburn Lake Trails.

3.5. *Project History*

On June 8, 2010 the GDPUD approved the upgrade of the Auburn Lake Trails WTP for improvements associated with a direct filtration process and a contact clarification process (Alternative 1 and Alternative 2 combined, including correction of operational deficiencies) and adopted the April 2010 *Auburn Lake Trails Water Treatment Plant Project Environmental Assessment/Initial Study*, which analyzed the potential impacts resulting from development of the project proposed at that time. Upgrades proposed in 2010 included onsite improvements at the current ALT WTP as well as off-site improvements at a 34-acre GDPUD parcel near Georgetown, California referred to as "Greenwood Lake."

The alternatives considered within the 2010 environmental analyses are summarized in **Sections 3.5.1, 3.5.2, 3.5.3, and 3.5.4** below.

Document Path: O:\N CalIA Projects\Auburn Lake Trails WTP Upgrade\GIS Project Files\MND\AuburnLakeTrails_SnV_20160215.mxd



USGS 7.5 Min. Greenwood Quad
 Township 12N, Range 9E, Sections 21
 Approximate Location:
 38° 54'46.092"N, 120°55'38.750" W
 Datum: NAD 83 State Plane CA Zone II (US Feet)
 Approximate acreage: 1.952 Acres

SITE AND VICINITY

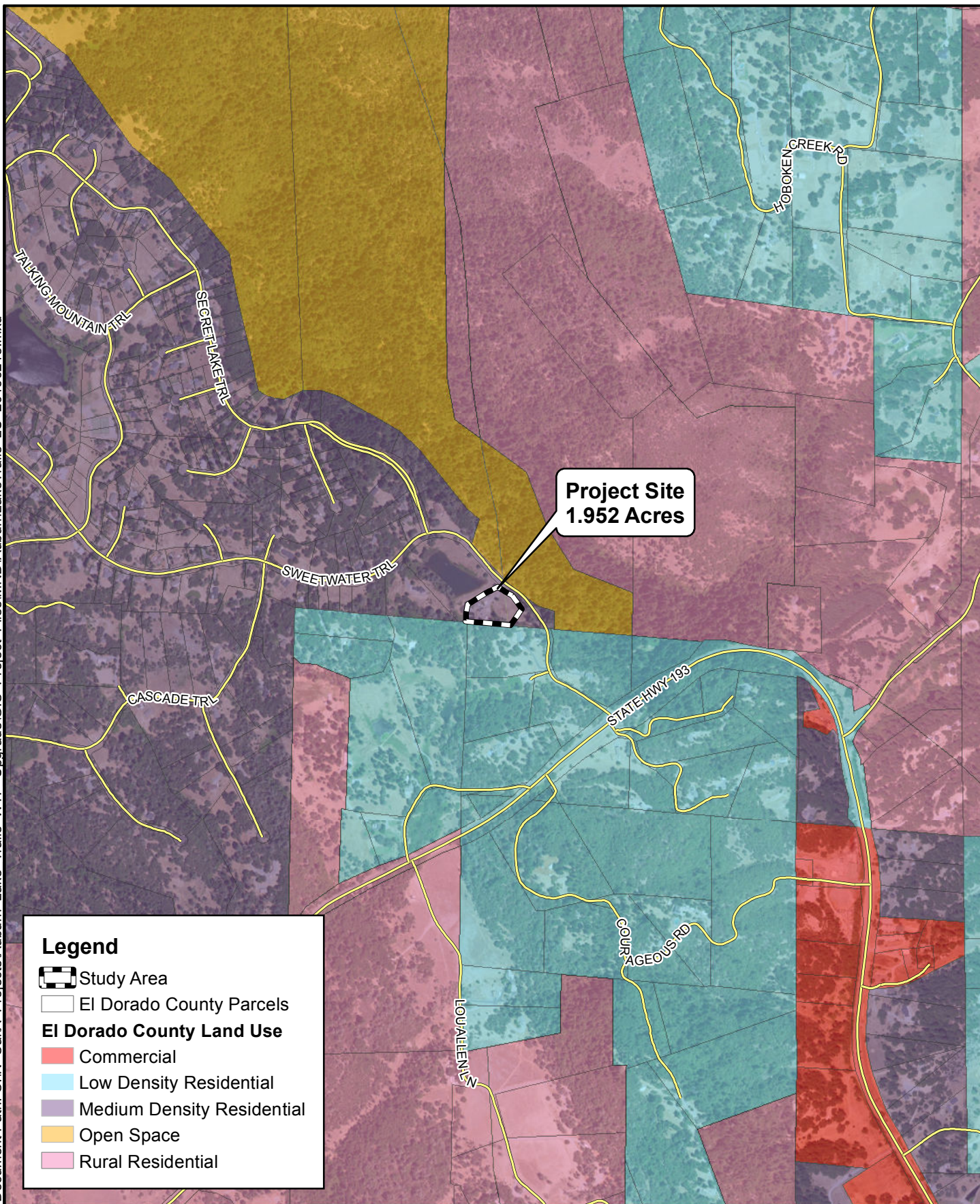
FOOTHILL ASSOCIATES
 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE
 © 2016



0 0.15 0.3
 Miles
 1 in = 0.3 miles

Drawn By: CCH, MUB
 Date: 02/15/2016

FIGURE 3.5-1



Legend

- Study Area
- El Dorado County Parcels
- El Dorado County Land Use**
- Commercial
- Low Density Residential
- Medium Density Residential
- Open Space
- Rural Residential

EL DORADO COUNTY GENERAL PLAN LAND USE DESIGNATIONS

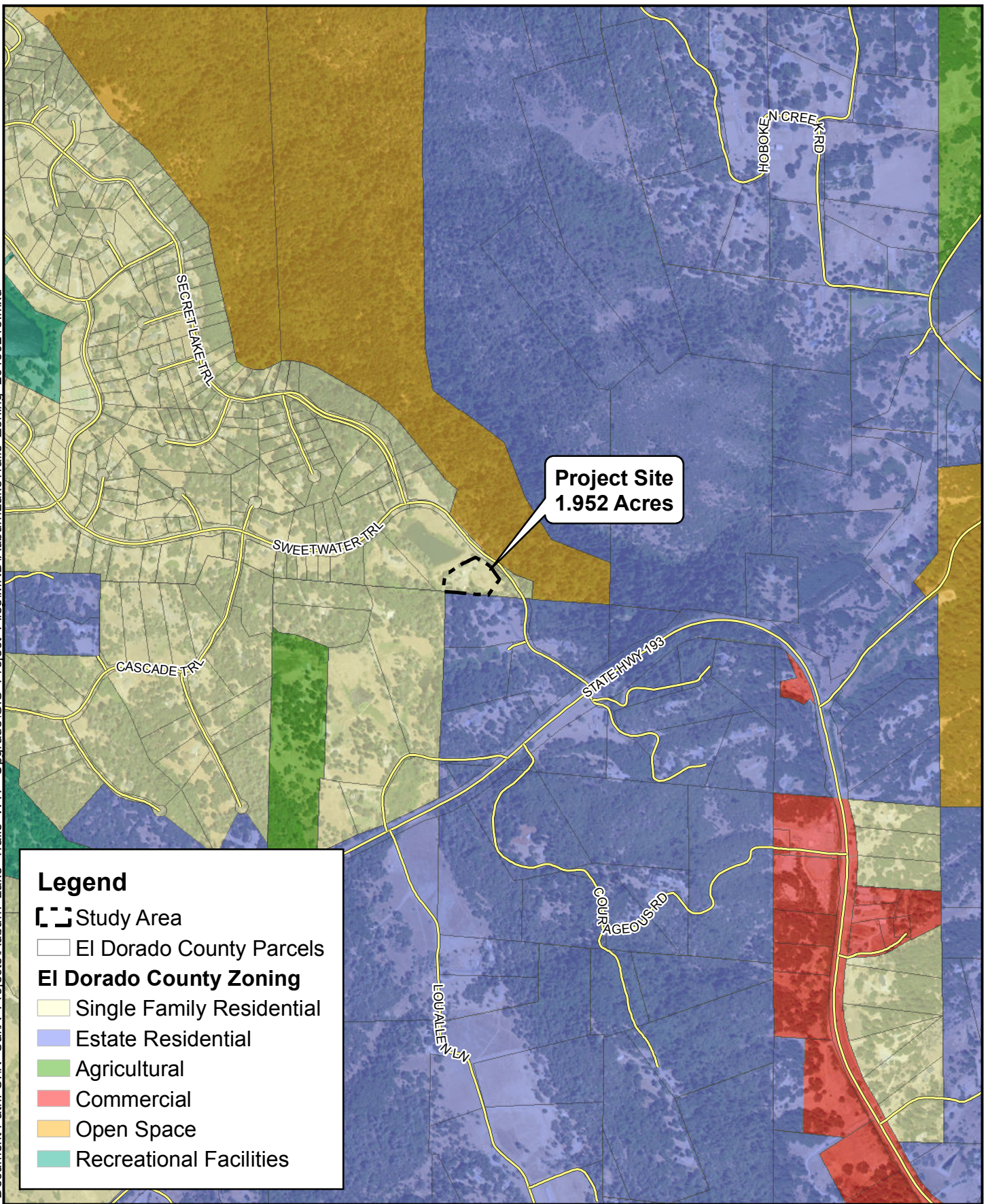
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 © 2016



0 500 1,000
 Feet
 1 inch = 1,000 feet

Drawn By: MUB, CCH
Date: 02/15/2016

FIGURE 3.5-2



Legend

- Study Area
- El Dorado County Parcels

El Dorado County Zoning

- Single Family Residential
- Estate Residential
- Agricultural
- Commercial
- Open Space
- Recreational Facilities

EL DORADO COUNTY ZONING DISTRICTS



3.5.1. No Project Alternative

The No Project Alternative would result in continued operations at the Auburn Lake Trails WTP under the existing water treatment process and would require no construction or modification to the ALT WTP or at the Greenwood Lake site. The ALT WTP would continue to operate in non-compliance with State and federal drinking water standards.

3.5.2. Alternative One: Direct Filtration Process Components

Direct Filtration Process Components (Alternative One) consisted of the following improvements:

- Installation of two flocculation units for enhancement of the existing filters. These units would consist of structures approximately 12 feet in diameter and 15 feet in height. They would be added upstream of the existing filters to provide additional contact and coagulation. The flocculation units are tanks equipped with slow moving paddles that gently agitate the water to encourage contact of suspended particles. Polymer coagulants are injected ahead of the flocculation units to allow coalescing, thus enabling removal by the filters. This process is an accepted technology by the CDPH. These units would be located on an equipment pad next to the proposed equipment/chemical building.
- Rebuilding and upgrading the existing filters due to the age of the units. These upgrades would include pipe rerouting and additional lift pumps.

3.5.3. Alternative Two: Contact Clarification Process Components

Improvements to correct operational deficiencies that would occur under either process include:

A. Correction of deficiencies at the ALT site:

1. Construction of a new clearwell storage tank for post-treatment disinfection contact time. This capacity of this tank would be approximately 500,000 gallons if Alternative One is chosen or approximately 250,000 gallons if Alternative Two is chosen. A 250,000-gallon tank would be approximately 48 feet in diameter and 20 feet in height. A 500,000-gallon tank would be approximately 60 feet in diameter and 24 feet in height. This structure would be south of and adjacent to the driveway entrance to the ALT site, in the open field on the east side of the existing filters.
2. Elimination of existing settlement ponds and construction of a washwater recovery tank. The proposed washwater recovery tank would be located at the southwest corner of the Project Site at the current location of the waste pond. This tank would be approximately 36 feet in diameter and 20 feet in height.
3. Modification of two existing on-site tanks for filter-to-waste (FTW) storage. Proposed improvements would not require changes the existing dimensions of the

tanks. All proposed modifications would be constructed internal to the existing tanks.

4. Construction of an equipment/chemical building. This building would be located on the west side of the existing control building.

For Alternative One, this building would be approximately 36 feet wide, 40 feet long and 20 feet in height. There would be an additional uncovered pad (approximately 36 feet wide by 24 feet long) on the south side of this building which would be the location of the two flocculation units described in Alternative One above.

For Alternative Two, this building would be approximately 36 feet wide, and 64 feet long with a height of 20 feet with all components housed inside the building.

5. Demolition of an existing lab and trailer and construction of a storage/equipment building for future use. This future storage/equipment building would be approximately 20 feet wide by 36 feet long, and 20 feet in height.
6. Telemetry upgrade including a new radio antennae mast at the ALT site (maximum height of 40 feet), and piping realignment, upsizing of pumps, and upgrade of controls.
7. Realignment and repaving of the driveway and repaving between buildings and facilities at the ALT site.

B. Correction of deficiencies at the Greenwood Lake site:

1. Construction of two drying beds and associated truck access for solids trucked from the ALT site. The backwash and FTW processes produce suspended solids, organic matter, and coagulant. These solids would be collected in the FTW settling tank during the rainy season. The solids would be removed from the settling tank in the spring and transported to the Greenwood Lake site. The residuals would be approximately 95 percent water at the time of removal and would require approximately twelve trips between the ALT and the Greenwood Lake site. The drying beds would be constructed on the southwest side of the GDPUD's Greenwood Lake Reservoir, adjacent to Loghouse Road. The physical footprint of these drying beds would be approximately 30 feet wide by 120 feet long, with an approximate depth of two feet. The beds would be lined with material such as plastic or concrete to prevent direct contact with soil. Once solids are deposited in the beds, dewatering would occur by evaporation. The solids would be in the beds for a temporary time period each year (spring to fall) and the beds would be cleaned and emptied during the rainy season. The expected maximum volume of material at the beginning of each drying season would leave approximately 15 inches of freeboard in the two-foot-high beds. This freeboard would increase during the evaporation phase. At completion of drying (prior to each rainy season), the

material would be analytically tested to determine final disposal requirements. The beds would be swept clean with all material removed for disposal before commencement of the rainy season. If required per testing, the solids would be trucked to a permitted solid waste facility that accepts sludge waste. If the results of analytical testing allow for alternative disposal (e.g. dried solids made available to third parties for land application as soil amendment), the GDPUD would consult with the Regional Water Quality Control Board to determine the appropriate oversight, including waste discharge requirements. During the winter, precipitation entering the cleaned beds would be drained and dispersed in a manner (e.g. rock energy dissipaters) that would minimize erosion. The drying beds would be routinely inspected for liner integrity.

2. Installation of a radio pole and antenna for telemetry needs. A self-supporting telemetry pole/tower no greater than 40 feet in height would be installed to support a radio antenna and solar panel. This feature would be located between Loghouse Road and the reservoir water's edge. The antenna would be omni-directional with maximum power of 45 watts. There would be a small equipment enclosure located next to the telemetry pole to protect electrical equipment.

3.5.4. Current Design Options

Since 2010 the GDPUD has re-evaluated and updated design options for proposed improvements to the ALT WTP from those that were approved in 2010. Between 2010 and 2015, GDPUD identified and considered the following three individual design options.

Design Option One

The first design option considered was the original design approved in 2010, including the Greenwood Lake site.

The cost for the first design option was rejected as a result of the prohibitively high estimated project cost of over \$22 Million.

Design Option Two

The second design considered included construction of a filter building and a water storage tank, with a graded pad that would accommodate a second water storage tank.

The cost for the second design option was estimated at approximately \$11.5 Million.

Design Option Three

The third design, preferred by the GDPUD and not one of the previously analyzed alternatives, includes a filter building and no storage tanks, with sludge drying beds within the existing Auburn Lake Trails WTP site, and is preferred as the final design option due to a lower cost, resulting in savings as estimated at \$1 Million as compared to the second design option.

The potential environmental impacts resulting from development of the third project design option are analyzed within this document.

3.6. Project Purpose and Objectives

To comply with Order, GDPUD has developed several updated improvements in the final design that would provide the necessary upgrades to the existing Auburn Lake Trails WTP facility. Under the updated plan all project improvements would occur on the two-acre Project Site that is occupied by the existing WTP facility (Assessor's Parcel Number 0734420410) (**Figure 3.5-1**). Many of the existing facilities would remain in place or be modified to accommodate the required upgrades. The rated capacity would remain at three Million Gallons/Day (MGD).

The following 2010 project components are no longer part of the proposed improvements for the Auburn Lake Trail WTP:

- There will be no work completed at the Greenwood Lake site;
- There will be no construction of a new radio antenna mast 40 feet in height; and
- There will be no construction of an equipment/chemical building.

Individual components currently proposed by GDPUD to bring the Auburn Lake Trails WTP into compliance with State and federal requirements are summarized below and shown on **Figure 3.7-1A** and **Figure 3.7-1B**.

3.7. Project Components

3.7.1. Filter Building

A filter building would be constructed in the eastern portion of the existing Auburn Lake Trails WTP site. The building would be approximately 36 feet by 64 feet and would house the major water treatment components of the WTP. The filter building would be placed on an undeveloped vacant section of land, within the Auburn Lake Trail WTP property, to the east of the existing facilities on the Project Site. The proposed site for the filter building is an open grassy field. A building pad, approximately 220 feet by 120 feet, would be graded for the filter building. The northern portion of the building pad would be paved and the southern portion would have a gravel surface. The building would contain two stage filtration units, backwash pump, air scour blowers, air compressor, piping, valves, sample analysis, chemical systems, and a laboratory. Several small concrete equipment pads would be added on the building pad including a main switchboard, transformer, generator, and load bank.

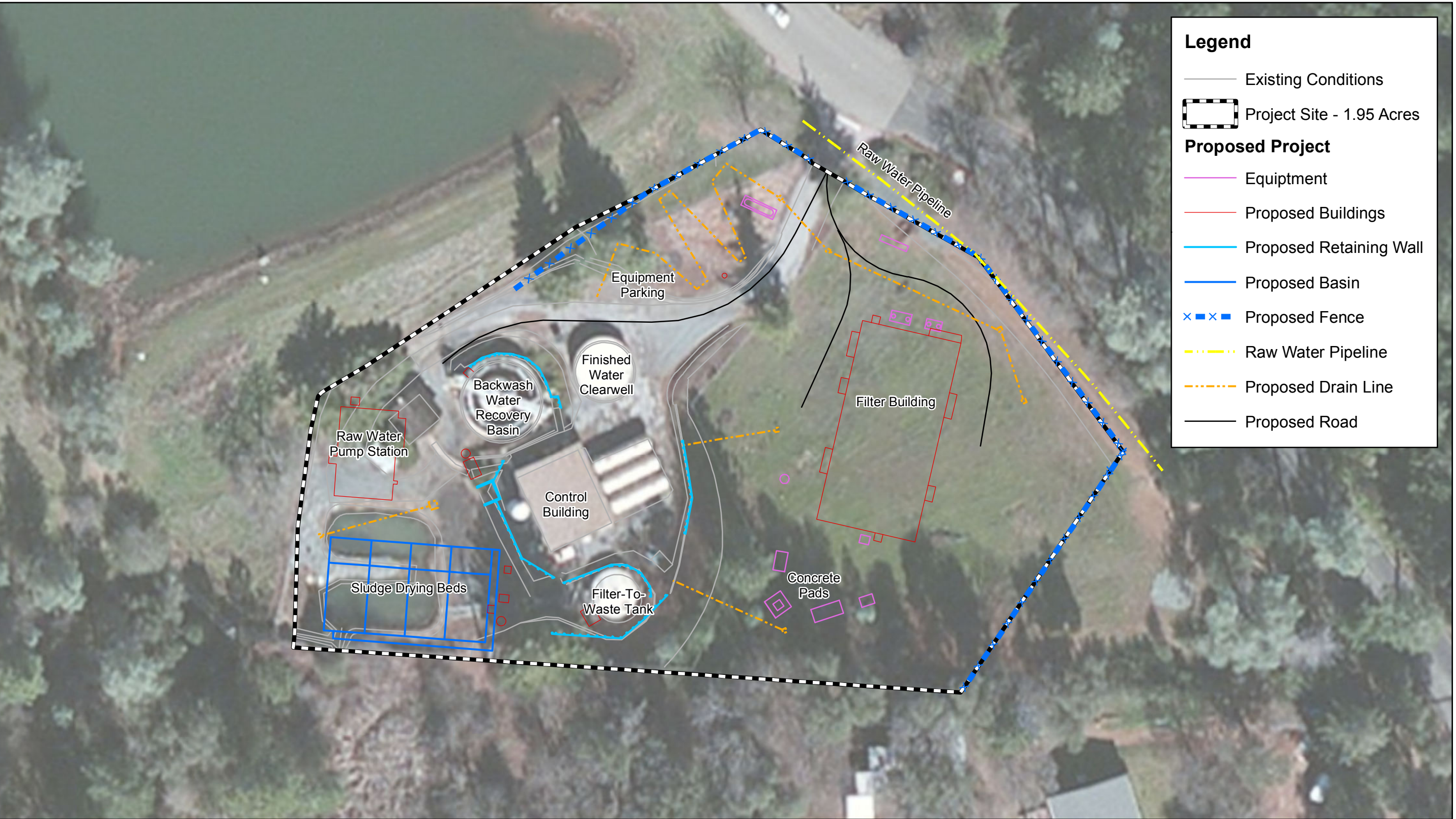
3.7.2. Equipment Parking

In the northern portion of the existing Auburn Lake Trails WTP site, adjacent to the access road, an equipment storage area is proposed. This area would be dedicated to the parking of construction vehicles and equipment, as well as the staging area for temporary construction

materials. A propane tank would also be added to the eastern edge of the equipment parking area.

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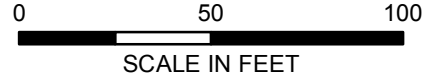


PROPOSED PROJECT DESIGN



© 2016

Digital base data provided by Psomas, 8-15-2014.
Project boundary is approximate.





Drawn By: MUB
Date: 02/15/2016

FIGURE 3.7-1A

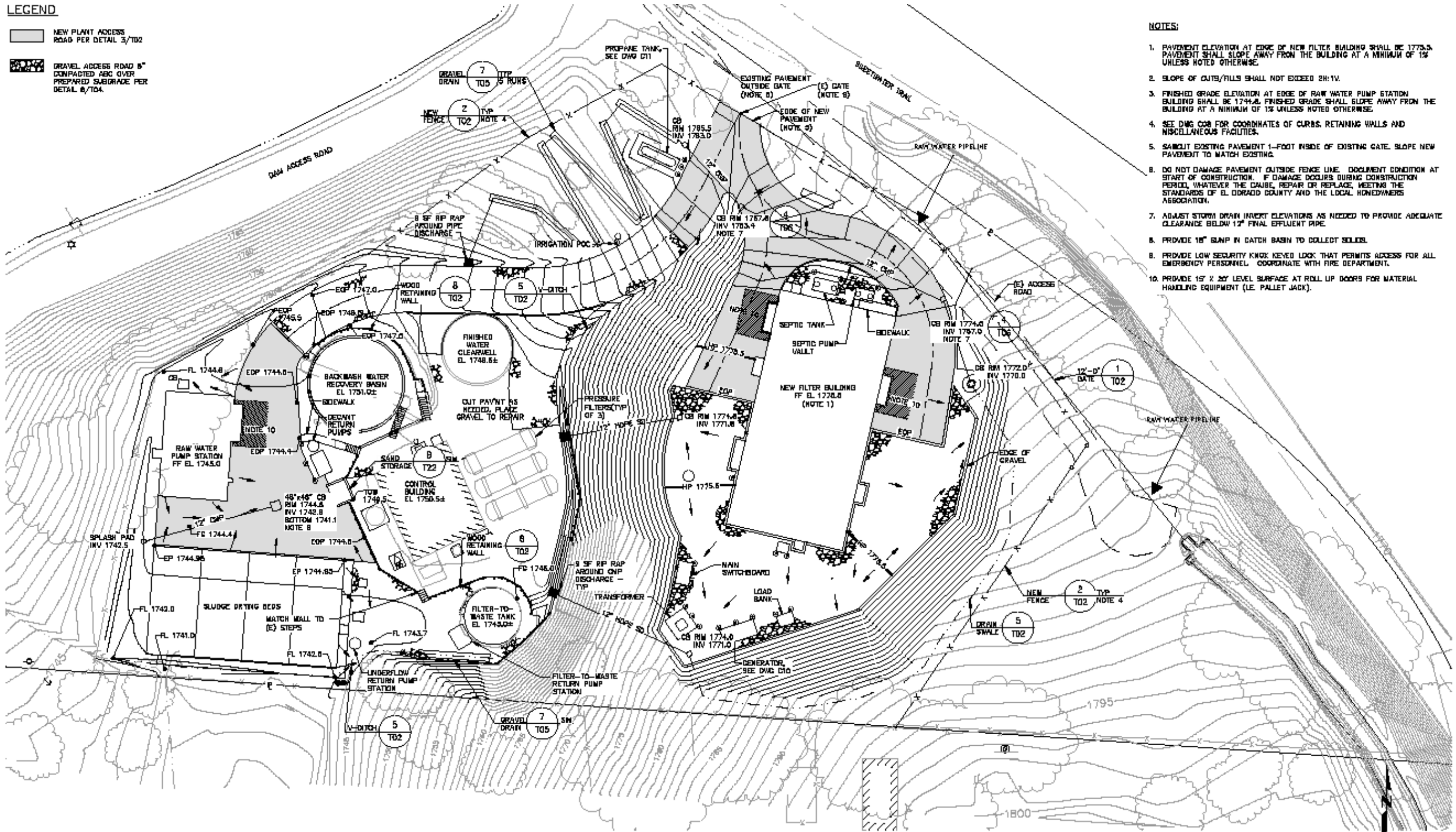
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LEGEND

-  NEW PLANT ACCESS ROAD PER DETAIL 3/T02
-  GRAVEL ACCESS ROAD 5" COMPACTED ABC OVER PREPARED SUBGRADE PER DETAIL 6/T04

NOTES:

1. PAVEMENT ELEVATION AT EDGE OF NEW FILTER BUILDING SHALL BE 1775.5. PAVEMENT SHALL SLOPE AWAY FROM THE BUILDING AT A MINIMUM OF 1% UNLESS NOTED OTHERWISE.
2. SLOPE OF CUTS/FILLS SHALL NOT EXCEED 2H:1V.
3. FINISHED GRADE ELEVATION AT EDGE OF RAW WATER PUMP STATION BUILDING SHALL BE 1744.8. FINISHED GRADE SHALL SLOPE AWAY FROM THE BUILDING AT A MINIMUM OF 1% UNLESS NOTED OTHERWISE.
4. SEE DWG C08 FOR COORDINATES OF CURBS, RETAINING WALLS AND MISCELLANEOUS FACILITIES.
5. REMOVE EXISTING PAVEMENT 1-FOOT INSIDE OF EXISTING GATE. SLOPE NEW PAVEMENT TO MATCH EXISTING.
6. DO NOT DAMAGE PAVEMENT OUTSIDE FENCE LINE. DOCUMENT CONDITION AT START OF CONSTRUCTION. IF DAMAGE OCCURS DURING CONSTRUCTION PERIOD, WHATEVER THE CAUSE, REPAIR OR REPLACE, MEETING THE STANDARDS OF EL DORADO COUNTY AND THE LOCAL HOMEOWNERS ASSOCIATION.
7. ADJUST STORM DRAIN INVERT ELEVATIONS AS NEEDED TO PROVIDE ADEQUATE CLEARANCE BELOW 12" FINAL EFFLUENT PIPE.
8. PROVIDE 18" SLUMP IN DITCH BASIN TO COLLECT SOLIDS.
9. PROVIDE LOW SECURITY KNOX KEVED LOCK THAT PERMITS ACCESS FOR ALL EMERGENCY PERSONNEL. COORDINATE WITH FIRE DEPARTMENT.
10. PROVIDE 15' X 20' LEVEL SURFACE AT ROLL UP DOORS FOR MATERIAL HANDLING EQUIPMENT (I.E. PALLET JACK).



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3.7.3. Finish Water Clearwell

The existing steel tank, finish water clearwell, is approximately 30 feet in diameter. The tank is proposed to be removed from the Project Site.

3.7.4. Backwash Water Recovery Basin

The existing steel tank, labeled backwash water recovery basin, is approximately 40 feet in diameter. This tank would remain on the Project Site in its current location and would be retrofitted for use as a backwash water recovery basin.

3.7.5. Raw Water Pump Station

A raw water pump station would be constructed in the western portion of the Project Site. This new structure would be approximately 30 feet by 46 feet. A small existing timber framed building would be removed to make room for the new raw water pump station. The raw water pump station would include new pumps, piping, valves, sample analysis, chemical systems, in-li Sludge Drying Beds

There would be a total of four sludge drying beds constructed on the Project Site in the southwest corner of the Project Site, in the location of the existing settlement ponds. The sludge drying beds would be approximately 20 feet wide. The total combined physical footprint of the sludge drying beds would be approximately 48 feet by 80 feet, with approximately three-foot-high sidewalls. There would also be a submersible underflow return pump station. The backwash process produces suspended solids, organic matter, and coagulant. These solids would be collected and moved to the drying beds. The beds would be in concrete bunkers to contain the sludge material. Once solids are deposited in the beds, dewatering would occur by evaporation. The solids would be in the beds for a temporary time period each year (spring to fall) and the beds would be cleaned and emptied during the rainy season.

3.7.6. Filter-to-Waste Tank

The existing steel tank, labeled filter-to-waste tank, would be used in the new treatment process, and is approximately 24 feet in diameter. The tank does not require any upgrades or retrofitting to be in compliance with the federal and State standards and would therefore remain in use on the Project Site.

3.7.7. Control Building

The exiting control building, located in the center of the Project Site, would be used during the construction of the WTP upgrades and would remain at the Project Site after the upgraded facility is in operation.

3.7.8. Raw Water Pipeline

Grading on the Project Site would impact the existing raw water pipeline. The existing line would therefore be relocated and upgraded. The proposed realigned raw water pipeline would run northeast of the Project Site.

3.7.9. Extend Existing Access Road

The existing paved access road to the Auburn Lake Trails WTP would be extended toward the proposed filter building. The proposed road would then split with road alignments to the east and west of the proposed filter building. At the end of the road alignments on either side of the filter building gravel would cover the rest to the building pad. Additionally, the access road at the WTP entry would be re-contoured. A total area of approximately 11,010 square feet would be paved.

3.7.10. Additional Site Alterations

Several other alterations are proposed to improve the overall Project Site. In several areas throughout the Project Site minor storm drainage would be added to ensure adequate stormwater flow on the Project Site. These storm drains would direct water around the existing and proposed facilities to the southwest corner of the Project Site, where stormwater would enter into an existing swale. Drains would be either piped or gravel depending on their location within the Project Site. A wooden retaining wall would be added around several of the existing features. The retaining wall would be added to the north of the existing backwash water recovery tank, to the east and west of the existing control building, and to the north, west, and south of the existing filter-to-waste tank. A fence is proposed around the eastern section of the existing Auburn Lake Trails WTP. The fence would enclose the WTP and provide additional safety of the WTP operating facilities that are located along Sweetwater Trail. Fence posts would be set in concrete and the fence would be a 6-foot-high steel fabric fence with 3 strands of barbed wire and a bottom tension wire. A strainer, and related appurtenances housed in a new building.

3.8. *Project Construction*

3.8.1. Earthwork

Grading will occur at the site as required to construct a building pad for the new filter building. The dimensions of the building pad are approximately 220 feet by 120 feet, plus cut and fill slopes. Minor earthwork/grading would also be required for proposed re-contouring of the existing access road, realigning the raw water pipeline, minor storm drainage improvements, and footing and foundation grading/excavation for buildings (filter building, raw water pump station, and sludge drying beds).

A total of 58,390 square feet of soil disturbing activities are estimated for project construction, generating approximately 1,330 cubic yards of excess earthen materials. The grading contractor would be required to dispose of the excess earthen materials offsite.

3.8.2. Construction Timeframe

Construction of the project is anticipated to commence in June of 2016, with completion expected by October 2017. The construction schedule anticipated for each phase of the Proposed Project is summarized below in **Table 3.8-1**.

TABLE 3.8-1 — AUBURN LAKE TRAILS WATER TREATMENT PLANT CONSTRUCTION SCHEDULE

Project Component	Duration (days)	Expected Start Date
Mobilization	20	May 2016
Raw Water Pump Station	65	June 2016
Filter Building	171	May 2016
Replace Irrigation Siphon (piping and connections)	40	June 2016
Site Work	40	June 2016
Plant Startup	15	January 2017
Filter to Waste	5	January 2017
Backwash Recovery	57	April 2017
Drying Beds	70	February 2017
Final Startup	90	June 2017
Project Completion	--	October 2017

3.9. Construction Staging Areas

Construction staging areas are proposed in the northern portion of the Project Site.

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4.0 INITIAL STUDY CHECKLIST

4.1. Aesthetics

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

4.1.1. Environmental Setting

The County has a broad range of landscapes that change with the gradual increase in elevation. Elevations range from 200 feet in the western rolling foothills, adjacent to Sacramento County, to more than 10,000 feet along the Sierra Nevada crest on the edge of the Lake Tahoe Basin.

The diverse environments of the region are represented by distinct natural communities and landforms that display different development patterns and historical features. This broad diversity is an important element of El Dorado County's visual heritage and one that many residents value as part of their quality of life (El Dorado County 2003).

The current GDPUD ALT WTP is located approximately four miles east of the Town of Cool. The visual setting at the ALT WTP consists of rolling hills and residential parcels. The existing WTP buildings and facility are located within a low area on the west side of Sweetwater Trail.

The Proposed Project would include construction of several new water treatment plant facilities, including the filter building, raw water pump station, and sludge drying beds. Additionally, the Backwash Water Recovery Basin would be retrofitted to ensure compliance with State regulations.

4.1.2. Regulatory Setting

The State of California Department of Transportation (Caltrans) administers State scenic route designations within El Dorado County for State and federal roadways. Portions of U.S. 50 and SR 89 in El Dorado County are designated as State Scenic Highways. The nearest State highway to the Project Site is SR 193, approximately ¼ mile from the ALT WTP site. There are no portions of SR 193 designated as scenic.

El Dorado County has not created a scenic highway ordinance and there are no formally County designated scenic highways within the County.

The federal Wild and Scenic Rivers Act of 1968 led to the establishment of the National Wild and Scenic Rivers System. Multiple federal agencies along with State share the management responsibilities for the designated rivers and river segments.

Federal agencies also evaluate impacts to scenic resources associated with Formally Classified Lands, including National Parks and Monuments; National Landmarks or Battlefield Sites; National Historic Parks or Sites, Wilderness Areas; Wildlife Refuges, State Parks, federally administered forest or other land; or Native American owned and leased administered by the Bureau of Indian Affairs (BIA).

4.1.3. Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

No Impact. Views of the ALT WTP site are limited to a small number of nearby residences. There is a limited view of the WTP site as vehicles leave the Auburn Lake Trail community on the privately owned and maintained Sweetwater Trail. There are no designated scenic vistas on or near the Project Site. The Project Site is located near a designated Wild and Scenic River. The nearest such designation is on the Lower American River from Sacramento to Nimbus Dam (approximately 23 miles from the Project Site) and the North Fork of the American River near Colfax, approximately 13 miles from the Project Site (National Wild and Scenic Rivers 2015). The Project Site is not located within a National Park, National Forest, State Park, or State Recreation Area. Nor is the Project Site visible from National Parks/Forests as the nearest National Parks are over 100 miles from the project vicinity (Lassen National Volcanic Park to the north and Yosemite National Park to the southeast). The nearest National Historic Parks are in the San Francisco Bay area, approximately 100 miles to the southwest. The nearest State Park is in Coloma, approximately 8 miles south of the Project Site. A portion of the Auburn State Recreation Area is located to the east and north of the ALT WTP, but the site itself is not located within the Auburn State Recreation Area. The nearest National Wildlife Refuges (NWR), Sutter NWR and Stone Lake NWR, are in Yuba City and Elk Grove respectively, each approximately 40 miles from the Project Site. The nearest National Wilderness Area, Desolation Wilderness, is also approximately 40 miles east from the Project Site. The nearest Native American tribal lands are located in Shingle Springs, approximately 18 miles south of the Project Site. The nearest location of any structure on the National Register of Historic Places is the Bailey House

near Pilot Hill, approximately six miles southwest of the ALT WTP site. Therefore, there are **no impacts** related to scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The Project Site is not located within a State scenic highway nor is the site visible from a State highway, including any State highways designated as scenic highways. Therefore, there are **no impacts** related to scenic resources within a State scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant With Mitigation Incorporated. At the ALT WTP site, construction activities would be visible from nearby residences and from vehicles on Sweetwater Trail. However, construction activities would be temporary and therefore, would have a less than significant impact to the existing visual character and quality of the Project Site.

After construction, the ALT WTP facility would include a new filter building approximately 36 feet by 64 feet. This structure would be located on the open field in the eastern half of the Project Site. This structure would be the most significant visual change to the WTP site due to its placement on the hillside between Sweetwater Trail and the lower sited WTP facilities, in an undeveloped portion of the ALT parcel. Although there are existing trees located on the GDPUD site on both sides of the WTP entrance driveway which would provide a degree of visual screening, the filter building would be visible from nearby residences and from the Sweetwater Trail roadway. Construction of the filter building could be considered a significant impact to the visual character of the site without mitigation. Implementation of **Mitigation Measure AES – 1 through Mitigation Measure AES – 4** would reduce impacts to less than significant by requiring neutral painting and visual screening to provide visual character more consistent with the surrounding area. Therefore, impacts are considered **less than significant with mitigation incorporated.**

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

Less Than Significant With Mitigation Incorporated. Construction activities would temporarily introduce equipment and vehicles to the Project Site. To the extent that construction activities would occur in the evening hours (up to 7:00 P.M.) after sunset, impacts from construction lighting may occur. However, construction related impacts would be temporary and short-term in nature. The expected construction start for the Proposed Project is June 2016 with expected completion in October 2017. The project does not propose any new operational lighting. However, additional lighting at the ALT WTP may be placed on structures for early evening hours of operations and for the safety of personnel. Additional sources of lighting may affect day or nighttime views. Therefore, impacts are considered **less than significant with mitigation incorporated.** Compliance with **Mitigation Measure AES – 5** would ensure that any proposed additional exterior lighting would be contained within the facility site, and not affect surrounding views.

4.1.4. Mitigation Measures

Mitigation Measure AES – 1:

Exterior coatings for the filter building shall incorporate earth tone colors with neutral tones to reduce the contrast of the structure with the surrounding landscape as viewed from the Auburn Lake Trails community gate.

Mitigation Measure AES – 2:

Site design considerations for proposed improvements shall preserve natural landscape wherever feasible and shall incorporate natural features such as rock outcroppings, native tree stands, and existing topographic features. Development footprints shall be minimized to the maximum extent practicable.

Mitigation Measure AES – 3:

All excavations shall be graded and planted to produce a natural-looking appearance.

Mitigation Measure AES – 4:

The final plans for the construction of the WTP filter building shall include tree and/or vegetative plantings to the extent necessary to provide a level of visual screening at plant maturity that would introduce vegetative foreground visual elements between the filter building and Sweetwater Trail adjacent to the WTP.

Mitigation Measure AES – 5:

All exterior lighting shall be hooded, shielded or opaque. No unobstructed beam of light shall be directed beyond any exterior lot line.

4.2. Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, or non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.2.1. Environmental Setting

Agricultural influences and activities contribute to the economic stability of the County through crop production, serve as the foundation of the El Dorado County's rural lifestyle, and serve as a key element in the sense of community of many rural regions. In 2012, El Dorado County had a crop production value of \$24 Million. The market value of products sold in the County totaled approximately \$30.5 Million in 2012 (USDA 2012).

Gentle slopes and rich soils characterizing lands on the west slope of the County are considered the most valuable for agriculture. Historically, grazing of cattle and other livestock was the primary economic contributor in El Dorado County, although current production of fruit

(including wine grapes) and nuts has become a major contributor to the County's agricultural production value. The leading crops by production value include apples, wine grapes, pasture and rangeland, Christmas trees, and cattle and calves, and timber (County of El Dorado 2003).

The General Plan designated land use for the Project Site at the existing ALT WTP is Medium Density Residential, and the site is located within the Single Family Residential zoning district. Surrounding land uses are primarily Medium Density Residential to the northwest (the Auburn Lake Trails community), Open Space to the east, and Estate Residential to the south.

4.2.2. Regulatory Setting

Federal Regulations

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is a component of the Agriculture and Food Act of 1981 and is intended to minimize the impact federal actions may have on the conversion of farmland to non-agricultural uses, by ensuring that proposed federal actions are implemented consistently with State and local programs designed to protect farmlands. Under the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance, and does not have to be actively farmed. Farmland according to FPPA, may include forest land, pastureland, cropland, or other land, but does not include water or urban built-up land.

State Regulations

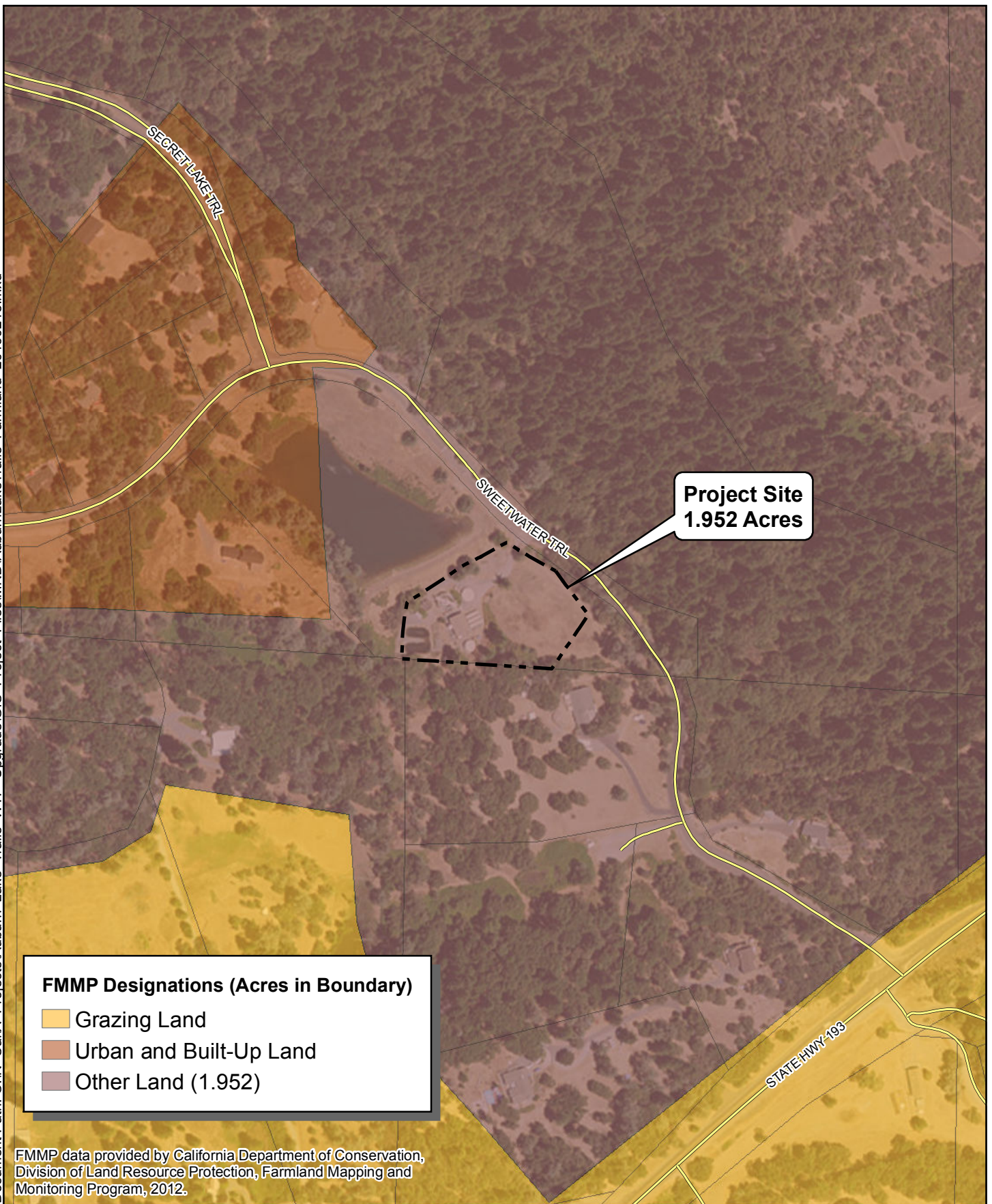
The State Farmland Mapping and Monitoring Program (FMMP) produces maps and data used for analyzing impacts to California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status with the best quality land identified as Prime Farmland. The program also identifies land that qualifies as Farmland of State Importance, Unique Farmland, and Farmland of Local Importance. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

4.2.3. Impact Analysis

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

No Impact. The Project Site is not located in areas designated as Prime, Unique, or Farmland of Statewide Importance (California Department of Conservation 2012). The Project Site is on land designated as "Other Land" by the California Department of Conservation (**Figure 4.2-1**). There would be no conversion of designated Prime, Unique, or Farmland of Statewide importance to non-agricultural use. Therefore, there would be **no impacts** to farmland.

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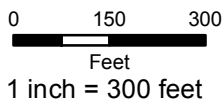


FMMP Designations (Acres in Boundary)

- Grazing Land
- Urban and Built-Up Land
- Other Land (1.952)

FMMP data provided by California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2012.

FARMLAND



Drawn By: CCH, MUB
Date: 02/15/2016

FIGURE 4.2-1

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project Site is located on lands designated and zoned for residential land use. The Project Site is not utilized for agricultural purposes or under a Williamson Act contract. Therefore, the Proposed Project would not conflict with existing zoning or conflict with a Williamson Act contract, and **no impact** would result from development of the Proposed Project.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The Project Site contains some areas of montane hardwood-conifer. Montane hardwood-conifer includes both hardwood (broad-leaved) and conifer vegetative species (Mayer and Laudenslayer 1988). However, the Project Site is not zoned as forest land or Timberland Preserve (**Figure 4.2-1**). The Project Site currently functions as a WTP and the Proposed Project would construct several new facilities and updated existing facilities, with no impact on the zoning designation. Development of the Proposed Project would not impact any existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, **no impact** would result from development of the Proposed Project.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project Site has no designated forest land and is not located within the El Dorado National Forest. The construction of new facilities would only remove two juniper trees, one liquid amber, and one fruit tree, all of which are non-native species. The Proposed Project would therefore not involve the loss of any forested land. There would be no land converted to non-forest use or loss of forest, and therefore there would be **no impact**.

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

No Impact. Development of the Proposed Project would result in the construction of several new facilities as well as upgrades to existing facilities on lands designated as other land by the FMMP (**Figure 4.2-1**). No project-related changes are proposed that would result in conversion of Farmland to non-agricultural use. Therefore, there is **no impact** related to farmland.

4.2.4. Mitigation Measures

No mitigation measures are warranted.

4.3. Air Quality

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district is relied upon to make the following determinations. Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.1. Environmental Setting

The Project Site is within the portion of the Sierra Nevada Foothills situated within the Mountain Counties Air Basin (MCAB), which includes portions of Plumas, Sierra, Nevada, Placer (middle portion), El Dorado (western portion), Amador, Calaveras, Tuolumne, and Mariposa counties. The MCAB lies along the northern Sierra Nevada mountain range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles. The MCAB includes the western slope of El Dorado County, from Lake Tahoe on the east to the Sacramento County boundary on the west. The prevailing wind is southwesterly and air pollution generally moves west to east through the air basin.

Air quality concerns in western El Dorado County include the most common pollutants including ozone, particulate matter from dust and diesel exhaust, and State defined Toxic Air Contaminants (TACs). Two TACs of concern in the County are diesel exhaust particulates and naturally occurring asbestos.

The El Dorado County Air Quality Management District's (EDCAQMD) *Guide to Air Quality Assessment* (2002) and the Sacramento Metropolitan Air Quality Management District's (SMAQMD) *Guide to Air Quality Assessment* (2009) provide the primary background for the following discussion on climate and air pollutants.

Climate

The proximity to the Sierra range and changes in elevation create considerable variation in the climate of the MCAB. There is a wide variation in rainfall, temperature, and winds throughout the basin. Temperature variations have significant influence on wind flow, dispersion along ridges, vertical mixing, and photochemistry. Precipitation in winter can be high in the upper elevations and then decrease rapidly towards the western side of the basin. The topography and climate create local conditions that become the dominant effect on emissions within the air basin. These local conditions can affect regional airflows and create areas of high pollutant concentrations. Inversion layers of warm air over cooler air often occur and trap pollutants close to the ground. Stagnant air in summer combines with high temperatures and sunshine to create ground level ozone from photochemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NOx). These two ozone precursors are also transported into the MCAB by winds from the San Francisco Bay area and the Sacramento area.

Air Pollutants

Ozone and particulate matter are pollutants of particular concern and importance within the region. These are the pollutants for which the region still periodically exceeds State and/or national standards. These pollutants are individually described below.

- Ozone (O₃) — Ozone occurs at both ground level and in the upper atmosphere. Ozone can be either helpful or harmful depending upon its location in the atmosphere. The layer closest to the Earth's surface is the troposphere. Here, ground-level or "bad" ozone is present as an air pollutant that is harmful to breathe and damages crops and other vegetation. Ground-level ozone is one of the main components of urban smog. The troposphere generally extends to an upward depth of approximately six miles, where it meets the stratosphere. The stratosphere or "good" ozone layer extends upward to a depth ranging from approximately 6 to 30 miles, and protects life on earth from the sun's harmful ultraviolet (UV) rays (USEPA 2008).

Ground-level ozone is not created directly from sources and emitted directly into the air, but is formed instead by photochemical reactions between oxides of nitrogen (NOx) and reactive organic gases (ROG) in the presence of sunlight. NOx and ROG are known as ozone precursors. Ozone levels are the highest from late spring through autumn when sunlight intensity is high and the hours of sunlight are longest. The major sources of NOx and ROG are emissions from motor vehicle exhaust, gasoline vapors, coatings and solvents, industrial facilities and electric utilities. In California, motor vehicles create the majority of reactive organic gas and nitrogen oxide emissions.

Ozone is a public health concern due to the fact that it acts as a respiratory irritant and increases susceptibility to respiratory infections and diseases. Exposure to levels of ozone above current ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms.

- Particulate Matter (PM₁₀) — PM₁₀ consists of particulate matter that is 10 microns or less in diameter. A micron is one-millionth of a meter. Airborne dust contains PM₁₀ and can include a wide range of solid or liquid particles, including smoke, dust, and aerosols. The health effects of PM₁₀ exposure depends upon the specific composition of the particulate matter. Effects may include aggravated asthma, chronic bronchitis, and decreased lung function. A sub-set of PM₁₀ is PM_{2.5} which includes particles less than 2.5 microns in diameter.

Respirable particulate matter, especially PM_{2.5}, is unhealthy to breathe and has been associated with premature mortality and other serious health effects. PM₁₀ poses a health concern because these particulates can be inhaled into and accumulate in the respiratory system. PM_{2.5} is believed to pose the greatest health risks. Because of their small size (approximately three percent of the average width of a human hair), fine particles can lodge deeply into the lungs. Extensive research reviewed by the California Air Resources Board (CARB) indicates that exposure to outdoor PM₁₀ and PM_{2.5} levels exceeding current ambient air quality standards is associated with increased risk of hospitalization for lung and heart-related respiratory illness, including emergency room visits for asthma.

Other pollutants of concern relative to the area include toxic air contaminants, including diesel exhaust and naturally occurring asbestos (NOA). Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer). TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., benzene near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under the State's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has adopted a comprehensive diesel risk reduction program. The USEPA has adopted low sulfur diesel fuel standards that will reduce diesel particulate matter substantially. These went into effect in late

2006. Diesel exhaust has also been identified as a TAC in Section 4.2.1 of the EDCAQMD *Guide to Air Quality Assessment*. Section 4.2.1 states that the total construction phase fuel use for a project must be kept below the levels shown in Table 4.2 to reduce the health risk from diesel particulate matter. Table 4.2 significance criteria is that construction equipment fleets with Best Available Control Technology for TACs (T-BACT) engines can only use 37,000 gallons of diesel fuel during the construction phase. T-BACT engines are defined as those in 1996 or later model year equipment. The significance criteria for equipment fleets without T-BACT (pre-1996 model year) is 3,700 gallons of diesel fuel used. Table 4.2 also notes that the “maximum gallons of fuel may be interpolated between 37,000 and 3,700 gallons based on the fraction of T-BACT and non T-BACT engines.

Locations within El Dorado County have been identified as having NOA or having the potential for NOA to be present in the ground. NOA is prevalent in at least 44 of California's 58 counties. Asbestos is the name for a group of naturally occurring silicate minerals, and may be found in serpentine rock, other ultramafic rock, and volcanic rock. When rock containing NOA is broken or crushed, asbestos may be released from the rock and may become airborne, potentially causing a health hazard (El Dorado County 2009).

The Project Site has been designated as “Quarter Mile Buffer for More Likely to Contain Asbestos or a Fault Line” by the El Dorado County Asbestos Review Areas, West Slope, County of El Dorado Map (County of El Dorado 2005). Areas to the north and south of the Project Site are identified as “more likely to contain asbestos” (County of El Dorado 2005).

4.3.2. Regulatory Setting

Federal Regulations

The Federal Clean Air Act (FCAA) governs air quality in the United States. The USEPA administers the FCAA. The USEPA has established ambient air quality standards (AAQS) for common pollutants. The ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the USEPA regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.

As required by the federal Clean Air Act, standards have been established for the following criteria pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), sulfur oxides, and lead.

The USEPA classified El Dorado County, as a serious non-attainment area for the eight-hour federal ozone standard. For all other federal criteria pollutants, El Dorado County is designated as attainment or unclassified.

State Regulations

Air quality in California is governed by the California Clean Air Act (CCAA). The CCAA is administered by CARB at the State level and by air quality management districts at the regional and local levels. Pursuant to the CCAA, the State of California has also established ambient air quality standards. California standards are generally considered more stringent than the corresponding federal standards, and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. CARB classifies El Dorado County, including the project area, as a non-attainment area for State ozone, as well as non-attainment for PM₁₀. For all other State criteria pollutants, El Dorado County is designated as attainment or unclassified.

Regional Regulations

The El Dorado County Air Quality Management District administers the California and Federal Clean Air Acts via guidelines set forth by State and federal agencies and establishes emission thresholds of significance.

The EDCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollution sources, issuing permits for stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education and awareness campaigns including regional “Spare the Air” days.

The EDCAQMD developed a *Guide to Air Quality Assessment* in 2002 identifying specific daily emissions thresholds based on the national and State standards. These thresholds were established to guide CEQA evaluation and are the national and State ambient air quality standards. These significance thresholds for construction-related emissions from the EDCAQMD *Guide to Air Quality Assessment* were applied to the Proposed Project.

4.3.3. Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The project would include construction of water treatment plant process facilities on the existing Auburn Lake Trails WTP. The project is consistent with the site land use and zoning, and construction and buildout of the Project Site would not conflict with or obstruct implementation of the air quality plan. Proposed improvements also include consistency with the goals and policies identified by *El Dorado County’s General Plan* pertaining to sustainability and overall strategy for air quality.

El Dorado County General Plan, Health and Safety Element identifies the following goals and policies applicable to Air Quality and relevant to the Proposed Project:

Goal 6.7:

- A. Strive to achieve and maintain ambient air quality standards established by the U.S. Environmental Protection Agency and California Air Resources Board.**
- B. Minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors.**

Objective 6.7.7: Construction Related, Short-Term Emissions

Policy 6.7.7. The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available prior to periodic updates of the Guide. The County shall encourage actions (e.g., use of light-colored roofs and retention of trees) to help mitigate heat island effects on air quality.

Construction of the Proposed Project would be implemented consistent with applicable regulatory standards and requirements, including consistency with all El Dorado County Air Quality Management District (ELCAQMD) rules and thresholds. Therefore, **no impact** would result from implementation of the Proposed Project.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant With Mitigation Incorporated. Construction of the Proposed Project would be short-term and is anticipated to commence in June of 2016, with completion expected by October 2017. Construction exhaust emissions would be generated from construction equipment, earth moving activities, construction worker commutes, and construction material hauling during the construction work window. The aforementioned activities would involve the use of diesel-powered equipment that would generate emissions of criteria pollutants, such as NO_x. Project construction activities also represent sources of fugitive dust which includes PM₁₀ and PM_{2.5} emissions. Construction-related activities remain of potential concern due to the fact that El Dorado County is currently designated as “non-attainment” for ozone and PM standards.

Construction-related emissions associated with the Proposed Project were estimated using the California Emissions Estimator model (CalEEMod) Version 2013.2.2. CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutants and GHG emissions associated with construction and operation of land use projects (KDA 2016). **Table**

4.3-1 below presents the estimated construction-related emissions of ROG and NO_x that would result from construction of the Proposed Project.

TABLE 4.3-1 — ESTIMATED MAXIMUM UNMITIGATED PROJECT CONSTRUCTION EMISSIONS

Pollutant	Summer Project Emissions (lbs./day)	Winter Project Emissions (lbs./day)	EDCAQMD Significance Thresholds (lbs./day)
ROG	45.21	45.20	82
NO _x	13.77	13.79	82

Source: KDA 2016, CalEEMod Version 2013.2.2 (Appendix B)

As shown above in **Table 4.3-1** above, estimated maximum unmitigated project construction emissions for ROG and NO_x would remain well below EDCAQMD significance thresholds. The significance thresholds for PM₁₀ and PM_{2.5} are addressed in the EDCAQMD *Guide to Air Quality Assessment* as being considered not significant if the project includes mitigation measures that will comply with Rule 403 of the South Coast AQMD, described in Appendix C-1 of the EDCAQMD *Guide to Air Quality Assessment*. **Mitigation Measure AQ – 1** would implement dust control measures described in Appendix C-1 of the EDCAQMD *Guide to Air Quality Assessment* and would reduce fugitive dust particulate matter impacts from the Proposed Project to less than significant levels.

Diesel exhaust particulate matter resulting from construction of the Proposed Project was estimated using estimates of construction phasing and equipment activity (Sanders pers. Comm). The CalEEMod model was used to develop estimates of the hours of use and horsepower for each type of equipment used for construction of the Proposed Project. The amount of diesel fuel used during the construction equipment activity was then estimated using diesel fuel consumption rates from the Virginia Tech Publication *Predicting Diesel Fuel Consumption* (KDA 2016). Using this technique to estimate diesel exhaust particulate matter construction of the Proposed Project is estimated to result in the use of 5,052 gallons of diesel fuel. This is above the 3,700 gallons of diesel fuel significance threshold for non T-BACT engines. Therefore, based on the Diesel Exhaust Particulate Matter significance threshold presented in the EDCAQMD *Guide to Air Quality Assessment* this is considered to be a potentially significant impact. Implementation of **Mitigation Measure AQ – 2** would require that at a minimum 4.06 percent of diesel fuel used by construction equipment be consumed by 1996 or later model year engines. Therefore, impacts related to air quality standards are considered **less than significant with mitigation incorporated**.

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

Less Than Significant. El Dorado County is currently designated as “non-attainment” for ozone and PM10. Projected growth and combined population, vehicle usage, and business activity within the County, in combination with other past, present, and reasonably foreseeable projects within the County and surrounding areas, could either delay attainment of established standards or require the adoption of additional controls on existing and future air pollution sources to offset emissions increases.

Implementation of the Proposed Project would involve minimal emissions during construction, as proposed improvements would not increase the treatment volume at the WTP and would not result in a substantial increase in long-term operational emissions. Construction emissions would be short-term in duration, and would be implemented from June of 2016 to October 2017. Accordingly, the incremental contribution of the Proposed Project’s construction-related emissions would not be considered cumulatively considerable. Therefore, impacts from the Proposed Project are considered **less than significant**, cumulatively.

- d) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant With Mitigation Incorporated. Project development would not introduce sensitive receptors to the area, and thus, would not expose new sources of sensitive receptors to any existing sources of substantially pollutant concentrations. However, the California Air Resources Board promulgated the Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operation (17 CCR 93105). This ATCM is a statewide regulation triggered prior to the ground-disturbing activities in certain areas of California, and applies to any size construction project, although there are more stringent mitigation requirements for projects that exceed one acre.

The El Dorado County Naturally Occurring Asbestos Review Area Map identifies areas with potential to contain naturally occurring asbestos (NOA) in El Dorado County. As identified by the map the Project Site is located in a “Quarter Mile Buffer for More Likely to Contain Asbestos or a Fault Line,” which indicates an elevated risk of the presence of NOA. Soil-disturbing construction activities in the Project Site would result in an elevated risk of entraining NOA. Therefore, impacts related to exposing sensitive receptors to substantial pollutant concentrations are considered a **less than significant with mitigation incorporated**.

Compliance with **Mitigation Measure AQ – 3 through Mitigation Measure AQ – 6** would require that the GDPUD comply with several CARB Airborne Toxic Control Measures and develop Fugitive Dust Control and Asbestos Dust Control Mitigation Plans for project construction. These implementation measures would reduce potential impacts from NOA to less than significant levels.

e) *Create objectionable odors affecting a substantial number of people?*

Less Than Significant Impact. Operation of the project after construction at the existing WTP would consist of continued water treatment with enhanced treatment capability for water quality purposes but no increase in treatment volume. Operation of the project at the ALT WTP after construction would not be expected to create additional odors that would affect a substantial number of people. Operation of the drying beds may produce localized odors at the immediate site during evaporation period. However, due to the short-term nature of the evaporation period and with the nearest residence being located over 250 feet away, any odors would not be expected to affect a substantial number of people. Construction of the project could potentially create odors, primarily diesel odors and odors from any repaving or painting at the WTP site. However, these odors would be temporary and sporadic and would not be expected to affect substantial numbers of people. Therefore, impacts are considered **less than significant**.

4.3.4. Mitigation Measures

- Mitigation Measure AQ – 1:** During project construction all measures presented in Section C.6 in Appendix C of the EDCAQMD *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* shall be implemented to reduce the impacts from fugitive dust PM¹⁰ and PM_{2.5} emissions.
- Mitigation Measure AQ – 2:** During project construction a minimum of 4.06 percent of diesel fuel used by construction equipment shall be consumed by 1996 or later model year engines (T-BACT engines).
- Mitigation Measure AQ – 3:** Project construction shall comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 93105, Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations.
- Mitigation Measure AQ – 4:** Project construction shall comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 93106, Asbestos ATCM for Surfacing Applications.
- Mitigation Measure AQ – 5:** Project construction shall comply with EDCAQMD Rule 223-1, preparing a Fugitive Dust Control Plan. The project shall comply with the additional dust control measures required in Rule 223-1, including the preparation of a Fugitive Dust Control Plan for approval by the EDCAQMD and compliance with the approved plan during construction.

Mitigation Measure AQ – 6:

Project construction at the ALT WTP site shall comply with EDCAQMD Rule 223-2, Fugitive Dust, Asbestos Hazard Mitigation. The project shall comply with the additional dust control measures required in Rule 223-2, including the preparation of an Asbestos Dust Mitigation Plan for approval by the EDCAQMD and compliance with the approved plan during construction.

4.4. Biological Resources

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.4.1. Environmental Setting

Methodology

In order to compile a list of potentially regionally occurring species and sensitive habitats, local resource databases were reviewed for the 7.5-minute USGS *Greenwood* topographic quadrangle map. Available information pertaining to the natural resources of the region was reviewed, and site-specific information was reviewed including the following:

- *Draft Auburn Lake Trails Water Treatment Plant Improvements Project Environmental Assessment/Initial Study, 2010, prepared by Foothill Associates;*
- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDDB);
- California Native Plant Society (CNPS), *Inventory of Rare and Endangered Plants of California within the Greenwood Quad;* and
- U.S. Fish and Wildlife Service (USFWS), *Federal Endangered and Threatened Species that may be affected by Projects in the Greenwood 7.5-minute series Topographic Quadrangle.*

These results of these analyses are represented in the September 5, 2014 *Biological Letter Report* [for the] *Revised Site Plan for the Auburn Lake Trails Water Treatment Plant, El Dorado County, California* (**Appendix C**).

The CNDDDB is a natural heritage database program maintained by the California Department of Fish and Wildlife Habitat Conservation Division that provides natural history and location information on rare, threatened, endangered, and other special-status species to the public, other agencies, and conservation organizations (CDFW 2014). The CNDDDB is often used as a tool by natural resource specialists and project planners to identify special-status plant and wildlife species that have been reported as occurring in specific geographic areas and habitat types since this database tracks occurrences and records of rare and sensitive species. The CNDDDB was reviewed in order to determine the potential for special-status species to occur in

the project vicinity. The following set of criteria has been used to determine each species' potential for occurrence onsite:

- Present:** Species known to occur onsite, based on CNDDDB records, and/or were observed onsite during the field survey(s).
- High:** Species known to occur on or near the site (based on CNDDDB records within 5 miles, and/ or based on professional expertise specific to the site or species) and there is suitable habitat onsite.
- Low:** Species known to occur in the vicinity of the site, and there is marginal habitat on the site and/ or species is not known to occur in the vicinity of the site; however, there is suitable habitat onsite.
- No:** Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site and/ or species was surveyed for during the appropriate season with negative results.

After compiling a list of potentially occurring special-status species and sensitive habitats, a reconnaissance-level habitat assessment was performed on August 11, 2014 in order to document habitat types and plant and wildlife communities occurring within the Project Site. During the site assessment, observed plant and wildlife species were recorded and biological communities onsite were categorized and assessed for the potential to support special-status species. For each species, habitat requirements were assessed and compared to the habitats recorded in the database records to determine their potential to occur within the Project Site. Special-status species were excluded if the Project Site lacked suitable habitat or if their range occurs outside of the Project Site geographic range. Species without the potential to occur within the Project Site are not discussed further in this document.

Biological Communities

El Dorado County supports a wide diversity of plant and wildlife species and ranges in elevations from 200 in the western portion of the County to over 10,800 feet in elevation in the eastern portion of the County (El Dorado County 2009). Generally, El Dorado County can be described as gently rolling annual grassland and oak woodland slopes in the east transitioning to more dominant coniferous pine and fir forests at higher elevations and more xeric landscape on the eastern slope. El Dorado County supports a variety of habitats that are important for movement corridors, and resident, breeding, and foraging habitat areas (El Dorado County 2004). A more in-depth discussion of wildlife movement corridors and those that occur in El Dorado County and the project vicinity are included below under Sensitive Habitats.

Sensitive Habitats

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation can also

occur when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The western portion of El Dorado County supports important migratory deer populations. Deer populations throughout the County have been characterized by both the California Department of Fish and Wildlife and the Tahoe National Forest as stable to slightly declining (CDFW 2009).

4.4.2. Regulatory Setting

Federal, State, and local regulations applicable to the Proposed Project are discussed below.

Federal Regulations

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

The FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (USACE) must consult with the USFWS and/or the National Oceanic and Atmospheric Administration (NOAA) when threatened or endangered species under their jurisdiction may be affected by a project. In the context of the project, FESA would be triggered if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in “take” of an endangered species or adversely modify critical habitat of such a species.

Executive Order 11990 “Protection of Wetlands”

Executive Order 11988 requires federal agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. The Order further requires that federal agencies avoid undertaking or providing assistance for new construction located in wetlands unless a finding can be made that the proposed action is the only practicable alternative and that this alternative includes all practicable measures necessary to minimize harm to wetlands.

State Regulations

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). The CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code §2081).

CDFW Species of Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFW and lead agencies during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern”, developed by these resource agencies. It tracks species in California whose numbers, reproductive success, or habitat may be in decline.

California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Plants of California* (CNPS 2001). Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS rankings:

- Rank 1A: Plants presumed Extinct in California
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere

- Rank 3: Plants about which we need more information – A Review List
- Rank 4: Plants of limited distribution – A Watch List

Migratory Bird Treaty Act and California Fish and Game Codes

The Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person, unless permitted by regulations, to:

“pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.” (16 U.S.C. 703). Thus, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. Removal of unoccupied nests, or bird mortality resulting indirectly from disturbance activities, is not considered a violation of the MBTA.

Section 3503.5 of the CDFG Code states that it is *“unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”* Disturbance activities that result in abandonment of an active bird-of-prey nest in areas adjacent to the disturbance may also be considered a violation of the CDFG Code.

Clean Water Act

The USACE regulates discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. “Discharges of fill material” is defined as the addition of fill material into waters of the United States, including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 C.F.R. §328.2(f)]. In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the USACE as “the line on the shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

California Department Fish and Game Code Section 1600

CDFW is a trustee agency that has jurisdiction under Section 1600 *et. seq.* of the CDFG Code. Under Section 1602, any public or private entity must notify CDFW if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds except when the Department has been notified pursuant to Section 1600.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

4.4.3. Regional Regulations

El Dorado County General Plan

The *El Dorado County General Plan Conservation and Open Space Element* identifies specific goals, objectives, and policies pertaining to the management, preservation, and conservation of natural resources and open space (El Dorado County 2004). The General Plan states that existing natural resources and open space to be conserved and improved include water, native plants, fish, wildlife species and habitat, and federally classified wilderness areas; and preserve resources of significant biological and ecological importance.

Goal 7.4 Wildlife and Vegetation Resources

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

Objective 7.4.1 Rare, Threatened, and Endangered Species

The County shall protect State and Federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws.

Policy 7.4.1.6 All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP).

Objective 7.4.2 Identify and Protect Resources

Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.5 Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

Policy 7.4.2.9 The Important Biological Corridor (-IBC) overlay shall apply to lands identified as having high wildlife habitat values because of extent, habitat function, connectivity, and other factors. Lands located within the overlay district shall be subject to the following provisions except that where the overlay is applied to lands that are also subject to the Agricultural District (-A) overlay or that are within the Agricultural Lands (AL) designation, the land use restrictions associated with the -IBC policies will not apply to the extent that the agricultural practices do not interfere with the purposes of the -IBC overlay.

- *Increased minimum parcel size;*
- *Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;*
- *Lower thresholds for grading permits;*
- *Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;*
- *Increased riparian corridor and wetland setbacks;*
- *Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Game);*
- *Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;*

- *Building permits discretionary or some other type of “site review” to ensure that canopy is retained;*
- *More stringent standards for lot coverage, floor area ratio (FAR), and building height; and*
- *No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).*

The standards listed above shall be included in the Zoning Ordinance.

Wildland Fire Safe measures are exempt from this policy, except that Fire Safe measures will be designed insofar as possible to be consistent with the objectives of the Important Biological Corridor.

Objective 7.4.4 Forest and Oak Woodland Resources

Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.

Policy 7.4.4.4

For all new development projects (not including agricultural cultivation and actions pursuant to an approved Fire Safe Plan necessary to protect existing structures, both of which are exempt from this policy) that would result in soil disturbance on parcels that (1) are over an acre and have at least 1 percent total canopy cover or (2) are less than an acre and have at least 10 percent total canopy cover by woodlands habitats as defined in this General Plan and determined from base line aerial photography or by site survey performed by a qualified biologist or licensed arborist, the County shall require one of two mitigation options: (1) the project applicant shall adhere to the tree canopy retention and replacement standards described below; or (2) the project applicant shall contribute to the County’s Integrated Natural Resources Management Plan (INRMP) conservation fund described in Policy 7.4.2.8.

Option A

The County shall apply the following tree canopy retention standards:

Percent Existing Canopy Cover	Canopy Cover to be Retained
80–100	60% of existing canopy
60–79	70% of existing canopy
40–59	80% of existing canopy
20–39	85% of existing canopy
10-19	90% of existing canopy

1-9 for parcels > 1 acre	90% of existing canopy
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Under Option A, the project applicant shall also replace woodland habitat removed at 1:1 ratio. Impacts on woodland habitat and mitigation requirements shall be addressed in a Biological Resources Study and Important Habitat Mitigation Plan as described in Policy 7.4.2.8. Woodland replacement shall be based on a formula, developed by the County, that accounts for the number of trees and acreage affected.

Policy 7.4.4.5 Where existing individual or a group of oak trees are lost within a stand, a corridor of oak trees shall be retained that maintains continuity between all portions of the stand. The retained corridor shall have a tree density that is equal to the density of the stand.

Objective 7.4.5 Native Vegetation and Landmark Trees

Protect and maintain native trees including oaks and landmark and heritage trees.

Policy 7.4.5.2 It shall be the policy of the County to preserve native oaks wherever feasible, through the review of all proposed development activities where such trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner. To ensure that oak tree loss is reduced to reasonable acceptable levels, the County shall develop and implement an Oak Tree Preservation Ordinance that includes the following components:

- A. Oak Tree Removal Permit Process. Except under special exemptions, a tree removal permit shall be required by the County for removal of any native oak tree with a single main trunk of at least 6 inches' diameter at breast height (dbh), or a multiple trunk with an aggregate of at least 10 inches dbh. Special exemptions when a tree removal permit is not needed shall include removal of trees less than 36 inches dbh on 1) lands in Williamson Act Contracts, Farmland Security Zone Programs, Timber Production Zones, Agricultural Districts, designated Agricultural Land (AL), and actions pursuant to a Fire Safe plan; 2) all single family residential lots of one acre or less that cannot be further subdivided; 3) when a native oak tree is cut down on the owner's property for the owner's personal use; and 4) when written approval has been received from the County Planning Department. In passing judgment upon tree removal permit applications, the County may impose such reasonable conditions of approval as are necessary to protect the health of existing oak trees, the public and the surrounding property, or sensitive habitats. The County Planning*

Department may condition any removal of native oaks upon the replacement of trees in kind. The replacement requirement shall be calculated based upon an inch for inch replacement of removed oaks. The total of replacement trees shall have a combined diameter of the tree(s) removed. Replacement trees may be planted onsite or in other areas to the satisfaction of the County Planning Department. The County may also condition any tree removal permit that would affect sensitive habitat (e.g., valley oak woodland), on preparation of a Biological Resources Study and an Important Habitat Mitigation Program as described in Policy 7.4.1.6. If an application is denied, the County shall provide written notification, including the reasons for denial, to the applicant.

- B. Tree Removal Associated with Discretionary Project. Any person desiring to remove a native oak shall provide the County with the following as part of the project application:*
- A written statement by the applicant or an arborist stating the justification for the development activity, identifying how trees in the vicinity of the project or construction site will be protected and stating that all construction activity will follow approved preservation methods;*
 - A site map plan that identifies all native oaks on the project site; and*
 - A report by a certified arborist that provides specific information for all native oak trees on the project site.*

4.4.4. Impact Analysis

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less Than Significant With Mitigation Incorporated. The Proposed Project would involve construction of several new facilities and the renovation of existing facilities to bring the Auburn Lake Trails WTP into compliance with State and federal standards. A *Biological Letter Report* was prepared for the two-acre site to document potential for sensitive species and biological communities to occur within the Project Site (Foothill Associates 2014). The criteria enumerated within the methodology subsection under “Environmental Setting” were utilized to determine each species potential for occurrence within the Project Site. Only those species that are known to be present or that have a high or low potential for occurrence will be discussed in further detail.

Listed and Special-Status Plants

Brandegee's Clarkia

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*) is an annual herb found often in roadcuts within chaparral, cismontane woodland, and coniferous forest. There are three CNDDDB record for this species within five miles of the Project Site (**Figure 4.4-1**) (CDFW 2016). The records are to the north and west of the Project Site. The coniferous forest provides habitat for the species. Brandegee's clarkia was not observed within the Project Site during the biological survey. This species has a *high* potential to occur within the Project Site.

Butte County Fritillary

Butte County fritillary (*Fritillaria eastwoodiae*) is found in cismontane woodland, chaparral, and lower montane coniferous forest. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 4.4-1**) (CDFW 2016). The record is approximately 2.5 miles northeast of the Project Site. The coniferous forest provides habitat for the species. Butte County fritillary was not observed within the Project Site during the biological survey. This species has a *high* potential to occur within the Project Site.

Oval-Leaved Viburnum

Oval-leaved viburnum (*Viburnum ellipticum*) is a perennial bulbiferous herb found in cismontane woodland, chaparral, and lower montane coniferous forest. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 4.4-1**) (CDFW 2016). The record is approximately 4.5 miles northwest of the Project Site. The coniferous forest provides habitat for the species. Oval-leaved viburnum was not observed within the Project Site during the biological survey. This species has a *high* potential to occur within the Project Site.

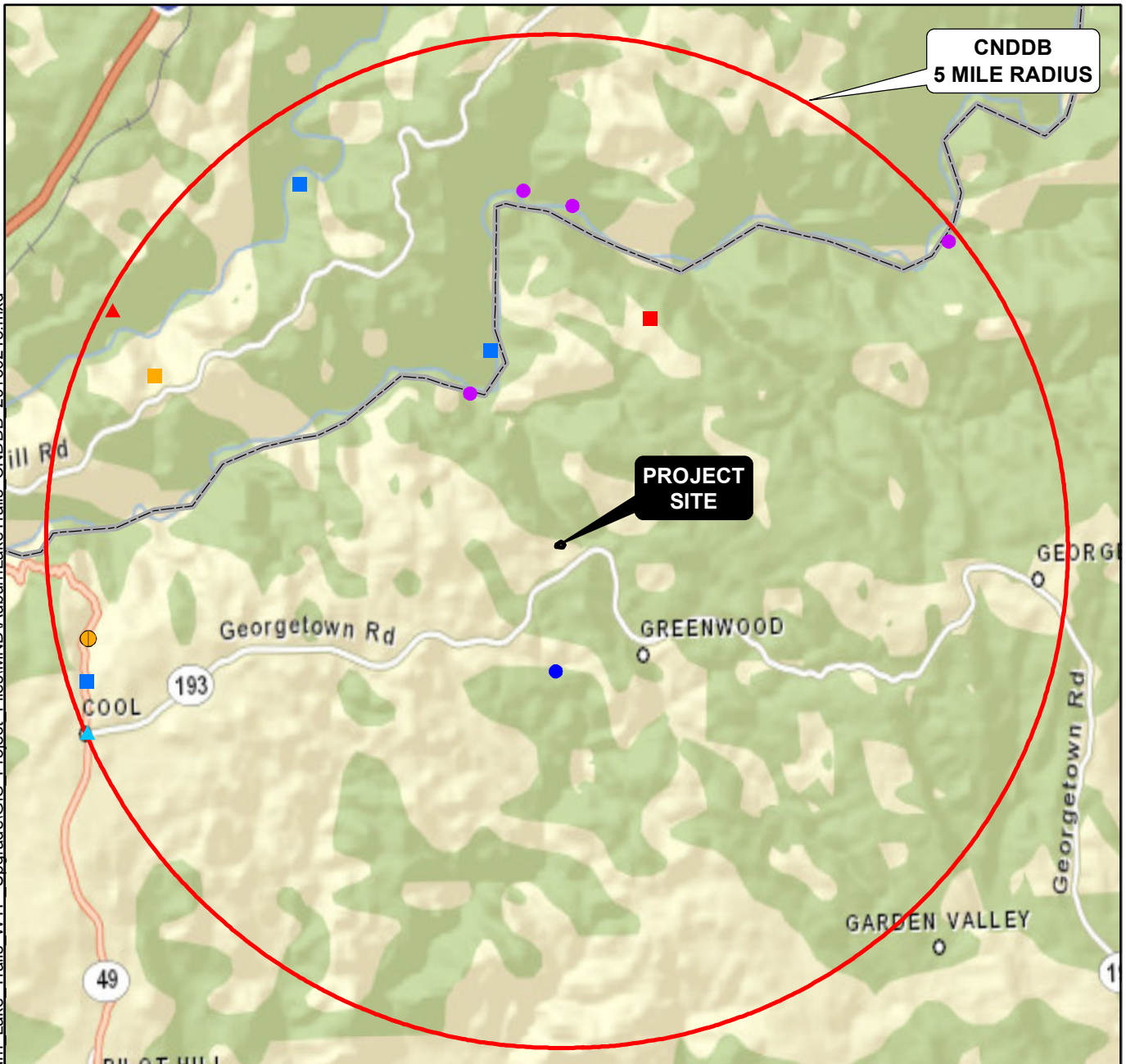
Listed and Special-Status Wildlife

Northwestern pond turtle (*Actinemys marmorata*) and migratory birds and other birds of prey have a high potential to occur within the Project Site, and the California red-legged frog (*Rana draytonii*) has a low potential to occur within the Project Site.

Special-Species with a High Potential to Occur

Northwestern Pond Turtle

Northwestern pond turtles require slow moving perennial aquatic habitats with suitable basking sites. Northwestern pond turtles occasionally inhabit irrigation ditches. Suitable aquatic habitat typically has a muddy or rocky bottom and has emergent aquatic vegetation for cover. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 4.4-1**) (CDFW 2016). The record is approximately one-mile south of the Project Site. The pond provides habitat for the species. No northwestern pond turtles were observed within the Project Site during the biological survey. This species has a *high* potential to occur within the Project Site.



CNDDB
5 MILE RADIUS

PROJECT
SITE



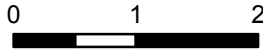
CNDDB Occurrences

■ Brandegee's clarkia	▲ Galile's cave harvestman	● foothill yellow-legged frog
■ Butte County fritillary	▲ vernal pool andrenid bee	● western pond turtle
■ oval-leaved viburnum	● tight coin (Yates' snail)	

SOURCE: Department of Fish and Wildlife, CA Natural Diversity Database (CNDDDB), 01/05/2016. CNDDDB points are centroids of polygon occurrences. These points do not represent actual point locations of occurrence.

Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, IPC, TomTom

CNDDB

 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE © 2016		 SCALE IN MILES	Drawn By: CCH, MUB Date: 02/15/2016	FIGURE 4.4-1
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Migratory Birds and Other Birds of Prey

Migratory birds and other birds of prey, protected under 50 CFR 10 of the Migratory Bird Treaty Act (MBTA) and/or Section 3503 of the California Fish and Game Code, have the potential to nest in the ornamental trees and coniferous forest within the Project Site. Trees within 500 feet of the Project Site provide habitat for nesting birds. Several birds protected under the MBTA and/or Section 3503 of the California Fish and Game Code were observed foraging within the vicinity of the Project Site. Migratory birds and other birds of prey have a *high* potential to nest within the Project Site during the nesting season.

Special-Status Species with a Low Potential to Occur

California Red-Legged Frog (CRLF)

CRLF typically inhabit ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Eggs often are attached to emergent vegetation and float at the surface. Submerged root masses and undercut banks are important habitat features for this species. In summer, CRLF aestivate in small mammal burrows, leaf litter, or other moist sites in or near riparian areas. Although CRLF historically occurred throughout much of the Central Valley, it is widely accepted that they have been extirpated from there for more than 50 years. All of the extant records for CRLF in the Sierras are over 800 feet above MSL. Below this elevation, aquatic habitat generally supports stronger populations of non-native predators associated with warm water habitats such as bullfrogs (*Lithobates catesbeiana*) and Centrarchid fish.

There are no known CNDDDB occurrences for this species within five miles of the Project Site (CDFW 2016). The nearest CNDDDB occurrence is approximately seven miles east of the Project Site. The pond within the Project Site contains hundreds of bullfrogs and fish, which are predators to CRLF, and the species' typically, do not co-exist. In addition, the Project Site lacks dense riparian vegetation required for shelter and for egg-laying. Further, the Project Site lacks upland aestivation habitat given that the pond is surrounded by ruderal/developed areas that lack small mammal burrows. No CRLF were observed within the Project Site during the biological survey. Although unlikely given the lack of known occurrences within five miles, the large number of bullfrogs and fish that occur within the pond, which are predators to CRLF, and the lack of dense riparian required for CRLF for shelter or egg-laying, CRLF have a low potential to occur within the Project Site.

The September 2, 2015 letter from the U.S. Fish and Wildlife Service (USFWS) *Concurrence with a May Effect, Not Likely to Adversely Affect Determination for the Auburn Lake Trails Water Treatment Upgrade Project, El Dorado County California* concurs with the finding that the Proposed Project may affect, but is not likely to affect the federally-threatened CRLF (**Appendix D**). The letter states that it is unlikely that the CRLF would be affected by the Proposed Project because the Project Site is small and mostly developed or ruderal; the Proposed Project would not affect any aquatic habitat; there are numerous bullfrogs and fish in the nearby pond with no other aquatic habitat nearby; and there are no document occurrences of CRLF within five miles of the Project Site. However, implementation of **Mitigation Measure BIO – 1** would

ensure that the CRLF would not be adversely affected by the Proposed Project by requiring pre-construction surveys and construction personnel training.

Conclusion

Several special-status species have been identified and/or have the potential to occur within the Project Site and would be impacted by the Proposed Project. Implementation of **Mitigation Measure BIO – 1 through Mitigation Measure BIO – 4** would require pre-construction surveys prior to implementation of construction activities ensuring no adverse effects to special-status species. These measures would reduce potential impacts to special-status species to a less than significant level. Therefore, impacts to special-status species are considered to be **less than significant with mitigation incorporated**.

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

Less than Significant With Mitigation Incorporated. Sensitive habitats include those that are of special concern to resources agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act (see above detail on Regulatory Setting). The Project Site includes the following biological communities: ruderal/developed, disturbed non-native grassland, coniferous forest, wetland, and settling pond (**Figure 4.4-2**). **Table 4.4-1** below provides a summary of biological communities by acreage within the Project Site. Dominant vegetation within each habitat type is identified below.

TABLE 4.4-1 — BIOLOGICAL COMMUNITIES WITHIN THE PROJECT SITE

Habitat Type	Acreage
Ruderal/Developed	0.94
Non-Native Annual Grassland	0.79
Coniferous Forest	0.15
Wetland	<0.01
Settling Pond	0.07
Total	1.96

Biological Communities

Ruderal/Developed

The majority of the Project Site is comprised of ruderal/developed areas. Ruderal/developed areas include: water tanks and buildings, graded roads, and disturbed ground. Ornamental landscape trees including coast redwood (*Sequoia sempervirens*) and cedar (*Cedrus* sp.) occur within the ruderal areas. Non-native weedy species including turkey-mullein (*Croton setigerus*) and yellow star-thistle (*Centaurea solstitialis*) occur within the disturbed ground.

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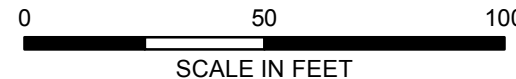
Biological Communities

- Coniferous Forest - 0.15 Acres
- Wetland - <0.01 Acres
- Settling Pond - 0.07 Acres
- Nonnative Annual Grassland - 0.79 Acres
- Redural/Developed - 0.94 Acres

**Project Site
1.952 Acres**



BIOLOGICAL COMMUNITIES



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Non-Native Annual Grassland

Disturbed non-native annual grassland occurs within the eastern portion of the Project Site. The grassland had recently been mowed at the time of the August 11, 2014 biological survey. Dominant vegetation includes: soft brome (*Bromus hordeaceus*), wild oat (*Avena* sp.), and yellow star-thistle.

Coniferous Forest

Coniferous forest occurs within the southern portion of the Project Site. Dominant vegetation includes foothill pine (*Pinus sabiniana*), soft brome, and wild oat.

Wetland

A wetland occurs within the southern portion of the Project Site. The wetland is a man-made feature that was formed from runoff from the tanks within the Project Site. The wetland is present year-round as a result of the continual runoff from water treatment operations. The wetland would dry up if water stopped flowing from the tanks. Dominant vegetation includes: Johnson grass (*Sorghum halipense*), spikerush (*Eleocharis macrostachya*), cudweed (*Euchiton* sp.), nutsedge (*Cyperus eragrostis*), and salt grass (*Distichlis spicata*).

Settling Pond

A water settling pond is located in the southern portion of the Project Site. The pond is routinely cleared of vegetation during routine maintenance activities. At the time of the August 11, 2014 biological survey, the perimeter of the pond was comprised of sparsely vegetated species including nutsedge, cattail (*Typha* sp.), and annual beard grass (*Polypogon monspeliensis*).

The water settling pond operation is routinely cleared of vegetation up to the property boundary. This management practice precludes the establishment or presence of any riparian vegetation and reduces the likelihood that the pond would be used by California red-legged frog and northwestern pond turtle. The pond is relatively shallow and barren, which further reduces their habitat value for these two species. However, due to the close proximity of the pond to the reservoir, the water settling pond represents low quality habitat for the California red-legged frog and northwestern pond turtle. In addition, biological communities on the Project Site have the potential to support special-status species.

The settling pond was constructed in uplands as part of the construction of the WTP and is therefore not subject to jurisdiction under Section 404 of the Clean Water Act (40 CFR 230.3(s)(7)). The wetland is a man-made feature that was formed from runoff from the tanks within the Project Site. Although the wetland is present year-round as a result of the continual runoff from water treatment operations and would dry up if water stopped flowing from the tanks. Therefore, in accordance with Final Rule issued by the Corps in 1986 (51 Federal Register 41217: CFR 328.3d(b), November 13, 1986), this wetland is not considered jurisdictional.

Conclusion

Project development would involve the construction of several new facilities as well as upgrades to existing facilities, potentially impacting sensitive habitats. There are several oak trees that occur on the Project Site along Sweetwater Trail; therefore, *El Dorado County General Plan Policy 7.4.4.4* would apply to the Proposed Project if these trees would be removed as part of project development. Implementation of **Mitigation Measure BIO – 5** would require an arborist survey prior to removal of any oak trees and a buffer around tree driplines for root protection. Impacts to wetlands and ponds are regulated by the County of El Dorado under General Plan Policy 7.3.3.4, which calls for a minimum setback of 100 feet from perennial streams, rivers, and lakes, and 50 feet from intermitted streams and wetlands. Implementation of **Mitigation Measure BIO – 6** would reduce impacts to sensitive habitats to less than significant by establishing a 100-foot setback from the reservoir and requiring the implementation of best management practices. Impacts are therefore considered **less than significant with mitigation incorporated**.

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

No Impact. A professional biologist conducted a field habitat assessment on August 11, 2014 and determined that there are no federally protected wetlands or waters of the U.S. as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pools, coastal, etc.) occurring on the Project Site. The settling pond was constructed in uplands as part of the construction of the WTP and is therefore not subject to jurisdiction under Section 404 of the Clean Water Act (40 CFR 230.3(s)(7)). The wetland is a man-made feature that was formed from runoff from the tanks within the Project Site. Although the wetland is present year-round as a result of the continual runoff from water treatment operations, it has formed since the 2010 EA/IS and would dry up if water stopped flowing from the tanks. Therefore, in accordance with Final Rule issued by the Corps in 1986 (51 Federal Register 41217: CFR 328.3d(b), November 13, 1986), this wetland is not jurisdictional. Therefore, **no impacts** to federally protected wetlands and waters of the U.S. would result from development of the Proposed Project.

- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant With Mitigation Incorporated. The Proposed Project would result in construction activities within portions of El Dorado County designated as an “Important Biological Corridor”. As stated in the General Plan, the “Important Biological Corridor overlay shall apply to lands identified as having high wildlife habitat values because of extent, habitat function, connectivity, and other factors” (El Dorado County 2004). Migratory birds and other birds of prey live within the trees and shrubs on the Project Site that may be affected by project construction. **Mitigation Measure BIO – 2** would reduce impacts to any nesting raptors or bird species protected by the MBTA to below the level of significance. The majority of the Project

Site is developed or mowed; therefore, proposed improvements are not expected to substantially interfere with any other native resident or migratory fish or wildlife species, established native or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, impacts to wildlife corridors are **considered less than significant with mitigation incorporated**.

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

Less Than Significant With Mitigation Incorporated. Pursuant to the El Dorado General Plan, potential impacts to plant or wildlife species that are State and federally recognized are expected to be avoided or minimized with **Mitigation Measure BIO – 1 through Mitigation Measure BIO – 4**. Sub-section “a” provides a more detailed discussion of listed species and their corresponding mitigation measures, where applicable.

A smaller number of planted trees occur on the WTP site. Trees, together and individually, compose the character of each site and serve as habitat for several species of wildlife. The *El Dorado County General Plan, Conservation and Open Space Element* regulates impacts to tree canopy under General Plan Policy 7.4.4.4. This policy set forth percentages of on-site canopy retention requirements for development projects until the County developed a County-wide strategy. In 2008, the County adopted the *El Dorado County Oak Woodland Management Plan* (OWMP) to implement these General Plan oak woodland protection policies. The County’s adoption of the OWMP was challenged in court. In 2012, the Appellate Court upheld the CEQA challenge to the OWMP and directed the County to prepare an Environmental Impact Report for the OWMP. Currently, a General Plan amendment is being prepared to clarify and refine the County’s oak tree protection policies.

As a result, only Option “A” of Policy 7.4.4.4 is applicable to oak woodland mitigation. Impacts to oak woodland canopy are currently assessed under the *Interim Interpretive Guidelines* amended October 12, 2007 (see El Dorado County Plan section above for Policy 7.4.4.4). The Project Site contains several oak trees along Sweetwater Trail. If any oak trees must be removed as a result of the Proposed Project **Mitigation Measure BIO – 5** shall be implemented. This mitigation measure would reduce any impacts to trees regulated by the County’s tree ordinance to a less than significant level by requiring an arborist survey and possible mitigation required by Policy 7.4.4.4.

Policy 7.4.2.5 in the El Dorado General Plan requires that a setback from all rivers streams, and lakes be included in the Zoning Ordinance for all ministerial and discretionary development projects. The Project Site is located adjacent to reservoirs and the site boundaries about these water bodies. There is currently no formally designated setback for water bodies in the Zoning Ordinance; however, a setback of 100 feet is in place through the *El Dorado General Plan, Conservation and Open Space Element* until a setback is implemented through the Zoning Ordinance. **Mitigation Measure BIO – 6**, would reduce potential impacts to the nearby reservoirs to below the level of significance. Therefore, impacts are considered **less than significant with mitigation incorporated**.

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

No Impact. There are no adopted or proposed Habitat Conservation Plans, Natural Community Conservation Plans or other approved local, regional, or State habitat conservation plans that include the Project Site. Therefore, no conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plans would occur as a result of the Proposed Project. Therefore, there would be **no impact** to a Conservation Plan resulting from development of the Proposed Project.

4.4.5. Mitigation Measures

Mitigation Measure BIO – 1:

Pre-construction survey(s) for California red-legged frog (CRLF) species shall be performed. At least 15 calendar days prior to beginning the pre-construction surveys, the applicant shall submit the name(s) and credentials of biologist(s) who could conduct the surveys to the USFWS. The survey(s) only needs to be conducted within 100 feet of the frog's associated aquatic and bank habitats, as well as the water settling ponds on the WTP site. Survey(s) shall be conducted by a qualified biologist, in accordance with USFWS Guidelines, and during the appropriate time of year for optimal detection of this species, from February through May when this species is most active. If there is a rain event between when the protocol surveys were performed and when construction begins, the USFWS approved biologist shall survey the area to be affected within 24 hours of the onset of construction.

Prior to construction a USFWS approved biologist shall train all construction personnel regarding habitat sensitivity and identification of special-status species, including the CRLF. This training shall include the legal status of the CRLF and penalties for "take" of the species, and the proper action to take if the species is encountered. If new construction personnel are added to the project, the contractor will ensure that the personnel receive the mandatory training before starting work. A fact sheet that contains this information will be prepared and distributed to all construction personnel. Upon complete of training, construction personnel will sign a form stating that they attended the training and understand all the conservation and protection measures. Additionally, all erosion control measures shall be free of

plastic monofilament or netting, preventing the entanglement of amphibians and reptiles in these materials.

If the CRLF is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFW and/or USFWS which may include measures to minimize adverse effects of construction on California red-legged frog and its associated habitat. The mitigation plan would include a monitoring plan for this species during the period of construction. If a CRLF is found during construction all work in the immediate area shall stop and the USFWS will be contacted. The CRLF will not be handled or harassed, and work shall not continue until the USFWS has provided guidance.

Mitigation Measure BIO – 2:

A pre-construction raptor survey within suitable nest trees shall be conducted if construction activities are scheduled to begin during the raptor nesting season (January 1 – September 31). A qualified biologist shall conduct the survey no more than 30 days prior to the onset of construction activities. If active nests are found on or within 500 feet of the site, CDFW shall be consulted and most likely CDFW will require that an appropriate buffer be established around the nest until the young have fledged or until the biologist has determined that the nest is no longer active. If the construction activities are scheduled to begin during the non-breeding season (October 1- December 31), a survey is not required, and no further mitigation measures are expected to be necessary. If tree removal is determined necessary, timing tree removal to occur during this time frame would also reduce the potential for raptors to nest within the construction limits of the site during the nesting season.

Mitigation Measure BIO – 3:

A pre-construction survey for northwestern pond turtle shall be performed. The survey(s) shall be conducted in the turtle's associated aquatic and upland habitats (portions of the sites within 200 feet of the reservoirs and water settling ponds). Surveys shall be conducted by a qualified biologist, in accordance with CDFW guidelines, and during the appropriate time of year, from February through late October, when this species is most active.

If this species is not found on the Project Site during the focused pre-construction survey, no further mitigation would be required. However, if this species is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFW and shall include measures to minimize adverse effects of construction on northwestern pond turtle and its associated habitat, including a monitoring plan for this species during the period of construction.

Mitigation Measure BIO – 4:

A pre-construction survey for special-status plant species with potential to occur within the Project Site shall be performed to determine their presence or absence within the Project Site prior to the installation of WTP improvements. Special-status plant species that shall be surveyed include: Brandegee’s Clarkia (*Clarkia biloba* ssp. *brandegeae*), Butte County Fritillary (*Fritillaria eastwoodiae*), and Oval-Leaved Viburnum (*Viburnum ellipticum*). The focused botanical survey(s) shall be performed within the optimum identification period, to the extent possible, of each species identified in **Appendix C** with a high potential to occur within the Project Site.

If these species are not found on the Project Site, then no further mitigation would be required. However, if these species are found, then consultation with the appropriate resource agencies shall be required and a mitigation plan shall be prepared. The mitigation plan should detail the various mitigation approaches to ensure “no-net-loss” of special-status plants. Examples of mitigation include avoidance of the plant species, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports these species.

Mitigation Measure BIO – 5:

Prior to any tree impacts occurring from project-related construction/improvements, an arborist survey shall be performed by an International Society of Arboriculture Certified Arborist based on the preparation of final site grading plans. Per the General Plan, the amount of tree impacts, oak tree canopy and oak woodland occurring on the Project Site, if any, shall be determined during the arborist survey and results presented in the arborist report. Only tree species subject to protection under the *El Dorado County General Plan* would require inventory

and possible mitigation required by the El Dorado County General Plan policies and Oak Woodland Ordinance. If indirect impacts to a tree's dripline or root protection zone may occur, measures to minimize impacts during construction shall be implemented. All impact avoidance measures identified in the El Dorado General Plan shall be implemented prior to, during, and following construction as appropriate.

Mitigation Measure BIO – 6:

Project activities shall be conducted outside of the temporary setback distance of 100 feet from the reservoirs adjacent to the Project Site, where possible.

If unavoidable project activities on the Project Site must occur within the 100-foot setback, uphill from the respective reservoir, then an entrenched silt-fence shall be installed adjacent to the downhill limit of work to fully encompass the lower side of the active area. Silt fences shall be installed per guidelines included in the *California Department of Transportation, Construction Site Best Management Practices Manual, Silt Fences* (California Department of Conservation 2003). Additionally, no work will occur within 10 feet of the edge of any wetland or riparian vegetation associated with either reservoir. Prior to the removal of any silt fences, or during the implementation of Best Management Practices (BMPs), a Certified Professional in Storm Water Quality or Certified Professional in Erosion and Sediment Control be consulted on best stabilization and sediment control options.

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4.5. Cultural Resources

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

4.5.1. Environmental Setting

The Project Site encompasses approximately two acres located between Sweetwater Trail on the east and north, and State Route 193 on the south, in northern El Dorado County, California. The Auburn Lake Trails facility is located within the southwest quarter of Section 1 of Township 12 North, Range 9 East, as shown on the USGS *Greenwood* 7.5-minute series quadrangle.

Much of the land in this general area has been subjected to mining, logging, agricultural, and light residential development, while the area has been subjected to extensive past mining and ranching since the middle of the 19th Century. A number of important water courses are located near the project area, including the Middle Fork of the American River, which is located approximately four miles northwest of the Area of Potential Effect (APE) (Jensen 2010).

Most of the ALT WTP APE has been subjected to intensive disturbance. The existing facility consists of multiple structures, tanks, effluent ponds, underground components, fencing and utilities. The existing facility consists entirely of contemporary water treatment components and structures. The location of the proposed filter building consists of a moderately steep slope of mowed grasses (Jensen 2010).

Based on available topographic and other maps, but notwithstanding the effects of past and on-going land uses, the project area appeared to contain lands moderate in sensitivity for both prehistoric and historic sites and features (Jensen 2010).

Geology

El Dorado County is located within the Sierra Nevada geomorphic province of California consisting of Pliocene and older deposits and characterized by steep-sided hills and narrow, rocky stream channels. Geologic deposits have been subject to uplifting as a result of plate tectonics, granitic intrusion, and volcanic activity. The east-west orientation of stream channels within the County is a result of glaciation and volcanic activity (County of El Dorado 2003).

Methodology

Compliance with CEQA requires completion of projects in conformity with the amended (October 1998). Guidelines, including in particular Section 15064.5, Compliance with Section 106 of the National Historic Preservation Act (NHPA) requires completion of projects in conformity with the standards, guidelines, and principles in the *Advisory Council's Treatment of Archaeological Properties: A Handbook* (1980), and *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (1983). Based on these rules, regulations and laws, the following tasks were considered an adequate and appropriate Scope of Work for the archaeological inventory:

- Conduct a records search at the North Central Information Center of the California Historical Resources Information System at CSU-Sacramento and consult with the Native American Heritage Commission (NAHC) and Native American representatives on the NAHC contact list. The goals of the records search and consultation are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationship between known sites and environmental variables. This step is also designed to ensure that, during subsequent field survey work, all significant/eligible cultural resources are discovered, correctly identified, and properly interpreted.
- Conduct a complete-coverage, intensive pedestrian survey of the APE. The purpose of the pedestrian survey is to ensure that previously recorded sites identified during the records search and consultation are re-located and eligibility evaluations updated on the basis of existing conditions vis-à-vis site integrity and condition. For previously undocumented sites discovered, the field survey would involve formally recording these on State DPR-523 Primary Records. For both previously identified and newly identified resources, the level of field work would be sufficient to recommend measures to avoid, minimize, or mitigate adverse effects of the undertaking to any sites recommended eligible or potentially eligible for listing on the National Register of Historic Places.
- Upon completion of the records search, consultation and pedestrian survey, prepare an archaeological inventory survey report that identifies project effects and that includes an Historic Properties Treatment Plan for any eligible or potentially eligible properties affected by the undertaking.

Several information sources were considered relevant to evaluating the types of sites and site distribution that might be encountered within the project area. The information evaluated

includes data maintained by the North Central Information Center of the California Historical Resources Information System (CSU-Sacramento), consultation with the NAHC and Native American representatives on the NAHC contact list, and published and unpublished documents relevant to regional ethnography, prehistory, and early historic developments.

North Central Information Center Records

The records of the North Central Information Center (CSU-Sacramento) were examined for existing recorded prehistoric and historic sites and previous archaeological surveys within or near the project area (Records Search dated November 25, 2009, NCIC File # ELD-09-90), with the following results:

Previous Archaeological Survey

None of the Auburn Lake Trails treatment plant facility has been previously subjected to survey by a professional archaeologist. Three surveys have been conducted on lands immediately adjacent to the facility. However, these previous investigation areas do not appear to overlap with the Auburn Lake Trails Water Treatment Plant Facility (Jensen 2010).

Native American Consultation

In conjunction with the records search for the present project, the Native American Heritage Commission was contacted regarding Sacred Land Listings. The NAHC indicated that there are no Sacred Land listings for the project area or adjacent lands (response dated December 3, 2009, **Appendix E**). The contact list from the Native American Heritage Commission included the following individuals and groups, all of whom were contacted and requested to supply any information they might have concerning prehistoric sites or traditional use areas within the project area:

- El Dorado County Indian Council, El Dorado, California;
- United Auburn Indian Community of the Auburn Rancheria, Auburn, California;
- Todd Valley Miwok-Maidu Cultural Foundation, Foresthill, California; and
- April Wallace Moore, Colfax, California.

To date, no responses have been received from these contacted groups.

Other Sources

In addition to examining records at the North Central Information Center at CSU-Sacramento and Native American consultation, the following sources were also reviewed by the Information Center, or separately:

- The National Register of Historic Places (1986, and supplements through 2009);
- The California Register of Historical Resources;
- The California Inventory of Historic Resources (State of California 1976);
- The California Historical Landmarks (State of California 1996);
- The California Points of Historical Interest (May 1992 and updates);
- The Historic Property Data File (OHP 2009);

- Caltrans Bridge Inventory; and
- 1871 GLO Plat for T12N/R9E; 1871 GLO Plat for T13N/R10E; 1849 USGS 7.5' *Greenwood* quad.

Published and unpublished documents relevant to environment, ethnography, prehistory and early historic developments in the vicinity, providing context for assessing site types and distribution patterns for the project area (summarized below).

Pedestrian Survey and Inventory

Pedestrian field survey was undertaken by Archaeologist Sean Michael Jensen in December 2009. The project APE land area was subjected to intensive pedestrian survey by walking back and forth across the two-acre land with systematic transects spaced at approximate 10 meter intervals. In searching for cultural resources, the surveyor considered the results of background research and was alert for unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Prehistory

Initial human entry into California occurred at the beginning of the paleo-Indian Period – between about 10,000 and 6,000 B.C. (Fredrickson 1974). Within portions of the Central Valley, fluted projectile points have been found at Tracy Lake (Heizer 1938) and around the margins of Buena Vista Lake in Kern County. Similar materials have been found to the north, at Samwel Cave near Shasta Lake and near McCloud and Big Springs in Siskiyou County. These early peoples are thought to have subsisted using a combination of hunting and lacustrine exploitation (Moratto 2004).

These early cultural assemblages were followed by an increase in Native population density about 7,500 years ago. Archaeologically defined as the Lower Archaic Period (6,000 to 3,000 BC), the transition to a less specialized foraging strategy clearly coincides with a middle Holocene climatic change to generally drier conditions which brought about desiccation of many of the West's pluvial lakes. Hunting and gathering populations of this period were small, mobile groups which focused increasingly on diverse environmental settings. By the beginning of the Middle Archaic Period (from about 3,000 to 1,000 BC), the broad regional patterns of foraging subsistence strategies had given way to more intensive procurement strategies, manifest in part by the establishment of year-round use of select village sites which in turn were located along major waterways. One of the most securely dated of these Archaic assemblages in north-central California is from the Squaw Creek Site located north of Redding. Here, a charcoal-based C-14 date suggests extensive Native American presence around 6,500 years ago, or 4,500 BC. Most of the artefactual material dating to this time period has counterparts further south, around Borax (Clear) Lake and the Farmington Area a short distance east of Sacramento. Important artifact types from this time period include large wide-stemmed projectile points and manos and metates.

Toward the end of this period, between about 1,000 BC and AD 100, sociopolitical complexity and the development of status distinctions appear, partially defining the Upper Archaic Period. Archaeological expressions within the northern and north-central Sierra Nevada during this period are defined as the Martis Complex, which maintained a hunter gathering subsistence strategy and a high degree of mobility. Distinctive artifact types include manos and metates used for processing food, and relatively large, heavy projectile points and bifaces manufactured from locally available basalt.

Defining the Emergent Period, from AD 300-500 through AD 1,800, within both northern and north-central Sierra Nevada and Central Valley contexts, Penutian-speaking Native American peoples are thought to have arrived, including those (i.e., Nisenan) who occupied the Lanza-Cool project area at the time of initial contact with European-American populations. Arriving ultimately from southern Oregon and the Columbia and Modoc Plateau region and proceeding down the major drainage systems (including the Feather, Yuba, Bear and American Rivers), these Penutian-speaking arrivals may have begun to displace the Martis populations, especially along the major river systems (Moratto 2004:303- 304). Presumably introduced by these Penutian arrivals were more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and cornernotched projectile points (Ragir 1972) (Jensen 2010).

Ethnography

The Project Site is located within territory occupied by the Hill Nisenan (Wilson and Towne 1978: Figure 1), Native American peoples who are also referred to as “Southern Maidu.” These Penutian-speaking peoples occupied the drainages of the southern Feather River and Honcut Creek in the north, through Bear River and the Yuba and American River drainages in the south. Villages were frequently located on flats adjoining streams, with the larger villages inhabited mainly in the winter as it was usually necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer and fall).

As with all northern California Indian groups, economic life for the Nisenan revolved around hunting, fishing and the collecting of plant foods. The Nisenan were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources which could be used in manufacturing an immense array of primary and secondary tools and implements. Unfortunately, only fragmentary evidence of the material culture of these people remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Based on the results of previous survey work within and near the Project Site and similar Sierra Nevada contexts, the range of prehistoric site types within the present project area was anticipated to include, or already documented as including, the following:

- Surface scatters of lithic artifacts and debitage associated with midden accumulations and occasionally other surface features (i.e., circular housepit depressions, mortar

holes) resulting from protracted occupation along the margins of stream channels, particularly where such channels merge with one another.

- Surface scatters of lithic artifacts and debitage without midden accumulations, resulting from short-term occupation and/or specialized economic activities, such as possible quarry and lithic reduction activity.
- Bedrock milling stations, including mortar holes and metate slicks.
- Petroglyphs.
- Isolated finds of aboriginal artifacts and flakes.

It was not expected that all of these site types would be present within the project area; however, these site types represent the most likely types present based on the results of the previous survey involving all of the present project area (Jensen 2010).

History

There is clear historic evidence that Spanish and Mexican expeditions and early fur trapping ventures visited the northern Sacramento Valley area, including the drainages of the Feather, Yuba, Bear, and American Rivers, during the early 19th Century. However, the first major incursion by Euroamericans occurred in 1833 with the John Work Expedition through the Central Valley (Cook 1955), an expedition which introduced several devastating diseases to the Native inhabitants of the Sacramento Valley and nearby foothill regions. More permanent Euroamerican occupation followed within a decade as settlers acquired large land grants from the Mexican government throughout California.

In 1849, the discovery of gold at nearby Coloma led immediately to exploration and intensive placer mining along virtually every stream in California (Clark 1970), including tributaries and various forks of the American River.

Mining dominated the economy and supported the growth of ancillary industries such as dry goods stores, saloons, toll roads and stage lines, foundries, lumber mills, and water companies. As mining became more corporate and began to eliminate small-scale participation, many miners turned to agriculture and support industries. Most of the early ranches that resulted were self-sufficient operations which included a variety of kept animals, small plots dedicated to growing vegetables and grain, and orchards and vineyards.

Water storage and transportation and related hydroelectric development represent additional important historic themes in El Dorado County, along with logging, ground transportation, public land entry, and homesteading.

The early mining activity, coupled with historic through contemporary logging, ranching and associated water distribution projects, have all impacted prehistoric and early historic sites in this portion of El Dorado County and the Project Site. The present land area may have fared

somewhat better than other areas of the County, however, being located within a region that appears to have remained ranch land until relatively recently (Jensen 2010).

4.5.2. Regulatory Setting

Federal Regulations

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies or State and local agency projects using federal funds to take into account the effect of the undertaking on historic properties.

State Regulations

Cultural resources can include historic and archaeological objects, structures, records, and sites which are associated with past human activities. A substantial adverse change in the significance of an historical resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. (Section 15064.5 (b)(1), CEQA Guidelines).

Per the CEQA Guidelines, historical resources include the following:

- A resource listed in, or eligible for listing in, the California Register of Historical Resources (California Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 *et. seq.*);
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code;
- Any object, building, structure, site, area, place, record, or manuscript, which:
 - is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - is associated with the lives of persons important in our past;
 - embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
 - has yielded, or may be likely to yield, information important in prehistory or history.

Per Public Resources Code Section 21083.2(g), an archaeological resource shall be considered unique if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code defines general provisions for the treatment of dead bodies, and requires that the County Coroner be contacted in the event of the inadvertent discovery of human remains and all excavation or disturbance of the site or nearby areas be immediately ceased until such time as the Coroner has made a determination pursuant to Section 27491 of the Government Code. In the event that the Coroner recognizes or has reason to believe that the remains are of Native American ancestry, the Native American Heritage Commission shall be contacted within 24 hours.

Regional Regulations

El Dorado County General Plan

The *El Dorado County General Plan* identifies the following goal and policy related to Cultural Resources relevant to the Proposed Project:

Goal 7.5: Cultural Resources

Ensure the preservation of the County's important cultural resources.

Policy 7.5.1.3: Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

4.5.3. Impact Analysis

- a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?*

No Impact. As discussed above Registered Professional Archaeologist Sean Michael Jensen, M.A. prepared the January 4, 2010 *Archaeological Inventory Survey* [for the] *Auburn Lake Trails Water Treatment Project, El Dorado County, California* to identify and evaluate cultural resources within the Project Site (**Appendix E**). Findings of the pedestrian survey, existing records at CSU-Sacramento, consultation with tribal representatives, and consultation with the Native American Heritage Commission did not yield any information on historical resources

within the Project Site (Jensen 2010). Therefore, no historical resources would be affected by the Proposed Project.

Section 106 of the National Historic Preservation Act (NHPA) requires federal, State, and local agency projects using federal funds to consider historic properties in project planning. The *Office of Historic Preservation Concurrence Letter* from State Historic Preservation Officer (SHPO) Carol Roland-Nawi, dated May 5, 2014, stated that no historic properties would be affected by the Proposed Project (**Appendix F**). Therefore, there would be **no impact** to historical resources related to development of the Proposed Project.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant With Mitigation Incorporated. Neither the pedestrian survey, existing records at CSU-Sacramento, consultation with tribal representatives, nor consultation with the Native American Heritage Commission yielded any information concerning prehistoric sites or features, traditional use areas or Sacred Land listings within or adjacent to the project vicinity.

Per Assembly Bill 52 (AB 52), as of July 1, 2015 Public Resources Code Sections 21080.3.1 and 21080.3 require public agencies to consult with the Native American Heritage Commission and Native American tribes for the purpose of mitigating impacts to tribal cultural resources. The process is described in part below:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section (Public Resources Code Section 21080.1 (d)).

As of writing this document no request has yet been received for notification from any designated contact of, or tribal representative of a traditionally and culturally affiliated California Native American Tribe. Consistent with Public Resources Code Section 21080.3.1 (c) and per AB 52 the NAHC was contacted regarding Sacred Lands listings on November 23, 2009. The NAHC responded December 3, 2009 and indicated that there are no Sacred Land listings for the Project Site or adjacent lands. Native American individuals and groups identified by the NAHC were contacted and requested to supply information they might have concerning prehistoric sites or traditional use areas within the Project Site. No responses were received from the contacted groups and individuals. Therefore, no Native American archaeological resources or traditional cultural properties were identified by the Archaeological Inventory Survey (Jensen 2010).

However, although unlikely, archaeological resources could be discovered during ground-disturbing construction activities. If such resources were to be discovered, the impact to

archaeological resources could be significant without mitigation. Therefore, implementation of **Mitigation Measure CR – 1** would reduce impacts to a less than significant level and impacts are considered **less than significant with mitigation incorporated**.

c) *Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Less Than Significant Impact with Mitigation Incorporated. There are no known unique geologic features within the Project Site (Jensen 2010). Paleontological resources are generally found in sedimentary geologic formations. Although it may be possible for paleontological resources to be present in alluvial deposits within the County, the presence of these resources is not anticipated within County geologic formations. Geology throughout El Dorado County is primarily characterized by igneous (volcanic) formations, and sedimentary formations are virtually non-existent (El Dorado County 2003). Project development would involve construction activities including excavation, trenching, grading, and other ground-disturbing activities which would have the potential to result in adverse changes to paleontological resources.

Compliance with **Mitigation Measure CR – 2** would require construction activities to cease in the event of inadvertent discovery of paleontological resources and would require that the GDPUD project manager be contacted for inadvertent discovery of resources associated with project construction. In the event of inadvertent discovery of paleontological resources, **Mitigation Measure CR – 2** would require coordination with local agency planning resources and the project archaeologist to assist with the proper treatment of discovered resources. Therefore, impacts related to paleontological resources are considered **less than significant with mitigation incorporated**.

d) *Disturb any human remains, including those interred outside of formal cemeteries?*

Less Than Significant With Mitigation Incorporated. There are no known formal cemeteries or known interments outside of formal cemeteries within the Project Site. However, grading and excavation activities associated with project construction would have the potential to unearth or otherwise expose previously unidentified human remains or burial grounds. Therefore, impacts are considered less than significant with mitigation incorporated. Compliance with **Mitigation Measure CR – 3** would require coordination with the El Dorado County Coroner in compliance with CEQA (Section 1064.5) and the California Health and Safety Code (Section 7050.5), as well as Native American Heritage Commission who will notify and appoint a Most Likely Descendent (MLD), thereby reducing potential impacts to less than significant levels. Therefore, impacts are considered **less than significant with mitigation incorporated**.

4.5.4. Mitigation Measures

Mitigation Measure CR – 1:

Should archaeological deposits or artifacts such as structural features or unusual amounts of bone or shell, artifacts, human remains, architectural artifacts, historic archaeological artifacts be inadvertently exposed during the course of any construction activity, work shall

immediately cease in the immediate area and the GDPUD project manager shall be contacted. GDPUD shall retain a qualified archaeologist to document the find, assess its significance, and recommend further treatment. The GDPUD shall implement any mitigation required for the recordation and/or protection of the cultural resources.

Mitigation Measure CR – 2:

If evidence of a paleontological site is uncovered during grading or other construction activities, work shall be halted within 100 feet of the find and the GDPUD project manager shall be contacted for inadvertent discovery of resources associated with project construction. A qualified paleontologist shall be retained to conduct an on-site evaluation and provide recommendations for removal and/or preservation. Work on the Project Site shall not resume until the paleontologist has had a reasonable time to conduct an examination and implement mitigation measures deemed appropriate and necessary by the agency with local jurisdiction in consultation with the qualified paleontologist to reduce impacts to a less than significant level.

Mitigation Measure CR – 3:

In the event that any human remains or any associated funerary objects are encountered during construction, all work will cease within the vicinity of the discovery and the GDPUD project manager shall be immediately contacted for inadvertent discovery of resources associated with park construction. In accordance with CEQA (Section 1064.5) and the California Health and Safety Code (Section 7050.5), the El Dorado County Coroner should be contacted immediately. If the human remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who will notify and appoint a Most Likely Descendent (MLD). The MLD will work with a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects. Construction activities in the immediate vicinity will not resume until a notice-to-proceed is issued.

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4.6. *Geology and Soils*

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

4.6.1. Environmental Setting

Geology

El Dorado County is located within the Sierra Nevada geomorphic province of California consisting of Pliocene and older deposits and characterized by steep-sided hills and narrow, rocky stream channels. Geologic deposits have been subject to uplifting as a result of plate tectonics, granitic intrusion, and volcanic activity. The east-west orientation of stream channels within the County is a result of glaciation and volcanic activity (County of El Dorado 2003).

Seismicity

Fault systems mapped within western El Dorado County include: West Bear Mountains Fault; the East Bear Mountains Fault; the Maidu Fault Zone; the El Dorado Fault; the Melones Fault Zone of the Clark, Gillis Hill Fault; and the Calaveras-Shoo Fly Thrust. No active faults have been mapped within the County, although a portion of the Rescue Lineament-Bear Mountains Fault Zone is a Late-Quaternary fault and is therefore considered potentially active (County of El Dorado 2003).

El Dorado County is not identified by the California Geological Survey as a city or county affected by Alquist-Priolo Earthquake Fault Zones (Department of Conservation 2015).

The potential intensity of seismic events is varied throughout the County, although generally, potential intensity increases to the east (County of El Dorado 2003). No portion of El Dorado County is located within a Seismic Hazard Zone, therefore hazards related to seismically-induced liquefaction, lateral spreading, and landslides are not present within the County (County of El Dorado 2003).

Soils

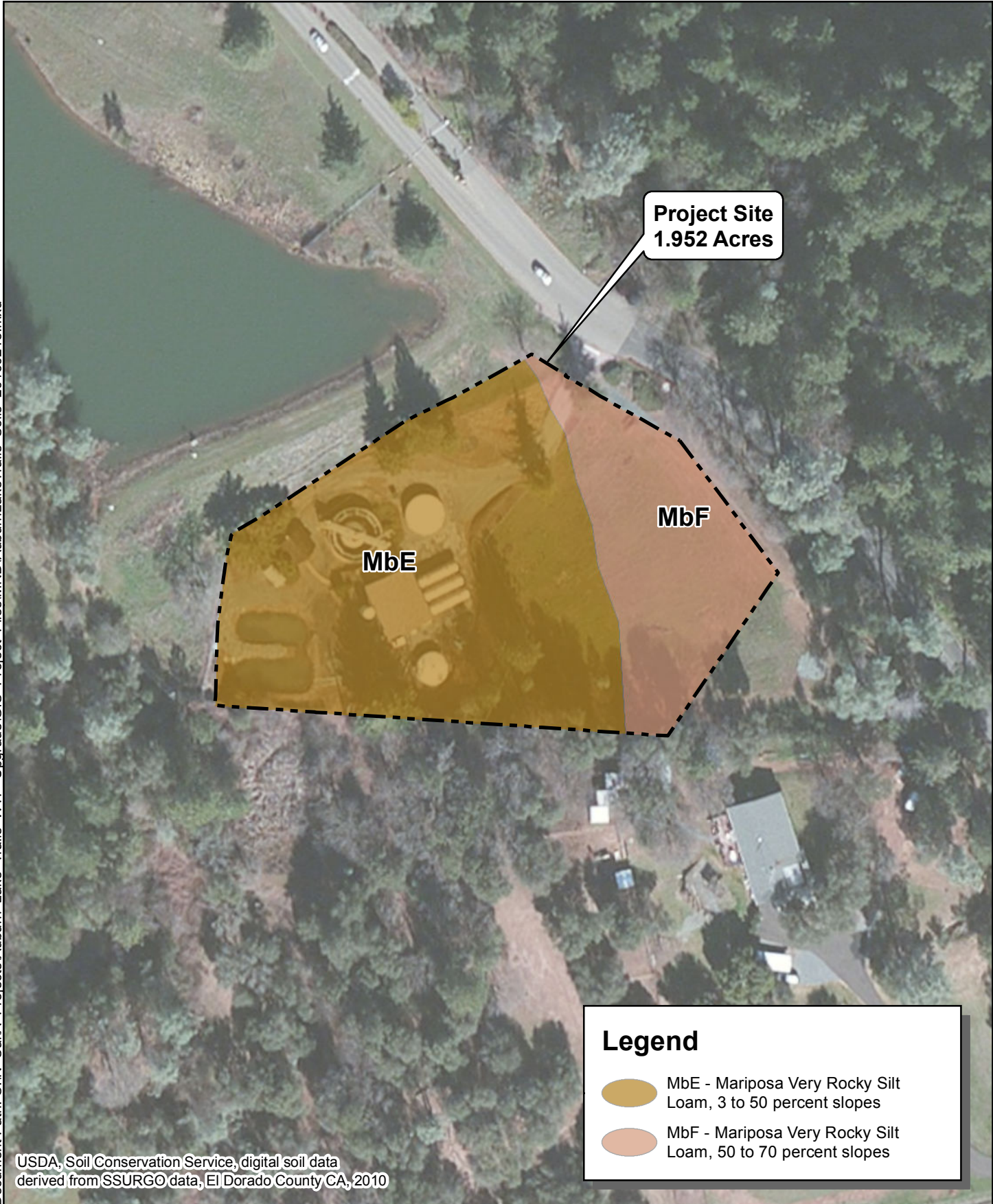
According to mapping completed by the Natural Resources Conservation Service (NRCS), two soil map units are mapped on the ALT site (USDA 2010), as shown on **Figure 4.6-1**. Individual soil map units are identified in **Table 4.6-1**.

TABLE 4.6-1 — AUBURN LAKE TRAILS SOIL MAP UNITS

Soil Map Unit Symbol	Soil Map Unit	Erosion Hazard	Shrink/Swell Potential
MbE	Mariposa Very Rocky Silt Loam, 3 to 50 percent slopes	Slight to High	Low
MbF	Mariposa Very Rocky Silt Loam, 50 to 70 percent slopes	High	Low

Source: USDA 1974

Document Path: O:\N CalVA Projects\Auburn Lake Trails WTP Upgrade\GIS Project Files\MND\AuburnLakeTrails Soils_20160215.mxd



USDA, Soil Conservation Service, digital soil data derived from SSURGO data, El Dorado County CA, 2010

Legend

- MbE - Mariposa Very Rocky Silt Loam, 3 to 50 percent slopes
- MbF - Mariposa Very Rocky Silt Loam, 50 to 70 percent slopes

SOILS

FOOTHILL ASSOCIATES
 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE
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0 50 100
 Feet
 1 inch = 100 feet

Drawn By: CCH, MUB
Date: 02/15/2016

FIGURE 4.6-1

The Mariposa soil series consists of a pink surface layer, medium acid gravelly silt loam approximately eight inches thick. Subsoil is reddish-yellow, medium and strong acid gravelly silt loam approximately 18 inches thick. This soil series is generally underlain by schists or slate at approximately 26 inches' depth. Permeability is moderate, surface runoff is medium to rapid, and the erosion hazard is slight to high. The Mariposa Series is poorly suitable for topsoil, but provides fair road fill (USDA 1974).

The Mariposa Very Rocky Silt Loam, 3 to 50 percent slopes soil is characterized by south and west facing slopes along narrow ridge tops. Permeability is moderate and surface runoff is medium to rapid. Woodland is the primary use for this soil.

The Mariposa Very Rocky Silt Loam, 50 to 70 percent slopes soil is found adjacent to major rivers, and is characterized by rapid surface runoff.

4.6.2. Regulatory Setting

State Regulations

Relevant State regulations are discussed in detail in **Section 4.9, Hydrology and Water Quality**.

Regional Regulations

El Dorado County General Plan

The *El Dorado County General Plan* identifies the following goal and objectives related to Geology and Soils and relevant to the Proposed Project:

Goal 6.3:

Minimize the threat to life and property from seismic and geologic hazards.

Policy 7.1.2.2: Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.

El Dorado County Code

Chapter 15.14 of the El Dorado County Code establishes and defines the County's Grading Ordinance for the purpose of regulating grading within the unincorporated area of El Dorado County to safeguard life, limb, health, property and public welfare; to avoid pollution of watercourses; and to ensure that the intended use of a graded site is consistent with the *El Dorado County General Plan*, any adopted Specific Plans, the adopted Storm Water Management Plan, California Fire Safe Standards and applicable El Dorado County ordinances including the Zoning Ordinance and the California Building Code.

4.6.3. Impact Analysis

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:*

I. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

Less Than Significant Impact. El Dorado County is not identified by the California Geological Survey as a city or county affected by Alquist-Priolo Earthquake Fault Zones (Department of Conservation 2015). Areas within the County may be subject to periodic ground shaking, with the potential magnitude of seismic events increasing from west to east (County of El Dorado 2003). The Proposed Project would not involve the construction of any structures for human habitation or for public gathering places. The potential magnitude of seismic events within the County is considered low to moderate (County of El Dorado 2003), and any proposed structural construction or renovation would be subject to the provisions of current Uniform Building Code (UBC) requirements as overseen by the County Building Division. Therefore, impacts from rupture of a known earthquake fault are considered **less than significant**.

II. *Strong seismic ground shaking?*

Less Than Significant Impact. The potential magnitude of seismic events within the County is considered low to moderate (County of El Dorado 2003), and any proposed structural construction or renovation would be subject to the provisions of current UBC requirements as overseen by the County Building Division. Development of the Proposed Project would not result in the construction of structures for human habitation or public gathering places. Therefore, impacts related to strong seismic ground shaking are considered **less than significant**.

III. *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact. No portion of El Dorado County is located within a mapped Seismic Hazard Zone, therefore areas within the County are not considered to be a risk from liquefaction hazards (County of El Dorado 2003). No impact would result from development of the Proposed Project related to liquefaction. Additional seismic-related effects include lateral spreading, seismically induced landslides, or other ground failure. The potential for these secondary seismic effects is considered minimal (County of El Dorado 2003). Therefore, impacts related to seismic-related ground failure are considered **less than significant**.

IV. *Landslides?*

Less Than Significant. The majority of improvements proposed by GDPUD are proposed on relatively flat, level ground and/or within areas previously graded and currently developed. However, as shown on **Figure 3.7-1A and 1B**, GDPUD proposes the construction of a new filter building on currently undisturbed ground in the eastern section of the Project Site. The proposed new filter building would be constructed on sloping, undisturbed ground. Geologic characteristics, including the potential for slope failure within the project area proposed for

construction of the new filter building remain unknown. However, compliance with the California Building Code (CBC) would ensure the structural safety of the filter building. Therefore, impacts are considered **less than significant**.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant With Mitigation Incorporated. Regulatory provisions addressing erosion and soils loss as relevant to water quality include, but are not limited to, the National Pollutant Discharge Elimination System (NPDES) program for management of construction and municipal storm water runoff, as part of the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act. The NPDES program is implemented at the State and local level through issuance of permits and preparation of site-specific Storm Water Pollution Prevention Plans (SWPPP). Although the primary purpose of these regulations and standards is the protection of surface water resources from the effects of land development (such as turbidity resulting from erosion and sediment loss), measures included in these regulations and standards also reduce the potential for erosion and soil loss. State regulations pertaining to the management of erosion and sedimentation are described in detail in **Section 4.9, Hydrology and Water Quality**.

Site disturbance related to clearing, grading, and excavation activities associated with implementation of the Proposed Project would have the potential to result in increased erosion and sediment loss within the Project Site.

Project-related grading activities would also be subject to the requirements of the RWQCB for filing a Notice of Intent (NOI) to comply with the Construction General Permit for projects over an acre or for projects that are part of a larger common plan of development encompassing over one acre. NOI applicants are required to develop a SWPPP specifying individual BMPs as well as scheduling for regular monitoring and maintenance of BMPs for effectiveness. However, until such time as GDPUD has prepared a site-specific SWPPP, impacts relate to erosion and soil loss would be considered potentially significant. Compliance with **Mitigation Measures GEO – 1 through GEO – 6** would require GDPUD to file an NOI with the Central Valley Regional Water Quality Control Board and prepare a site-specific SWPPP and identify post-construction BMPs defining timing and methods for BMP implementation, monitoring and maintenance in sufficient detail to ensure that federal, State and locally adopted standards for erosion and sediment control, and water quality are met throughout project construction, as well as following completion of construction activities and throughout implementation of the proposed improvements, reducing potential impacts to less than significant levels. Therefore, impacts to soil erosion and loss of topsoil are considered **less than significant with mitigation incorporated**.

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

Less Than Significant. Secondary seismic-related effects include lateral spreading, seismically induced landslides, or other ground failure. The potential for these secondary seismic effects is considered minimal (County of El Dorado 2003). Therefore, impacts related to seismic-related

ground failure are considered less than significant. GDPUD proposes the construction of a new filter building on a currently undisturbed area in the eastern portion of the Project Site. The proposed filter building would be constructed on sloping, undisturbed ground. A geotechnical study performed by Youngdahl Consulting Group, Inc. in 2011 reported that the Project Site has a permanent elevated groundwater table, relatively low seismicity, and relatively shallow bedrock. This combination of features results in very low potential of damage from liquefaction, slope instability, and surface rupture (Youngdahl Consulting Group, Inc. 2011). Therefore, impacts are considered **less than significant**.

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

No Impact. As described in **Table 4.6-1** the shrink/swell potential for project area soils on the Project Site ranges from low to moderate. However, development of the Proposed Project would not involve the construction of structures, for human habitation or for public gathering places and all structures proposed for construction would be subject to the provisions of current UBC requirements as overseen by the County Building Division. Therefore, development of the Proposed Project would not create substantial risks to life or property related to expansive soils. **No impact** would result from development of the Proposed Project.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. Existing ALT WTP facilities include the use of septic systems and leach fields. Development of the Proposed Project would not involve the expanded use of septic tanks or alternative wastewater disposal systems. Therefore, **no impact** would result from development of the Proposed Project.

4.6.4. Mitigation Measures

Mitigation Measure GEO – 1: To the extent possible, all clearing, grading, and excavation activities shall occur between April 15 and October 15. Grading and excavation activities conducted after October 15 shall only be permitted during dry-weather conditions.

Mitigation Measure GEO – 2: Prior to commencement of ground-disturbing activities, GDPUD shall file an NOI to obtain coverage under the current NPDES Construction General Permit with the Central Valley Regional Water Quality Control Board. Pursuant to the terms of the General Permit, GDPUD shall prepare a Storm Water Pollution Prevention Plan (SWPPP) identifying site-specific BMPs to effectively control erosion and sediment loss. If required by the General Permit risk assessment, GDPUD shall also develop and implement a Rain Event Action Plan (REAP) designed to protect all

exposed portions of the site within 48 hours prior to any likely precipitation event.

Mitigation Measure GEO – 3:

During construction, BMPs for erosion and sediment control identified by the project SWPPP shall be implemented by the project contractor. At a minimum, erosion control measures shall include placement of mulch, straw wattles, straw bales, geotextiles and mats, earthen berms, sediment barriers or traps, or the construction of silt fences to intercept and retain sediment transported by storm water runoff in all areas disturbed by construction activities. For all project areas subject to ground disturbance and any grading and excavation activities occurring between October 15 and April 15, the project contractor shall be responsible for ensuring that a qualified professional, contractor staff, or GDPUD staff trained in storm water erosion control techniques and practices monitor the effectiveness of BMPs on the project site daily Monday through Friday, on weekends if rain events occur, and recommend additional BMPs or corrective measures for any BMPs not meeting water quality objectives.

Mitigation Measure GEO – 4:

Erosion protection shall be provided for all disturbed areas and shall be monitored and maintained to effectively control areas of potential erosion and sediment loss.

Mitigation Measure GEO – 5:

Post-construction restoration of all disturbed areas shall include soil and bank stabilization through seeding and/or revegetation utilizing native plant species.

Mitigation Measure GEO – 6:

Soil stockpiles shall be protected from erosion by maintaining effective covering (e.g. plastic tarp) over any stockpiled materials, or through the implementation of other BMPs designed to effectively control erosion and sediment loss.

4.7. Greenhouse Gas Emissions

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

4.7.1. Environmental Setting

Greenhouse gas (GHG) emissions negatively affect the environment through contributing, on a cumulative basis, to global climate change. Atmospheric concentration of GHGs determines the intensity of climate change, with current levels already leading to increases in global temperatures, sea level rise, severe weather, and other environmental impacts. From a CEQA perspective, GHG impacts to global climate change are inherently cumulative (SMAQMD 2015). Due to the inherently cumulative nature of impacts associated with global climate change, a project’s GHG emissions contribution is typically quantified and analyzed on an annual operational basis.

4.7.2. Regulatory Setting

State Regulations

There are several State regulations for GHG emissions that have been implemented to reduce GHGs. California Assembly Bill 32 (AB 32), adopted in 2006, established the Global Warming Solutions Act of 2006. AB 32 requires the State to reduce GHGs to 1990 levels by the year 2020. Senate Bill 97, adopted in 2007, requires the Governor’s Office of Planning and Research (OPR) to develop CEQA guidelines to incorporate analysis and mitigation for GHG emissions for projects subject to CEQA. Finally, Executive Order S-3-05, established in 2006, develops statewide emission reduction targets through the year 2050.

Local Regulations

El Dorado County Air Quality Management District is part of the committee of air districts in the Sacramento Region called the Thresholds Committee. The committee of air districts along with the Sacramento Metropolitan Air Quality Management District has developed recommended GHG thresholds of significance in order to comply with AB 32 and meet requirements of the

CEQA Guidelines section 15183.5 (b). Data from the EDCAQMD was used to help determine the air quality GHG thresholds developed by the Threshold Committee. The SMAQMD Board of Directors adopted GHG thresholds on October 23, 2014, via resolution AQMD2014-028. The adopted annual threshold of 1,100 MTCO_{2e} is applicable to the construction phase, as well as the operational phase for land development and construction projects in the jurisdiction of the SMAQMD. EDCAQMD has not yet formally adopted the annual threshold of 1,100 MTCO_{2e}, but will add it to their CEQA *Guide to Air Quality Assessment* in the near future. The EDCAQMD is recommending CEQA analysis to adopt the SMAQMD thresholds of 1,100 MTCO_{2e} and use their guidance for GHG emissions (EDCAQMD 2015). Therefore, project-related emissions are considered a significant impact if the amount of emissions exceeds 1,100 metric tons per year (MT/yr.) of construction-related GHG emissions.

4.7.3. Impact Analysis

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

Less Than Significant Impact. The estimated construction-related GHG emissions attributable to the Proposed Project would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and construction equipment operation. A weighted composite of these types of emissions is calculated to develop estimates of carbon dioxide equivalent (CO_{2e}). The Proposed Project’s short-term construction-related emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2 (**Appendix B**). CalEEMod was developed to model land use emissions for criteria pollutants and GHGs associated with both construction and operation of a variety of land use projects. The model quantifies direct GHG emissions from project construction. The estimated increase in GHG emissions associated with construction of the Proposed Project is 198.30 MT of CO_{2e} emissions as summarized below in **Table 4.7-1**.

TABLE 4.7-1 — PROJECTED ESTIMATED ANNUAL CONSTRUCTION-RELATED GHG EMISSIONS

	CO ₂ emissions (MTCO _{2e})
Total Construction GHG Emissions	198.30

Source: KDA 2016. CalEEMod Version 2013.2.2 (**Appendix B**).

As presented in **Table 4.7-1**, annual construction-related GHG emissions associated with development of improvements proposed are estimated to total 198.30 MTCO_{2e}. The annual threshold of 1,100 MTCO_{2e} is applicable to the construction phase of the Proposed Project. The Proposed Project’s construction-related GHG emissions would be substantially below the SMAQMD thresholds significance for construction phase GHG emissions. Therefore, the Proposed Project’s construction-related GHG emissions are considered **less than significant**.

b) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

No Impact. Implementation of the Proposed Project would not conflict with or obstruct implementation of any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Proposed improvements include consistency with the goals and policies identified by the *El Dorado County General Plan* pertaining to sustainability and an overall strategy for reduction of emissions. Construction and operation of proposed improvements would be implemented consistent with applicable regulatory standards and requirements, including consistency with all applicable EDCAQMD and SMAQMD rules and thresholds. Therefore, **no impact** would result from development of the Proposed Project.

4.7.4. Mitigation Measures

No mitigation measures are warranted.

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4.8. Hazards and Hazardous Materials

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.8.1. Environmental Setting

Development of the Proposed Project would include construction of water treatment plant process facilities and upgrades to existing facilities at the Auburn Lake Trails WTP.

The General Plan designated land use for the Project Site at the existing ALT WTP is Medium Density Residential with Single Family Residential zoning. Surrounding land uses are primarily Medium Density Residential to the northwest (the Auburn Lake Trails community), Open Space to the east, and Estate Residential to the south.

4.8.2. Regulatory Setting

Hazardous materials are regulated by the following federal, State, and local laws, Ordinances, and regulations relevant to the Proposed Project.

Federal Regulations

Federal agencies that regulate hazardous materials include:

- United States Environmental Protection Agency – USEPA administers the Resource Conservation and Recovery Act (RCRA), which regulates the generation, transportation, treatment, storage and disposal of hazardous waste.
- Occupational Safety and Health Administration (OSHA) – OSHA is responsible for ensuring worker safety, including operations that may use, handle or dispose of hazardous materials.

State Regulations

State agencies with responsibility to regulate hazardous materials include:

- California Environmental Protection Agency (Cal-EPA) – Cal-EPA and the Office of Emergency Services (OES) establish regulations governing the use of hazardous materials. Within Cal-EPA, the California Department of Toxic Substances Control

(DTSC) has primary regulatory responsibility. Enforcement of regulations has been delegated to local jurisdictions, which enter into agreements with CDTSC.

- California State Water Resources Control Board and Regional Water Quality Control Board (RWQCB) – These agencies regulate surface water and groundwater quality according to the Porter-Cologne Water Quality Act, the Toxic Pits Cleanup Act, the Underground Tank Law and Clean Water Act.

In January 1996, Cal-EPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The six program elements of the Unified Program are: (1) hazardous waste generators and hazardous waste onsite treatment; (2) underground storage tanks; (3) above-ground storage tanks; (4) hazardous material release response plans and inventories; (5) risk management and prevention program; and (6) Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency – a Certified Unified Program Agency (CUPA) which is responsible for consolidating the administration of the six program elements within its jurisdiction.

Regional Regulations

The El Dorado County Department of Environmental Management, Hazardous Waste Division, is approved by Cal-EPA as the CUPA for El Dorado County.

Additional responsibilities of the Department of Environmental Health include Hazardous Materials Incident Response. The environmental management department staff and selected local firefighters who have completed the required hazardous materials response training, as specified in the Federal Code of Regulations Section 29 Part 1910.120, are designated as the El Dorado County Hazardous Materials Response Team.

El Dorado County Code

Hazardous Material Ordinance

Chapter 8.38 of the El Dorado County Code establishes the County Hazardous Material Ordinance. The Ordinance requires any person who: conducts, prepares or performs a site investigation, clean-up, monitoring program or environmental assessment; installs soil borings or monitoring wells; or utilities and/or stores hazardous materials pursuant to Chapter 6.95 of the California Health and Safety Code to apply, in advance, with the Environmental Management Department on a form provided by the County.

4.8.3. Impact Analysis

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

Less Than Significant Impact. Following construction, the Proposed Project would consist of continued operation of the ALT WTP. Currently used and expected water treatment chemicals

to be used at the WTP include polymer coagulants, chlorine as a disinfectant, and soda ash for pH adjustment. The backwash and filter-to-waste process produces suspended solids, organic matter, and coagulant. These solids would be collected in the existing filter-to-waste tank during the rainy season. These solids would be removed from the settling tank in the spring and transported to the proposed sludge drying beds. The sludge drying beds would be constructed on the southwest section of the ALT WTP. The physical footprint of these drying beds would be approximately 80 feet by 48 feet, with approximately 3-foot-high sidewalls, within concrete bunkers. Once solids are deposited in the beds, dewatering would occur by evaporation. The solids would be in the beds for a temporary time period each year (spring to fall) and the beds would be clean and empty during the rainy season. At completion of drying (prior to each fall season), the material would be analytically tested to determine final disposal requirements. The beds would be swept clean with all material removed for disposal before commencement of the rainy season. If required per testing, the solids would be trucked to a permitted solid waste facility that accepts sludge waste. If the results of analytical testing allow for alternative disposal (e.g. dried solids made available to third parties for land application as soil amendment), the GDPUD would consult with the Regional Water Quality Control Board to determine the appropriate oversight, including waste discharge requirements. During the winter, precipitation entering the cleaned beds would be drained and dispersed in a manner (e.g. rock energy dissipaters) that would minimize erosion. The drying beds would be routinely inspected for liner integrity.

Operation of the Proposed Project at the ALT WTP site after construction would be required to continue to comply with all regulatory requirements for the transportation, use, and storage of hazardous materials. These regulatory requirements may include the preparation of a Hazardous Material Business Plan. Pursuant to State statute and local regulatory requirements, the owner or operator of any business that handles a hazardous material in total quantity equal to or in excess of the following quantities is required to develop and submit a Hazardous Materials Business Plan to the local CUPA, which is the Hazardous Materials Division of El Dorado County Department of Environmental Management:

1. 500 pounds of solids;
2. 55 gallons of liquids;
3. 200 cubic feet of compressed gasses at standard temperature and pressure; and
4. Quantities of radioactive materials for which an emergency plan is required pursuant to Parts 30, 40 or 70 of Chapter 10, Title 10, Code of Federal Regulations (CFR), or equal to or greater than the amounts specified above, whichever amount is less. Cumulative quantity is defined as the total amount of hazardous materials categorized into one Department of Transportation Hazard Class as described in 49 CFR.

The Business Plan protects the public by providing the following:

- Hazmat storage information to emergency responders;

- Community members have access to information about hazardous materials under the "community right to know" program; and
- Prevention of hazardous materials spills and releases through cooperation among businesses and local, State, and federal government authorities. Businesses are required to disclose all hazardous materials and wastes above certain designated quantities which are used, stored, or handled at their facility.

Businesses generating any quantity of hazardous waste are required to file a hazardous waste contingency plan, even if exempt from the requirements of filing a Hazardous Materials Business Plan.

Through the Proposed Project's compliance with these existing regulatory requirements, impacts related to hazardous materials exposure would be considered less than significant. Additional relevant discussion can be found under subsection of **Section 4.17, Utilities and Service Systems**.

During construction, the Proposed Project must comply with all federal, State, and local requirements for temporary storage of flammable and combustible materials at construction sites as well as comply with all federal, State, and local requirements for reporting releases of hazardous materials. The project's compliance with these requirements would reduce the risk of release of hazardous substances to a less than significant level. Therefore, impacts related to development of the Proposed Project as well as impacts associated with continued operations would be considered **less than significant**.

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

Less Than Significant Impact. Following construction, the Proposed Project would consist of continued operation of the ALT WTP. Operation of the ALT WTP site after construction would continue to comply with all regulatory requirements for the transportation, use, and storage of hazardous materials, as discussed in detail under sub-section "a," above. Impacts from project operation would therefore be considered less than significant.

During construction, the Proposed Project would be required to comply with all federal, State, and local requirements for temporary storage of flammable and combustible materials at construction sites as well as comply with all federal, State, and local requirements for reporting releases of hazardous materials. The project's compliance with these requirements would reduce the risk of release of hazardous substances used for construction purposes to a less than significant level.

The Proposed Project would include the demolition/removal of one building for the installation of the raw water pump station. Depending upon the age of this structure, it may have the potential to contain asbestos in the building materials. Asbestos is a natural mineral fiber that was once commonly used in building materials. Inhaling airborne asbestos fibers can increase

the risk of developing certain lung diseases, including lung cancer and asbestosis. Asbestos is a recognized toxic material, and release of asbestos into the atmosphere would be considered a potentially significant impact. The Proposed Project may be required to comply with the CARB requirements for demolition notification and construction debris handling. These State requirements implement USEPA's National Emission Standard for Hazardous Air Pollutants for Asbestos (40 C.F.R. §61.140 *et. seq.*) and are intended to limit the emission of asbestos to the atmosphere. The project's compliance with these regulations, if applicable, would reduce impacts from construction demolition to less than significant.

Locations within El Dorado County have been identified as having naturally occurring asbestos (NOA) or having the potential for NOA to be present in the ground. NOA is prevalent in at least 44 of California's 58 counties. Asbestos is the name for a group of naturally occurring silicate minerals, and may be found in serpentine rock, other ultramafic rock, and volcanic rock. When rock containing NOA is broken or crushed, asbestos may be released from the rock and may become airborne, potentially causing a health hazard (El Dorado County 2015).

Areas to the southwest and to the northeast of the ALT WTP site have been designated as locations "more likely to contain asbestos" as identified by the California Department of Conservation, Mines and Geology and as shown on the El Dorado County Asbestos Review Areas map. The Project Site is identified as being within a ¼ mile buffer zone of such an area or within a ¼ buffer zone of a geologic fault that may include NOA. Impacts related to NOA are discussed within the **Air Quality** Section of this document (**Section 4.3**).

Therefore, impacts related to construction of the Proposed Project as well as impacts associated with continued operations would be considered less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

No Impact. The Project Site is not located within ¼ mile of an existing or proposed school. Therefore, there would be **no impact** from hazardous emissions to a school facility.

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

No Impact. A search of the California Department of Toxic Substances (CDTS) *Envirostor* database confirmed that the Project Site is not located on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, it would not create a significant hazard to the public or to the environment (CDTS 2016). Therefore, there would be **no impact** from the Proposed Project.

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

No Impact. The Project Site is not located within an airport land use area nor is it within two miles of a public airport. Therefore, **no impact** would result from the Proposed Project.

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

No Impact. The Project Site is not located in the vicinity of a private airstrip and would not result in safety hazards related to a private airstrip. Therefore, **no impact** would result from development of the Proposed Project.

g) *Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

No Impact. The Proposed Project as completed would not result in any physical features that would impair implementation of, or physically interfere with, emergency evacuations. During construction, construction equipment would be staged on the Project Site. Therefore, there would be **no impact** from the Proposed Project.

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

Less Than Significant With Mitigation Incorporated. The Project Site is located in a rural residential area. Operation of the facilities after construction would not be expected to expose people or structures to a significant risk involving wildland fires. The Project Site is an existing developed facility. However, construction of the filter building on the Project Site would occur on a relatively undisturbed grassy area. Construction activities have the potential to cause wildfires which would be a potentially significant impact. Implementation of **Mitigation Measures HAZ – 1 through Mitigation Measure HAZ – 2** for construction activities associated would reduce the potential impact to a **less than significant level with mitigation incorporated** by requiring clearing of dry vegetation and spark arresters on construction equipment.

4.8.4. Mitigation Measures

Mitigation Measure HAZ – 1:

If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel prior to construction. To the extent feasible, areas subject to construction activities will be maintained free of fire fuel and debris during the course of construction.

Mitigation Measure HAZ – 2:

Contractors shall ensure that vehicles and all equipment (heavy equipment and hand-held equipment) that typically include a spark arrester are equipped with a spark arrester

in good working condition during the duration of construction.

4.9. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.9.1. Environmental Setting

The Proposed Project would include construction of water treatment plant process facilities and upgrades to existing facilities at the existing Auburn Lake Trails WTP.

4.9.2. Regulatory Setting

Federal Regulations

The Federal Emergency Management Agency oversees the delineation of flood zones and provides disaster assistance. The agency manages the National Flood Insurance Program, which enables property owners in designated flood zones to purchase flood insurance. Flood zones are mapped on Flood Insurance Rate Maps that show the expected frequency and severity of flooding by area.

Federal Clean Water Act Section 402

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

(Phase II Rule) that became final on December 8, 1999 were expanded to address storm water discharges from construction sites that disturb land areas equal to or greater than one (1) acre and less than five (5) acres (small construction activity). The State of California Regional State Water Resources Control Board (SWRCB) administers and enforces the provisions of the NPDES program.

NPDES is the primary federal program that regulates point-source and non point-source discharges to waters of the United States. The SWRCB issues both general and individual permits. Construction activities are regulated under the NPDES General Permit for Construction Activities provided the total amount of ground disturbance during construction exceeds one acre. The appropriate RWQCB enforces the General Permit. Coverage under a General Permit requires the preparation of a Storm Water Pollution Prevention Plan. The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a Best Management Practice (BMP) monitoring and maintenance schedule. Construction activities that are subject to this General Permit includes clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre of total land area.

Effective July 1, 2010 all dischargers are required to obtain coverage under the new Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, including construction associated with linear underground projects (LUP). Pursuant to the General Permit, a discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project.

Executive Order 11988 “Floodplain Management”

Executive Order 11988 requires federal agencies to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains. Each agency has the responsibility to evaluate if a proposed action would occur within a designated floodplain, and to consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the only practicable alternative is located within a floodplain, then the federal agency must demonstrate and provide public notice to the effect of how impacts to the floodplain will be minimized.

State Regulations

Waste Discharge Requirements

Article 4, Section 13260 of the California Water Code requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could

affect the quality of the waters of the State, shall file a Report of Waste Discharge (ROWD) with the appropriate regional board. The Regional Board reviews the applicant's ROWD and may establish Waste Discharge Requirements (WDRs) for the proposed action. WDRs may include effluent limitations, as well as monitoring and reporting requirements.

4.9.3. Impact Analysis

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant With Mitigation Incorporated. Implementation of the proposed storm drains would result in diverting surface water drainage around the existing and proposed facilities to the southwest corner of the Project Site, into an existing swale. This drainage system would ensure that storm water is properly conveyed within the Project Site. Water quality, however, may be impacted during construction activities due to surface runoff from disturbed surfaces into drainages at the Project Site. Implementation of a Storm Water Pollution Prevention Plan and related erosion control BMPs are required under **Mitigation Measures GEO – 2 through GEO – 6 and Mitigation Measure BIO – 6**. Implementation of these measures would reduce construction related impacts to water quality to a less than significant level.

The backwash and filter-to-waste processes at the WTP produce suspended solids, organic matter, and coagulant. These solids would be collected in the existing filter-to-waste setting tank during the rainy season. These solids would be removed from the settling tank in spring and transported to the proposed sludge drying beds in the south west corner of the Project Site. The physical footprint of these drying beds would be approximately 80 feet by 48 feet, with approximately 3-foot-high sidewalls, and contained within concrete bunkers. Once solids are deposited in the beds, dewatering would occur by evaporation. The solids would be in the beds for a temporary time period each year (spring to fall) and the beds would be clean and empty during the rainy season. At completion of drying (prior to each fall season), the material would be analytically tested to determine final disposal requirements. The beds would be swept clean with all material removed for disposal before commencement of the rainy season. If required per testing, the solids would be trucked to a permitted solid waste facility that accepts sludge waste. If the results of analytical testing allow for alternative disposal (e.g. dried solids made available to third parties for land application as soil amendment), the GDPUD would consult with the Regional Water Quality Control Board to determine the appropriate oversight, including waste discharge requirements. During the winter, precipitation entering the cleaned beds would be drained and dispersed in a manner (e.g. rock energy dissipaters) that would minimize erosion. The drying beds would be routinely inspected for liner integrity. Compliance with these testing and waste disposal requirements would result in less than significant impacts.

Operational impacts are considered less than significant resulting from compliance with disposal requirements. However, construction impacts are considered **less than significant with mitigation incorporated** to ensure implementation of a Storm Water Pollution Prevention

Plan under **Mitigation Measure GEO – 3** and related erosion control BMPs during project construction.

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

Less Than Significant Impact. The Proposed Project would include construction of a new raw water pump station, sludge drying beds, and an upgraded tank backwash recovery tank on an existing developed portion of the ALT WTP site with one additional component (the filter building) being constructed on a grassy slope adjacent to the existing facility. The minimal increase of impervious surfaces created by the Proposed Project, primarily resulting from the proposed road extension, would not be expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The building pad for the filter building would be surfaced with gravel on half of the area allowing for groundwater recharge. Therefore, impacts related to groundwater supplies would be considered **less than significant**.

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

Less Than Significant With Mitigation Incorporated. After construction, the topography of the Project Site would be modified from the current state. The proposed filter building would result in a change in the runoff pattern on the slope. Proposed storm drains would be located throughout the Project Site to convey surface drainage. Drainage would be directed around the existing and proposed facilities to the south west corner of the Project Site into an existing swale. This would ensure adequate drainage of the Project Site, following the grading associated with Project Construction. The proposed sludge drying beds would be located within a portion of the existing WTP facility (existing settlement ponds), and would not result in a substantial change in the existing topography. During the dry season, the water in the drying beds would evaporate. During the rainy season, the emptied drying beds would drain to the southwest portion of the Project Site. The development of the additional drainage features at the WTP would not be expected to substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion or siltation.

During construction, excavation, and fill required by the project, the potential for erosion exists both on- and off-site, primarily impacting drainages near the roadway and residences. Implementation of a Storm Water Pollution Prevention Plan and related erosion control best management practices are required under **Mitigation Measures BIO – 6 and GEO – 2 through GEO – 6**. Implementation of these mitigation measures would reduce impacts related to drainage pattern erosion to a less than significant level. Therefore, impacts are considered **less than significant with mitigation incorporated**.

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

Less Than Significant Impact. Surface water drainage at the WTP would be directed to proposed stormwater drains that would convey water to the southwest portion of the Project Site. During the rainy season, precipitation entering the cleaned and empty drying beds would drain southwest corner of the Project Site. The development of proposed drainage features at the WTP would not be expected to substantially alter the existing drainage pattern of the Project Site in a manner that would result in flooding on- or off-site. The minimal increase of impervious surfaces created by the Proposed Project along with the additional drain lines are not anticipated to substantially alter the existing drainage pattern of the site in a way that would result in flooding. Therefore, impacts are considered **less than significant**.

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

Less Than Significant Impact. The minimal increase in impervious surfaces resulting from development of the Proposed Project would not be expected to create or contribute runoff water in quantities that exceed the capacity of the existing and planned drainage systems at the Project Site nor provide substantial additional sources of polluted runoff. Therefore, impacts are considered to be **less than significant**.

- f) *Otherwise substantially degrade water quality?*

Less Than Significant With Mitigation Incorporated. Please see answer to subsection a) above.

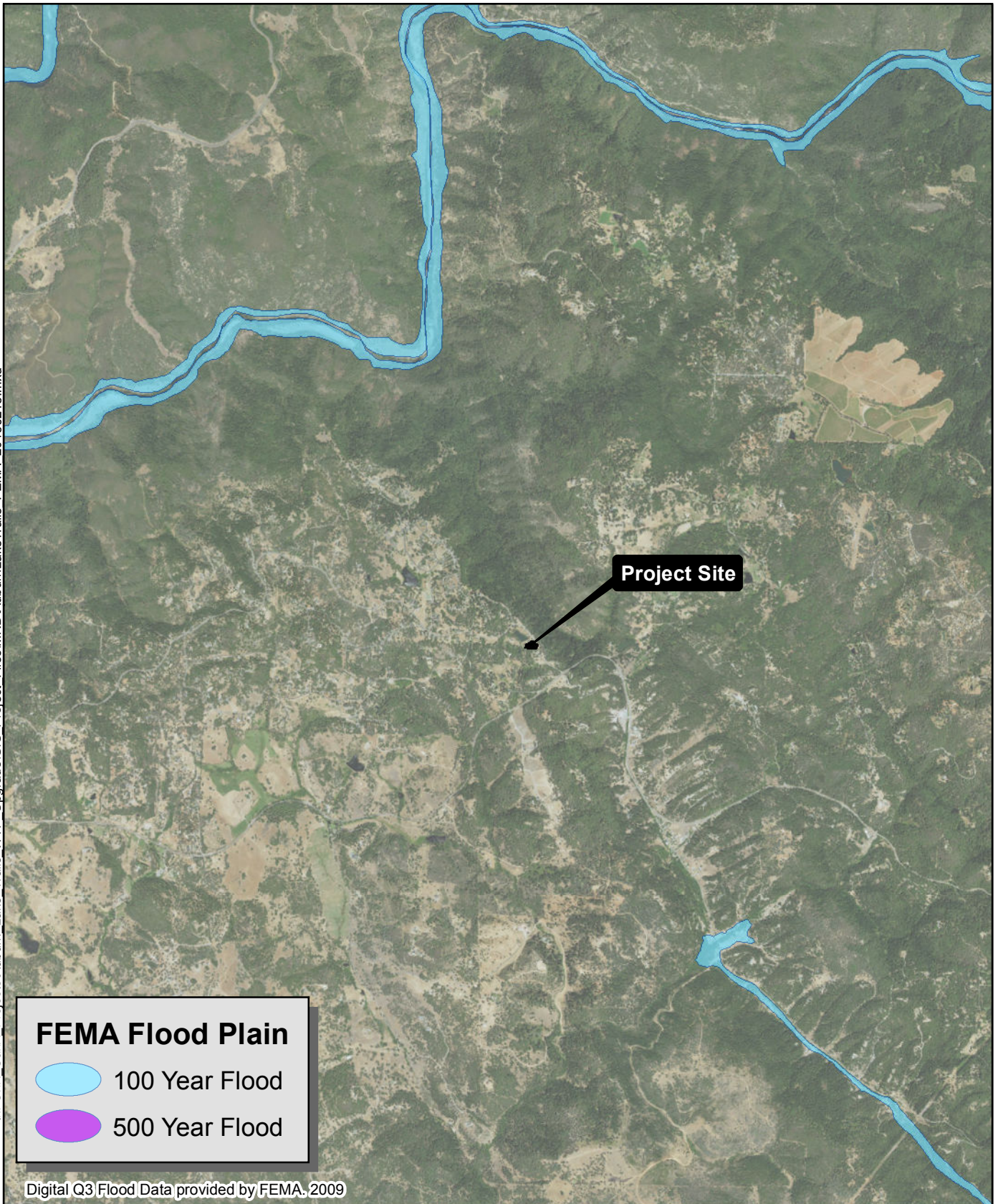
- g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No Impact. The Proposed Project would not involve the construction of housing. As depicted in **Figure 4.9-1** the Project Site is not located within a 100-year flood hazard area. Therefore, **no impact** would result from development of the Proposed Project.

- h) *Place within a 100-year flood hazard area structures that would impede or redirect flood flows?*

No Impact. As depicted in **Figure 4.9-1** the Project Site is not located within a 100-year flood hazard area and therefore, project development would not result in the placement of structures that would impede or redirect flood flows. Therefore, **no impact** would result from development of the Proposed Project.

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FEMA FLOODPLAIN LOCATION

FOOTHILL ASSOCIATES
 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE
 © 2016



0 2000 4000
 FEET
 1 inch = 4,000 feet

Drawn By: CCH, MUB
 Date: 02/15/2016

FIGURE 4.9-1

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

No Impact. The project would include construction of water treatment plant process facilities on the existing Auburn Lake Trails WTP property. The project does not propose additional employees at the WTP, or new housing or structures that could expose people to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a failure of a levee or dam. Therefore, **no impact** would result from development of the Proposed Project.

- j) *Inundation by seiche, tsunami or mudflow?*

No Impact. The Project Site is not located in an area subject to seiche, tsunami or mudflow. Therefore, **no impact** would result from development of the Proposed Project.

4.9.4. Mitigation Measures

Please see **Mitigation Measure BIO – 6** in the **Biological Resources** section (**Section 4.4**) and **Mitigation Measures GEO – 2 through GEO – 6** in (**Section 4.6**) of this Initial Study/Mitigated Negative Declaration for mitigation that addresses the impacts listed under a), c), and f) above.

4.10. Land Use and Planning

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in land use/operational conflicts between existing and proposed on-site or off-site land uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.10.1. Environmental Setting

El Dorado County encompasses approximately 1,110,103 acres of land. Of this, approximately 46 percent is in public ownership and 54 percent is privately owned. Approximately 196,000 acres (approximately 17 percent of land in the County) has been developed, with the vast majority of this being residential units. In addition, the County has existing commitments (projects that have received a Building Permit, have an approved tentative parcel map or subdivision map, or are part of an approved development agreement) for 14,565 additional dwelling units in the western part of the County. Undeveloped lands within the County are largely comprised of agricultural lands and forestlands. Forestlands occupy 636,000 acres (55 percent of the County), with federally controlled timberlands encompassing approximately 377,000 in the El Dorado and Tahoe National Forests and 259,000 acres in private production. The County had 153,472 acres of agricultural land (farmland and grazing land) in 1997 (approximately 13 percent of the County), with 41,852 acres of that land being protected under the Williamson Act. Lands regulated or owned by entities not subject to County planning and land use authority within the County encompass approximately 531,924 acres (46 percent of the land). The Shingle Springs Rancheria is located approximately 29 miles south of the project vicinity and is owned by the Shingle Springs Band of Miwok Indians. The Rancheria is considered a sovereign nation (County of El Dorado 2003).

AS shown on **Figure 3.5-2**, the General Plan land use designation for the Project Site at the existing ALT WTP is Medium Density Residential and the Project Site is zoned as Single Family Residential. General Plan overlay designations for the site include: Platted Lands, Important Biological Corridor, and Mineral Resources. Surrounding land uses are primarily Medium Density Residential to the northwest (the Auburn Lake Trails community), Open Space to the east, and Estate Residential to the south.

4.10.2. Impact Analysis

a) Physically divide an established community?

No Impact. The Proposed Project would include construction of water treatment plant process facilities and upgrades to existing facilities within the Auburn Lake Trails WTP. The Proposed Project would not result in the physical division of any established community and therefore would be **no impact** to established communities.

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

No Impact. The Proposed Project would be developed in conformance with all applicable land use plans and ordinances, and would not conflict with any agency's plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The Project Site is not located within a coastal zone management area (National Oceanic and Atmospheric Administration 2015). **No impact** would result from development of the Proposed Project.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The Project Site is not located within a designated Habitat Conservation Plan (HCP) area or within a designated Natural Community Conservation Plan (NCCP) area. Nor is the Project Site located within or adjacent to any of the ecological preserve areas designated on the El Dorado County General Plan land use map. Development of the Proposed Project would not conflict with any conservation plans and therefore **no impact** would result.

d) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The Proposed Project would construct new facilities on the Auburn Lake Trails WTP site including a filter building, raw water pump station, and sludge drying beds. Development of the Proposed Project would also involve upgrades to existing facilities on the Project Site. Development of proposed improvements is consistent with the current operational land use on the Project Site, and all development would occur within the existing Auburn Lake Trails WTP property (APN: 0734420410). The Proposed Project does not have the potential to result in land use or operational conflicts on- or off-site, therefore there would be **no impact** and no mitigation is required.

4.10.3. Mitigation Measures

No mitigation measures are warranted.

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4.11. Mineral Resources

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

4.11.1. Environmental Setting

El Dorado County contains a wide variety of mineral resources. Metallic mineral deposits, particularly gold, are considered the most significant extractive mineral resource. The 1849 California “Gold Rush” originated from gold discovered in El Dorado County. Other metallic minerals found in the County include: silver, copper, nickel, chromite, zinc, tungsten, mercury, titanium, platinum, and iron. Nonmetallic mineral resources include: building stone, limestone, slate, clay, marble, soapstone, sand, and gravel (County of El Dorado 2003).

The California State Department of Conservation, California Geological Survey is responsible for the classification and designation of areas within California containing or potentially containing significant mineral resources. The El Dorado General Plan (2004) includes a map of “Important Mineral Resource Areas” as identified as Mineral Resource Zones (MRZ) 2a and 2b by the California Geological Survey. The MRZ-2a designation pertains to areas underlain by mineral deposits where geologic data indicated that significant measured or indicated resources are present. The MRZ-2b designation pertains to areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. The General Plan map of Important Mineral Resource Areas was utilized to designate Mineral Resource overlay land use areas on the General Plan Land Use Map.

The Project Site at the existing ALT WTP has a General Plan land use designation of Medium Density Residential, and is located in the “R2A” (Single Family Residential two acre) zoning district. General Plan overlay designations for the site include “platted lands” and “important biological corridor”. The southeastern portion of the ALT parcel is designated “mineral resources” General Plan overlay. El Dorado County has established Mineral Resource zoning districts (MR) but has not established corresponding mineral resource combining districts to be applied to sites where extraction of mineral resources would be compatible with adjacent land

uses. Surrounding land uses are primarily Medium Density Residential to the northwest (the Auburn Lake Trails community), Open Space to the east, and Estate Residential to the south.

4.11.2. Impact Analysis

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

Less Than Significant Impact. A small linear strip of land along the southeastern boundary of the Project Site at the existing WTP is located in an area identified by the County's General Plan as an area within a Mineral Resource (-MR) overlay designation. The purpose of the -MR overlay designation is to identify areas designated as Mineral Resource Zone 2 by State Classification Reports. Prior to authorizing any land uses that would potentially threaten the potential for mineral extraction in these areas, the County is required to document the reason for approval and notify the relevant agencies, and must consider and document the values of the proposed land use versus the mineral resource value.

Although a portion of the Project Site is identified by the County General Plan within the -MR overlay designation, the site currently supports WTP facilities, and proposed improvements would not preclude future mineral resource extraction (if such activities were deemed practicable). Therefore, impacts from potential loss of mineral resources are considered **less than significant**.

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

Less Than Significant Impact. A small linear strip of land along the southeastern boundary of the Project Site at the existing WTP is located in an area identified by the County's General Plan as an area within a Mineral Resource (-MR) overlay designation. The purpose of the -MR overlay designation is to identify areas designated as Mineral Resource Zone 2 by State Classification Reports. Prior to authorizing any land uses that would potentially threaten the potential for mineral extraction in these areas, the County is required to document the reason for approval and notify the relevant agencies, and must consider and document the values of the proposed land use versus the mineral resource value.

Although a portion of the Project Site is identified by the County General Plan within the -MR overlay designation, the site currently supports WTP facilities, and proposed improvements would not preclude future mineral resource extraction (if such activities were deemed practicable). Therefore, impacts from potential loss of mineral resources are considered **less than significant**.

4.11.3. Mitigation Measures

No mitigation measures are warranted.

4.12. Noise

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

4.12.1. Environmental Setting

Noise is commonly defined as unwanted sound in the environment. This definition reflects a subjective reaction to the characteristics of the physical phenomenon of noise. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Although elevated noise levels can result in physiological damage and hearing loss, excessive noise in the environment more commonly impairs general human well-being by contributing to psychological stress and irritation. Such health effects can result when noise

interferes with everyday human activities such as sleep, talking, recreation, relaxation, and tasks requiring concentration. When noise is either disturbing or annoying, whether by its pitch or loudness, it may be considered objectionable.

The overall noise level associated with a given noise environment is called the “ambient” noise level. Ambient noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, trains, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Other contributing noise sources, often referred to as “background” sources, can include the sound of birds, people talking, occasional vehicles passing by, or televisions and radios.

Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). Environmental sound levels are usually measured in A-weighted decibels, or dBA, which is a method of taking into account the sensitivity of the human ear to various frequencies in the sound spectrum. In general, a difference of three decibels is barely perceptible to the human ear, while a difference of 10 decibels is perceived as a doubling of loudness. A common statistical tool used to measure the ambient noise level is the average, or equivalent, sound level (Leq), which is the sound level corresponding to a steady-state, A-weighted sound level containing the same total energy as a time-varying signal over a given period (usually one hour).

Factors that affect the transmission of noise between the noise source and the receptor include:

- **Line of sight:** Barriers, such as topography, sound walls and other structures, between a noise source and recipient can provide varying degrees of noise attenuation, particularly when placed near the noise source.
- **Distance:** A reduction in noise level of roughly 6 dBA occurs with each doubling of distance from a noise source, depending on the hardness of intervening surfaces.

Due to the rural residential setting at the Project Site, existing noise levels would be expected to be low to moderate at the ALT WTP site. Existing noise sources at the ALT WTP project area primarily consist of roadway traffic and typical residential outdoor activities. The nearest residence to the Project Site is approximately 200 feet from the proposed filter building construction site with some existing scattered trees located between the proposed filter building site and the residence. Another residence is located approximately 400 feet to the west of the site, and a third residence is approximately 500 feet to the southwest. Other residences in the area are 1,000 feet or greater from the ALT WTP site.

4.12.2. Regulatory Setting

Federal Regulations

The federal Occupational Safety and Health Administration (OSHA) defines potentially harmful noise exposure (the level at which hearing loss may occur from long-term exposure) as

exposure to greater than 90 dBA averaged over eight hours. For noise greater than 90 dBA, the allowable exposure time is correspondingly shorter.

State Regulations

The State of California sets interior residential standards for multi-family dwellings at 45 dBA Ldn. This interior residential standard is meant primarily for sleep and speech protection.

Regional Regulations

The current *El Dorado County General Plan, Noise Element*, adopted July 19, 2004, establishes separate noise criteria for transportation-related noise sources and non-transportation noise sources. The General Plan also establishes allowable noise exposure for non-transportation construction noise. For rural residential areas, 50 db Leq and 60 db Lmax are the allowable construction noise limits between 7:00 A.M. and 7:00 P.M., with lower limits (45 Leq and 55 Lmax) from 7:00 P.M. to 10:00 P.M. and still lower limits (40 Leq and 50 Lmax) from 10:00 P.M. overnight to 7:00 A.M.

4.12.3. Impact Analysis

- a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?*

Less Than Significant With Mitigation Incorporated. Construction activities at the Project Site would include excavation and fill operations. Additional activities at the Project Site would include construction of the raw water pump station (approximately 30 feet by 46 feet) and filter building (approximately 36 feet by 64 feet). Construction would also involve the removal of the finish water clearwell steel tank and a small timber framed building to make room for the raw water pump station. The construction of the project, although a temporary noise source, would be a potentially significant impact as noise levels could exceed the noise thresholds identified in the General Plan. With the incorporation of **Mitigation Measure NOISE – 1**, noise impacts would be reduced to less than significant levels. Therefore, project impacts related to noise exposure are considered **less than significant with mitigation incorporated**.

- b) *Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*

Less Than Significant Impact. There are no federal, State, or local regulations for ground borne vibration. Construction activities at the Project Site would include excavation and fill operations. Additional activities at the Project Site would include construction of the raw water pump station (approximately 30 feet by 46 feet) and filter building (approximately 36 feet by 64 feet). Construction would also involve the removal of the finish water clearwell steel tank and a small timber framed building to provide a place for the raw water pump station. These activities would result in ground borne vibration, but it is anticipated that the vibrations would be less than significant due to their temporary nature and due to the standard construction equipment expected to be utilized. The project is not expected to involve blasting. Therefore, impacts related to ground borne noise and vibration are considered **less than significant**.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant Impact. The operation of the project after construction (continued operation of an existing WTP and the use of drying beds) would not be expected to create significant increases in noise levels. Therefore, impacts are considered **less than significant**.

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant Impact With Mitigation Incorporated. Project construction related to development of the Proposed Project would result in temporary increases in noise sources. Implementation of **Mitigation Measure NOISE – 1**, would require construction activities to adhere to specified hours of operation and construction standards that would reduce impacts from construction noise to less than significant levels. Therefore, impacts are considered **less than significant with mitigation incorporated**.

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

No Impact. The ALT WTP Project Site is not located within an airport land use area nor is it within two miles of a public airport. Therefore, people working on the project and residing in the project vicinity would not be exposed to excessive noise levels. **No impact** would result from development of the Proposed Project.

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

No Impact. There are no private air strips within the project vicinity. Therefore, people working in the Project Site would not be exposed to any excessive noise levels. **No impact** would result from development of the Proposed Project.

4.12.4. Mitigation Measures

Mitigation Measure Noise – 1: The following measures shall be implemented to reduce construction related noise impacts:

- The construction hours for the project shall be limited to the hours of 7:00 A.M. to 7:00 P.M. Monday through Friday, and from 8:00 A.M. to 5:00 P.M. on weekends and on federally recognized holidays. Construction outside of these hours shall normally be avoided. Exceptions are allowed if it can be shown that construction beyond these times is necessary to meet regulatory deadlines, to alleviate traffic congestion or to prevent safety hazards.

- All construction equipment shall be outfitted with factory installed muffling devices and all construction equipment shall be maintained in good working order. All stationary construction equipment noise sources (e.g. generators, compressors) shall be located as far away from noise sensitive land uses as feasible.

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4.13. Population and Housing

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

4.13.1. Environmental Setting

The following data from the County's General Plan, as well as the U.S. Census Bureau provide the basis on which the potential for socioeconomic effects resulting from implementation of the proposed project and alternatives are evaluated. Additional relevant information is included in **Section 4.2, Agriculture and Forestry Resources, Section 4.10, Land Use and Planning, Section 4.11, Mineral Resources, and Section 4.18, Mandatory Findings of Significance.**

GDPUD has been providing water supply for a population under 10,000 within approximately 72,000 acres of the Sierra Nevada Foothill communities of Garden Valley, Kelsey, Pilot Hill, Greenwood, Cool, and Georgetown for over 60 years. The Local Agency Formation Commission sphere of influence for GDPUD encompasses approximately 173,000 acres (County of El Dorado 2003). Annual water service provisions approximate 9,000 acre-feet and include treated water for residential and commercial uses, as well as untreated water for agricultural uses (County of El Dorado 2003).

The Cool/Pilot Hill area encompasses approximately 45,587 acres and is characterized by low-density and rural residential parcels and large-acreage ranch lands. Pockets of medium-density residential and commercial uses have been established near the two historic town sites. The Auburn State Recreation Area covers a large portion of the land along the North Fork American River (County of El Dorado 2003).

Provisions for accommodating population growth and economic development within the County are delegated through the land use designations identified by the County's General Plan as implemented through the Zoning Ordinance.

U.S. Census American Community data for 2010 indicates the County supports a population of approximately 181,000. Approximately 87 percent of the population is white/Caucasian, and approximately five percent of the County's families live below the poverty level. The County's minority population and families living within the poverty level percentages are below State percentages (U.S. Census Bureau 2010).

As of 2010, the County supported approximately 70,000 housing units, representing less than one percent of estimated statewide housing units (U.S. Census Bureau 2010).

4.13.2. Impact Analysis

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

No Impact. The current ALT WTP receives water from Pilot Creek through a 26-mile system of open-canals, and small reservoirs operated by GDPUD, that convey water to the Auburn Lake Trails Reservoir. Implementation of the Proposed Project would consist of modifications to the existing 3.0 Million Gallons per Day (MGD) ALT surface water treatment facility as well as sludge drying beds. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). The majority of the existing facility components would remain as is, or be modified/upgraded to accept the new equipment to correct deficiencies in the treatment process to comply with State and federal drinking water regulations. Implementation of the Proposed Project would not induce population growth, either directly or indirectly. No new housing or commercial land uses are proposed for development, and no roads or infrastructure would be expanded or extended. Therefore, implementation of the Proposed Project would not induce population growth and **no impact** to population growth would result.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

No Impact. Implementation of the Proposed Project would not displace any existing housing and would therefore not result in the necessity for the construction of replacement housing at an alternate location(s). **No impact** would result from project development.

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. Implementation of the Proposed Project would not result in the displacement of substantial numbers of people necessitating the construction of replacement housing in any other location(s). **No impact** would result from project development.

4.13.3. Mitigation Measures

No mitigation measures are warranted.

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4.14. Public Services

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

4.14.1. Environmental Setting

Fire Protection

Thirteen fire protection districts within El Dorado County are responsible for responding to structural fires and wildland fires, as well as providing emergency medical services within their assigned areas. The Project Site is located within the vicinity of the El Dorado County and Georgetown Fire Protection Districts. Mutual aid agreements exist between the local fire protection districts, and other agencies, including the California Department of Forestry and Fire Protection (CALFIRE) (County of El Dorado 2003).

CALFIRE is responsible for fire protection in the State Responsible Areas (SRAs), and is also required by law to respond to and abate uncontrolled fire that threatens to destroy life, property, or natural resources outside the SRAs (County of El Dorado 2003).

First response to medical emergencies is provided by the local fire protection districts and CALFIRE (County of El Dorado 2003).

Regulatory Setting

There are no federal or State regulations pertaining to fire protection services relevant to the Proposed Project.

El Dorado County Code

Fire District Improvement Fee

Chapter 13.20 of the County Code establishes the Fire District Improvement Fee, which is paid by developers at the issuance of building permits for all new discretionary and ministerial projects. The fee is used to finance public improvements and equipment for fire protection purposes. Each building permit applicant in the County pays a fair share of the total cost of improvements and equipment needed to serve the development proposed.

Police Protection

The El Dorado County Sheriff's Office provides service to the unincorporated areas of El Dorado County with a staff of 383 people, including 185 sworn officers. Secondary response is provided by the California Highway Patrol. The County has not adopted a goal for response times, as response times vary by priority and location. The Georgetown Substation is the closest office within the vicinity of the Project Site (County of El Dorado 2003).

Regulatory Setting

There are no federal, State, or local regulations pertaining to police protection services relevant to the Project.

Schools

The Project Site is located within the boundaries of the Black Oak Mine Unified School District (County of El Dorado 2003).

Regulatory Setting

There are no federal, State or local regulations pertaining to schools relevant to the Project.

Parks

The Project Site is located within the Georgetown Divide Recreation District (GDRD). Two of the District's facilities are located within the vicinity of the project area, including Georgetown Park and Beam Field (County of El Dorado 2003).

Regulatory Setting

There are no federal, State or local regulations pertaining to parks relevant to the Project.

4.14.2. Impact Analysis

a) Fire protection?

No Impact. Implementation of Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). Most of the existing facility components would remain, or be modified/upgraded to accept the new equipment or improve the

treatment process to comply with State and federal drinking water regulations. Project development would not include residential development, and would not result in population growth or the need for additional or impacts to existing fire protection services. In addition, prior to issuance of building permits for all ministerial and discretionary development projects, project applicants are required to pay a fair share contribution to finance fire protection service improvements and facilities. Therefore, **no impact** to fire protection services would result from project development.

b) Police protection?

No Impact. Implementation of the Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the existing capacity of the facility (Carlton 2009). Most of the existing facility components would remain, or be modified/upgraded to accept the new equipment or improve the treatment process to comply with State and federal drinking water regulations. Project development would not include residential development, and would not result in population growth and the need for additional or impacts to existing police protection services. Therefore, **no impact** would result from project development.

c) Schools?

No Impact. Implementation of the Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). Most of the existing facility components would remain, or be modified/upgraded to accept the new equipment or improve the treatment process to comply with State and federal drinking water regulations. Project development would not include residential development, and would not result in population growth and the need for additional or impacts to existing school facilities. Therefore, **no impact** to school facilities would result from project development.

d) Parks?

No Impact. Implementation of the Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). Most of the existing facility components would remain, or be modified/upgraded to accept the new equipment or improve the treatment process to comply with State and federal drinking water regulations. Project development would not include residential development, and would not result in population growth and the need for additional or impacts to existing park facilities. Therefore, **no impact** to parks would result from project development.

e) Other public facilities?

No Impact. Implementation of the Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply

with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). Most of the existing facility components would remain, or be modified/upgraded to accept the new equipment or improve the treatment process to comply with State and federal drinking water regulations. Project development would not include residential development, and would not result in population growth and the need for additional or impacts to other public facilities. Therefore, **no impact** to additional public facilities would result from project development.

4.14.3. Mitigation Measures

No mitigation measures are warranted.

4.15. Recreation

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

4.15.1. Environmental Setting

El Dorado County currently has three County operated park facilities. These include Bradford Park in Shingle Springs, Pioneer Park in Somerset, and Henningsen Lotus Park in Lotus. Henningsen Park is the facility closest to the Project Site, approximately 13 miles from the ALT. The Project Site is located within the Georgetown Divide Recreation District (GDRD). Georgetown Park and Beam Field in Georgetown are the two closest GDRD park and recreation facilities to the Project Site. Within the immediate Auburn Lake Trails private community area, there are private recreation facilities and equestrian trails.

4.15.2. Impact Analysis

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

No Impact. The Proposed Project would include construction of water treatment plant process facilities within the existing Auburn Lake Trails WTP parcel. The Proposed Project does not include the construction of recreational facilities and does not include housing or components that would result in population growth. There are no components of the project that would require the construction or expansion of new parks or recreational facilities, nor would development of the Proposed Project result in residential or commercial land uses generating population growth, facilitating increased use of existing facilities which would cause or accelerate substantial physical deterioration of existing facilities. Therefore, **no impacts** related to recreational facilities would result from development of the Proposed Project.

b) Include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. See answer to a) above.

4.15.3. Mitigation Measures

No mitigation measures are warranted.

4.16. Transportation / Traffic

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.16.1. Environmental Setting

The Proposed Project would include construction of water treatment plant process facilities on the existing ALT WTP parcel. The ALT site is located at 3650 Sweetwater Trail between State Route 193 and the Auburn Lake Trails residential community. Sweetwater Trail is a two-lane privately maintained road within the Auburn Lake Trails community. The ALT WTP site is approximately one-quarter mile from SR 193.

4.16.2. Regulatory Setting

According to the *El Dorado County General Plan, Circulation Element* almost 90 percent of all trips within the County are made by automobile. The County is comprised of a rural roadway

network with U.S. 50 as the primary transportation corridor running east to west, resulting in elevated automobile use (County of El Dorado 2004).

Construction within County roadways and roadway right-of-ways within El Dorado County require an encroachment permit from the Department of Transportation. Encroachment permits contain conditions to ensure safe and orderly traffic control.

Level of Service (LOS) is a quantitative measure of traffic operating conditions using letter grades “A” through “F” to characterize operating conditions at intersections and along roadway segments. LOS A through F represents progressively worsening traffic conditions, with LOS A representing the best condition (minimal delay times) and LOS F representing the worst condition.

4.16.3. Impact Analysis

- a) *Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?*

Less Than Significant Impact. The Proposed Project consists of the construction of water treatment plant process facilities on the existing ALT WTP parcel, as well as upgrades to existing facilities. Construction of the Proposed Project would be sequenced and temporary in nature. Additional traffic related to construction vehicles is anticipated to be minimal, remaining in compliance with Goal TC-1 of the *County’s General Plan, Circulation Element* to maintain safe, orderly, and efficient traffic movement (County of El Dorado, 2004). Operational project elements would not increase the number of employees onsite and would have a minimal increase to the number of trips associated with the WTP, for maintenance of the proposed sludge drying beds. This additional operational impact would not change circulation associated with the WTP in a way that would conflict with any established plan, ordinance, or policy. Therefore, impacts are considered **less than significant**.

- b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*

Temporary Construction Impacts:

Temporary construction impacts would occur due to increased traffic of construction vehicles and construction worker commute vehicles. Temporary construction impacts could also occur if the construction involved any encroachment into County owned and maintained roadways. Construction at the Project Site would include a minor realignment of the access road to the existing facility, and this would not affect local traffic around the Project Site. The Proposed Project contains a staging area within the Project Site for construction vehicles, and this would further reduce the amount of traffic associated with construction of the Proposed Project.

Due to the small footprint of the construction site at ALT WTP, combined with the planned sequencing and temporary nature of the construction activities, additional traffic related to

construction vehicles would be expected to minimal and would remain in compliance with existing County levels of service and congestion management standards. Therefore, impacts to congestion management and level of service standards from construction would be considered **less than significant**.

Operational Impacts:

After construction, continued operation of the ALT WTP would require no additional employees at the facility. The new sludge drying beds, however, would require maintenance that would result in a minimal increase in vehicle trips a few times annually. Therefore, operation at the ALT WTP would not create an increase in employee traffic, or substantially change the volume-to-capacity ratio remaining in compliance with County level of service standards.

Therefore, impacts related to compliance with congestion management programs and level of service standards are considered **less than significant**.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The Proposed Project consists of the construction of water treatment plant process facilities on the existing ALT WTP parcel, as well as upgrades to existing facilities. There are three public airports that serve the west slope of El Dorado County: Placerville Airport, Cameron Park Airport, and Georgetown Airport. None of these three facilities support commercial flights. The Proposed Project would result in no change to air traffic patterns. Therefore, **no impact** would result from development of the Proposed Project.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Proposed Project consists of the construction of water treatment plant process facilities within the existing ALT WTP, as well as upgrades to existing facilities. The Proposed Project would not include traffic or roadway design features that would substantially increase hazards, nor does the Proposed Project increase hazards due to incompatible uses. During construction, staging and parking would be accommodated on-site, in a designated parking area. Therefore, **no impacts** related to transportation design or use hazards would result from implementation of the Proposed Project.

e) Result in inadequate emergency access?

Less Than Significant Impact. Development of the Proposed Project would not impact access to the site locations after construction. During construction, construction equipment would be utilized on the Project Site which may result in temporary on-site equipment congestion. However, access along both public and private roads would not be expected to be impacted. Therefore, impacts related to emergency access are considered **less than significant**.

f) Result in inadequate parking capacity?

No Impact. Project development would consist of the construction of water treatment plant process facilities on the existing ALT WTP, as well as retrofitting of several existing on-site

facilities. The project would not result in any conflicts with adopted policies, plans, or programs supporting alternative transportation. As discussed in *subsection a*, development of the Proposed Project is consistent with the *El Dorado County, General Plan, Circulation Element*. Therefore, there is **no impact** to policies, plans, or programs for alternative forms of transportation.

4.16.4. Mitigation Measures

No mitigation measures are warranted.

4.17. Utilities and Service Systems

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

4.17.1.Environmental Setting

Wastewater

Two types of wastewater treatment systems are used within the County: (1) Centralized Community Wastewater Treatment Plants and Wastewater Collection system, and (2) private onsite septic treatment systems, which are either connected to individual residences and non-residential buildings in areas not served by the community collection and disposal systems and which rely upon septic tanks and/or onsite, soil absorption systems.

Septic wastewater generated from current ALT operations is treated by an onsite septic system.

4.17.2.Regulatory Setting

Federal Regulations

Federal Clean Water Act - 33 U.S.C. §1251 et. seq. (1972)

Originally enacted in 1948 as the Federal Water Pollution Control Act, the Federal Clean Water Act was substantially reorganized and expanded in 1972, and amended in 1977. The Clean Water Act establishes the regulatory structure relevant to discharges of pollutants to waters of the United States, and regulating surface water quality standards. Under the Clean Water Act, point source discharges of pollutants to jurisdictional surface waters are prohibited without a permit. The USEPA administers the Clean Water Act.

During the early 1970's water quality protection focused on the chemical integrity of surface water, while more recent regulatory guidance also emphasizes the physical and biological integrity of surface waters to achieve a broader foal of "protecting and propagating fish, shellfish, and wildlife and recreation." Recent Clean Water Act programs now emphasize watershed-based strategies placing equal emphasis on protecting healthy water bodies and restoring impaired water bodies. The more recent strategies strive to address issues not only addressed by Clean Water Act regulatory authority, but the entire range of issues influencing a given watershed. Stakeholder involvement in achieving and maintaining water quality goals and other environmental goals is another symbol of the modern approach.

The USEPA delegates authority for implementation and enforcement of the CWA to the Regional Water Quality Control Boards. Within the project vicinity, the Central Valley RWQCB is responsible for enforcement. Water quality standards for the project area are defined by the Central Valley RWQCB within the Sacramento and San Joaquin River Basin Plan, prepared pursuant to the federal Clean Water Act and the State Porter-Cologne Water Quality Control Act.

State Regulations

Porter Cologne Water Quality Control Act (California Water Code, Division 7)

The SWRCB and the nine Regional Water Quality Control Boards (Regional Boards) are designated responsibility for ensuring implementation and compliance with the provision of the federal CWA through the provisions of California's Porter-Cologne Water Quality Control Act. Regional Boards have the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their jurisdiction and through multiple enforcement mechanisms.

Regional Water Quality Control Boards

The SWRCB and the nine Regional Water Quality Control Boards (Regional Boards) are responsible for ensuring implementation and compliance with the provision of the federal CWA and California's Porter-Cologne Water Quality Control Act. The project area is located within the jurisdiction of the Central Valley Regional Water Quality Control Board.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. Where multiple beneficial uses exist, water quality standards must protect the most sensitive use.

Waste Discharge Requirements

Article 4, Section 13260 of the California Water Code requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State, shall file a Report of Waste Discharge (ROWD) with the appropriate regional board. The Regional Board reviews the applicant's ROWD and may establish Waste Discharge Requirements (WDRs) for the proposed action. WDRs may include effluent limitations, as well as monitoring and reporting requirements.

Regional Regulations

El Dorado County General Plan

Goal 5.2: **The development or acquisition of an adequate water supply consistent with the geographical distribution or location of future land uses and planned developments.**

Policy 5.2.1.13: The County shall encourage water purveyors to design water supply and infrastructure projects in a manner that avoids or reduces significant environmental effects to the maximum extent feasible in light of the water supply objectives of a given project.

Water Supply

The GDPUD is a public utility located in Georgetown, California, currently providing potable water service to approximately 3,600 water connections. GDPUD purveys treated surface

water to the community through two water treatment facilities, the Walton Lake Water Treatment Plant and the Auburn Lake Trails Water Treatment Plant. The operation of both water treatment facilities is permitted and regulated by the State of California.

There are no federal or State regulations pertaining to water supply relevant to the Proposed Project.

Solid Waste

Assembly Bill 939 (AB 939) (Public Resources Code 41780) was enacted to increase landfill life and conserve other resources through increased source reduction and recycling. AB 939 requires cities and counties to prepare Solid Waste Management Plans to implement AB 939's goals, particularly to divert approximately 50 percent of solid waste from landfills. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements. These elements are designed to develop programs to achieve diversion goals, stimulate local recycling in manufacturing and stimulate the purchase of recycled products. Public Resources Code 41780 as amended April 22, 2009 (AB 479) requires 60 percent diversion from landfills by January 2015 through source reduction, recycling, and composting activities. In addition, AB 470 also mandates additional recycling requirements for commercial businesses.

El Dorado County is divided into two waste management regions: The Tahoe Basin and The West Slope and has franchise agreements with private solid waste companies to provide disposal, recycling, and collection services. The solid waste disposal site in the western portion of the County is Western El Dorado Recovery Systems Materials Recovery Facility (MRF). The MRF is a large volume transfer facility that was permitted on February 23, 2005. The MRF is located at 4100 Throwita Way in Placerville, California. Solid waste is ultimately hauled outside of the County to permitted facilities (Cal Recycle 2015). The County contains a solid waste landfill, the Union Mine Disposal Site, that is located in the unincorporated area of El Dorado. This facility was permitted on May 15, 2002 (Cal Recycle 2015). The County has introduced a number of programs addressing hazardous waste disposal and recycling programs (County of El Dorado 2003).

Federal requirements established under the Resource Conservation and Recovery Act include definitions and controls of hazardous materials and are regulated by the USEPA. The SWRCB and Cal Recycle regulate State solid waste disposal under classifications of both waste and disposal facilities depending upon whether waste material is classified hazardous, designated (non-hazardous but may adversely impact waters), non-hazardous, or inert.

4.17.3. Impact Analysis

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

Less Than Significant Impact. The Proposed Project does not propose any expansion of the existing septic system at the Project Site. Proposed backwash/solids handling improvements include the retrofitting the current backwash water recovery basin to comply with State and

federal standards. Effective solids removal would allow nearly complete recycling of the process water, thereby eliminating the need for off-site discharge, therefore impacts related to exceedance of wastewater treatment requirements are considered **less than significant**.

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

Less Than Significant With Mitigation Incorporated. The GDPUD is improving the current ALT WTP to comply with State and federal regulations. Improvements to the WTP would include construction of a filter building, removing the finish water clearwell, retrofitting the backwash water recovery basin, construction of a new raw water pump station, and construction of four sludge drying beds. All improvements would occur within existing developed areas onsite, with the exception of the proposed new filter building. The filter building would be located within an open field.

As identified by this EA/IS, potential environmental impacts have been identified related to aesthetics, air quality, biology, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and noise. For each resource issue area for which potentially significant impacts have been identified, mitigation measures are proposed to reduce all potentially significant impacts to less than significant levels. Therefore, impacts related to the construction of new, or the expansion of existing water supply facilities resulting from development of the Proposed Project are considered **less than significant with mitigation incorporated**. Please refer to individual resource issues area impact analyses for proposed mitigation measures.

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

Less Than Significant With Mitigation Incorporated. Project development would consist of modifications to an existing 3.0 Million Gallons per Day surface water treatment facility, as required to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. Project development would also involve construction of a filter building, removing the finish water clearwell, retrofitting the backwash water recovery basin, construction of a new raw water pump station, and construction of four sludge drying beds.

Several storm water drains are proposed to direct storm water around the Project Site. Storm water would be directed by the drains to the southwest portion of the Project Site into an existing swale. Construction and operation of the stormwater drains would be in compliance with County Ordinance 4992, Chapter 8.79 for stormwater quality and would therefore not cause significant environmental effects.

The four sludge drying beds would be located on the southwestern portion of the ALT WTP facility. During the winter, precipitation entering the drying beds would be drained and dispersed in a manner that would minimize erosion (e.g. rock energy dissipaters). Mitigation

measures identified for **Section 4.6, Geology and Soils**, would require the preparation of a SWPPP, identifying construction and post-construction BMPs for the control of erosion and sediment loss within all disturbed areas, reducing potential impacts related to storm water runoff and drainage. Therefore, impacts are considered **less than significant with mitigation incorporated**.

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

No Impact. The current ALT WTP receives water from Pilot Creek through a 75-mile system of open-canals and small reservoirs operated by GDPUD that convey water to the Auburn Lake Trails Reservoir. Implementation of the Proposed Project would consist of modifications to the existing 3.0 MGD ALT surface water treatment facility. Improvements are necessary to comply with CDPH requirements to meet the Federal Safe Drinking Water Act. The improvements would not expand the capacity of the facility (Carlton 2009). Most of the existing facility components would remain as is, or be modified/upgraded to accept the new equipment or improve the treatment process to comply with State and federal drinking water regulations. Therefore, **no impact** related to expanded entitlements would result from project development.

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

No Impact. The ALT site currently utilizes an onsite septic system. The project does not propose any expansion of the existing septic system at the Project Site. Implementation of the Proposed Project would not involve the development of land uses generating wastewater and would therefore not require any wastewater treatment capacity/facilities. Backwash/solids handling improvements include retrofitting the existing backwash recovery basin. Effective solids removal would allow nearly complete recycling of the process water, thereby eliminating the need for off-site discharge. Therefore, **no impact** would result from implementation of the Proposed Project.

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

Less Than Significant Impact. Any solid waste generated by project-related construction activities would be required to be disposed of in compliance with State and local statutory requirements and regulations. El Dorado County currently contracts with private companies for solid waste collection, disposal, and recycling services. The County contracts with a private carrier for long haul of unrecyclable solid waste outside of the County.

The Proposed Project would include the construction of sludge drying beds for solids in the southwest portion of the Project Site. At completion of drying (prior to each fall season), the material would be analytically tested to determine final disposal requirements. The beds would be swept clean with all material removed for disposal before commencement of the rainy

season. If required per testing, the solids would be trucked to a permitted solid waste facility that accepts sludge waste.

The Western Regional Landfill located in the City of Lincoln accepts sludge and has adequate remaining capacity for disposal of project-generated solid/sludge waste (Cal Recycle 2015). Alternately, GDPUD may choose to haul the solids to another facility that accepts sludge. However, this alternative would be subject to confirmation of an existing facility which could accommodate this material.

If the results of analytical testing allow for alternative disposal (e.g. dried solids made available to third parties for land application as soil amendment), the GDPUD would consult with the Regional Water Quality Control Board to determine the appropriate oversight, including waste discharge requirements.

Existing permitted facilities/resources are available within El Dorado County to accommodate construction-related solid waste generated by project construction and the Western Regional Landfill has adequate capacity to accept project-generated sludge waste, if applicable; therefore, impacts related to solid waste disposal needs related to development of the Proposed Project are considered **less than significant**.

g) Comply with federal, state and local statutes and regulations related to solid waste?

No Impact. Solid waste disposal services/facilities are currently available to accommodate project-related construction waste, as well as drying beds solids in compliance with federal, State and local statutes and regulations. Therefore, **no impact** would result from development of the Proposed Project.

4.17.4. Mitigation Measures

Compliance with mitigation measures identified throughout all resource issues areas discussed within this document would ensure that potential environmental effects resulting from development of the Proposed Project would be reduced to less than significant, as discussed under sub-section b.

Compliance with **Mitigation Measures GEO – 2 through GEO – 6** would reduce potential impacts identified by sub-section c to less than significant levels, by ensuring water quality objectives related to stormwater drainage are maintained.

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4.18. Mandatory Findings of Significance

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

4.18.1. Impact Analysis

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

Less than Significant With Mitigation Incorporated. Implementation of the Proposed Project would have the potential to degrade the quality of the existing environment. Potential impacts have been identified related to **Aesthetics, Air Quality, Biological Resources, Cultural**

Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Utilities and Service Systems. Mitigation measures have been identified related to individual potential resource-specific impacts. Proposed mitigation measures would reduce the level of all project-related impacts to less than significant levels. Therefore, impacts would be considered **less than significant with mitigation incorporated.**

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

Less Than Significant With Mitigation Incorporated. The Proposed Project would have the potential to result in impacts to the environment but these impacts, in addition to being fully mitigated, are primarily related to construction and would therefore be short-term, and temporary. Long-term operational impacts from the project are minimal and existing laws, ordinances and regulations exist to ensure that compliance with statutory and regulatory standards is maintained through the operational life of the project. These impacts, construction-related and operational, are therefore not cumulatively considerable when viewed in connection with the effects of past, current, or probable future projects. Where applicable, this Initial Study/Mitigated Negative Declaration identifies Mitigation Measures by individual resource area as relevant to potential environmental impacts resulting from implementation of the Proposed Project. Impacts resulting from project-related improvements are therefore considered **less than significant with mitigation measures incorporated.**

c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant with Mitigation Incorporated. Project development would have the potential to significantly impact the environment through adverse effects on human beings. Compliance with **Mitigation Measures AES – 1 through AES – 5** would reduce potential impacts related to **Aesthetics** to less than significant levels. Compliance with **Mitigation Measure AQ – 1 through AQ – 6** would reduce potential impacts related to **Air Quality** to less than significant levels. Compliance with **Mitigation Measures BIO – 1 through BIO – 6** would reduce impacts related to **Biological Resources** to less than significant levels. Compliance with **Mitigation Measures CR – 1 and CR – 3** would reduce potential impacts related to **Cultural Resources** to less than significant levels. Compliance with **Mitigation Measures GEO – 1 through GEO – 6** would reduce potential impacts related to **Geology and Soils** to less than significant levels. Compliance with **Mitigation Measures HAZ – 1 and HAZ – 2** would reduce potential impacts related to **Hazards and Hazardous Materials** to less than significant levels. Compliance with **Mitigation Measures BIO – 6 and GEO – 2 through GEO – 6** would reduce potential impacts related to **Hydrology and Water Quality** to less than significant levels. Compliance with **Mitigation Measures Noise – 1** would reduce potential impacts related to **Noise** to less than significant levels. Compliance with **Mitigation Measures GEO – 2 through GEO – 6** would reduce potential impacts related to **Utilities and Service Systems** to less than significant levels. Therefore, impacts resulting from implementation of the Proposed Project are considered **less than significant with mitigation incorporated.**

5.0 CEQA DETERMINATION

Pursuant to Section 15063, CEQA Guidelines, Georgetown Divide Public Utility District has utilized an Environmental Checklist to evaluate the potential environmental effects of the Proposed Project. The checklist provides a determination of these potential impacts and includes the substantiation developed in support of the conclusions checked on this form.

On the basis of this initial evaluation:

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

Thomas Gray
Signature

2-17-2016
Date

Wendell Wall
Printed Name: Wendell Wall, General
Manager

For: Georgetown Divide Public Utility
District

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6.0 REPORT PREPARATION

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Appendix A — Mitigation Monitoring and Reporting Program

Auburn Lake Trails Water Treatment Plant Project Mitigation Monitoring and Reporting Program

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
Aesthetics				
AES – 1: Exterior coatings for the filter building shall incorporate earth tone colors with neutral tones to reduce the contrast of the structure with the surrounding landscape as viewed from the Auburn Lake Trails community gate.	Georgetown Divide Public Utility District (GDPUD)	GDPUD	During Construction	
AES – 2: Site design considerations for proposed improvements shall preserve natural landscape wherever feasible and shall incorporate natural features such as rock outcroppings, native tree stands, and existing topographic features. Development footprints shall be minimized to the maximum extent practicable.	GDPUD	GDPUD	Prior to and During Construction	
AES – 3: All excavations shall be graded and planted to produce a natural-looking appearance.	Contractors	GDPUD	During Construction	
AES – 4: The final plans for the construction of the WTP filter building shall include tree and/or vegetative plantings to the extent necessary to provide a level of visual screening at plant maturity that would introduce vegetative foreground visual elements between the filter building and Sweetwater Trail adjacent to the WTP.	GDPUD	GDPUD	Filter Building Design Details – Prior to Construction	
AES – 5: All exterior lighting shall be hooded, shielded or opaque. No unobstructed beam of light shall be directed beyond any exterior lot line.	GDPUD	GDPUD	During and Following Construction	
Air Quality				
AQ – 1: During project construction all measures presented in Section C.6 in Appendix C of the EDCAQMD <i>Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act</i> shall be implemented to reduce the impacts from fugitive dust PM ¹⁰ and PM _{2.5} emissions.	GDPUD and Construction Contractors	GDPUD/El Dorado County Air Quality Management District (EDCAQMD)	During Construction	
AQ – 2: During project construction a minimum of 4.06 percent of diesel fuel used by construction equipment shall be consumed by 1996 or later model year engines (T-BACT engines).	Contractor	GDPUD	During Construction	
AQ – 3: Project construction shall comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 93105, Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations.	Contractor	GDPUD/CARB	During Construction	
AQ – 4: Project construction shall comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 93106, Asbestos ATCM for Surfacing Applications.	Contractor	GDPUD	During Construction	
AQ – 5: Project construction shall comply with EDCAQMD Rule 223-1, preparing a Fugitive Dust Control Plan. The project shall comply with the additional dust control measures required in Rule 223-1, including the preparation of a Fugitive Dust Control Plan for approval by the EDCAQMD and compliance with the approved plan during construction.	Contractor	GDPUD/EDCAQMD	Prior to Construction and Comply with Plan During Construction	
AQ – 6: Project construction at the ALT WTP site shall comply with EDCAQMD Rule 223-2, Fugitive Dust, Asbestos Hazard Mitigation. The project shall comply with the additional dust control measures required in Rule 223-2, including the preparation of an Asbestos Dust Mitigation Plan for approval by the EDCAQMD and compliance with the approved plan during construction.	Contractor	GDPUD/EDCAQMD	Prior to Construction and Comply with Plan During Construction	

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
Biological Resources				
<p>BIO – 1: Pre-construction survey(s) for California red-legged frog (CRLF) species shall be performed. At least 15 calendar days prior to beginning the pre-construction surveys, the applicant shall submit the name(s) and credentials of biologist(s) who could conduct the surveys to the USFWS. The survey(s) only needs to be conducted within 100 feet of the frog’s associated aquatic and bank habitats, as well as the water settling ponds on the WTP site. Survey(s) shall be conducted by a qualified biologist, in accordance with USFWS Guidelines, and during the appropriate time of year for optimal detection of this species, from February through May when this species is most active. If there is a rain event between when the protocol surveys were performed and when construction begins, the USFWS approved biologist shall survey the area to be affected within 24 hours of the onset of construction.</p> <p>Prior to construction a USFWS approved biologist shall train all construction personnel regarding habitat sensitivity and identification of special-status species, including the CRLF. This training shall include the legal status of the CRLF and penalties for “take” of the species, and the proper action to take if the species is encountered. If new construction personnel are added to the project, the contractor will ensure that the personnel receive the mandatory training before starting work. A fact sheet that contains this information will be prepared and distributed to all construction personnel. Upon complete of training, construction personnel will sign a form stating that they attended the training and understand all the conservation and protection measures. Additionally, all erosion control measures shall be free of plastic monofilament or netting, preventing the entanglement of amphibians and reptiles in these materials.</p> <p>If the CRLF is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFW and/or USFWS which may include measures to minimize adverse effects of construction on California red-legged frog and its associated habitat. The mitigation plan would include a monitoring plan for this species during the period of construction. If a CRLF is found during construction all work in the immediate area shall stop and the USFWS will be contacted. The CRLF will not be handled or harassed, and work shall not continue until the USFWS has provided guidance.</p>	GDPUD	GDPUD and/or USFWS/CDFW	Prior to Construction	
<p>BIO – 2: A pre-construction raptor survey within suitable nest trees shall be conducted if construction activities are scheduled to begin during the raptor nesting season (January 1 – September 31). A qualified biologist shall conduct the survey no more than 30 days prior to the onset of construction activities. If active nests are found on or within 500 feet of the site, CDFW shall be consulted and most likely CDFW will require that an appropriate buffer be established around the nest until the young have fledged or until the biologist has determined that the nest is no longer active. If the construction activities are scheduled to begin during the non-breeding season (October 1- December 31), a survey is not required, and no further mitigation measures are expected to be necessary. If tree removal is determined necessary, timing tree removal to occur during this time frame would also</p>	GDPUD	GDPUD/ CDFW	No More than Thirty Days Prior to Construction	

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
<p>reduce the potential for raptors to nest within the construction limits of the site during the nesting season.</p>				
<p>BIO – 3: A pre-construction survey for northwestern pond turtle shall be performed. The survey(s) shall be conducted in the turtle’s associated aquatic and upland habitats (portions of the sites within 200 feet of the reservoirs and water settling ponds). Surveys shall be conducted by a qualified biologist, in accordance with CDFW guidelines, and during the appropriate time of year, from February through late October, when this species is most active.</p> <p>If this species is not found on the Project Site during the focused pre-construction survey, no further mitigation would be required. However, if this species is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFW and shall include measures to minimize adverse effects of construction on northwestern pond turtle and its associated habitat, including a monitoring plan for this species during the period of construction.</p>	GDPUD	GDPUD/ CDFW	No More than Thirty Days Prior to Construction	
<p>BIO – 4: A pre-construction survey for special-status plant species with potential to occur within the Project Site shall be performed to determine their presence or absence within the Project Site prior to the installation of WTP improvements. Special-status plant species that shall be surveyed include: Brandegee’s Clarkia (<i>Clarkia biloba</i> ssp. <i>brandegeae</i>), Butte County Fritillary (<i>Fritillaria eastwoodiae</i>), and Oval-Leaved Viburnum (<i>Viburnum ellipticum</i>). The focused botanical survey(s) shall be performed within the optimum identification period, to the extent possible, of each species identified in Appendix C with a high potential to occur within the Project Site.</p> <p>If these species are not found on the Project Site, then no further mitigation would be required. However, if these species are found, then consultation with the appropriate resource agencies shall be required and a mitigation plan shall be prepared. The mitigation plan should detail the various mitigation approaches to ensure “no-net-loss” of special-status plants. Examples of mitigation include avoidance of the plant species, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports these species.</p>	GDPUD	GDPUD	Prior to Construction (within floristically appropriate season)	
<p>BIO – 5: Prior to any tree impacts occurring from project-related construction/improvements, an arborist survey shall be performed by an International Society of Arboriculture Certified Arborist based on the preparation of final site grading plans. Per the General Plan, the amount of tree impacts, oak tree canopy and oak woodland occurring on the Project Site, if any, shall be determined during the arborist survey and results presented in the arborist report. Only tree species subject to protection under the <i>El Dorado County General Plan</i> would require inventory and possible mitigation required by the El Dorado County General Plan policies and Oak Woodland Ordinance. If indirect impacts to a tree’s dripline or root protection zone may occur, measures to minimize impacts during construction shall be implemented. All impact avoidance measures identified in the El Dorado General Plan shall be implemented prior to, during, and following construction as appropriate.</p>	GDPUD	GDPUD	Prior to Construction that would Involve any Tree Impacts	

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
<p>BIO – 6: Project activities shall be conducted outside of the temporary setback distance of 100 feet from the reservoirs adjacent to the Project Site, where possible.</p> <p>If unavoidable project activities on the Project Site must occur within the 100-foot setback, uphill from the respective reservoir, then an entrenched silt-fence shall be installed adjacent to the downhill limit of work to fully encompass the lower side of the active area. Silt fences shall be installed per guidelines included in the California Department of Transportation, Construction Site Best Management Practices Manual, Silt Fences (California Department of Conservation 2003). Additionally, no work will occur within 10 feet of the edge of any wetland or riparian vegetation associated with either reservoir. Prior to the removal of any silt fences, or during the implementation of Best Management Practices (BMPs), a Certified Professional in Storm Water Quality or Certified Professional in Erosion and Sediment Control be consulted on best stabilization and sediment control options.</p>	GDPUD	GDPUD	Prior to and During Construction	
Cultural Resources				
<p>CR – 1: Should archaeological deposits or artifacts such as structural features or unusual amounts of bone or shell, artifacts, human remains, architectural artifacts, historic archaeological artifacts be inadvertently exposed during the course of any construction activity, work shall immediately cease in the immediate area and the GDPUD project manager shall be contacted. GDPUD shall retain a qualified archaeologist to document the find, assess its significance, and recommend further treatment. The GDPUD shall implement any mitigation required for the recordation and/or protection of the cultural resources.</p>	Contractor and GDPUD	GDPUD	During Construction	
<p>CR – 2: If evidence of a paleontological site is uncovered during grading or other construction activities, work shall be halted within 100 feet of the find and the GDPUD project manager shall be contacted for inadvertent discovery of resources associated with project construction. A qualified paleontologist shall be retained to conduct an on-site evaluation and provide recommendations for removal and/or preservation. Work on the Project Site shall not resume until the paleontologist has had a reasonable time to conduct an examination and implement mitigation measures deemed appropriate and necessary by the agency with local jurisdiction in consultation with the qualified paleontologist to reduce impacts to a less than significant level.</p>	Contractor and GDPUD	GDPUD	During Construction	
<p>CR – 3: In the event that any human remains or any associated funerary objects are encountered during construction, all work will cease within the vicinity of the discovery and the GDPUD project manager shall be immediately contacted for inadvertent discovery of resources associated with park construction. In accordance with CEQA (Section 1064.5) and the California Health and Safety Code (Section 7050.5), the El Dorado County Coroner should be contacted immediately. If the human remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who will notify and appoint a Most Likely Descendent (MLD). The MLD will work with a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects. Construction activities</p>	Contractor and GDPUD	GDPUD	During Construction	

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
in the immediate vicinity will not resume until a notice-to-proceed is issued.				
Geology and Soils				
GEO – 1: To the extent possible, all clearing, grading, and excavation activities shall occur between April 15 and October 15. Grading and excavation activities conducted after October 15 shall only be permitted during dry-weather conditions.	Contractor and GDPUD	GDPUD	During Construction Activities Involving Ground Disturbance	
GEO – 2: Prior to commencement of ground-disturbing activities, GDPUD shall file an NOI to obtain coverage under the current NPDES Construction General Permit with the Central Valley Regional Water Quality Control Board. Pursuant to the terms of the General Permit, GDPUD shall prepare a Storm Water Pollution Prevention Plan (SWPPP) identifying site-specific BMPs to effectively control erosion and sediment loss. If required by the General Permit risk assessment, GDPUD shall also develop and implement a Rain Event Action Plan (REAP) designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.	Contractor and GDPUD	GDPUD	Prior to Commencement of Ground Disturbing Activities	
GEO – 3: During construction, BMPs for erosion and sediment control identified by the project SWPPP shall be implemented by the project contractor. At a minimum, erosion control measures shall include placement of mulch, straw wattles, straw bales, geotextiles and mats, earthen berms, sediment barriers or traps, or the construction of silt fences to intercept and retain sediment transported by storm water runoff in all areas disturbed by construction activities. For all project areas subject to ground disturbance and any grading and excavation activities occurring between October 15 and April 15, the project contractor shall be responsible for ensuring that a qualified professional, contractor staff, or GDPUD staff trained in storm water erosion control techniques and practices monitor the effectiveness of BMPs on the project site daily Monday through Friday, on weekends if rain events occur, and recommend additional BMPs or corrective measures for any BMPs not meeting water quality objectives.	Contractor and GDPUD	GDPUD/RWQCB	During Construction	
GEO – 4: Erosion protection shall be provided for all disturbed areas and shall be monitored and maintained to effectively control areas of potential erosion and sediment loss.	Contractor and GDPUD	GDPUD/RWQCB	During Construction Activities Involving Ground-Disturbing Activities	
GEO – 5: Post-construction restoration of all disturbed areas shall include soil and bank stabilization through seeding and/or revegetation utilizing native plant species.	Contractor and GDPUD	GDPUD	During Construction Activities Involving Ground-Disturbing Activities	
GEO – 6: Soil stockpiles shall be protected from erosion by maintaining effective covering (e.g. plastic tarp) over any stockpiled materials, or through the implementation of other BMPs designed to effectively control erosion and sediment loss.	Contractor and GDPUD	GDPUD	During Construction Activities Involving Ground-Disturbing Activities	

Mitigation Measure (MM)	Implementing Responsibility	Monitoring Responsibility	Timing*	Verification of Compliance (Initials/Date)
Hazards and Hazardous Materials				
HAZ – 1: If dry vegetation or other fire fuels exist on or near staging areas, welding areas, or any other area on which equipment will be operated, contractors shall clear the immediate area of fire fuel prior to construction. To the extent feasible, areas subject to construction activities will be maintained free of fire fuel and debris during the course of construction.	Contractor and GDPUD	GDPUD	Prior to and During Construction	
HAZ – 2: Contractors shall ensure that vehicles and all equipment (heavy equipment and hand-held equipment) that typically include a spark arrester are equipped with a spark arrester in good working condition during the duration of construction.	Contractor	GDPUD	Prior to and During Construction	
Noise				
Noise – 1: The following measures shall be implemented to reduce construction related noise impacts: <ul style="list-style-type: none"> The construction hours for the project shall be limited to the hours of 7:00 A.M. to 7:00 P.M. Monday through Friday, and from 8:00 A.M. to 5:00 P.M. on weekends and on federally recognized holidays. Construction outside of these hours shall normally be avoided. Exceptions are allowed if it can be shown that construction beyond these times is necessary to meet regulatory deadlines, to alleviate traffic congestion or to prevent safety hazards. All construction equipment shall be outfitted with factory installed muffling devices and all construction equipment shall be maintained in good working order. All stationary construction equipment noise sources (e.g. generators, compressors) shall be located as far away from noise sensitive land uses as feasible. 	GDPUD and Contractor	GDPUD	During Construction	

**Appendix B — Auburn Lake Trails Water Treatment Plant Air Quality
Analysis**

January 5, 2016

Ms. Kyrsten Shields
Senior Regulatory Specialist
Foothill Associates
590 Menlo Drive, Suite 5
Rocklin, CA 95765

Subject: *Auburn Lake Trails Water Treatment Plant Air Quality Analysis*

Dear Ms. Shields:

On behalf of KD Anderson & Associates (KDA), I am pleased to submit this letter report presenting the results of air quality analysis of the Auburn Lake Trails Water Treatment Plant (ALT WTP) Project (Proposed Project). This letter report presents a description of the project, the methods used in the air quality analysis, and the results of the air quality analysis.

PROJECT DESCRIPTION

The Georgetown Divide Public Utility District (District) proposes to make improvements to the existing ALT WTP. The existing facility is currently under a Compliance Order from the State, for failure to meet the current requirements of the Surface Water Treatment Rule.

The ALT WTP is located on the southwest side of Sweetwater Trail, approximately one quarter mile northwest of Georgetown Road, which is State Route (SR) 193.

To comply with the Compliance Order, the District proposes to implement upgrades to the existing facility. All proposed improvements would occur on the existing 2+ acre parcel that is occupied by the existing facility. To reduce construction costs, many of the existing facilities would remain in place or be modified, to accommodate the required upgrades.

The current plant has a rated capacity of 3 million gallons/day (MGD). The upgraded plant would have a rated capacity of 3 MGD. There would be no growth inducing elements associated with this project.

The enclosed **Figure 1** shows the existing facilities and proposed improvements. The following are key components of the project improvements. The numbers listed below correspond to the numbers shown in **Figure 1**.

1. The construction of a Filter Building. The dimensions of the building are approximately 36 feet by 64 feet. This building would house the major water treatment components of the plant.
2. This area of the site is dedicated to the parking of construction vehicles and equipment together with the temporary staging of construction materials.
3. This is an existing steel tank, labeled Finish Water Clearwell, approximately 30 feet in diameter. This tank would be removed and not used with the new plant.
4. This is an existing steel tank, labeled Backwash Water Recovery Basin, approximately 40 feet in diameter. This tank would remain in the current location and would be retrofitted for use as a Backwash Water Recovery Basin.
5. The construction of a Raw Water Pump Station. This is a new structure to the site with dimensions of approximately 30 feet by 46 feet. A small existing timber framed building would be removed from this area to make room for the new structure.
6. The construction of sand drying beds. These four beds would have a combined total footprint of approximately 45 feet by 88 feet.
7. This is an existing steel tank, labeled Filter to Waste Tank, approximately 24 feet in diameter. This tank would be used in the new treatment process.
8. This is an existing Control Building. This building would be in use during the construction of the Plant upgrades and would remain at the site after the new facility is in operation.

Grading (earthwork) would occur at the site as required to construct a building pad for the new filter building. The dimensions of the building pad are approximately 220 feet by 120 feet, plus cut and fill slopes.

SIGNIFICANCE THRESHOLDS

Implementation of the ALT WTP Project would result in construction activity, which would generate air pollutant emissions. Construction activities such as grading, excavation and travel on unpaved surfaces would generate dust, and can lead to elevated concentrations of inhalable particulate matter smaller than 10 microns in diameter (PM₁₀) and fine particulate matter smaller than 2.5 microns in diameter (PM_{2.5}). The operation of construction equipment results in exhaust emissions. A substantial portion of the construction equipment is powered by diesel engines, which produce relatively high levels of nitrogen oxide (NO_x) emissions. Construction activity could also potentially entrain naturally occurring asbestos (NOA), if present in the soil.

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Significance thresholds applied to construction-related emissions are from the El Dorado County Air Quality Management District (EDCAQMD) document *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* (El Dorado County Air Quality Management District 2002).

Ozone Precursor Emissions

Construction-related ozone precursor emissions, reactive organic gas (ROG) and NO_x, are considered a significant impact in this letter report if implementation of the Proposed Project would generate emissions exceeding:

- 82 pounds per day (ppd) of ROG, or
- 82 ppd of NO_x.

These values are from Table 3.2 of the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*.

Fugitive Dust Particulate Matter

Section 4.2.3 of the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* states:

“Mass emissions of fugitive dust PM₁₀ need not be quantified, and may be assumed to be not significant, if the project includes mitigation measures that will prevent visible dust beyond the project property lines, in compliance with Rule 403 of the South Coast AQMD. See Section C.6 in Appendix C-1, where the mitigation measures in Rule 403 are set forth.”

An excerpt from Appendix C-1 of the EDCAQMD guide is enclosed with this letter report. Implementing the dust control measures described in Appendix C-1 would allow the Proposed Project to be below the EDCAQMD threshold of significance for construction-related particulate matter emissions.

In this letter report, this significance threshold is applied to both PM₁₀ and PM_{2.5}.

Greenhouse Gas Emissions

The EDCAQMD participated in a joint process with other air districts in the region to develop CEQA significance thresholds for greenhouse gas (GHG) emissions. The other air districts were the Sacramento Metropolitan Air Quality Management District (SMAQMD), Placer County Air Pollution Control District, Feather River Air Quality Management District, and Yolo-Solano Air Quality Management District. The Board of Directors of the SMAQMD adopted the GHG

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thresholds in October 2014. The EDCAQMD recommends use of the GHG emissions significance thresholds adopted by the SMAQMD (Baughman pers. comm.). The SMAQMD GHG significance thresholds are applied in this letter report.

Project-related GHG emissions are considered a significant impact if the amount of emissions exceeds 1,100 metric tons per year (MT/yr) of construction-related GHG emissions. If Project-related GHG emissions exceed this threshold, measures to reduce or offset the GHG emissions should be considered. Measures that reduce the amount of GHG emissions to less than the threshold are considered to reduce the impact to less than significant levels.

Diesel Exhaust Particulate Matter

Diesel exhaust particulate matter has been identified as a toxic air contaminant (TAC). Section 4.2.1 of the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* states:

“ . . .the District has determined that keeping total construction phase fuel use under the limits shown in Table 4.2, below, will not result in a health risk from Diesel particulate matter that exceeds the significance criteria for toxic air contaminants (1 in 1 million if T-BACT is not used; 10 in 1 million if T-BACT is used.)”

Table 4.2 of the EDCAQMD guide is enclosed with this letter report. As shown in Table 4.2, the significance criteria for construction equipment fleets with Best Available Control Technology for TACs (T-BACT) engines is 37,000 gallons of diesel fuel used during the construction phase. T-BACT engines are defined as those in 1996 or later model year equipment. The significance criteria for equipment fleets without T-BACT (pre-1996 model year) is 3,700 gallons of diesel fuel used. The importance of 1996 is that it is the year in which “Tier 1” emission control standards applied to many¹ construction equipment engines.

As noted in Table 4.2 of the EDCAQMD guide, “Maximum gallons of fuel may be interpolated between 37,000 and 3,700 gallons based on the fraction of T-BACT and non T-BACT engines.” Applying interpolation of values presented in Table 4.2 of the EDAQMD guide results in a maximum 5,052 gallons of diesel fuel consumption during the construction phase if a minimum of 4.06 percent of the fuel is consumed in 1996 or later model year engines.

¹ The year in which emission control standards applied varies, based on the engine horsepower. References to dates in the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act* and in this letter report are based on the horsepower ranges for the most common types of construction equipment.

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Naturally Occurring Asbestos

Naturally occurring asbestos has been identified as a TAC by the California Air Resources Board (CARB). No quantitative significance thresholds have been set for NOA. However, the EDCAQMD provides a map that may be used as a screening-level indicator of the likelihood of NOA being present on the Proposed Project site. The map, *Asbestos Review Areas – Western Slope – County of El Dorado – State of California* (County of El Dorado 2005) shows the location of individual parcels and areas within the following four categories considered to be subject to elevated risk of containing NOA:

- Found Area of NOA,
- Quarter Mile Buffer for Found Area of NOA,
- More Likely to Contain Asbestos (Dept of Conservation Mines & Geology OPEN-FILE REPORT 2000-002), and
- Quarter Mile Buffer for More Likely to Contain Asbestos or Fault Line.

If a project site is located outside of all four areas listed above, it may be considered to have a relatively lower probability of containing NOA and, in this letter report, will be considered to have a less-than-significant impact.

If a project site is located within one of the four areas listed above, it may be considered to have an elevated probability of containing NOA and, in this letter report, will be considered to have a significant impact.

Implementation of mitigation measures to reduce asbestos emissions during construction activities will be considered to reduce the impact to a less-than-significant level.

METHODOLOGY

The following describes methods used to assess project-related construction impacts.

Ozone Precursor Emissions

Construction-related emissions associated with the Proposed Project were estimated using the CalEEMod emissions modeling program (South Coast Air Quality Management District 2013). CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and

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operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod emissions model contains default data characterizing the construction and operation of projects. The CalEEMod default values were used except where:

- project-specific data are available, and
- updated technical data are available.

Project-specific data included the construction schedule and a description of the use of construction equipment (Sanders pers. comm.).

More detailed information on the CalEEMod model is available at the internet website <http://caleemod.com/>. Output files from the CalEEMod model, as applied to the Proposed Project, are enclosed with this letter report.

Greenhouse Gas Emissions

Implementation of the Proposed Project would contribute to increases of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) emissions in the study area. A weighted composite of these types of emissions is calculated to develop estimates of carbon dioxide equivalent (CO₂e) emissions. Construction-related GHG emissions associated with the project were estimated using the CalEEMod emissions modeling program. This program is described above.

Diesel Exhaust Particulate Matter

Consumption of diesel fuel during construction of the Proposed Project was estimated using estimates of construction equipment activity from the Sanders pers. comm. The CalEEMod model was used to develop estimates of the hours of use and horsepower for each type of equipment. The amount of diesel fuel used during the construction equipment activity was then estimated using diesel fuel consumption rates from the Virginia Tech publication *Predicting Diesel Fuel Consumption* (Grisso 2013).

Naturally-Occurring Asbestos

As noted above, the map *Asbestos Review Areas – Western Slope – County of El Dorado – State of California* (County of El Dorado 2005) is used in this letter report as a source of information on the potential for NOA to be present on the Project site.

AIR QUALITY ANALYSIS RESULTS

The following describes the results of the air quality analysis and the significance of air quality impacts.

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Ozone Precursor Emissions

Construction of the Proposed Project would result in the generation of ozone precursor emissions ROG and NO_x. During the summer season, construction activity would generate:

- 45.21 ppd of ROG and
- 13.77 ppd of NO_x.

During the winter season, construction activity would generate:

- 45.20 ppd of ROG and
- 13.79 ppd of NO_x.

None of the above values would exceed the 82 ppd ROG significance threshold, or the 82 ppd NO_x threshold. Therefore, this impact is considered less than significant, and no mitigation measures are required.

Fugitive Dust Particulate Matter

Construction of the Proposed Project would generate fugitive dust PM₁₀ and PM_{2.5} emissions. Based on procedures presented in the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*, these emissions are considered a significant impact which would be reduced to a less-than-significant level with implementation of measures presented in Section C.6 in Appendix C-1 of the Guide.

Mitigation Measure 1. During construction, implement measures presented in Section C.6 in Appendix C-1 of the *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*. These measures are also enclosed with this letter report.

With implementation of Mitigation Measure 1, this impact would be considered less than significant.

Greenhouse Gas Emissions

Construction of the Proposed Project would result in the generation of GHG emissions. During the construction period, construction activity would generate 198.30 MT of CO₂e emissions. This amount is less than the 1,100 MT/yr significance threshold for GHG emissions. Therefore, this impact is considered less than significant, and no mitigation measures are required.

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Diesel Exhaust Particulate Matter

Construction of the Proposed Project would generate diesel exhaust particulate matter emissions. Construction of the Proposed Project is estimated to result in the use of 5,052 gallons of diesel fuel. Based on the Diesel Exhaust Particulate Matter significance threshold presented in *Guide to Air Quality Assessment – Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*, this is considered to be a potentially significant impact. This impact will be reduced to a less-than-significant level by implementing the following mitigation measure.

Mitigation Measure 2. During construction, require that a minimum 4.06 percent of diesel fuel used by construction equipment be consumed by 1996 or later model year engines.

With implementation of Mitigation Measure 2, this impact would be considered less than significant.

Naturally Occurring Asbestos

The map, *Asbestos Review Areas – Western Slope – County of El Dorado – State of California* shows areas more likely to contain NOA. Soil-disturbing construction activity in these areas would result in an elevated risk of entraining NOA. The asbestos map shows the project site is located in a “Quarter Mile Buffer for More Likely to Contain Asbestos or a Fault Line”, which indicates an elevated risk of the presence of NOA.

Based on information presented in the Asbestos Review Areas map, this impact is considered to be significant. This impact will be reduced to a less-than-significant level by implementing the following mitigation measures.

Mitigation Measure 3. Comply with CARB Airborne Toxic Control Measure (ATCM) 93105, *Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations*.

Mitigation Measure 4. Comply with CARB ATCM 93106, *Asbestos ATCM for Surfacing Applications*.

Mitigation Measure 5. Comply with EDCAQMD Rule 223-1, preparing and submitting to the EDCAQMD a Fugitive Dust Control Plan.

Mitigation Measure 6. Comply with EDCAQMD Rule 223-2, preparing and submitting to the EDCAQMD an Asbestos Dust Mitigation Plan.

With implementation of Mitigation Measure 3 through Mitigation Measure 6, this impact would be considered less than significant.

KDA

CLOSING

Thank you for providing KDA with this opportunity to provide Foothill Associates with air quality analysis services on the Auburn Lake Trails Water Treatment Plant Project. Please let me know if you have any questions about this letter report.

Sincerely,

KD Anderson & Associates, Inc.

A handwritten signature in blue ink, appearing to read "Wayne Shijo". The signature is fluid and cursive, with the first name being more prominent.

Wayne Shijo
Project Manager

enclosures

KDA

**AUBURN LAKE TRAILS
WATER TREATMENT PLANT PROJECT –
AIR QUALITY LETTER REPORT ENCLOSURES**

BIBLIOGRAPHY

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Grisso, Robert. 2013. Predicting Diesel Fuel Consumption. Blacksburg, VA.

South Coast Air Quality Management District. 2013. CalEEMod – California Emissions Estimator Model User’s Guide – Version 2013.2. Diamond Bar, CA.

Personal Communications

Baughman, Adam. Air Quality Engineer. El Dorado County Air Quality Management District. February 3, 2015 E-mail message to Wayne Shijo, KD Anderson & Associates.

Sanders, George. Georgetown Divide Public Utility District. December 8, 2015 E-mail message to Kyrsten Shields, Foothill Associates.



PROPOSED PROJECT DESIGN



ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

© 2014

Digital base data provided by: Permas, 8-15-2014.
Project boundary is approximate.



Drawn By: MUB
Date: 08/29/2014

FIGURE 1

Document Name: ALT_WTP_Prop\Proj_20140825 : 8/29/2014 11:46:24 AM

Additions have been made to this drawing by the Georgetown Divide Public Utility District. Those additions consist of the labeling of project improvements, numbers 1 through 8 inclusive, and included with the Project Description as requested by the U.S. Department of Fish and Wildlife.

1. FILTER BUILDING
2. TEMPORARY PARKING AND MATERIALS STAGING AREA
3. FINISH WATER CLEARWELL (Existing Tank)
4. BACKWASH WATER RECOVERY (Existing Tank)
5. RAW WATER PUMP STATION
6. SAND DRYING BEDS
7. FILTER TO WASTE TANK (Existing Tank)
8. CONTROL BUILDING (Existing Structure)

South Coast Air Quality Management District

Rule 403 Tables

C.6 Fugitive Dust Mitigation Measures

The following tables C.4 and C.5 are taken from Rule 403 of the South Coast Air Quality Management District (SCAQMD) and contain mitigation measures that may be applied under the screening criteria in sec. 4.2 of Chapter 4 to reduce fugitive dust emissions from construction activities to a less-than-significant level.

Table C.4 Best Available Fugitive Dust Control Measures

Fugitive Dust Source Category	Control Actions
Earth-moving (except construction cutting and filling areas, and mining operations)	1a. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR 1a-1. For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving – construction fill areas	1b. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the District; for areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM method 1557 or other equivalent method approved by the District, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content; two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
Earth-moving – construction cut areas and mining operations	1c. Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining areas unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	2a/b. Apply dust suppression in a sufficient quantity and frequency to maintain a stabilized surface; any areas which cannot be stabilized, as evidenced by wind driven dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area.

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First Edition – February 2002

Disturbed surface areas – completed grading areas	2c. Apply chemical stabilizers within 5 working days or grading completion; OR 2d. Take action 3a or 3c specified for inactive disturbed surface areas.
Inactive disturbed surface areas	3a. Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible due to excessive slope or other safety conditions; OR 3b. Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR 3c. Establish a vegetative ground cover within 21 days after active operations have ceased; ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR 3d. Utilize any combination of control actions 3a, 3b and 3c such that, in total, they apply to all inactive disturbed surface areas.
Unpaved roads	4a. Water all roads used for any vehicular traffic at least once per every two hours of active operations; OR 4b. Water all roads used for any vehicular traffic once daily and restrict vehicle speed to 15 mph; OR 4c. Apply chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	5a. Apply chemical stabilizers; OR 5b. Apply water to at least 80 percent of the surface areas of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR 5c. Install a three-sided enclosure with walls with no more than 50 percent porosity that extend, at a minimum, to the top of the pile.
Track-out control	6a. Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and width of at least 20 feet; OR 6b. Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.

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First Edition – February 2002

All categories	7a. Any other control measures approved by the District.
Source: SCAQMD Rule 403, Tables 2 and 3.	

Table C.5 Best Available Fugitive Dust Control Measures for High Wind Conditions*

Fugitive Dust Source Category	Control Measures
Earth moving	1A. Cease all active operations, OR 2A. Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	0B. On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR 1B. Apply chemical stabilizers prior to a wind event; OR 2B. Apply water to all unstabilized disturbed areas 3 times per day; if there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR 3B. Take the actions specified in Table B.6, Item 3c; OR 4B. Utilize any combination of control actions specified in Table 1, Items 1B, 2B and 3B, such that, in total, they apply to all disturbed surfaced areas.
Unpaved roads	1C. Apply chemical stabilizers prior to a wind event; OR 2C. Apply water twice per hour during active operation; OR 3C. Stop all vehicular traffic.
Open storage piles	1D. Apply water twice per hour; OR 2D. Install temporary coverings.
Paved road track-out	1E. Cover all haul vehicles; OR 2E. Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for operation on both public and private roads.
All categories	1F. Any other control measures approved by the District.
* High wind conditions means when gusts exceed 25 mph. Source: SCAQMD Rule 403, Table 1.	

**Diesel Fuel Use Screening Criteria
for Acceptable Diesel PM Health Risk**

PM Control Technology	Maximum Gallons of Diesel Fuel Consumption During Construction Phase
T-BACT applied	37,000
T-BACT not applied	3,700

Notes: For the purposes of this screening test, T-BACT is defined as the use of 1996 and later model year engines in all Diesel construction equipment. Determination of fuel use should be documented based on the equipment manufacturer's data. Maximum gallons of fuel may be interpolated between 37,000 and 3,700 gallons based on the fraction of T-BACT and non T-BACT engines. Risk calculation to support the above screening values is based on fuel use under the "high risk" Prime Engine Scenario in Table 6, Appendix VII, Risk Characterization Scenarios, from the CARB October, 2000 "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles".

Source: El Dorado County Air Quality Management District 2002. Table 4.2

CalEEMod Model Output Files

The following CalEEMod emissions model output files are presented below:

CalEEMod Model Output File
Construction-Related Criteria Pollutant Emissions
Daily Summer Period

CalEEMod Model Output File
Construction-Related Criteria Pollutant Emissions
Daily Winter Period

CalEEMod Model Output File
Construction-Related Greenhouse Gas Emissions
Annual Period

CalEEMod Model Output File
Construction-Related Criteria Pollutant Emissions
Daily Summer Period

Auburn Lake Trails Water Treatment Plan El Dorado-Mountain County County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	26.40	1000sqft	0.61	26,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, not for operational emissions. CO2 intensity factor of 349 lb/MMh from PG&E "Greenhouse Gas Emission Factors" April 2013.

Land Use - Using warehouse land use for filter building, and building pad size (220 ft x 120 ft = 26,400 sq. ft) for square footage.

Construction Phase - Demolition phase deleted. Construction equipment quantities and duration per George Sanders 12/8/15 E-mail to Kyrsten Shields.

Off-road Equipment - 1 air compressor, 8 hours per day.

Off-road Equipment - 1 crane 2 hours per day. 1 forklift 2 hours per day. 1 tractor/loader/backhoe 4 hours per day.

Off-road Equipment - 1 welder, 2 hours per day.

Off-road Equipment - 2 generator sets, 4 hours per day.

Off-road Equipment - 1 rubber tired dozer 4 hours per day. 1 grader 4 hours per day.

Off-road Equipment - 2 tractor/loaders/backhoe, 3 hours per day.

Off-road Equipment - 1 excavator, 2 hours per day.

Off-road Equipment - 1 paver, 8 hours per day. 2 rollers, 8 hours per day. 1 paving equipment 8 hours per day.

Off-road Equipment - 1 rubber tired dozer, 8 hours per day.

Off-road Equipment - 1 tractor/loader/backhoe 8 hours per day.

Architectural Coating -

Vehicle Trips - This file is only for construction-related emissions only. Not for operational emissions. Operational vehicle trips set to zero.

Area Coating - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Landscape Equipment - This file is for construction only. Not for operational emissions. Operational quantities set to minimal.

Energy Use - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Water And Wastewater - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Solid Waste - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Off-road Equipment - 1 crane, 2 hours per day. 1 forklift, 2 hours per day. 1 tractor/loader/backhoe, 4 hours per day.

Grading - Retained CalEEMod-calculated default values.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	39600	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	30.00

tblConstructionPhase	NumDays	100.00	300.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	150.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	1.00	25.00
tblConstructionPhase	NumDays	1.00	50.00
tblConstructionPhase	PhaseEndDate	7/9/2018	7/5/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	9/8/2017
tblConstructionPhase	PhaseEndDate	11/2/2018	6/15/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	10/6/2017
tblConstructionPhase	PhaseEndDate	11/17/2017	4/21/2017
tblConstructionPhase	PhaseEndDate	4/14/2017	3/10/2017
tblConstructionPhase	PhaseStartDate	6/20/2018	6/16/2018
tblConstructionPhase	PhaseStartDate	6/3/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	9/9/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	3/25/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	10/7/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	2/4/2017	1/1/2017
tblGrading	AcresOfGrading	2.50	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	AcresOfGrading	0.00	0.50
tblLandscapeEquipment	NumberSummerDays	180	1
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	4.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	24.82	0.00
tblVehicleTrips	ST_TR	2.59	0.00
tblVehicleTrips	SU_TR	2.59	0.00

tblVehicleTrips	WD_TR	2.59	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	6,105,000.00	0.00

2.0 Emissions Summary

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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Energy	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
Mobile	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	0.5652	3.0000e-005	2.7300e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005	0.0000	6.1100e-003

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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Energy	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
Mobile	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	0.5652	3.0000e-005	2.7300e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005	0.0000	6.1100e-003

	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
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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation 25	Site Preparation	1/1/2017	2/3/2017	5	25	For equipment used 25 days.
2	Site Preparation 50	Site Preparation	1/1/2017	3/10/2017	5	50	For equipment used 50 days.
3	Grading 10	Grading	3/11/2017	3/24/2017	5	10	For equipment used 10 days.
4	Grading 150	Grading	3/11/2017	10/6/2017	5	150	For equipment used 150 days.
5	Grading 30	Grading	3/11/2017	4/21/2017	5	30	For equipment used 30 days.
6	Building Construction 30	Building Construction	4/22/2017	6/2/2017	5	30	For equipment used 30 days.
7	Building Construction 100	Building Construction	4/22/2017	9/8/2017	5	100	For equipment used 100 days.
8	Building Construction 300	Building Construction	4/22/2017	6/15/2018	5	300	For equipment used 300 days.
9	Paving 2	Paving	6/16/2018	6/19/2018	5	2	Paving period = 2 days.
10	Architectural Coating 14	Architectural Coating	6/16/2018	7/5/2018	5	14	Archit coating period = 14 days.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,600; Non-Residential Outdoor: 13,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation 25	Graders	0	0.00	174	0.41

Site Preparation 25	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation 25	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation 50	Graders	0	0.00	174	0.41
Site Preparation 50	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading 10	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 10	Graders	1	4.00	174	0.41
Grading 10	Rubber Tired Dozers	1	4.00	255	0.40
Grading 10	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading 150	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 150	Rubber Tired Dozers	0	0.00	255	0.40
Grading 150	Tractors/Loaders/Backhoes	2	3.00	97	0.37
Grading 30	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 30	Excavators	1	2.00	162	0.38
Grading 30	Rubber Tired Dozers	0	0.00	255	0.40
Grading 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Cranes	0	0.00	226	0.29
Building Construction 30	Forklifts	0	0.00	89	0.20
Building Construction 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Welders	1	2.00	46	0.45
Building Construction 100	Cranes	1	2.00	226	0.29
Building Construction 100	Forklifts	2	2.00	89	0.20
Building Construction 100	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Building Construction 300	Cranes	0	0.00	226	0.29
Building Construction 300	Forklifts	0	0.00	89	0.20
Building Construction 300	Generator Sets	2	4.00	84	0.74
Building Construction 300	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving 2	Cement and Mortar Mixers	0	0.00	9	0.56
Paving 2	Pavers	1	8.00	125	0.42

Paving 2	Paving Equipment	1	8.00	130	0.36
Paving 2	Rollers	2	8.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating 14	Air Compressors	1	8.00	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
Site Preparation 25	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation 50	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 10	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 150	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 30	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 20	1	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 100	5	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 200	2	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 14	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation 25 - 2017

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					
Fugitive Dust					6.0433	0.0000	6.0433	3.3125	0.0000	3.3125			0.0000			0.0000
Off-Road	1.1764	13.0377	9.8238	8.7800e-003		0.6057	0.6057		0.5572	0.5572		899.3161	899.3161	0.2756		905.1026
Total	1.1764	13.0377	9.8238	8.7800e-003	6.0433	0.6057	6.6490	3.3125	0.5572	3.8697		899.3161	899.3161	0.2756		905.1026

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.2 Site Preparation 25 - 2017

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					
Fugitive Dust					6.0433	0.0000	6.0433	3.3125	0.0000	3.3125			0.0000			0.0000
Off-Road	1.1764	13.0377	9.8238	8.7800e-003		0.6057	0.6057		0.5572	0.5572	0.0000	899.3161	899.3161	0.2756		905.1026
Total	1.1764	13.0377	9.8238	8.7800e-003	6.0433	0.6057	6.6490	3.3125	0.5572	3.8697	0.0000	899.3161	899.3161	0.2756		905.1026

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.3 Site Preparation 50 - 2017

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					
Fugitive Dust					0.0106	0.0000	0.0106	1.1500e-003	0.0000	1.1500e-003			0.0000			0.0000
Off-Road	0.3168	3.0439	2.3938	3.1100e-003		0.2289	0.2289		0.2106	0.2106		318.2649	318.2649	0.0975		320.3128
Total	0.3168	3.0439	2.3938	3.1100e-003	0.0106	0.2289	0.2395	1.1500e-003	0.2106	0.2118		318.2649	318.2649	0.0975		320.3128

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.3 Site Preparation 50 - 2017

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					
Fugitive Dust					0.0106	0.0000	0.0106	1.1500e-003	0.0000	1.1500e-003			0.0000			0.0000
Off-Road	0.3168	3.0439	2.3938	3.1100e-003		0.2289	0.2289		0.2106	0.2106	0.0000	318.2649	318.2649	0.0975		320.3128
Total	0.3168	3.0439	2.3938	3.1100e-003	0.0106	0.2289	0.2395	1.1500e-003	0.2106	0.2118	0.0000	318.2649	318.2649	0.0975		320.3128

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.4 Grading 10 - 2017

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					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	1.0700	11.4017	7.3817	7.5400e-003		0.5764	0.5764		0.5303	0.5303		772.7942	772.7942	0.2368		777.7666
Total	1.0700	11.4017	7.3817	7.5400e-003	3.0110	0.5764	3.5874	1.6551	0.5303	2.1854		772.7942	772.7942	0.2368		777.7666

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
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
Worker	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840
Total	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840

3.4 Grading 10 - 2017

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					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	1.0700	11.4017	7.3817	7.5400e-003		0.5764	0.5764		0.5303	0.5303	0.0000	772.7942	772.7942	0.2368		777.7666
Total	1.0700	11.4017	7.3817	7.5400e-003	3.0110	0.5764	3.5874	1.6551	0.5303	2.1854	0.0000	772.7942	772.7942	0.2368		777.7666

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
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
Worker	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840
Total	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840

3.5 Grading 150 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2376	2.2829	1.7954	2.3300e-003		0.1717	0.1717		0.1580	0.1580		238.6987	238.6987	0.0731		240.2346
Total	0.2376	2.2829	1.7954	2.3300e-003	0.0000	0.1717	0.1717	0.0000	0.1580	0.1580		238.6987	238.6987	0.0731		240.2346

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
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
Worker	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840
Total	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840

3.5 Grading 150 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2376	2.2829	1.7954	2.3300e-003		0.1717	0.1717		0.1580	0.1580	0.0000	238.6987	238.6987	0.0731		240.2346
Total	0.2376	2.2829	1.7954	2.3300e-003	0.0000	0.1717	0.1717	0.0000	0.1580	0.1580	0.0000	238.6987	238.6987	0.0731		240.2346

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
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
Worker	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840
Total	0.0224	0.0271	0.3503	8.1000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		63.8223	63.8223	2.9400e-003		63.8840

3.6 Grading 30 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0910	1.0092	0.8595	1.3300e-003		0.0497	0.0497		0.0457	0.0457		135.9920	135.9920	0.0417		136.8670
Total	0.0910	1.0092	0.8595	1.3300e-003	0.0000	0.0497	0.0497	0.0000	0.0457	0.0457		135.9920	135.9920	0.0417		136.8670

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.6 Grading 30 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0910	1.0092	0.8595	1.3300e-003		0.0497	0.0497		0.0457	0.0457	0.0000	135.9920	135.9920	0.0417		136.8670
Total	0.0910	1.0092	0.8595	1.3300e-003	0.0000	0.0497	0.0497	0.0000	0.0457	0.0457	0.0000	135.9920	135.9920	0.0417		136.8670

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
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
Worker	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304
Total	0.0135	0.0162	0.2102	4.8000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		38.2934	38.2934	1.7600e-003		38.3304

3.7 Building Construction 30 - 2017**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					
Off-Road	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319		51.8694	51.8694	0.0112		52.1052
Total	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319		51.8694	51.8694	0.0112		52.1052

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.7 Building Construction 30 - 2017

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					
Off-Road	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	51.8694	51.8694	0.0112		52.1052
Total	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	51.8694	51.8694	0.0112		52.1052

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.8 Building Construction 100 - 2017

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					
Off-Road	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588		540.7018	540.7018	0.1657		544.1809
Total	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588		540.7018	540.7018	0.1657		544.1809

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.8 Building Construction 100 - 2017

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					
Off-Road	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588	0.0000	540.7018	540.7018	0.1657		544.1809
Total	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588	0.0000	540.7018	540.7018	0.1657		544.1809

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.9 Building Construction 300 - 2017

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					
Off-Road	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004		623.0346	623.0346	0.0504		624.0936
Total	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004		623.0346	623.0346	0.0504		624.0936

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.9 Building Construction 300 - 2017

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					
Off-Road	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004	0.0000	623.0346	623.0346	0.0504		624.0936
Total	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004	0.0000	623.0346	623.0346	0.0504		624.0936

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
Vendor	0.0468	0.3091	0.7169	7.5000e-004	0.0234	4.3500e-003	0.0278	6.6600e-003	4.0000e-003	0.0107		73.2784	73.2784	5.7000e-004		73.2904
Worker	0.0493	0.0596	0.7706	1.7800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		140.4091	140.4091	6.4600e-003		140.5448
Total	0.0961	0.3687	1.4875	2.5300e-003	0.1639	5.3700e-003	0.1693	0.0439	4.9400e-003	0.0489		213.6875	213.6875	7.0300e-003		213.8352

3.9 Building Construction 300 - 2018**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					
Off-Road	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620		623.0346	623.0346	0.0450		623.9785
Total	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620		623.0346	623.0346	0.0450		623.9785

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
Vendor	0.0412	0.2884	0.6559	7.5000e-004	0.0235	3.7200e-003	0.0272	6.6700e-003	3.4200e-003	0.0101		72.4821	72.4821	5.4000e-004		72.4933
Worker	0.0429	0.0531	0.6846	1.7800e-003	0.1405	9.9000e-004	0.1415	0.0373	9.1000e-004	0.0382		135.1078	135.1078	5.9100e-003		135.2318
Total	0.0841	0.3415	1.3405	2.5300e-003	0.1640	4.7100e-003	0.1687	0.0439	4.3300e-003	0.0483		207.5899	207.5899	6.4500e-003		207.7252

3.9 Building Construction 300 - 2018

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					
Off-Road	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620	0.0000	623.0346	623.0346	0.0450		623.9785
Total	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620	0.0000	623.0346	623.0346	0.0450		623.9785

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
Vendor	0.0412	0.2884	0.6559	7.5000e-004	0.0235	3.7200e-003	0.0272	6.6700e-003	3.4200e-003	0.0101		72.4821	72.4821	5.4000e-004		72.4933
Worker	0.0429	0.0531	0.6846	1.7800e-003	0.1405	9.9000e-004	0.1415	0.0373	9.1000e-004	0.0382		135.1078	135.1078	5.9100e-003		135.2318
Total	0.0841	0.3415	1.3405	2.5300e-003	0.1640	4.7100e-003	0.1687	0.0439	4.3300e-003	0.0483		207.5899	207.5899	6.4500e-003		207.7252

3.10 Paving 2 - 2018

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					
Off-Road	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880		1,381.0450	1,381.0450	0.4299		1,390.0737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880		1,381.0450	1,381.0450	0.4299		1,390.0737

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
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
Worker	0.0390	0.0483	0.6224	1.6100e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		122.8252	122.8252	5.3700e-003		122.9380
Total	0.0390	0.0483	0.6224	1.6100e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		122.8252	122.8252	5.3700e-003		122.9380

3.10 Paving 2 - 2018

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					
Off-Road	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880	0.0000	1,381.0450	1,381.0450	0.4299		1,390.0737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880	0.0000	1,381.0450	1,381.0450	0.4299		1,390.0737

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
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
Worker	0.0390	0.0483	0.6224	1.6100e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		122.8252	122.8252	5.3700e-003		122.9380
Total	0.0390	0.0483	0.6224	1.6100e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		122.8252	122.8252	5.3700e-003		122.9380

3.11 Architectural Coating 14 - 2018

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	43.7014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135
Total	44.0996	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135

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
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
Worker	7.8000e-003	9.6600e-003	0.1245	3.2000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		24.5651	24.5651	1.0700e-003		24.5876
Total	7.8000e-003	9.6600e-003	0.1245	3.2000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		24.5651	24.5651	1.0700e-003		24.5876

3.11 Architectural Coating 14 - 2018

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	43.7014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135
Total	44.0996	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135

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
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
Worker	7.8000e-003	9.6600e-003	0.1245	3.2000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		24.5651	24.5651	1.0700e-003		24.5876
Total	7.8000e-003	9.6600e-003	0.1245	3.2000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		24.5651	24.5651	1.0700e-003		24.5876

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	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	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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	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

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					
Unrefrigerated Warehouse-No Pail	0	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

5.2 Energy by Land Use - NaturalGas

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					
Unrefrigerated Warehouse-No Rail	0	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

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Unmitigated	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Total	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Total	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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
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10.0 Vegetation

CalEEMod Model Output File
Construction-Related Criteria Pollutant Emissions
Daily Winter Period

Auburn Lake Trails Water Treatment Plan El Dorado-Mountain County County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	26.40	1000sqft	0.61	26,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, not for operational emissions. CO2 intensity factor of 349 lb/MMh from PG&E "Greenhouse Gas Emission Factors" April 2013.

Land Use - Using warehouse land use for filter building, and building pad size (220 ft x 120 ft = 26,400 sq. ft) for square footage.

Construction Phase - Demolition phase deleted. Construction equipment quantities and duration per George Sanders 12/8/15 E-mail to Kyrsten Shields.

Off-road Equipment - 1 air compressor, 8 hours per day.

Off-road Equipment - 1 crane 2 hours per day. 1 forklift 2 hours per day. 1 tractor/loader/backhoe 4 hours per day.

Off-road Equipment - 1 welder, 2 hours per day.

Off-road Equipment - 2 generator sets, 4 hours per day.

Off-road Equipment - 1 rubber tired dozer 4 hours per day. 1 grader 4 hours per day.

Off-road Equipment - 2 tractor/loaders/backhoe, 3 hours per day.

Off-road Equipment - 1 excavator, 2 hours per day.

Off-road Equipment - 1 paver, 8 hours per day. 2 rollers, 8 hours per day. 1 paving equipment 8 hours per day.

Off-road Equipment - 1 rubber tired dozer, 8 hours per day.

Off-road Equipment - 1 tractor/loader/backhoe 8 hours per day.

Architectural Coating -

Vehicle Trips - This file is only for construction-related emissions only. Not for operational emissions. Operational vehicle trips set to zero.

Area Coating - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Landscape Equipment - This file is for construction only. Not for operational emissions. Operational quantities set to minimal.

Energy Use - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Water And Wastewater - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Solid Waste - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Off-road Equipment - 1 crane, 2 hours per day. 1 forklift, 2 hours per day. 1 tractor/loader/backhoe, 4 hours per day.

Grading - Retained CalEEMod-calculated default values.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	39600	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	30.00

tblConstructionPhase	NumDays	100.00	300.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	150.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	1.00	25.00
tblConstructionPhase	NumDays	1.00	50.00
tblConstructionPhase	PhaseEndDate	7/9/2018	7/5/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	9/8/2017
tblConstructionPhase	PhaseEndDate	11/2/2018	6/15/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	10/6/2017
tblConstructionPhase	PhaseEndDate	11/17/2017	4/21/2017
tblConstructionPhase	PhaseEndDate	4/14/2017	3/10/2017
tblConstructionPhase	PhaseStartDate	6/20/2018	6/16/2018
tblConstructionPhase	PhaseStartDate	6/3/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	9/9/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	3/25/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	10/7/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	2/4/2017	1/1/2017
tblGrading	AcresOfGrading	2.50	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	AcresOfGrading	0.00	0.50
tblLandscapeEquipment	NumberSummerDays	180	1
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	4.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	24.82	0.00
tblVehicleTrips	ST_TR	2.59	0.00
tblVehicleTrips	SU_TR	2.59	0.00

tblVehicleTrips	WD_TR	2.59	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	6,105,000.00	0.00

2.0 Emissions Summary

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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Energy	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
Mobile	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	0.5652	3.0000e-005	2.7300e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005	0.0000	6.1100e-003

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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Energy	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
Mobile	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	0.5652	3.0000e-005	2.7300e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005	0.0000	6.1100e-003

	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
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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation 25	Site Preparation	1/1/2017	2/3/2017	5	25	For equipment used 25 days.
2	Site Preparation 50	Site Preparation	1/1/2017	3/10/2017	5	50	For equipment used 50 days.
3	Grading 10	Grading	3/11/2017	3/24/2017	5	10	For equipment used 10 days.
4	Grading 150	Grading	3/11/2017	10/6/2017	5	150	For equipment used 150 days.
5	Grading 30	Grading	3/11/2017	4/21/2017	5	30	For equipment used 30 days.
6	Building Construction 30	Building Construction	4/22/2017	6/2/2017	5	30	For equipment used 30 days.
7	Building Construction 100	Building Construction	4/22/2017	9/8/2017	5	100	For equipment used 100 days.
8	Building Construction 300	Building Construction	4/22/2017	6/15/2018	5	300	For equipment used 300 days.
9	Paving 2	Paving	6/16/2018	6/19/2018	5	2	Paving period = 2 days.
10	Architectural Coating 14	Architectural Coating	6/16/2018	7/5/2018	5	14	Archit coating period = 14 days.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,600; Non-Residential Outdoor: 13,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation 25	Graders	0	0.00	174	0.41

Site Preparation 25	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation 25	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation 50	Graders	0	0.00	174	0.41
Site Preparation 50	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading 10	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 10	Graders	1	4.00	174	0.41
Grading 10	Rubber Tired Dozers	1	4.00	255	0.40
Grading 10	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading 150	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 150	Rubber Tired Dozers	0	0.00	255	0.40
Grading 150	Tractors/Loaders/Backhoes	2	3.00	97	0.37
Grading 30	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 30	Excavators	1	2.00	162	0.38
Grading 30	Rubber Tired Dozers	0	0.00	255	0.40
Grading 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Cranes	0	0.00	226	0.29
Building Construction 30	Forklifts	0	0.00	89	0.20
Building Construction 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Welders	1	2.00	46	0.45
Building Construction 100	Cranes	1	2.00	226	0.29
Building Construction 100	Forklifts	2	2.00	89	0.20
Building Construction 100	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Building Construction 300	Cranes	0	0.00	226	0.29
Building Construction 300	Forklifts	0	0.00	89	0.20
Building Construction 300	Generator Sets	2	4.00	84	0.74
Building Construction 300	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving 2	Cement and Mortar Mixers	0	0.00	9	0.56
Paving 2	Pavers	1	8.00	125	0.42

Paving 2	Paving Equipment	1	8.00	130	0.36
Paving 2	Rollers	2	8.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating 14	Air Compressors	1	8.00	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
Site Preparation 25	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation 50	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 10	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 150	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 30	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 20	1	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 100	5	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 200	2	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 14	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation 25 - 2017

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					
Fugitive Dust					6.0433	0.0000	6.0433	3.3125	0.0000	3.3125			0.0000			0.0000
Off-Road	1.1764	13.0377	9.8238	8.7800e-003		0.6057	0.6057		0.5572	0.5572		899.3161	899.3161	0.2756		905.1026
Total	1.1764	13.0377	9.8238	8.7800e-003	6.0433	0.6057	6.6490	3.3125	0.5572	3.8697		899.3161	899.3161	0.2756		905.1026

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.2 Site Preparation 25 - 2017

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					
Fugitive Dust					6.0433	0.0000	6.0433	3.3125	0.0000	3.3125			0.0000			0.0000
Off-Road	1.1764	13.0377	9.8238	8.7800e-003		0.6057	0.6057		0.5572	0.5572	0.0000	899.3161	899.3161	0.2756		905.1026
Total	1.1764	13.0377	9.8238	8.7800e-003	6.0433	0.6057	6.6490	3.3125	0.5572	3.8697	0.0000	899.3161	899.3161	0.2756		905.1026

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.3 Site Preparation 50 - 2017

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					
Fugitive Dust					0.0106	0.0000	0.0106	1.1500e-003	0.0000	1.1500e-003			0.0000			0.0000
Off-Road	0.3168	3.0439	2.3938	3.1100e-003		0.2289	0.2289		0.2106	0.2106		318.2649	318.2649	0.0975		320.3128
Total	0.3168	3.0439	2.3938	3.1100e-003	0.0106	0.2289	0.2395	1.1500e-003	0.2106	0.2118		318.2649	318.2649	0.0975		320.3128

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.3 Site Preparation 50 - 2017

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					
Fugitive Dust					0.0106	0.0000	0.0106	1.1500e-003	0.0000	1.1500e-003			0.0000			0.0000
Off-Road	0.3168	3.0439	2.3938	3.1100e-003		0.2289	0.2289		0.2106	0.2106	0.0000	318.2649	318.2649	0.0975		320.3128
Total	0.3168	3.0439	2.3938	3.1100e-003	0.0106	0.2289	0.2395	1.1500e-003	0.2106	0.2118	0.0000	318.2649	318.2649	0.0975		320.3128

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.4 Grading 10 - 2017

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					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	1.0700	11.4017	7.3817	7.5400e-003		0.5764	0.5764		0.5303	0.5303		772.7942	772.7942	0.2368		777.7666
Total	1.0700	11.4017	7.3817	7.5400e-003	3.0110	0.5764	3.5874	1.6551	0.5303	2.1854		772.7942	772.7942	0.2368		777.7666

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
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
Worker	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080
Total	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080

3.4 Grading 10 - 2017**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					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	1.0700	11.4017	7.3817	7.5400e-003		0.5764	0.5764		0.5303	0.5303	0.0000	772.7942	772.7942	0.2368		777.7666
Total	1.0700	11.4017	7.3817	7.5400e-003	3.0110	0.5764	3.5874	1.6551	0.5303	2.1854	0.0000	772.7942	772.7942	0.2368		777.7666

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
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
Worker	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080
Total	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080

3.5 Grading 150 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2376	2.2829	1.7954	2.3300e-003		0.1717	0.1717		0.1580	0.1580		238.6987	238.6987	0.0731		240.2346
Total	0.2376	2.2829	1.7954	2.3300e-003	0.0000	0.1717	0.1717	0.0000	0.1580	0.1580		238.6987	238.6987	0.0731		240.2346

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
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
Worker	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080
Total	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080

3.5 Grading 150 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2376	2.2829	1.7954	2.3300e-003		0.1717	0.1717		0.1580	0.1580	0.0000	238.6987	238.6987	0.0731		240.2346
Total	0.2376	2.2829	1.7954	2.3300e-003	0.0000	0.1717	0.1717	0.0000	0.1580	0.1580	0.0000	238.6987	238.6987	0.0731		240.2346

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
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
Worker	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080
Total	0.0203	0.0336	0.3130	7.2000e-004	0.0639	4.6000e-004	0.0643	0.0169	4.3000e-004	0.0174		56.8463	56.8463	2.9400e-003		56.9080

3.6 Grading 30 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0910	1.0092	0.8595	1.3300e-003		0.0497	0.0497		0.0457	0.0457		135.9920	135.9920	0.0417		136.8670
Total	0.0910	1.0092	0.8595	1.3300e-003	0.0000	0.0497	0.0497	0.0000	0.0457	0.0457		135.9920	135.9920	0.0417		136.8670

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.6 Grading 30 - 2017

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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0910	1.0092	0.8595	1.3300e-003		0.0497	0.0497		0.0457	0.0457	0.0000	135.9920	135.9920	0.0417		136.8670
Total	0.0910	1.0092	0.8595	1.3300e-003	0.0000	0.0497	0.0497	0.0000	0.0457	0.0457	0.0000	135.9920	135.9920	0.0417		136.8670

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
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
Worker	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448
Total	0.0122	0.0201	0.1878	4.3000e-004	0.0383	2.8000e-004	0.0386	0.0102	2.6000e-004	0.0104		34.1078	34.1078	1.7600e-003		34.1448

3.7 Building Construction 30 - 2017

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					
Off-Road	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319		51.8694	51.8694	0.0112		52.1052
Total	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319		51.8694	51.8694	0.0112		52.1052

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004		72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003		125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003		197.7722

3.7 Building Construction 30 - 2017

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					
Off-Road	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	51.8694	51.8694	0.0112		52.1052
Total	0.1252	0.4352	0.4782	6.4000e-004		0.0319	0.0319		0.0319	0.0319	0.0000	51.8694	51.8694	0.0112		52.1052

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004		72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003		125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003		197.7722

3.8 Building Construction 100 - 2017

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					
Off-Road	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588		540.7018	540.7018	0.1657		544.1809
Total	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588		540.7018	540.7018	0.1657		544.1809

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004		72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003		125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003		197.7722

3.8 Building Construction 100 - 2017

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					
Off-Road	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588	0.0000	540.7018	540.7018	0.1657		544.1809
Total	0.5843	5.8803	3.7075	5.2800e-003		0.3900	0.3900		0.3588	0.3588	0.0000	540.7018	540.7018	0.1657		544.1809

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004		72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003		125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003		197.7722

3.9 Building Construction 300 - 2017

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						
Off-Road	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004		623.0346	623.0346	0.0504			624.0936
Total	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004		623.0346	623.0346	0.0504			624.0936

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004			72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003			125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003			197.7722

3.9 Building Construction 300 - 2017**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					
Off-Road	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004	0.0000	623.0346	623.0346	0.0504		624.0936
Total	0.5701	4.4642	3.7735	6.5800e-003		0.3004	0.3004		0.3004	0.3004	0.0000	623.0346	623.0346	0.0504		624.0936

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
Vendor	0.0591	0.3341	1.0526	7.5000e-004	0.0234	4.4400e-003	0.0279	6.6600e-003	4.0800e-003	0.0108		72.5622	72.5622	5.9000e-004		72.5746
Worker	0.0447	0.0738	0.6886	1.5800e-003	0.1405	1.0200e-003	0.1415	0.0373	9.4000e-004	0.0382		125.0619	125.0619	6.4600e-003		125.1976
Total	0.1038	0.4079	1.7412	2.3300e-003	0.1639	5.4600e-003	0.1694	0.0439	5.0200e-003	0.0490		197.6241	197.6241	7.0500e-003		197.7722

3.9 Building Construction 300 - 2018

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					
Off-Road	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620		623.0346	623.0346	0.0450		623.9785
Total	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620		623.0346	623.0346	0.0450		623.9785

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
Vendor	0.0516	0.3114	0.9831	7.5000e-004	0.0235	3.7800e-003	0.0272	6.6700e-003	3.4700e-003	0.0101		71.7757	71.7757	5.5000e-004		71.7874
Worker	0.0381	0.0658	0.6037	1.5800e-003	0.1405	9.9000e-004	0.1415	0.0373	9.1000e-004	0.0382		120.3176	120.3176	5.9100e-003		120.4417
Total	0.0897	0.3772	1.5868	2.3300e-003	0.1640	4.7700e-003	0.1687	0.0439	4.3800e-003	0.0483		192.0934	192.0934	6.4600e-003		192.2291

3.9 Building Construction 300 - 2018

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					
Off-Road	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620	0.0000	623.0346	623.0346	0.0450		623.9785
Total	0.5054	4.1134	3.7472	6.5800e-003		0.2620	0.2620		0.2620	0.2620	0.0000	623.0346	623.0346	0.0450		623.9785

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
Vendor	0.0516	0.3114	0.9831	7.5000e-004	0.0235	3.7800e-003	0.0272	6.6700e-003	3.4700e-003	0.0101		71.7757	71.7757	5.5000e-004		71.7874
Worker	0.0381	0.0658	0.6037	1.5800e-003	0.1405	9.9000e-004	0.1415	0.0373	9.1000e-004	0.0382		120.3176	120.3176	5.9100e-003		120.4417
Total	0.0897	0.3772	1.5868	2.3300e-003	0.1640	4.7700e-003	0.1687	0.0439	4.3800e-003	0.0483		192.0934	192.0934	6.4600e-003		192.2291

3.10 Paving 2 - 2018

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					
Off-Road	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880		1,381.0450	1,381.0450	0.4299		1,390.0737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880		1,381.0450	1,381.0450	0.4299		1,390.0737

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
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
Worker	0.0347	0.0598	0.5488	1.4400e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		109.3797	109.3797	5.3700e-003		109.4925
Total	0.0347	0.0598	0.5488	1.4400e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		109.3797	109.3797	5.3700e-003		109.4925

3.10 Paving 2 - 2018

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					
Off-Road	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880	0.0000	1,381.0450	1,381.0450	0.4299		1,390.0737
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0604	11.0392	9.1487	0.0137		0.6392	0.6392		0.5880	0.5880	0.0000	1,381.0450	1,381.0450	0.4299		1,390.0737

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
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
Worker	0.0347	0.0598	0.5488	1.4400e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		109.3797	109.3797	5.3700e-003		109.4925
Total	0.0347	0.0598	0.5488	1.4400e-003	0.1277	9.0000e-004	0.1286	0.0339	8.3000e-004	0.0347		109.3797	109.3797	5.3700e-003		109.4925

3.11 Architectural Coating 14 - 2018

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	43.7014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135
Total	44.0996	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135

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
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
Worker	6.9300e-003	0.0120	0.1098	2.9000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		21.8759	21.8759	1.0700e-003		21.8985
Total	6.9300e-003	0.0120	0.1098	2.9000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		21.8759	21.8759	1.0700e-003		21.8985

3.11 Architectural Coating 14 - 2018

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	43.7014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135
Total	44.0996	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135

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
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
Worker	6.9300e-003	0.0120	0.1098	2.9000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		21.8759	21.8759	1.0700e-003		21.8985
Total	6.9300e-003	0.0120	0.1098	2.9000e-004	0.0256	1.8000e-004	0.0257	6.7700e-003	1.7000e-004	6.9400e-003		21.8759	21.8759	1.0700e-003		21.8985

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	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	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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	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

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					
Unrefrigerated Warehouse-No Pail	0	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

5.2 Energy by Land Use - NaturalGas

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					
Unrefrigerated Warehouse-No Rail	0	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

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Unmitigated	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Total	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003
Total	0.5652	3.0000e-005	2.7300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7800e-003	5.7800e-003	2.0000e-005		6.1100e-003

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
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10.0 Vegetation

CalEEMod Model Output File
Construction-Related Greenhouse Gas Emissions
Annual Period

Auburn Lake Trails Water Treatment Plan El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	26.40	1000sqft	0.61	26,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	1			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, not for operational emissions. CO2 intensity factor of 349 lb/MMh from PG&E "Greenhouse Gas Emission Factors" April 2013.

Land Use - Using warehouse land use for filter building, and building pad size (220 ft x 120 ft = 26,400 sq. ft) for square footage.

Construction Phase - Demolition phase deleted. Construction equipment quantities and duration per George Sanders 12/8/15 E-mail to Kyrsten Shields.

Off-road Equipment - 1 air compressor, 8 hours per day.

Off-road Equipment - 1 crane 2 hours per day. 1 forklift 2 hours per day. 1 tractor/loader/backhoe 4 hours per day.

Off-road Equipment - 1 welder, 2 hours per day.

Off-road Equipment - 2 generator sets, 4 hours per day.

Off-road Equipment - 1 rubber tired dozer 4 hours per day. 1 grader 4 hours per day.

Off-road Equipment - 2 tractor/loaders/backhoe, 3 hours per day.

Off-road Equipment - 1 excavator, 2 hours per day.

Off-road Equipment - 1 paver, 8 hours per day. 2 rollers, 8 hours per day. 1 paving equipment 8 hours per day.

Off-road Equipment - 1 rubber tired dozer, 8 hours per day.

Off-road Equipment - 1 tractor/loader/backhoe 8 hours per day.

Architectural Coating -

Vehicle Trips - This file is only for construction-related emissions only. Not for operational emissions. Operational vehicle trips set to zero.

Area Coating - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Landscape Equipment - This file is for construction only. Not for operational emissions. Operational quantities set to minimal.

Energy Use - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Water And Wastewater - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Solid Waste - This file is for construction-related emissions only. Not for operational emissions. Operational quantities set to zero.

Off-road Equipment - 1 crane, 2 hours per day. 1 forklift, 2 hours per day. 1 tractor/loader/backhoe, 4 hours per day.

Grading - Retained CalEEMod-calculated default values.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	39600	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	5.00	14.00
tblConstructionPhase	NumDays	100.00	30.00

tblConstructionPhase	NumDays	100.00	300.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	150.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	1.00	25.00
tblConstructionPhase	NumDays	1.00	50.00
tblConstructionPhase	PhaseEndDate	7/9/2018	7/5/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	9/8/2017
tblConstructionPhase	PhaseEndDate	11/2/2018	6/15/2018
tblConstructionPhase	PhaseEndDate	10/20/2017	10/6/2017
tblConstructionPhase	PhaseEndDate	11/17/2017	4/21/2017
tblConstructionPhase	PhaseEndDate	4/14/2017	3/10/2017
tblConstructionPhase	PhaseStartDate	6/20/2018	6/16/2018
tblConstructionPhase	PhaseStartDate	6/3/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	9/9/2017	4/22/2017
tblConstructionPhase	PhaseStartDate	3/25/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	10/7/2017	3/11/2017
tblConstructionPhase	PhaseStartDate	2/4/2017	1/1/2017
tblGrading	AcresOfGrading	2.50	0.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	AcresOfGrading	0.00	0.50
tblLandscapeEquipment	NumberSummerDays	180	1
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	4.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	3.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	24.82	0.00
tblVehicleTrips	ST_TR	2.59	0.00
tblVehicleTrips	SU_TR	2.59	0.00

tblVehicleTrips	WD_TR	2.59	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	6,105,000.00	0.00

2.0 Emissions Summary

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	0.1031	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
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1031	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

	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
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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation 25	Site Preparation	1/1/2017	2/3/2017	5	25	For equipment used 25 days.
2	Site Preparation 50	Site Preparation	1/1/2017	3/10/2017	5	50	For equipment used 50 days.
3	Grading 10	Grading	3/11/2017	3/24/2017	5	10	For equipment used 10 days.
4	Grading 150	Grading	3/11/2017	10/6/2017	5	150	For equipment used 150 days.
5	Grading 30	Grading	3/11/2017	4/21/2017	5	30	For equipment used 30 days.
6	Building Construction 30	Building Construction	4/22/2017	6/2/2017	5	30	For equipment used 30 days.
7	Building Construction 100	Building Construction	4/22/2017	9/8/2017	5	100	For equipment used 100 days.
8	Building Construction 300	Building Construction	4/22/2017	6/15/2018	5	300	For equipment used 300 days.
9	Paving 2	Paving	6/16/2018	6/19/2018	5	2	Paving period = 2 days.
10	Architectural Coating 14	Architectural Coating	6/16/2018	7/5/2018	5	14	Archit coating period = 14 days.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,600; Non-Residential Outdoor: 13,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation 25	Graders	0	0.00	174	0.41
Site Preparation 25	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation 25	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Site Preparation 50	Graders	0	0.00	174	0.41
Site Preparation 50	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading 10	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 10	Graders	1	4.00	174	0.41
Grading 10	Rubber Tired Dozers	1	4.00	255	0.40

Grading 10	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading 150	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 150	Rubber Tired Dozers	0	0.00	255	0.40
Grading 150	Tractors/Loaders/Backhoes	2	3.00	97	0.37
Grading 30	Concrete/Industrial Saws	0	0.00	81	0.73
Grading 30	Excavators	1	2.00	162	0.38
Grading 30	Rubber Tired Dozers	0	0.00	255	0.40
Grading 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Cranes	0	0.00	226	0.29
Building Construction 30	Forklifts	0	0.00	89	0.20
Building Construction 30	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction 30	Welders	1	2.00	46	0.45
Building Construction 100	Cranes	1	2.00	226	0.29
Building Construction 100	Forklifts	2	2.00	89	0.20
Building Construction 100	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Building Construction 300	Cranes	0	0.00	226	0.29
Building Construction 300	Forklifts	0	0.00	89	0.20
Building Construction 300	Generator Sets	2	4.00	84	0.74
Building Construction 300	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Paving 2	Cement and Mortar Mixers	0	0.00	9	0.56
Paving 2	Pavers	1	8.00	125	0.42
Paving 2	Paving Equipment	1	8.00	130	0.36
Paving 2	Rollers	2	8.00	80	0.38
Paving 2	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating 14	Air Compressors	1	8.00	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
Site Preparation 25	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation 50	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 10	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 150	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading 30	1	3.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 20	1	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 100	5	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 200	2	11.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 4	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation 25 - 2017

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					
Fugitive Dust					0.0755	0.0000	0.0755	0.0414	0.0000	0.0414	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1630	0.1228	1.1000e-004	7.5700e-003	7.5700e-003		6.9600e-003	6.9600e-003		0.0000	10.1981	10.1981	3.1200e-003	0.0000	10.2637
Total	0.0147	0.1630	0.1228	1.1000e-004	0.0755	7.5700e-003	0.0831	0.0414	6.9600e-003	0.0484	0.0000	10.1981	10.1981	3.1200e-003	0.0000	10.2637

3.2 Site Preparation 25 - 2017

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	1.5000e-004	2.3000e-004	2.3300e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3962	0.3962	2.0000e-005	0.0000	0.3966
Total	1.5000e-004	2.3000e-004	2.3300e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3962	0.3962	2.0000e-005	0.0000	0.3966

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					
Fugitive Dust					0.0755	0.0000	0.0755	0.0414	0.0000	0.0414	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1630	0.1228	1.1000e-004		7.5700e-003	7.5700e-003		6.9600e-003	6.9600e-003	0.0000	10.1981	10.1981	3.1200e-003	0.0000	10.2637
Total	0.0147	0.1630	0.1228	1.1000e-004	0.0755	7.5700e-003	0.0831	0.0414	6.9600e-003	0.0484	0.0000	10.1981	10.1981	3.1200e-003	0.0000	10.2637

3.2 Site Preparation 25 - 2017

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	1.5000e-004	2.3000e-004	2.3300e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3962	0.3962	2.0000e-005	0.0000	0.3966
Total	1.5000e-004	2.3000e-004	2.3300e-003	1.0000e-005	4.6000e-004	0.0000	4.6000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3962	0.3962	2.0000e-005	0.0000	0.3966

3.3 Site Preparation 50 - 2017

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					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9200e-003	0.0761	0.0599	8.0000e-005		5.7200e-003	5.7200e-003		5.2700e-003	5.2700e-003	0.0000	7.2181	7.2181	2.2100e-003	0.0000	7.2646
Total	7.9200e-003	0.0761	0.0599	8.0000e-005	2.7000e-004	5.7200e-003	5.9900e-003	3.0000e-005	5.2700e-003	5.3000e-003	0.0000	7.2181	7.2181	2.2100e-003	0.0000	7.2646

3.3 Site Preparation 50 - 2017

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	2.9000e-004	4.7000e-004	4.6600e-003	1.0000e-005	9.2000e-004	1.0000e-005	9.3000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7923	0.7923	4.0000e-005	0.0000	0.7931
Total	2.9000e-004	4.7000e-004	4.6600e-003	1.0000e-005	9.2000e-004	1.0000e-005	9.3000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7923	0.7923	4.0000e-005	0.0000	0.7931

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					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9200e-003	0.0761	0.0599	8.0000e-005		5.7200e-003	5.7200e-003		5.2700e-003	5.2700e-003	0.0000	7.2181	7.2181	2.2100e-003	0.0000	7.2646
Total	7.9200e-003	0.0761	0.0599	8.0000e-005	2.7000e-004	5.7200e-003	5.9900e-003	3.0000e-005	5.2700e-003	5.3000e-003	0.0000	7.2181	7.2181	2.2100e-003	0.0000	7.2646

3.3 Site Preparation 50 - 2017

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	2.9000e-004	4.7000e-004	4.6600e-003	1.0000e-005	9.2000e-004	1.0000e-005	9.3000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7923	0.7923	4.0000e-005	0.0000	0.7931
Total	2.9000e-004	4.7000e-004	4.6600e-003	1.0000e-005	9.2000e-004	1.0000e-005	9.3000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.7923	0.7923	4.0000e-005	0.0000	0.7931

3.4 Grading 10 - 2017

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					
Fugitive Dust					0.0151	0.0000	0.0151	8.2800e-003	0.0000	8.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3500e-003	0.0570	0.0369	4.0000e-005		2.8800e-003	2.8800e-003		2.6500e-003	2.6500e-003	0.0000	3.5053	3.5053	1.0700e-003	0.0000	3.5279
Total	5.3500e-003	0.0570	0.0369	4.0000e-005	0.0151	2.8800e-003	0.0179	8.2800e-003	2.6500e-003	0.0109	0.0000	3.5053	3.5053	1.0700e-003	0.0000	3.5279

3.4 Grading 10 - 2017

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	1.0000e-004	1.6000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2641	0.2641	1.0000e-005	0.0000	0.2644
Total	1.0000e-004	1.6000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2641	0.2641	1.0000e-005	0.0000	0.2644

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					
Fugitive Dust					0.0151	0.0000	0.0151	8.2800e-003	0.0000	8.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3500e-003	0.0570	0.0369	4.0000e-005		2.8800e-003	2.8800e-003		2.6500e-003	2.6500e-003	0.0000	3.5053	3.5053	1.0700e-003	0.0000	3.5279
Total	5.3500e-003	0.0570	0.0369	4.0000e-005	0.0151	2.8800e-003	0.0179	8.2800e-003	2.6500e-003	0.0109	0.0000	3.5053	3.5053	1.0700e-003	0.0000	3.5279

3.4 Grading 10 - 2017

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	1.0000e-004	1.6000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2641	0.2641	1.0000e-005	0.0000	0.2644
Total	1.0000e-004	1.6000e-004	1.5500e-003	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2641	0.2641	1.0000e-005	0.0000	0.2644

3.5 Grading 150 - 2017

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					
Fugitive Dust					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	0.0178	0.1712	0.1347	1.7000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	16.2408	16.2408	4.9800e-003	0.0000	16.3453
Total	0.0178	0.1712	0.1347	1.7000e-004	0.0000	0.0129	0.0129	0.0000	0.0119	0.0119	0.0000	16.2408	16.2408	4.9800e-003	0.0000	16.3453

3.5 Grading 150 - 2017

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	1.4600e-003	2.3300e-003	0.0233	6.0000e-005	4.5900e-003	3.0000e-005	4.6300e-003	1.2200e-003	3.0000e-005	1.2500e-003	0.0000	3.9615	3.9615	2.0000e-004	0.0000	3.9657
Total	1.4600e-003	2.3300e-003	0.0233	6.0000e-005	4.5900e-003	3.0000e-005	4.6300e-003	1.2200e-003	3.0000e-005	1.2500e-003	0.0000	3.9615	3.9615	2.0000e-004	0.0000	3.9657

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					
Fugitive Dust					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	0.0178	0.1712	0.1347	1.7000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	16.2408	16.2408	4.9800e-003	0.0000	16.3453
Total	0.0178	0.1712	0.1347	1.7000e-004	0.0000	0.0129	0.0129	0.0000	0.0119	0.0119	0.0000	16.2408	16.2408	4.9800e-003	0.0000	16.3453

3.5 Grading 150 - 2017

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	1.4600e-003	2.3300e-003	0.0233	6.0000e-005	4.5900e-003	3.0000e-005	4.6300e-003	1.2200e-003	3.0000e-005	1.2500e-003	0.0000	3.9615	3.9615	2.0000e-004	0.0000	3.9657
Total	1.4600e-003	2.3300e-003	0.0233	6.0000e-005	4.5900e-003	3.0000e-005	4.6300e-003	1.2200e-003	3.0000e-005	1.2500e-003	0.0000	3.9615	3.9615	2.0000e-004	0.0000	3.9657

3.6 Grading 30 - 2017

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					
Fugitive Dust					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	1.3700e-003	0.0151	0.0129	2.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	1.8506	1.8506	5.7000e-004	0.0000	1.8625
Total	1.3700e-003	0.0151	0.0129	2.0000e-005	0.0000	7.4000e-004	7.4000e-004	0.0000	6.9000e-004	6.9000e-004	0.0000	1.8506	1.8506	5.7000e-004	0.0000	1.8625

3.6 Grading 30 - 2017

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	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	0.0000
Worker	1.7000e-004	2.8000e-004	2.8000e-003	1.0000e-005	5.5000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4754	0.4754	2.0000e-005	0.0000	0.4759	
Total	1.7000e-004	2.8000e-004	2.8000e-003	1.0000e-005	5.5000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4754	0.4754	2.0000e-005	0.0000	0.4759	

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						
Fugitive Dust					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	1.3700e-003	0.0151	0.0129	2.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	1.8506	1.8506	5.7000e-004	0.0000	1.8625	
Total	1.3700e-003	0.0151	0.0129	2.0000e-005	0.0000	7.4000e-004	7.4000e-004	0.0000	6.9000e-004	6.9000e-004	0.0000	1.8506	1.8506	5.7000e-004	0.0000	1.8625	

3.6 Grading 30 - 2017

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	1.7000e-004	2.8000e-004	2.8000e-003	1.0000e-005	5.5000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4754	0.4754	2.0000e-005	0.0000	0.4759
Total	1.7000e-004	2.8000e-004	2.8000e-003	1.0000e-005	5.5000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4754	0.4754	2.0000e-005	0.0000	0.4759

3.7 Building Construction 30 - 2017

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					
Off-Road	1.8800e-003	6.5300e-003	7.1700e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	0.7058	0.7058	1.5000e-004	0.0000	0.7090
Total	1.8800e-003	6.5300e-003	7.1700e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	0.7058	0.7058	1.5000e-004	0.0000	0.7090

3.7 Building Construction 30 - 2017**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	7.9000e-004	4.9400e-003	0.0135	1.0000e-005	3.4000e-004	7.0000e-005	4.0000e-004	1.0000e-004	6.0000e-005	1.6000e-004	0.0000	0.9931	0.9931	1.0000e-005	0.0000	0.9932
Worker	6.4000e-004	1.0300e-003	0.0103	2.0000e-005	2.0200e-003	2.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7431	1.7431	9.0000e-005	0.0000	1.7449
Total	1.4300e-003	5.9700e-003	0.0238	3.0000e-005	2.3600e-003	9.0000e-005	2.4400e-003	6.4000e-004	7.0000e-005	7.1000e-004	0.0000	2.7361	2.7361	1.0000e-004	0.0000	2.7381

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					
Off-Road	1.8800e-003	6.5300e-003	7.1700e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	0.7058	0.7058	1.5000e-004	0.0000	0.7090
Total	1.8800e-003	6.5300e-003	7.1700e-003	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	0.7058	0.7058	1.5000e-004	0.0000	0.7090

3.7 Building Construction 30 - 2017**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	7.9000e-004	4.9400e-003	0.0135	1.0000e-005	3.4000e-004	7.0000e-005	4.0000e-004	1.0000e-004	6.0000e-005	1.6000e-004	0.0000	0.9931	0.9931	1.0000e-005	0.0000	0.9932
Worker	6.4000e-004	1.0300e-003	0.0103	2.0000e-005	2.0200e-003	2.0000e-005	2.0400e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.7431	1.7431	9.0000e-005	0.0000	1.7449
Total	1.4300e-003	5.9700e-003	0.0238	3.0000e-005	2.3600e-003	9.0000e-005	2.4400e-003	6.4000e-004	7.0000e-005	7.1000e-004	0.0000	2.7361	2.7361	1.0000e-004	0.0000	2.7381

3.8 Building Construction 100 - 2017**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					
Off-Road	0.0292	0.2940	0.1854	2.6000e-004		0.0195	0.0195		0.0179	0.0179	0.0000	24.5258	24.5258	7.5100e-003	0.0000	24.6836
Total	0.0292	0.2940	0.1854	2.6000e-004		0.0195	0.0195		0.0179	0.0179	0.0000	24.5258	24.5258	7.5100e-003	0.0000	24.6836

3.8 Building Construction 100 - 2017

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	2.6400e-003	0.0165	0.0451	4.0000e-005	1.1300e-003	2.2000e-004	1.3500e-003	3.2000e-004	2.0000e-004	5.2000e-004	0.0000	3.3102	3.3102	3.0000e-005	0.0000	3.3108
Worker	2.1400e-003	3.4200e-003	0.0342	8.0000e-005	6.7300e-003	5.0000e-005	6.7800e-003	1.7900e-003	5.0000e-005	1.8400e-003	0.0000	5.8102	5.8102	2.9000e-004	0.0000	5.8163
Total	4.7800e-003	0.0199	0.0792	1.2000e-004	7.8600e-003	2.7000e-004	8.1300e-003	2.1100e-003	2.5000e-004	2.3600e-003	0.0000	9.1204	9.1204	3.2000e-004	0.0000	9.1271

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					
Off-Road	0.0292	0.2940	0.1854	2.6000e-004		0.0195	0.0195		0.0179	0.0179	0.0000	24.5258	24.5258	7.5100e-003	0.0000	24.6836
Total	0.0292	0.2940	0.1854	2.6000e-004		0.0195	0.0195		0.0179	0.0179	0.0000	24.5258	24.5258	7.5100e-003	0.0000	24.6836

3.8 Building Construction 100 - 2017

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	2.6400e-003	0.0165	0.0451	4.0000e-005	1.1300e-003	2.2000e-004	1.3500e-003	3.2000e-004	2.0000e-004	5.2000e-004	0.0000	3.3102	3.3102	3.0000e-005	0.0000	3.3108
Worker	2.1400e-003	3.4200e-003	0.0342	8.0000e-005	6.7300e-003	5.0000e-005	6.7800e-003	1.7900e-003	5.0000e-005	1.8400e-003	0.0000	5.8102	5.8102	2.9000e-004	0.0000	5.8163
Total	4.7800e-003	0.0199	0.0792	1.2000e-004	7.8600e-003	2.7000e-004	8.1300e-003	2.1100e-003	2.5000e-004	2.3600e-003	0.0000	9.1204	9.1204	3.2000e-004	0.0000	9.1271

3.9 Building Construction 300 - 2017

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					
Off-Road	0.0513	0.4018	0.3396	5.9000e-004		0.0270	0.0270		0.0270	0.0270	0.0000	50.8687	50.8687	4.1200e-003	0.0000	50.9551
Total	0.0513	0.4018	0.3396	5.9000e-004		0.0270	0.0270		0.0270	0.0270	0.0000	50.8687	50.8687	4.1200e-003	0.0000	50.9551

3.9 Building Construction 300 - 2017

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	0.0000
Vendor	4.7600e-003	0.0296	0.0811	7.0000e-005	2.0300e-003	4.0000e-004	2.4300e-003	5.8000e-004	3.6000e-004	9.4000e-004	0.0000	5.9584	5.9584	5.0000e-005	0.0000	5.9594	
Worker	3.8500e-003	6.1500e-003	0.0615	1.5000e-004	0.0121	9.0000e-005	0.0122	3.2200e-003	8.0000e-005	3.3100e-003	0.0000	10.4583	10.4583	5.3000e-004	0.0000	10.4694	
Total	8.6100e-003	0.0358	0.1426	2.2000e-004	0.0142	4.9000e-004	0.0146	3.8000e-003	4.4000e-004	4.2500e-003	0.0000	16.4167	16.4167	5.8000e-004	0.0000	16.4288	

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						
Off-Road	0.0513	0.4018	0.3396	5.9000e-004		0.0270	0.0270		0.0270	0.0270	0.0000	50.8686	50.8686	4.1200e-003	0.0000	50.9551	
Total	0.0513	0.4018	0.3396	5.9000e-004		0.0270	0.0270		0.0270	0.0270	0.0000	50.8686	50.8686	4.1200e-003	0.0000	50.9551	

3.9 Building Construction 300 - 2017

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	0.0000
Vendor	4.7600e-003	0.0296	0.0811	7.0000e-005	2.0300e-003	4.0000e-004	2.4300e-003	5.8000e-004	3.6000e-004	9.4000e-004	0.0000	5.9584	5.9584	5.0000e-005	0.0000	0.0000	5.9594
Worker	3.8500e-003	6.1500e-003	0.0615	1.5000e-004	0.0121	9.0000e-005	0.0122	3.2200e-003	8.0000e-005	3.3100e-003	0.0000	10.4583	10.4583	5.3000e-004	0.0000	0.0000	10.4694
Total	8.6100e-003	0.0358	0.1426	2.2000e-004	0.0142	4.9000e-004	0.0146	3.8000e-003	4.4000e-004	4.2500e-003	0.0000	16.4167	16.4167	5.8000e-004	0.0000	0.0000	16.4288

3.9 Building Construction 300 - 2018

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						
Off-Road	0.0303	0.2468	0.2248	3.9000e-004		0.0157	0.0157		0.0157	0.0157	0.0000	33.9125	33.9125	2.4500e-003	0.0000	0.0000	33.9638
Total	0.0303	0.2468	0.2248	3.9000e-004		0.0157	0.0157		0.0157	0.0157	0.0000	33.9125	33.9125	2.4500e-003	0.0000	0.0000	33.9638

3.9 Building Construction 300 - 2018

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	0.0000
Vendor	2.7800e-003	0.0184	0.0502	5.0000e-005	1.3600e-003	2.2000e-004	1.5800e-003	3.9000e-004	2.1000e-004	5.9000e-004	0.0000	3.9291	3.9291	3.0000e-005	0.0000	3.9298	
Worker	2.2000e-003	3.6600e-003	0.0362	1.0000e-004	8.0800e-003	6.0000e-005	8.1400e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7080	6.7080	3.2000e-004	0.0000	6.7147	
Total	4.9800e-003	0.0221	0.0864	1.5000e-004	9.4400e-003	2.8000e-004	9.7200e-003	2.5400e-003	2.6000e-004	2.7900e-003	0.0000	10.6371	10.6371	3.5000e-004	0.0000	10.6445	

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						
Off-Road	0.0303	0.2468	0.2248	3.9000e-004		0.0157	0.0157		0.0157	0.0157	0.0000	33.9124	33.9124	2.4500e-003	0.0000	33.9638	
Total	0.0303	0.2468	0.2248	3.9000e-004		0.0157	0.0157		0.0157	0.0157	0.0000	33.9124	33.9124	2.4500e-003	0.0000	33.9638	

3.9 Building Construction 300 - 2018

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	2.7800e-003	0.0184	0.0502	5.0000e-005	1.3600e-003	2.2000e-004	1.5800e-003	3.9000e-004	2.1000e-004	5.9000e-004	0.0000	3.9291	3.9291	3.0000e-005	0.0000	3.9298
Worker	2.2000e-003	3.6600e-003	0.0362	1.0000e-004	8.0800e-003	6.0000e-005	8.1400e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7080	6.7080	3.2000e-004	0.0000	6.7147
Total	4.9800e-003	0.0221	0.0864	1.5000e-004	9.4400e-003	2.8000e-004	9.7200e-003	2.5400e-003	2.6000e-004	2.7900e-003	0.0000	10.6371	10.6371	3.5000e-004	0.0000	10.6445

3.10 Paving 2 - 2018

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					
Off-Road	1.0600e-003	0.0110	9.1500e-003	1.0000e-005		6.4000e-004	6.4000e-004		5.9000e-004	5.9000e-004	0.0000	1.2529	1.2529	3.9000e-004	0.0000	1.2611
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0600e-003	0.0110	9.1500e-003	1.0000e-005		6.4000e-004	6.4000e-004		5.9000e-004	5.9000e-004	0.0000	1.2529	1.2529	3.9000e-004	0.0000	1.2611

3.10 Paving 2 - 2018

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	3.0000e-005	6.0000e-005	5.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1016	0.1016	0.0000	0.0000	0.1017
Total	3.0000e-005	6.0000e-005	5.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1016	0.1016	0.0000	0.0000	0.1017

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					
Off-Road	1.0600e-003	0.0110	9.1500e-003	1.0000e-005		6.4000e-004	6.4000e-004		5.9000e-004	5.9000e-004	0.0000	1.2529	1.2529	3.9000e-004	0.0000	1.2611
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0600e-003	0.0110	9.1500e-003	1.0000e-005		6.4000e-004	6.4000e-004		5.9000e-004	5.9000e-004	0.0000	1.2529	1.2529	3.9000e-004	0.0000	1.2611

3.10 Paving 2 - 2018

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	3.0000e-005	6.0000e-005	5.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1016	0.1016	0.0000	0.0000	0.1017
Total	3.0000e-005	6.0000e-005	5.5000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1016	0.1016	0.0000	0.0000	0.1017

3.11 Architectural Coating 14 - 2018

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	0.3059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-003	0.0187	0.0173	3.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	2.3830	2.3830	2.3000e-004	0.0000	2.3878
Total	0.3087	0.0187	0.0173	3.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	2.3830	2.3830	2.3000e-004	0.0000	2.3878

3.11 Architectural Coating 14 - 2018

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	5.0000e-005	8.0000e-005	7.7000e-004	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1423	0.1423	1.0000e-005	0.0000	0.1424
Total	5.0000e-005	8.0000e-005	7.7000e-004	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1423	0.1423	1.0000e-005	0.0000	0.1424

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	0.3059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-003	0.0187	0.0173	3.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	2.3830	2.3830	2.3000e-004	0.0000	2.3878
Total	0.3087	0.0187	0.0173	3.0000e-005		1.4100e-003	1.4100e-003		1.4100e-003	1.4100e-003	0.0000	2.3830	2.3830	2.3000e-004	0.0000	2.3878

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.456845	0.078463	0.189736	0.161142	0.074925	0.010638	0.010772	0.000982	0.001366	0.000775	0.008718	0.000744	0.004895

5.0 Energy Detail

~~4.4 Fleet Mix~~

Historical Energy Use: N

5.1 Mitigation Measures Energy

5.2 Energy by Land Use - NaturalGas

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						
Unrefrigerated Warehouse-No Rail	0	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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1031					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	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	0.1031	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

	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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1031					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	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	0.1031	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

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Pool	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

**Appendix C — *Biological Letter Report Revised Site Plan for the
Auburn Lake Trails Water Treatment Plant, El Dorado County,
California***

September 5, 2014

George Sanders
Georgetown Divide Public Utility District
P.O. Box 4240
Georgetown, CA 95634

RE: Revised Site Plan for the Auburn Lake Trails Water Treatment Plant, El Dorado County, California

Dear Mr. Sanders:

This biological letter report (Report) analyzes the potential for regionally occurring special-status species to occur within the Auburn Lake Trails Water Treatment Plant Project (Project Site), in El Dorado County, California. The purpose of this Report is to document the potential for special-status species to occur within the Project Site, evaluate impacts on special-status species identified within the draft Environmental Assessment/Initial Study (EA/IS) (2010) based on revisions to the project design, and to determine whether additional avoidance or mitigation measures are needed to reduce impacts to a less than significant level.

The approximately 2-acre Project Site is located on the west side of Sweetwater Trail in El Dorado County, California. The Project Site is situated within Section 21 of Township 12 North, Range 9 East, of the *Greenwood, California* USGS 7.5-minute series quadrangle. The approximate location of the Project Site is 38° 55' 35.2" North, 120° 53' 47.66" West. The topography is relatively flat with elevations that range from 1,745 feet in the southwest to 1,770 feet in the northeast.

1.0 Background

Foothill Associates' prepared a draft EA/IS for the Auburn Lake Trails Water Treatment Plant Improvements Project (March 2010). Since the draft EA/IS has been submitted, the proposed project design has been revised. The revised project design is provided as **Figure 1**. Changes to the project description include:

- Removal of the clearwell chlorine contact tank, washwater recovery tank, and equipment recovery building from the proposed improvements;
- Addition of a new filter building;
- The Greenwood site will not be used for drying beds in future operations. All drying will occur on site; and
- Removal of approximately 1,330 cubic yards of excess cut from the Project Site.

Six mitigation measures were identified in the draft EA/IS to reduce potential project impacts to a less than significant level. Since the draft EA/IS was prepared, the California Department of Fish and Game, referred to in the mitigation measures as CDFG, has been renamed the California Department of Fish and Wildlife (CDFW).

MM BIO – 1: *A pre-construction raptor survey within suitable nest trees shall be conducted if construction activities are scheduled to begin during the raptor nesting season (January 1 – September 31). A qualified biologist shall conduct the survey no more than 30 days prior to the onset of construction activities. If active nests are found on or within 500 feet of the site, CDFG shall be consulted and most likely CDFG will require that an appropriate buffer be established around the nest until the young have fledged or until the biologist has determined that the nest is no longer active. If the construction activities are scheduled to begin during the non-breeding season (October 1- December 31), a survey is not required, and no further mitigation measures are expected to be necessary. If tree removal is determined necessary, timing tree removal to occur during this time frame would also reduce the potential for raptors to nest within the construction limits of the site during the nesting season.*

MM BIO – 2: *A pre-construction survey for California red-legged frog species shall be performed. The survey(s) only needs to be conducted within 100 feet of the frog's associated aquatic and bank habitats, as well as the water setting ponds on the WTP site. Surveys shall be conducted by a qualified biologist, in accordance with CDFG guidelines, and during the appropriate time of year for optimal detection of this species, from February through May when this species is most active.*

If this species is not found on the project site during the focused pre-construction survey, no further mitigation would be required. However, if this species is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFG and/or USFWS which may include measures to minimize adverse effects of construction on California red-legged frog and its associated habitat. The mitigation plan would include a monitoring plan for this species during the period of construction.

MM BIO – 3: *A pre-construction survey for northwest pond turtle shall be performed. The survey(s) only needs to be conducted in the turtle's associated aquatic and upland habitats (portions of the sites within 200 feet of the reservoirs and water settling ponds). Surveys shall be conducted by a qualified biologist, in accordance with CDFG guidelines, and during the appropriate time of year, from February through late October, when this species is most active.*

If this species is not found on the project site during the focused pre-construction survey, no further mitigation would be required. However, if this species is found during focused surveys, then a detailed mitigation plan shall be prepared upon consultation with CDFG and/or USFWS which may include measures to minimize adverse effects of construction on northwestern pond turtle and its associated habitat. The mitigation plan would include a monitoring plan for this species during the period of construction.

MM BIO – 4: *A pre-construction survey(s) for the special-status plant species listed above under ‘special-status plant species’ with potential to occur on the site(s) shall be performed to determine their presence or absence within the project sites prior to the installation of WTP improvements or installation of the Greenwood drying beds. The focused botanical survey(s) shall be performed within the optimum identification period, to the extent possible, of each species identified in Appendix A.*

If these species are not found on the project site then no further mitigation would be required. However, if these species are found, then consultation with the appropriate resource agencies would be required and a mitigation plan shall be prepared. The mitigation plan should detail the various mitigation approaches to ensure “no-net-loss” of special-status plants. Examples of mitigation include avoidance of the plant species, acquisition of credits at an approved mitigation bank, or acquisition and preservation of property that supports these species.

MM BIO – 5: *Potentially regulated trees may occur in the project grading areas. Prior to any tree impacts occurring from project related construction/improvements, an arborist survey shall be performed by an International Society of Arboriculture certified arborist based on the preparation of final site grading plans. Per the General Plan, the amount of tree impacts, oak tree canopy and oak woodland occurring on the sites, if any, shall be determined during the arborist survey and results presented in the arborist report. Only tree species subject to protection under the El Dorado County General Plan would require inventory and possible mitigation required by the El Dorado County General Plan policies and Oak Woodland Ordinance. If indirect impacts to a tree’s dripline or root protection zone may occur, measures to minimize impacts during construction shall be implemented. All impact avoidance measures identified in the El Dorado General Plan shall be implemented prior to, during, and following construction as appropriate.*

MM BIO – 6: *Project activities shall be conducted outside of the temporary setback distance of 100 feet from the reservoirs adjacent to the Greenwood and WTP site, where possible. At a limited area in the northeast portion of the Greenwood project site, a telemetry antenna and associated equipment enclosure would be placed immediately east of Loghouse Road for optimum operation. The placement of these installations at this proposed location would reduce the amount of vegetative and tree disturbance to the minimum level possible. Furthermore, because the riparian vegetation is primarily limited to the portion of bank immediately adjacent to the reservoir, the installation of the telemetry antenna and associated equipment enclosure is not expected to disturb any riparian vegetation. Since the telemetry antenna and associated equipment enclosure will not be installed outside of the 100-foot buffer, an entrenched silt fence adjacent to the eastern extent of work, such that it encompasses the down-slope portion of the work area, shall be installed to prevent any silt or sediment from entering the reservoir. The northernmost edge of the proposed drying beds on the Greenwood site would also be potentially located within 100 feet of the reservoir; however,*

they are located downhill from the reservoir and require no additional protective measures for their placement.

If unavoidable project activities on either site must occur within the 100-foot setback, uphill from the respective reservoir, then an entrenched silt-fence shall be installed adjacent to the downhill limit of work to fully encompass the lower side of the active area. Silt fences shall be installed per guidelines included in the California Stormwater Quality Association (California Stormwater Quality Association 2003). Additionally, no work will occur within 10 feet of the edge of any wetland or riparian vegetation associated with either reservoir. Prior to the removal of any silt fences, or during the implementation of best management practices (BMP), a Certified Professional in Storm Water Quality or Certified Professional in Erosion and Sediment Control be consulted on best stabilization and sediment control options.

2.0 Methodology

A Foothill Associates biologist conducted a biological survey within the Project Site on August 11, 2014. The biological survey consisted of documenting existing site conditions and determining whether the Project Site supports regionally occurring special-status species.

2.1 Preliminary Data Gathering and Review

Available information pertaining to the natural resources of the regional was reviewed. Site-specific information was reviewed including the following:

- Foothill Associates. 2010. *Draft Auburn Lake Trails Water Treatment Plant Improvements Project Environmental Assessment/ Initial Study*, prepared Foothill Associates. (Foothill Associates 2010);
- California Department of Fish and Wildlife (CDFW). 2014. California Natural Diversity Database. (CNDDDB: *Greenwood* topographic quadrangle) Sacramento, California. (CDFW 2014) (**Attachment A**);
- California Native Plant Society (CNPS). 2014. *Inventory of Rare and Endangered Plants of California within the Greenwood Quad*. (CNPS 2014) (**Attachment A**); and
- U.S. Fish and Wildlife Service (USFWS). 2014. *Federal Endangered and Threatened Species that may be affected by Projects in the Greenwood 7.5-minute series Topographic Quadrangle*. (USFWS 2014) (**Attachment A**).

A list of regionally occurring special-status species was compiled based on a review of pertinent literature and a review of the USFWS, CNDDDB, and CNPS database records (**Attachment B**). For each species, habitat requirements were assessed and compared to the habitats observed within the Project Site during the August 11, 2014 biological survey in order to determine their potential to occur within the Project Site. Special-status species were excluded if the Project Site lacks suitable habitat or occurs outside of the known geographic or elevation range. Species without the potential to occur within the Project Site are not discussed further in this Report. Species are considered to have a *high* potential to occur within the Project Site if the Project Site

provides suitable habitat and there are CNDDDB records documented within five miles of the Project Site. Species are considered to have a *low* potential to occur within the Project Site if the Project Site provides suitable habitat, but there are no CNDDDB records documented within five miles of the Project Site. CNDDDB records documented within five miles of the Project Site are provided in **Figure 2**.

3.0 Results

3.1 Biological Communities

Biological communities within the Project Site include ruderal/developed, disturbed non-native grassland, coniferous forest, wetland, and settling pond (**Figure 3**). **Table 1** below provides a summary of biological communities by acreages within the Project Site. Dominant vegetation within each habitat type is identified below.

Table 1 — Biological Communities within the Project Site

Habitat Type	Acreage ¹
Ruderal/Developed	0.94
Non-Native Annual Grassland	0.79
Coniferous Forest	0.15
Wetland	<0.01
Settling Pond	0.07
Total	1.96

¹GIS calculations may not reflect exact acreage due to rounding.

The majority of the Project Site is comprised of ruderal/developed areas. Ruderal/developed areas include: water tanks and buildings, graded roads, and disturbed ground. Ornamental landscape trees including coast redwood (*Sequoia sempervirens*) and cedar (*Cedrus* sp.) occur within the ruderal areas. Non-native weedy species including turkey-mullein (*Croton setigerus*) and yellow star-thistle (*Centaurea solstitialis*) occur within the disturbed ground.

Disturbed non-native annual grassland occurs within the eastern portion of the Project Site. The grassland had recently been mowed at the time of the August 11, 2014 biological survey. Dominant vegetation includes: soft brome (*Bromus hordeaceus*), wild oat (*Avena* sp.), and yellow star-thistle.

Coniferous forest occurs within the southern portion of the Project Site. Dominant vegetation includes foothill pine (*Pinus sabiniana*), soft brome, and wild oat.

A wetland occurs within the southern portion of the Project Site. The wetland is a man-made feature that was formed from runoff from the tanks within the Project Site. The wetland is present year-round as a result of the continual runoff from water treatment operations. The wetland would dry up if water stopped flowing from the tanks. Dominant vegetation includes: Johnson grass (*Sorghum halipense*), spikerush (*Eleocharis macrostachya*), cudweed (*Euchiton* sp.), nutsedge (*Cyperus eragrostis*), and salt grass (*Distichlis spicata*).

A water settling pond is located in the southern portion of the Project Site. The pond is routinely cleared of vegetation during routine maintenance activities. At the time of the August 11, 2014

biological survey, the perimeter of the pond was comprised of sparsely vegetated species including nutsedge, cattail (*Typha* sp.), and annual beard grass (*Polypogon monspeliensis*).

3.2 Wildlife

The following birds were observed foraging within or in the vicinity of the Project Site: turkey vulture (*Cathartes aura*), western scrub-jay (*Apelocoma californica*), oak titmouse (*Baeolophus inornatus*), and acorn woodpecker (*Melanerpes formicivorus*). Hundreds of fish and bullfrogs (*Rana castesbiana*) were observed within the pond.

3.3 Listed and Special-Status Species

3.3.1 Special-Status Species with a High Potential to Occur

Plants

Brandegee's Clarkia

Brandegee's clarkia is an annual herb found often in roadcuts within chaparral, cismontane woodland, and coniferous forest. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 2**) (CDFW 2014). The record is approximately 4.9 miles west of the Project Site. The coniferous forest provides habitat for the species. Brandegee's clarkia was not observed within the Project Site during the biological survey. This species has a high potential to occur within the Project Site.

Butte County Fritillary

Butte County fritillary is found in cismontane woodland, chaparral, and lower montane coniferous forest. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 2**) (CDFW 2014). The record is approximately 2.5 miles northeast of the Project Site. The coniferous forest provides habitat for the species. Butte County fritillary was not observed within the Project Site during the biological survey. This species has a high potential to occur within the Project Site.

Oval-Leaved Viburnum

Oval-leaved viburnum is a perennial bulbiferous herb found in cismontane woodland, chaparral, and lower montane coniferous forest. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 2**) (CDFW 2014). The record is approximately 4.5 miles northwest of the Project Site. The coniferous forest provides habitat for the species. Oval-leaved viburnum was not observed within the Project Site during the biological survey. This species has a high potential to occur within the Project Site.

Wildlife

Northwestern Pond Turtle

Northwestern pond turtles require slow moving perennial aquatic habitats with suitable basking sites. Northwestern pond turtles occasionally inhabit irrigation ditches. Suitable aquatic habitat

typically has a muddy or rocky bottom and has emergent aquatic vegetation for cover. There is one CNDDDB record for this species within five miles of the Project Site (**Figure 2**) (CDFW 2014). The record is approximately one mile south of the Project Site. The pond provides habitat for the species. No northwestern pond turtles were observed within the Project Site during the biological survey. This species has a high potential to occur within the Project Site.

Migratory Birds and Other Birds of Prey

Migratory birds and other birds of prey, protected under 50 CFR 10 of the Migratory Bird Treaty Act (MBTA) and/or Section 3503 of the California Fish and Game Code, have the potential to nest in the ornamental trees and coniferous forest within the Project Site. Trees within 500 feet of the Project Site provide habitat for nesting birds. Several birds protected under the MBTA and/or Section 3503 of the California Fish and Game Code were observed foraging within the vicinity of the Project Site. Migratory birds and other birds of prey have a high potential to nest within the Project Site during the nesting season. The draft EA/IS identifies the breeding season to extend from January 1 through September 30.

3.3.2 Special-Status Species with a Low Potential to Occur

Wildlife

California Red-Legged Frog (CRLF)

CRLF typically inhabit ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Eggs often are attached to emergent vegetation and float at the surface. Submerged root masses and undercut banks are important habitat features for this species. In summer, CRLF aestivate in small mammal burrows, leaf litter, or other moist sites in or near riparian areas. Although CRLF historically occurred throughout much of the Central Valley, it is widely accepted that they have been extirpated from there for more than 50 years. All of the extant records for CRLF in the Sierras are over 800 feet above MSL. Below this elevation, aquatic habitat generally supports stronger populations of non-native predators associated with warm water habitats such as bullfrogs (*Lithobates catesbeiana*) and Centrarchid fish.

There are no known CNDDDB occurrences for this species within five miles of the Project Site (CDFW 2014). The nearest CNDDDB occurrence is approximately seven miles east of the Project Site. The pond within the Project Site contains hundreds of bullfrogs and fish, which are predators to CRLF, and the species' typically, do not co-exist. In addition, the Project Site lacks dense riparian vegetation required for shelter and for egg-laying. Further, the Project Site lacks upland aestivation habitat given that the pond is surrounded by ruderal/developed areas that lack small mammal burrows. No CRLF were observed within the Project Site during the biological survey. Although unlikely given the lack of known occurrences within five miles, the large number of bullfrogs and fish that occur within the pond, which are predators to CRLF, and the lack of dense riparian required for CRLF for shelter or egg-laying, CRLF have a low potential to occur within the Project Site.

3.4 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under the California Environmental Quality Act (CEQA) or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the *El Dorado County General Plan*.

3.4.1 Protected Trees

Impacts to oak woodland habitat canopy are regulated by the County of El Dorado under General Plan Policy 7.4.4.4. No oak trees occur within the Project Site. Several oak trees occur outside of the boundaries of the Project Site.

3.4.2 Wetlands and Other Waters of the U.S.

The settling pond was constructed in uplands as part of the construction of the water treatment plant and is therefore not subject to jurisdiction under Section 404 of the Clean Water Act (40 CFR 230.3(s)(7)). The wetland is a man-made feature that was formed from runoff from the tanks within the Project Site. Although the wetland is present year-round as a result of the continual runoff from water treatment operations, it has formed since the 2010 EA/IS and would dry up if water stopped flowing from the tanks. Therefore, in accordance with Final Rule issued by the Corps in 1986 (51 Federal Register 41217: CFR 328.3d(b), November 13, 1986), this wetland is not jurisdictional.

Impacts to wetlands and ponds are regulated by the County of El Dorado under General Plan Policy 7.3.3.4, which calls for a minimum setback of 100 feet from perennial streams, rivers, and lakes, and 50 feet from intermitted streams and wetlands.

4.0 Conclusions and Recommendations

This Report documents sensitive habitats and special-status species with potential to occur within the Project Site based on existing site conditions. Implementation of the existing Mitigation Measures will reduce project impacts to less than significant levels. The project no longer includes any work at the Greenwood site, therefore no surveys or other mitigation measures are required at that site.

Migratory birds and other birds of prey have a high potential to nest within 500 feet of the Project Site. Implementation of Mitigation Measure BIO-1 would reduce potential impacts to nesting birds to less than significant.

CRLF have a low potential to occur within the Project Site. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to this species to less than significant.

Northwestern pond turtle has a high potential to occur within the Project Site. Implementation of Mitigation Measure BIO-3 would reduce potential impacts to this species to less than significant.

Special-status plants including: Brandegee's clarkia, Butte County fritillary, and oval-leaved viburnum have a high potential to occur within the Project Site. Implementation of Mitigation Measure BIO-4 would reduce potential impacts to these species to less than significant.

The Project Site does not contain oak trees. Therefore, no impacts to oak woodland habitat will occur and implementation of Mitigation Measure BIO-5 is not required. If it is determined that any of the oak trees that occur outside of the Project Site need to be removed as a result of construction activities, implementation of Mitigation Measure BIO-5 is required.

A storm-water pollution prevention plan (SWPPP) has been prepared under separate cover. Implementation of the erosion control Best Management Practices defined in the SWPPP, including installation of silt fence in accordance with Mitigation Measure BIO-6, would reduce the impact to the adjacent reservoir to less than significant.

Please do not hesitate to contact me at (916) 435-1202 or kbayne@foothill.com if you have any questions or require additional information.

Sincerely,

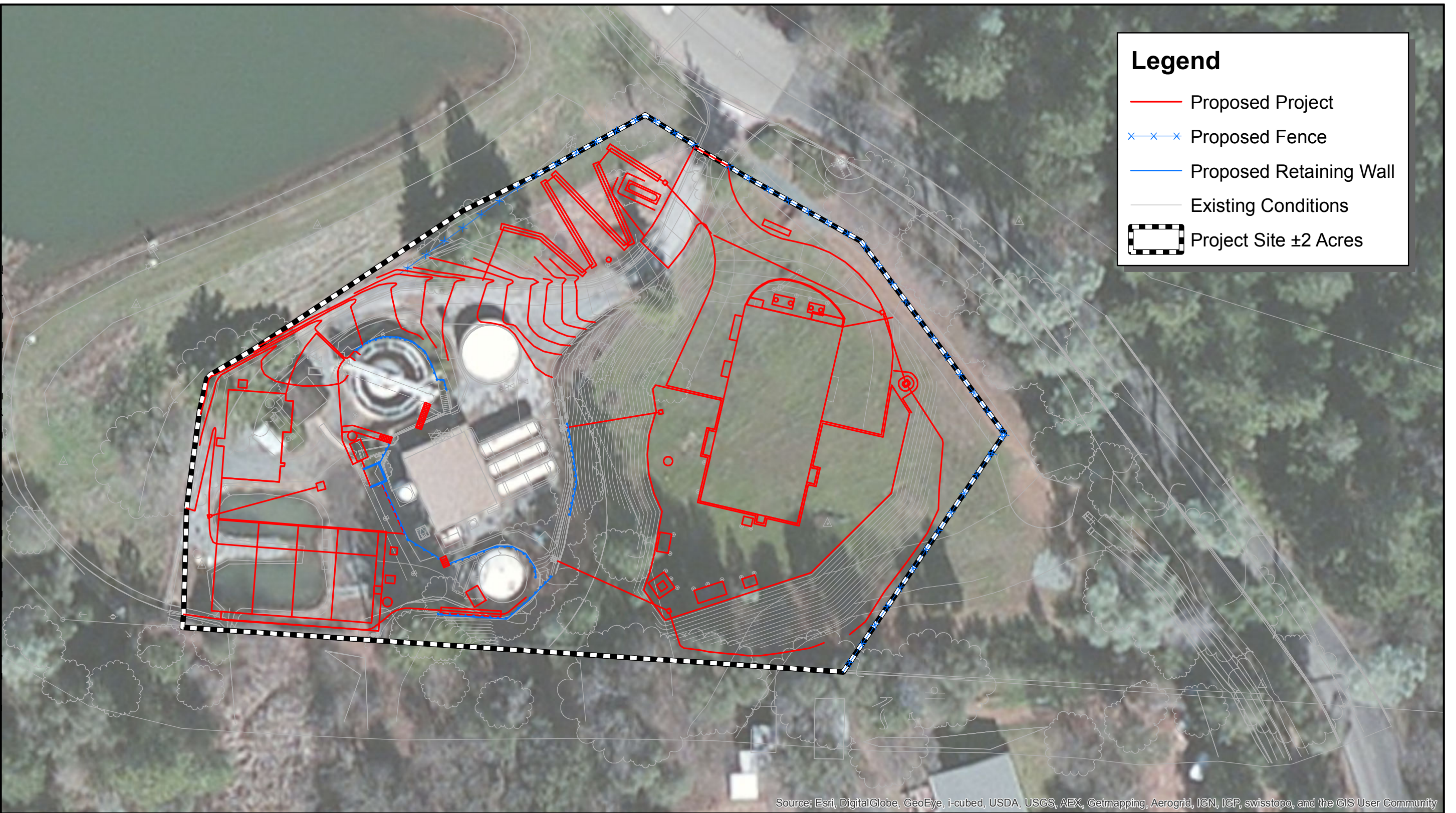


Kelly Bayne, M.S.
Senior Biologist

Enclosures:

- Figure 1 — Proposed Project Design
- Figure 2 — CNDDDB
- Figure 3 — Biological Communities
- Attachment A — USFWS, CNDDDB, and CNPS Lists
- Attachment B — Regionally Occurring Special-Status Species

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Legend

- Proposed Project
- x-x- Proposed Fence
- Proposed Retaining Wall
- Existing Conditions
- Project Site ±2 Acres

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROPOSED PROJECT DESIGN

FOOTHILL ASSOCIATES
 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE
 © 2014

Digital base data provided by Psomas, 8-15-2014.
Project boundary is approximate.

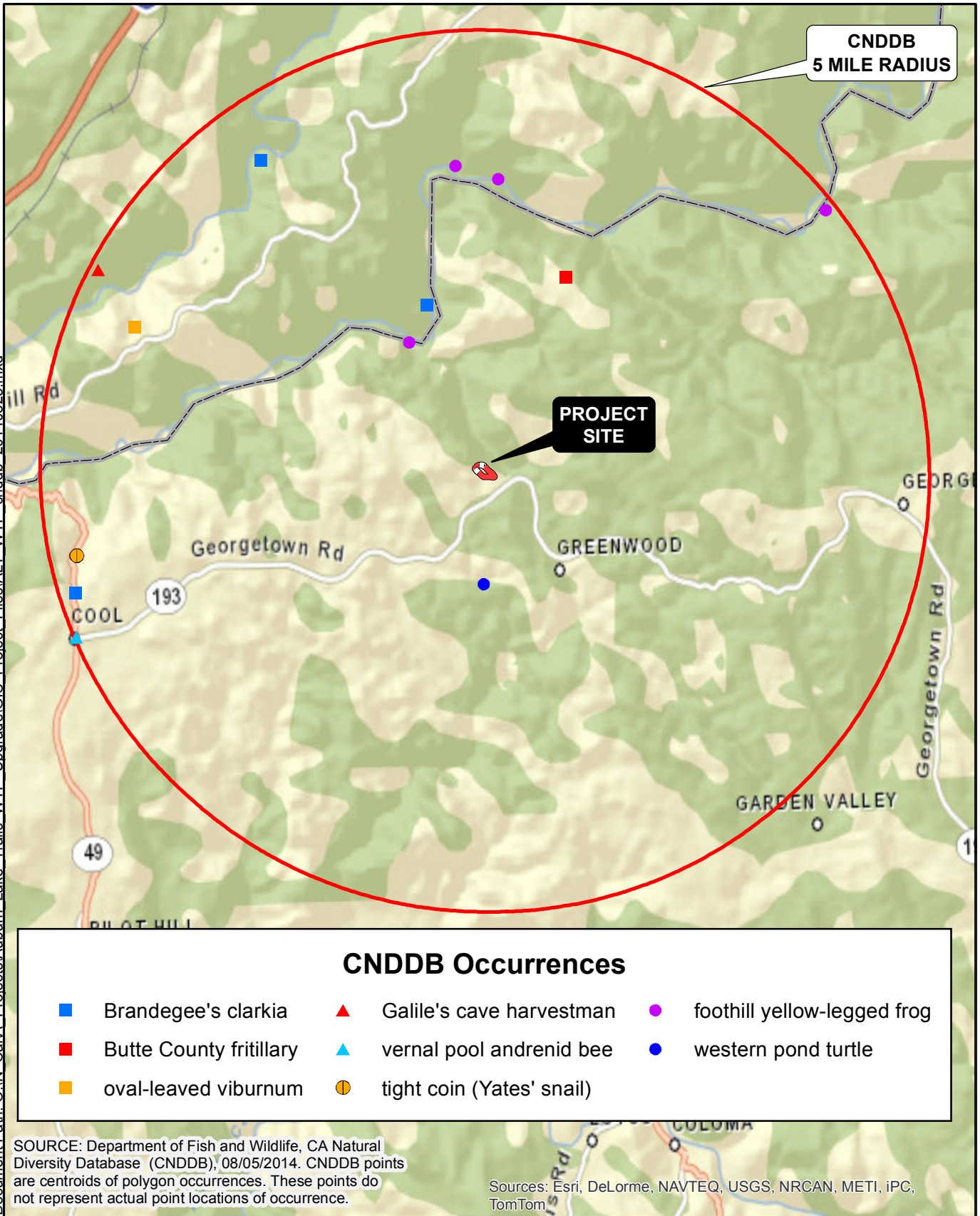


0 50 100
 SCALE IN FEET

Drawn By: MUB
Date: 08/29/2014

FIGURE 1



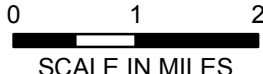
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CNDDDB Occurrences			
■	Brandegge's clarkia	●	foothill yellow-legged frog
■	Butte County fritillary	▲	vernal pool andrenid bee
■	oval-leaved viburnum	●	western pond turtle
	▲	●	tight coin (Yates' snail)

SOURCE: Department of Fish and Wildlife, CA Natural Diversity Database (CNDDDB), 08/05/2014. CNDDDB points are centroids of polygon occurrences. These points do not represent actual point locations of occurrence.

Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, IPC, TomTom

CNDDDB			
 ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE © 2014		 SCALE IN MILES	Drawn By: MUB Date: 08/25/2014
			FIGURE 2

Document Path: O:\N_CalIA_Projects\Auburn_Lake_Trails_WTP_Upgrade\GIS_Project_Files\ALT_WTP_Habitat_20140826.mxd

Biological Communities

- Coniferous Forest - 0.15 Acres
- Wetland - <0.01 Acres
- Settling Pond - 0.07 Acres
- Nonnative Annual Grassland - 0.79 Acres
- Redural/Developed - 0.94 Acres

**Project Site
± 2 Acres**



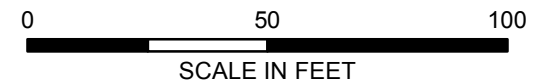
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

BIOLOGICAL COMMUNITIES



© 2014

Digital base data provided by Psomas, 8-15-2014.
Project boundary is approximate.



Drawn By: MUB
Date: 08/29/2014

FIGURE 3

**Attachment A — Special-Status Species Lists
(USFWS, CDFW, and CNPS)**

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the
GREENWOOD (526B)
U.S.G.S. 7 1/2 Minute Quad

Report Date: August 11, 2014

Listed Species

Invertebrates

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Amphibians

Rana draytonii
California red-legged frog (T)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.

- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Query Summary:

Quad **IS** (Greenwood (3812088))

CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia	Dicots	PDONA05053	89	3	None	None	G4G5T4	S4	4.2	BLM_S-Sensitive	Chaparral Cismontane woodland Lower montane coniferous forest
<i>Emys marmorata</i>	western pond turtle	Reptiles	ARAAD02030	1136	1	None	None	G3G4	S3	null	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	Aquatic Artificial flowing waters Klamath/North coast flowing waters Klamath/North coast standing waters Marsh & swamp Sacramento/San Joaquin flowing waters Sacramento/San Joaquin standing waters South coast flowing waters South coast standing waters Wetland
<i>Fritillaria eastwoodiae</i>	Butte County fritillary	Monocots	PMLILOV060	235	1	None	None	G3Q	S3	3.2	USFS_S-Sensitive	Chaparral Cismontane woodland Lower montane coniferous forest Ultramafic
<i>Rana boylei</i>	foothill yellow-legged frog	Amphibians	AAABH01050	805	5	None	None	G3	S2S3	null	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	Aquatic Chaparral Cismontane woodland Coastal scrub Klamath/North coast flowing waters Lower montane coniferous forest Meadow & seep Riparian forest Riparian woodland Sacramento/San Joaquin flowing waters
<i>Viburnum ellipticum</i>	oval-leaved viburnum	Dicots	PDCPR07080	29	1	None	None	G5	S3	2B.3	null	Chaparral Cismontane woodland Lower montane coniferous forest

Plant List

5 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 38120H8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	1B.2	S3	G3
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	Onagraceae	annual herb	4.2	S4	G4G5T4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	4.2	S3.2	G5T3
Fritillaria eastwoodiae	Butte County fritillary	Liliaceae	perennial bulbiferous herb	3.2	S3	G3Q
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	S3	G5

Suggested Citation

CNPS, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 11 August 2014].

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Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

Attachment B — Regionally Occurring Special-Status Species

Regionally Occurring Listed and Special-Status Species

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Plants			
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>biloba</i>	--; --; --; 4	Annual herb found often in roadcuts within chaparral, cismontane woodland, and lower montane coniferous forest from 75 to 915 meters. Blooms May-July. There is one CNDDDB record within five miles of the Project Site.	High ; the coniferous forest within Project Site provides habitat for this species.
Butte County fritillary <i>Fritillaria eastwoodiae</i>	--; --; --; 3	Cismontane woodland, chaparral, and lower montane coniferous forest. Often associated with serpentine soils. Blooms March-June. There is one CNDDDB record within five miles of the Project Site.	High ; the coniferous forest within Project Site provides habitat for this species.
Oval-leaved viburnum <i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	--; --; --; 2B	Perennial deciduous shrub found in chaparral, cismontane woodland, and lower montane coniferous forest. Blooms May-June. There is one CNDDDB record within five miles of the Project Site.	High ; the coniferous forest within Project Site provides habitat for this species.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--; --; --; 1B	Perennial bulbiferous herb found in cismontane woodland, chaparral, and lower montane coniferous forest with serpentinite, gabbroic and other soils; from 245 to 1,170 meters. Blooms May-June.	None ; the Project Site does not provide habitat for this species.
Streambank spring beauty <i>Claytonia parviflora</i> ssp. <i>grandiflora</i>	--; --; --; 4	Annual herb found on rocky substrate in cismontane woodland. Blooms February-May.	None ; the Project Site does not provide habitat for this species.
Wildlife			
Invertebrates			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT; --; --; --	Blue elderberry shrubs usually associated with riparian areas.	None ; no elderberry shrubs occur within the Project Site.
Amphibians/Reptiles			
California red-legged frog <i>Rana aurora draytonii</i>	FT; CSC; --; --	Requires a permanent water source and is typically found along quiet, slow-moving streams, ponds, or marsh communities with emergent vegetation. Believed extirpated from the Central Valley floor since 1970s.	Low ; the pond within the Project Site provides habitat for this species. No upland aestivation habitat occurs within the Project Site.

Common Name	Regulatory Status (Federal; State; Local; CNPS)	Habitat Requirements	Potential for Occurrence
Foothill yellow-legged frog <i>Rana boylei</i>	--; CSC; --; --	Found in shallow flowing streams with some cobble in a variety of habitats including woodlands, riparian forest, coastal scrub, chaparral, and wet meadows from 0 to 1,830 meters (NatureServe 2014). There are three CNDDDB records within five miles of the Project Site.	None; the Project Site does not provide habitat for this species.
Northwestern pond turtle <i>Emys marmorata</i>	--; CSC; --; --	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands. There is one CNDDDB record within five miles of the Project Site.	High; the perennial marsh and perennial drainage provide aquatic habitat for this species. The annual grassland and riparian habitat provide upland habitat for this species, however, this species was not observed during the biological surveys.
Fish			
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT, CH; --; --; --	Spawn in the Fresno and San Joaquin rivers and tributaries before migrating to the Delta and Bay Area (Moyle 2002).	None; the Project Site does not provide habitat for this species.
Delta smelt <i>Hypomesus transpacificus</i>	FT; CE; --; --	Known almost exclusively in the Fresno-San Joaquin estuary, from the Suisun Bay upstream through the Delta in Contra Costa, Fresno, San Joaquin, Solano, and Yolo counties. May also occur in the San Francisco Bay (Moyle 2002).	None; the Project Site does not provide habitat for this species.
Birds			
Migratory birds and other birds of prey (hawks, owls, and vultures)	MBTA and §3503.5 Department of Fish and Game Code	Nests in a variety of communities including cismontane woodland, mixed coniferous forest, chaparral, montane meadow, riparian, and urban communities.	High; the ornamental trees within the Project Site provide nesting habitat for birds and raptors.
Federally-Listed Species:		California State Listed Species:	
FE = federal endangered	PT = proposed threatened	CE = California state endangered	CNPS* Rank Categories:
FT = federal threatened	FPD = proposed for delisting	CT = California state threatened	1A = plants presumed extinct in California
FC = candidate	FD = delisted	CR = California state rare	1B = plants rare, threatened, or endangered in California and elsewhere
		CSC = California species of special Concern	2 = plants rare, threatened, or endangered in California, but common elsewhere
Source: Foothill Associates			

Appendix D — U.S. Fish and Wildlife Service Concurrence Letter



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2014-I-0413

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

SEP 22 2015

Ms. Bridget Binning
Senior Environmental Scientist, Environmental Review Unit
California Department of Public Health
Division of Drinking Water and Environmental Management
P.O. Box 997377, MS 7400
Sacramento, California 95899-7377

Subject: Concurrence with a May Effect, Not Likely to Adversely Affect Determination for the Auburn Lake Trails Water Treatment Upgrade Project in El Dorado County, California

Dear Ms. Binning:

This letter is in response to your April 8, 2014, request that the U.S. Fish and Wildlife Service (Service) concur with the determination that the Georgetown Divide Public Utility District's proposed Auburn Lake Trails Water Treatment Upgrade Project (Project) in El Dorado County, California, may affect, but is not likely to adversely affect, the federally-threatened California red-legged frog (*Rana draytonii*) in accordance with the requirements of the Endangered Species Act of 1973, as amended (Act). The California Department of Public Health (CPDH) is acting as a non-federal representative of the Environmental Protection Agency (EPA) for the purposes of consultation with the Service under Section 7 of the Act. Your request was received on April 9, 2014.

In reviewing the potential effects of the proposed Project, the Service has relied upon: (1) the May, 2014 Biological Assessment; (2) the September, 5, 2014, *Revised Site Plan for the Auburn Lake Trails Water Treatment Plant, El Dorado County, California*; (3) emails exchanged between the Service, CDPH, and other Project personnel, including an updated Project description that was received on August 21, 2015; and (4) other information available to the Service.

The Auburn Lake Trails Water Treatment Plant (WTP) was constructed in 1974 to serve the area around the Auburn Lake Trails residential subdivision. In 2004, the CDPH sent the Georgetown Divide Public Utility District an "Order to Correct Non-Compliance," requiring the plant to upgrade its treatment processes to one of four approved filtration technologies. The proposed Project seeks to implement the required upgrades.

The major elements of the Project include:

1. Construction of a new filter building. The building will house the major water treatment components of the plant, and will be approximately 36 feet (ft) by 64 ft. The new building will require grading of a building pad that measures approximately 220 ft by 120 ft plus cut and fill slopes.
2. Removal of an existing steel tank, which is approximately 30 ft in diameter.

3. Retrofitting of an existing steel tank, approximately 40 ft in diameter, which will serve as the Backwash Water Recovery Basin.
4. Removal of an existing timber framed building and construction, in its place, of a Raw Water Pump Station, which will be approximately 30 ft by 46 ft.
5. Construction of four sand drying beds, which will have a combined footprint of approximately 45 ft by 88 ft.
6. Miscellaneous grading associated with re-contouring the existing access road, relocating pipe, and constructing foundations for new buildings, among other things.

Grading for the Project will result in approximately 1,300 cubic yards of excess fill material, which will be removed from the site and disposed of in compliance with local, state, and federal regulation. Vehicle and equipment parking, and equipment staging will take place on the north end of the Project site.

The Project area, which houses the current treatment plant, covers approximately two acres. Of that, approximately 0.94 acre is already developed or contains ruderal habitat, while 0.79 acre is comprised of non-native annual grassland. The remainder of the site contains minimal coniferous forest, a small man-made wetland that is created by runoff from the water treatment operations, and existing settling ponds. Immediately to the northwest of the Project site lies a pond, which may provide suitable aquatic habitat for California red-legged frogs. The pond, however, contains large numbers of both bullfrogs and fish, which both prey upon and may act as deterrents to California red-legged frog. No surveys have been performed at the site, but no California red-legged frogs have been observed at the site, and there are no records of the species in the California Natural Diversity Database (CNDDDB) from within five miles surrounding the site. The nearest documented occurrence is approximately seven miles away.

Because there is potential upland and dispersal habitat for California red-legged frog at the site, however, the following conservation measures will be implemented with the project:

1. At least 15 calendar days prior to beginning pre-construction surveys, the applicant shall submit the name(s) and credentials of biologist(s) who could conduct the surveys. A qualified biologist will have completed at least four years of university training in wildlife biology or a related science and/or have demonstrated field experience in the identification and life history of California red-legged frog.
2. A pre-construction survey for California red-legged frog shall be performed. The survey(s) will be conducted within 100 feet of California red-legged frog's associated aquatic and bank habitats, as well as the water settling ponds. Surveys shall be conducted by a qualified biologist, in accordance with Service guidelines, and during the appropriate time of year for optimal detection of this species, from February through May when this species is most active.
3. If there is a rain event between when the protocol surveys were performed and when construction begins, the Service-approved biologist will survey the area to be affected within 24 hours of the onset of construction.
4. Prior to the start of construction, a Service-approved biologist will train all construction personnel regarding habitat sensitivity and identification of special status species. The

training will include information regarding the legal status of California red-legged frog and penalties for take of the species, and what to do if a listed species is encountered. If new construction personnel are added to the project, the contractor will ensure that the personnel receive the mandatory training before starting work. A fact sheet or other supporting materials containing this information will be prepared and distributed to all construction personnel. Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all the conservation and protection measures.


5. Erosion control methods will not include plastic monofilament or netting, since amphibians and reptiles may become entangled in these materials.
6. If a California red-legged frog, or any frog that personnel think might be a California red-legged frog is encountered during construction, all work in the immediate area will stop and the Service will be contacted. No such frog will be handled or harassed, and work will not continue until the Service has provided guidance.

The Service concurs that the proposed Project, including all avoidance and minimization measures listed here, may affect, but is not likely to adversely affect California red-legged frogs because the effects are likely to be discountable based on the following: (1) the Project area is small (less than two acres), the majority of which is developed or ruderal; (2) no aquatic habitat will be affected by the Project; (3) given the presence of large numbers of bullfrogs and fish in the nearby pond, the lack of other aquatic habitat nearby, the lack of documented occurrences within five miles of the Project, and the presence of existing development at the site, it is unlikely that California red-legged frogs inhabit the Project area; (4) the conservation measures implemented with the Project, including training for Project employees and pre-construction surveys by a Service-approved biologist, will ensure that California red-legged frogs are not adversely effected by Project activities.

Therefore, unless new information reveals effects of the project that may affect federally listed species or critical habitat in a manner not identified to date, or if a new species is listed or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary for the proposed Auburn Lake Trails Water Treatment Upgrade Project. If you have any questions regarding this letter, please contact Bjorn Erickson, Endangered Species Biologist, or Ryan Olah, Coast-Bay Division Chief, at the letterhead address, electronic mail (peter_erickson@fws.gov or ryan_olah@fws.gov) or telephone ((916) 414-6646 or (916) 414-6623).

Sincerely,



 Eric Tattersall
Acting Assistant Field Supervisor

Appendix E — *Archaeological Inventory Survey [for the] Auburn Lake Trails Water Treatment Project, El Dorado County, California*

ARCHAEOLOGICAL INVENTORY SURVEY

**Auburn Lake Trails Water Treatment Project,
c. 7.5-acres,
El Dorado County, California.**

Prepared for

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Keywords *for Information Center Use:*

Archaeological Inventory Survey, 7.5-acres, El Dorado County, CEQA/NHPA, USGS
Greenwood, Ca. 7.5' Quad., No Historic Properties/Significant Historic Resources/Unique
Archaeological Resources.

January 4, 2010

GENESIS SOCIETY

ARCHAEOLOGICAL - HISTORICAL - CULTURAL RESOURCE MANAGEMENT SERVICES

1. INTRODUCTION

Project Background

This report details the results of an archaeological inventory survey involving two separate land areas totaling approximately 7.5 acres of land located between Spanish Dry Diggins Road in the north, and State Route 193 in the south, in northern El Dorado, California. Proposed action involves modification of facilities at the existing Auburn Lake Trails water treatment plant, construction of a new 500,000 gallon tank adjacent to the treatment plant facility, creation of two new drying beds and construction of a communications tower.

The proposed project will involve physical disturbance to ground surface and sub-surface components in conjunction with proposed water treatment facility improvements, and will therefore have the potential to impact cultural resources located within the Areas of Potential Effect (APE), which consists of the 2.4-acre Auburn Lake Trails facility and the c. 5.12-acre Greenwood area (see attached **Project Location Map**). Evaluation of the project's effects to cultural resources must be undertaken in conformity with El Dorado rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code, Section 21000, et seq. (CEQA), and The California CEQA Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines as amended).

As well, the project will require permitting through the US Department of Agriculture, Rural Development. Cultural studies must therefore also comply with federal guidelines, including in particular Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800).

Scope of Work

Compliance with CEQA requires completion of projects in conformity with the amended (October 1998) Guidelines, including in particular Section 15064.5. Compliance with Section 106 of the NHPA requires completion of projects in conformity with the standards, guidelines, and principles in the Advisory Council's Treatment of Archaeological Properties: A Handbook (1980), and Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (1983). Based on these rules, regulations and laws, the following tasks were considered an adequate and appropriate Scope of Work for the present archaeological inventory:

- Conduct a records search at the North Central Information Center of the California Historical Resources Information System at CSU-Sacramento and consult with the Native American Heritage Commission (NAHC) and Native American representatives on the NAHC contact list. The goals of the records search and consultation are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationship between known sites and environmental variables. This step is also designed to ensure that, during subsequent field survey work, all significant/eligible cultural resources are discovered, correctly identified, and properly interpreted.

- Conduct a complete-coverage, intensive pedestrian survey of the APE. The purpose of the pedestrian survey is to ensure that previously recorded sites identified during the records search and consultation are re-located and eligibility evaluations updated on the basis of existing conditions vis-à-vis site integrity and condition. For previously undocumented sites discovered, the field survey would involve formally recording these on State DPR-523 Primary Records. For both previously identified and newly identified resources, the level of field work would be sufficient to recommend measures to avoid, minimize or mitigate adverse effects of the undertaking to any sites recommended eligible or potentially eligible for listing on the National Register of Historic Places.
- Upon completion of the records search, consultation and pedestrian survey, prepare an archaeological inventory survey report that identifies project effects and that includes an ***Historic Properties Treatment Plan*** for any eligible or potentially eligible properties affected by the undertaking.

The present document constitutes the final report for this project, detailing the results of the records search, consultation and pedestrian field survey and providing recommendations for treatment of historic properties that could be affected. All field survey procedures followed guidelines provided by the State Historic Preservation Office (Sacramento) and conform to accepted professional standards.

Location

The Auburn Lake Trails Water Treatment Project totals approximately 7.5 acres located between Spanish Dry Diggins Road in the north, and State Route 193 in the south, in northern El Dorado, California. Lands affected at the Greenwood site are located within a portion of the southeast quarter of the southeast quarter of Section 31 of Township 13 North, Range 10 East, while the Auburn Lake Trails facility is located within the southwest quarter of Section 1 of Township 12 North, Range 9 East, as shown on the USGS Greenwood, California, 7.5' series quadrangle (see attached ***Project Location Map***).

A number of important water courses are located near the project area, including the Middle Fork of the American River, which is located approximately 4 miles northwest of the APE.

Much of the land in this general area has been subjected to mining, logging, agricultural and light residential development, while the area has been subjected to extensive past mining and ranching since the middle of the 19th Century.

Based on available topographic and other maps, but notwithstanding the effects of past and on-going land uses, the project area appeared to contain lands moderate in sensitivity for both prehistoric and historic sites and features.

2. EXISTING CONDITIONS

Several information sources were considered relevant to evaluating the types of sites and site distribution that might be encountered within the project area. The information evaluated

includes data maintained by the North Central Information Center of the California Historical Resources Information System (CSU-Sacramento), consultation with the NAHC and Native American representatives on the NAHC contact list, and published and unpublished documents relevant to regional ethnography, prehistory, and early historic developments.

North Central Information Center Records

The records of the North Central Information Center (CSU-Sacramento) were examined for existing recorded prehistoric and historic sites and previous archaeological survey within or near the project area (Records Search dated November 25, 2009, NCIC File # ELD-09-90, copy attached), with the following results.

Previous Archaeological Survey:

Approximately 50% of the Greenwood site has been subjected to survey by a professional archaeologist. Windmiller (1997) conducted a survey for the Pilot Hill Ranch water treatment facility, which involved a linear corridor bisecting the Greenwood site. As well, Napton and Greathouse (2007) conducted a survey for the Greenwood Lake water treatment plant, which involved survey of the western portion of the present Greenwood APE. As a result of these surveys, one historic-era resource (CA-ELD-959-H), a segment of the Georgetown Divide Water Conveyance System at Greenwood Lake Reservoir, was recorded within/adjacent to the present APE. The State Historic Preservation Officer, along with a federal agency, reached a consensus for the ditch system and classified the resource as 6Y2 (not eligible for listing on the NRHP).

None of the Auburn Lake Trails treatment plant facility has been subjected to survey by a professional archaeologist. Three surveys have been conducted on lands immediately adjacent to the facility. However, these previous investigation areas do not appear to overlap with the Auburn Lake Trails water treatment plant facility.

Recorded Cultural Resources:

One historic-era site (CA-ELD-959-H), a segment of the Georgetown Divide Water Conveyance System at Greenwood Lake Reservoir, has been recorded within/immediately adjacent to both APE areas. Both Windmiller (1997) and Napton and Greathouse (2007) concluded that the site's integrity had been sufficiently compromised as to render it not eligible for inclusion on the National Register of Historic Places.

Native American Consultation

In conjunction with the records search for the present project, the Native American Heritage Commission (NAHC) was contacted regarding Sacred Land Listings. The NAHC indicated that there are no Sacred Land listings for the project area or adjacent lands (response dated December 3, 2009, copy attached). The contact list from the Native American Heritage Commission included the following individuals and groups, all of whom were contacted and requested to supply any information they might have concerning prehistoric sites or traditional use areas within the project area:

1. El Dorado County Indian Council, El Dorado, California.
2. United Auburn Indian Community of the Auburn Rancheria, Auburn, California.
3. Todd Valley Miwok-Maidu Cultural Foundation, Foresthill, California.
4. April Wallace Moore, Colfax, California.

To date, no responses have been received from these contacted groups.

Other Sources

In addition to examining records at the North Central Information Center at CSU-Sacramento and Native American consultation, the following sources were also reviewed by the Information Center, or separately:

- The National Register of Historic Places (1986, and supplements through 2009).
- The California Register of Historical Resources.
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Historic Property Data File (OHP 2009).
- Caltrans Bridge Inventory.
- 1871 GLO Plat for T12N/R9E; 1871 GLO Plat for T13N/R10E; 1849 USGS 7.5' Greenwood quad.
- Published and unpublished documents relevant to environment, ethnography, prehistory and early historic developments in the vicinity, providing context for assessing site types and distribution patterns for the project area (summarized below).

Prehistoric Summary: Initial human entry into California occurred at the beginning of the paleo-Indian Period – between about 10,000 and 6,000 B.C. (Fredrickson 1974). Within portions of the Central Valley, fluted projectile points have been found at Tracy Lake (Heizer 1938) and around the margins of Buena Vista Lake in Kern County. Similar materials have been found to the north, at Samwel Cave near Shasta Lake and near McCloud and Big Springs in Siskiyou County. These early peoples are thought to have subsisted using a combination of hunting and lacustrine exploitation (Moratto 2004).

These early cultural assemblages were followed by an increase in Native population density after about 7,500 years ago. Archaeologically defined as the Lower Archaic Period (6,000 to 3,000 BC), the transition to a less specialized foraging strategy clearly coincides with a middle Holocene climatic change to generally drier conditions which brought about desiccation of many of the West's pluvial lakes. Hunting and gathering populations of this period were small, mobile groups which focused increasingly on diverse environmental settings. By the beginning of the Middle Archaic Period (from about 3,000 to 1,000 BC), the broad regional patterns of foraging subsistence strategies had given way to more intensive procurement strategies, manifest in part by the establishment of year-round use of select village sites which in turn were located along major waterways. One of the most securely dated of these Archaic assemblages in north-central California is from the Squaw Creek Site located north of Redding. Here, a charcoal-based C-14 date suggests extensive Native American presence around 6,500 years ago, or 4,500 BC. Most of the artifactual material dating to this time period has counterparts further south, around Borax (Clear) Lake and the

Farmington Area a short distance east of Sacramento. Important artifact types from this time period include large wide-stemmed projectile points and manos and metates.

Toward the end of this period, between about 1,000 BC and AD 100, sociopolitical complexity and the development of status distinctions appear, partially defining the Upper Archaic Period. Archaeological expressions within the northern and north-central Sierra Nevada during this period are defined as the Martis Complex, which maintained a hunter-gathering subsistence strategy and a high degree of mobility. Distinctive artifact types include manos and metates used for processing food, and relatively large, heavy projectile points and bifaces manufactured from locally available basalt.

Defining the Emergent Period, from AD 300-500 through AD 1,800, within both northern and north-central Sierra Nevada and Central Valley contexts, Penutian-speaking Native American peoples are thought to have arrived, including those (i.e., Nisenan) who occupied the Lanza-Cool project area at the time of initial contact with European-American populations. Arriving ultimately from southern Oregon and the Columbia and Modoc Plateau region and proceeding down the major drainage systems (including the Feather, Yuba, Bear and American Rivers), these Penutian-speaking arrivals may have begun to displace the Martis populations, especially along the major river systems (Moratto 2004:303-304). Presumably introduced by these Penutian arrivals were more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and corner-notched projectile points (Ragir 1972).

Ethnography: The Auburn Lake Trails APE is located within territory occupied by the Hill Nisenan (Wilson and Towne 1978: Figure 1), Native American peoples who are also referred to as “Southern Maidu.” These Penutian-speaking peoples occupied the drainages of the southern Feather River and Honcut Creek in the north, through Bear River and the Yuba and American River drainages in the south. Villages were frequently located on flats adjoining streams, with the larger villages inhabited mainly in the winter as it was usually necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer and fall).

As with all northern California Indian groups, economic life for the Nisenan revolved around hunting, fishing and the collecting of plant foods. The Nisenan were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources which could be used in manufacturing an immense array of primary and secondary tools and implements. Unfortunately, only fragmentary evidence of the material culture of these people remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Based on the results of previous survey work within and near the project area and similar Sierra Nevada contexts, the range of prehistoric site *types* within the present project area was anticipated to include, or already documented as including, the following:

- Surface scatters of lithic artifacts and debitage associated with midden accumulations and occasionally other surface features (i.e., circular housepit depressions, mortar holes)

- resulting from protracted occupation along the margins of stream channels, particularly where such channels merge with one another.
- Surface scatters of lithic artifacts and debitage without midden accumulations, resulting from short-term occupation and/or specialized economic activities, such as possible quarry and lithic reduction activity.
 - Bedrock milling stations, including mortar holes and metate slicks.
 - Petroglyphs.
 - Isolated finds of aboriginal artifacts and flakes.

Clearly, it was not expected that all of these site types would be present within the project area, but that these represent the most likely *types* present based on the results of the previous survey involving all of the present project area.

Historic Context: There is clear historic evidence that Spanish and Mexican expeditions and early fur trapping ventures visited the northern Sacramento Valley area, including the drainages of the Feather, Yuba, Bear, and American Rivers, during the early 19th century. However, the first major incursion by Euroamericans occurred in 1833 with the John Work Expedition through the Central Valley (Cook 1955), an expedition which introduced several devastating diseases to the Native inhabitants of the Sacramento Valley and nearby foothill regions. More permanent Euroamerican occupation followed within a decade as settlers acquired large land grants from the Mexican government throughout California.

In 1849, the discovery of gold at nearby Coloma led immediately to exploration and intensive placer mining along all virtually every stream in California (Clark 1970), including in particular Greenwood Creek, Georgetown Creek, and of course all other tributaries to and including as well the various Forks of the American River.

Mining dominated the economy and supported the growth of ancillary industry such as dry-goods stores, saloons, toll roads and stage lines, foundries, lumber mills, and water companies. As mining became more corporate and began to eliminate small-scale participation, many miners turned to agriculture and support industries. Most of the early ranches that resulted were self-sufficient operations which included a variety of kept animals, small plots dedicated to growing vegetables and grain, and orchards and vineyards.

Water storage and transportation and related hydroelectric development represent additional important historic themes in El Dorado County, along with logging, ground transportation, public land entry, and homesteading.

The early mining activity, coupled with historic through contemporary logging, ranching and associated water distribution projects, have all impacted prehistoric and early historic sites in this portion of El Dorado County and the project area. The present land area may have fared somewhat better than other areas of the County, however, being located within a region that appears to have remained ranch land until relatively recently.

3. PEDESTRIAN SURVEY and INVENTORY

Pedestrian field survey was undertaken by Archaeologist Sean Michael Jensen in December 2009. Both of the project APE land areas were subjected to intensive pedestrian survey by walking back and forth across the c. 2.4-acre and the 5.12-acre land areas respectively with systematic transects spaced at c. 10 meter intervals. In searching for cultural resources, the surveyor considered the results of background research and was alert for unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Most of the Auburn Lake Trails water treatment facility APE has been subjected to intensive disturbance. The existing facility consists of multiple structures, tanks, effluent ponds, underground components, fencing and utilities. The existing facility consists entirely of contemporary water treatment components and structures. The location of the proposed 500,000 gallon tank consists of a moderately steep slope of mowed grasses.

The Greenwood Lake APE consists of gently sloping lands dominated by conifers and brush, with evidence of past tree and brush removal. Likewise, adjacent construction activities associated with the dam and reservoir have resulted in substantial disturbance to surface and subsurface soils within the APE. Evidence of land re-contouring and grading were observed at various locations throughout the APE.

Prehistoric Sites

Neither the pedestrian survey, existing records at CSU-Sacramento, consultation with tribal representatives, nor consultation with the Native American Heritage Commission yielded any information concerning prehistoric sites or features, traditional use areas or Sacred Land listings within or adjacent to the project area.

Historic Sites

As described in the Records Search section, above, a segment of the Georgetown Divide Ditch Water Conveyance System at Greenwood Lake Reservoir (site CA-ELD-959-H) has been formally recorded and evaluated within the Greenwood Lake APE.

Initial construction for the Georgetown Divide-Pilot Hill Ditch system began in the 1850's in order to serve mining activities in the area. Greenwood Lake was constructed along this conveyance system in 1874, with additional ditches and features added over the next century.

During his recordation of the ditch in 1997, Windmiller noted that while the ditch had been originally constructed during the 1850's, numerous modifications and upgrades during the 1960's and 1970's had resulted in a loss of historic integrity. Consequently, Windmiller recommended the site not eligible for inclusion on the NRHP. Similarly, Napton and Greathouse (2007) noted that while the ditch "generally follows its historic route, it had been "realigned or otherwise modified, and at numerous locations it has been lined with gunite to reduce leakage, and throughout its route it has been stabilized and maintained by ditch tenders. Like Windmiller, the researchers recommended that due to a lack of integrity the

site no longer represented an historic property, and therefore was not eligible for inclusion on the NRHP. Consequently, a federal agency, along with the State Historic Preservation Officer, reached a consensus for the ditch system and classified the resource as 6Y2 (not eligible for listing on the NRHP).

During the present pedestrian survey, it was determined that a small segment of the ditch is present within the APE. Within the APE, the ditch exits Greenwood Lake before leaving the APE some 30' to the west. A service road crosses the ditch, via a contemporary culvert, at this point. The contemporary routing of the ditch at this point, combined with concrete stabilizing walls and a fully contemporary culvert proceeding under the service road further support the observations made by past researchers, all of which result in the recommendation that this segment of site CA-ELD-959-H does not retain sufficient integrity to constitute an historic property, and therefore is not eligible for inclusion on the NRHP.

4. PROJECT EFFECTS

A project may have a significant impact or adverse effect on cultural resources/historic properties if the project will or could result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance or values of the resource would be materially impaired.

Based on the specific findings detailed above under *Pedestrian Survey and Inventory*, no historic properties are present within the project area and no historic properties will be affected by the undertaking, as presently proposed.

5. PROJECT SUMMARY

This report details the results of an archaeological inventory survey involving two separate land areas which total approximately 7.5 acres located between Spanish Dry Diggins Road in the north, and State Route 193 in the south, in northern El Dorado, California. Proposed action involves modification of facilities at the existing Auburn Lake Trails water treatment plant, construction of a new 500,000 gallon tank adjacent to the treatment plant facility, creation of two new drying beds and construction of a communications tower.

Neither the pedestrian survey, existing records at CSU-Sacramento, consultation with tribal representatives, nor consultation with the Native American Heritage Commission yielded any information concerning prehistoric sites or features, traditional use areas or Sacred Land listings within or adjacent to the project area.

A segment of the Georgetown Divide Water Conveyance System at Greenwood Lake Reservoir has been formally recorded within the Greenwood Lake APE. The present study, in part, involves removal of an existing culvert at this point, but with no direct impacts to the ditch itself. Previous evaluations of the Georgetown Divide Water Conveyance System at Greenwood Lake Reservoir has resulted in a recommendation that the site does not qualify as an historic property and thus is not eligible for inclusion on the NRHP. The State Historic Preservation Officer, along with a federal agency, reached a consensus for the ditch system and classified the resource as 6Y2 (not eligible for listing on the NRHP). Observations made

during the present investigation support these findings, and consequently, this site is recommended not eligible for inclusion on the National Register of Historic Places.

Based on the findings of the present archaeological inventory, no historic properties will be affected by the undertaking, as presently proposed. Despite these negative findings, however, the following general provisions are considered appropriate:

1. ***Consultation in the event of inadvertent discovery of human remains:*** In the event that human remains are inadvertently encountered during any ground-disturbing activity or at any time subsequently, State law shall be followed, which includes but is not limited to immediately contacting the County Coroner's office upon any discovery of human remains.
2. ***Consultation in the event of inadvertent discovery of cultural material:*** The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future stream bank restoration activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey, and particularly where extensive past disturbance has occurred, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

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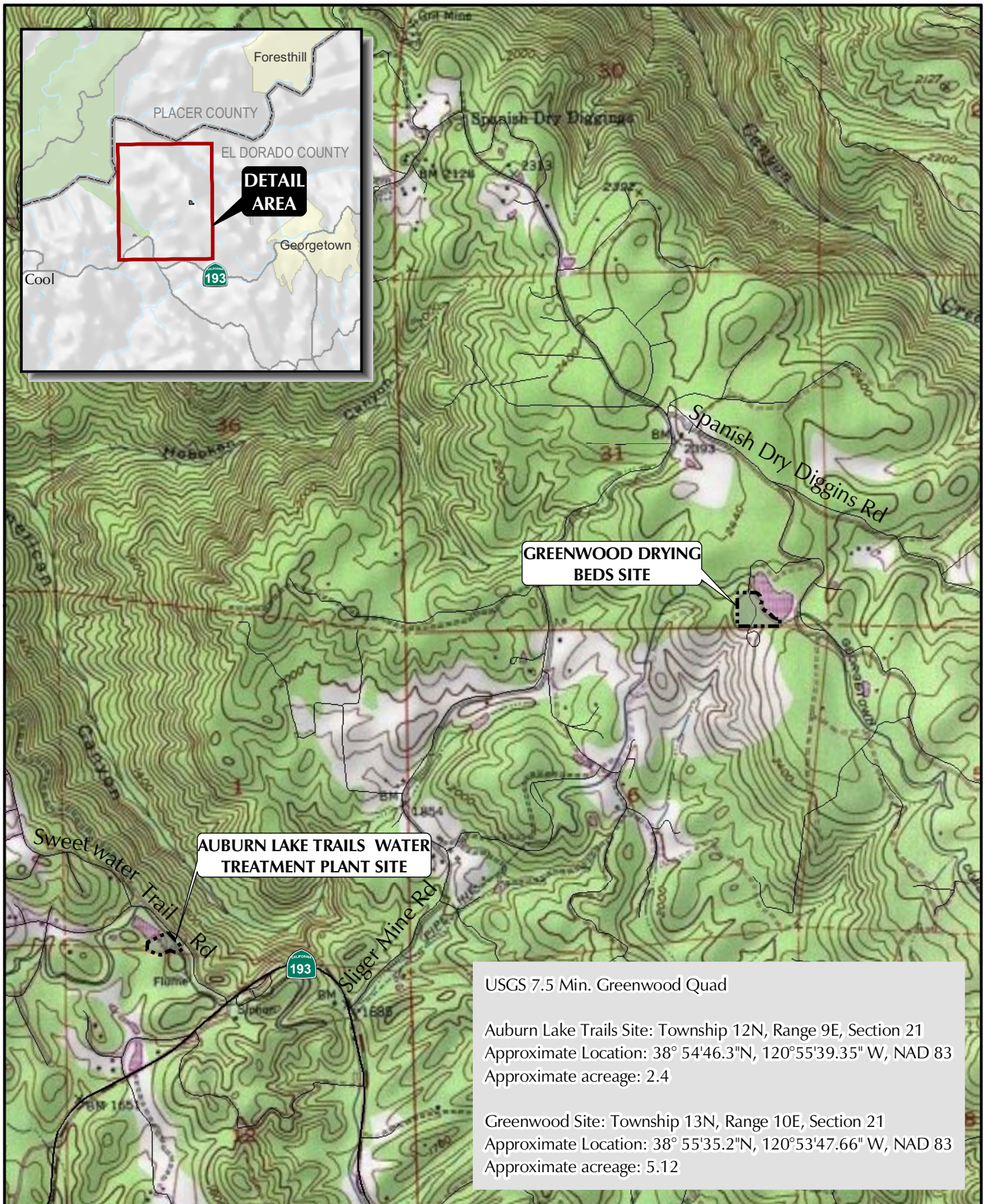
- 1945 "Fur Brigade to the Bonaventura: John Work's California Expedition, 1832-1833, for the Hudson's Bay Company," The Journal of John Work, Alice B. Maloney, Editor. California Historical Society, San Francisco.

ARCHAEOLOGICAL INVENTORY SURVEY

**Auburn Lake Trails Water Treatment Project,
c. 7.5-acres,
El Dorado County, California.**

ATTACHMENTS

- Project Location Map
- Records Search from CSU-Sacramento
- Letter to the Native American Heritage Commission
- Response from the Native American Heritage Commission
- Letters to Listed Native American Individuals/Groups/Tribes
- DPR 523 for Site “CA-ELD-959-H”



SITE AND VICINITY



NORTH CENTRAL INFORMATION CENTER

916-278-6217

ncic@csus.edu

FAX 916-278-5162

CSU-SACRAMENTO - 6000 J STREET, ADAMS BLDG. SUITE #208 - SACRAMENTO, CA 95819-6100

Amador, El Dorado, Nevada, Placer, Sacramento, and Yuba Counties

Records Search Results Summary

November 25, 2009

NCIC File No.: ELD-09-90

Sean M. Jensen
Genesis Society
7053 Molokai Drive
Paradise, CA 95969

Researcher: Sally Torpy

Re: Auburn Lake Trails Water Treatment Project, c. 7.52 acres
T12N/R9E S 1; T13N/10E S 31
USGS 7.5' Greenwood Quad, El Dorado County

- **NCIC Resources Within/Adjacent to Search Area:**
CA-ELD-959-H
- **NCIC Reports Within/Adjacent to Search Area:**
#6803
#8086
#8720
#9690
- **OHP Historic Property Data File (2009):** Nothing listed
- **Determination of Eligibility (2009):** CA-ELD-959-H (Georgetown Divide Ditch ...)
- **NRHP/CRHR listings (2006 & updates):** Nothing listed
- **California Inventory of Historic Resources (1976):** Nothing listed
- **California State Historical Landmarks (1996):** Nothing listed
- **Points of Historic Interest (1992):** Nothing listed
- **Caltrans Bridge Inventory:** Nothing listed
- **Historic Maps:**
1871 GLO Plat for T12N/R9E
1871 GLO Plat for T13N/R10E
1949 USGS 7.5' Greenwood quad

GENESIS SOCIETY

a Corporation Sole

7053 MOLOKAI DRIVE
PARADISE, CALIFORNIA 95969
(530) 680-6170 VOX
(530) 876-8650 FAX
seanjensen@comcast.net

November 23, 2009

Native American Heritage Commission

Attn.: Ms. Debbie Treadway
915 Capitol Mall, Room 364
Sacramento, California 95814

Subject: Auburn Lake Trails Water Treatment Facility Project, El Dorado County, California.

Dear Debbie:

We have been requested to conduct the archaeological survey, for the above-cited project, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

<u><i>Project Name:</i></u>	Auburn Lake Trails Water Treatment Project, c. 7.52-acres
<u><i>County:</i></u>	El Dorado
<u><i>Map</i></u>	USGS Greenwood, 7.5'
<u><i>Location:</i></u>	Portion of Section 1 of T12N, R9E and Portion of Section 31 of T13N, R10E.

Thanks in advance for your assistance.

Regards,



Sean Michael Jensen, Administrator

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

**NATIVE AMERICAN HERITAGE
COMMISSION**915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4042
Fax (916) 657-5390

December 3, 2009

Sean Michael Jensen
Genesis Society
7053 Molokai Drive
Paradise, CA 95969Sent by Fax: 530-876-8650
Number of Pages: 2

RE: Auburn Lake Trails Water Treatment Facility Project, El Dorado County

Dear Mr. Jensen:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

A handwritten signature in cursive script that reads "Katy Sanchez".

Katy Sanchez
Program Analyst

Native American Contact
El Dorado County
November 30, 2009

El Dorado County Indian Council

P.O. Box 564 Miwok
El Dorado , CA 95623 Maidu

April Wallace Moore
19630 Placer Hills Road
Colfax , CA 95713
530-637-4279

Nisenan - So Maidu
Konkow
Washoe

United Auburn Indian Community of the Auburn Rancheria
Jessica Tavares, Chairperson

10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok

530-883-2390
530-883-2380 - Fax

Todd Valley Miwok-Maidu Cultural Foundation
Christopher Suehead, Cultural Representative

PO Box 1490 Miwok
Foresthill , CA 95631 Maidu

tvmmcf@foothill.net

United Auburn Indian Community of the Auburn
Tribal Preservation Committee

10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok

530-883-2320
530-883-2380 - Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Auburn Lake Trails Water Treatment Facility Project; El Dorado County.

GENESIS SOCIETY

a Corporation Sole

7053 MOLOKAI DRIVE
PARADISE, CALIFORNIA 95969
(530) 680-6170 VOX
(530) 876-8650 FAX
seanjensen@comcast.net

December 18, 2009

Native American Individuals, Groups and Tribes

Subject: Auburn Lake Trails Water Treatment Project, El Dorado County, California.

Dear Interested Native Americans:

Enclosed is a USGS topo-based map showing the location for a proposed water improvement project involving two separate parcels totaling approximately 5-acres in El Dorado County, California.

We have been requested to conduct the archaeological survey, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

<u>Project Name:</u>	Auburn Lake Trails Water Treatment Project, c. 7.52-acres
<u>County:</u>	El Dorado
<u>Map</u>	USGS Greenwood, 7.5'
<u>Location:</u>	Portion of Section 1 of T12N, R9E and Portion of Section 31 of T13N, R10E.

Thanks for your help. Please call with any questions.

Regards,



Sean Michael Jensen, Administrator

Resource Name or # (assigned by recorder): Greenwood #1

P1. Other Identifier: Segment of the Georgetown Divide Ditch Water Conveyance System at Greenwood Lake Reservoir

P2. Location: Not for publication Unrestricted P2a. **County:** El Dorado

Legal: T13N R10E, SE ¼ SE ¼ SE ¼ S-31 (irregular section); T12N R10E, NE ¼ NW ¼ S-6; MDM

P2b. USGS Quad: Greenwood 7.5' Date: 1949; PR 1973

P2c. Address City Zip

P2d. UTM, Zone 10: NAD 27, Garmin 12 GPS readings:

Northeast end at Greenwood Lake Reservoir: 682420 m E / 4310640 m N
Southwest end: 681920 m E / 4310260 m N

P2e. Other Locational Data (e.g., parcel #, directions to resource, etc., as appropriate):

From the intersection of State Route 193 and Sliger Mine Road (UTM 680660 m E/ 4308690 m N) at BM 1685, proceed northeast on Sliger Mine Road for approximately two and one-half miles to Spanish Dry Diggings Road, turn right (southeast) and proceed four-tenths of a mile to Reservoir Road, turn right (south) and proceed approximately two-tenths mile to Log House Road, turn left (southwest) and proceed one-tenth mile to the Greenwood Reservoir. The Georgetown Divide Ditch enters the reservoir from the southeast and exits from the northwest.

P3. (Describe the resource and major elements): The historical resource consists of a ca. 2600-foot long segment of the Georgetown Divide earthen ditch beginning at the Greenwood Lake Reservoir. The Georgetown Divide-Pilot Hill Ditch system was constructed in the 1850s in response to the need for more water to supply power for the mines operating in the area. The reservoir (contained by an earthen dam) measures approximately 400 ft x 800 ft (ca. 7 acres). Water is supplied to the reservoir by the Georgetown Divide-Pilot Hill Ditch, which enters the reservoir from the southeast and exits from the northwest. According to the Georgetown Utility District, Greenwood Lake was created in approximately 1874 and has the capacity to store 6-10 acre-feet of water. The following is an excerpt from Starns (2004:112 ff.), who has provided invaluable background information on this water conveyance system:

Pilot Creek Ditch System/Pilot and Rock Creek Water Company

The Pilot Creek, Pilot Hill and Rock Creek Ditches were the achievements of Dr. William H. Stone. Stone came to California in 1849 from Kentucky where he had been born in 1817. He had studied medicine, obtained his degree, then practiced medicine in El Dorado County until 1852. First mining at Michigan Flat in the Coloma Lotus region, Stone later moved to Wild Goose Flat southwest of Pilot Hill. He was elected twice to the position of County Treasurer in 1852 and 1853. Following that, he assumed management of the Pilot Creek Company's ditch system of which he was the principal

owner (Georgetown Gazette, March 31, 1882 in Gernes and Deibert 1999:106). Other members of the Board of Directors were Nichols (Stephen?), A. A. Van Guilder, S.S. Brooks (no relation to Lucian Brooks), and Thomas H. Williams; all of Coloma and F. Graham, R. Murphy and W. T. Gibbs of Georgetown (Davis and Rambeau 1987:32-33).

Davis and Rambeau have written that the Pilot Creek Ditch conveying water to Georgetown was completed by 1853 and that the third ditch constructed on the Divide was the El Dorado Ditch, constructed in 1853-54 (Davis and Rambeau 1987:32-33). By 1868, J. Ross Browne described the system as having five branches:

Bottle Hill (which he combined with the Jones Hill Ditch), 10 miles long; Volcanoville, five miles long; Kelsey's Branch, 10 miles long; Fairplay Branch, seven miles long; and Spanish Dry Diggings Branch, three miles long (Browne 1868:197).

The properties of the Pilot and Rock Creek Canal Company were sold to the Pilot Creek Water Company in 1861 (El Dorado County Deeds, Book G:204). The Bottle Hill Ditch was one of the branch ditches acquired in this transaction. The Pilot Creek Water Company then bought the El Dorado Ditch Company, of which Stone was also a Trustee. The Pilot Creek Water Company continued to expand until it, too, was sold to the California Water Company in 1872.

Old Pilot Creek Ditch

This ditch had its headwaters on Pilot Creek which extends from a vicinity west of Hartless Mountain and east of Uncle Tom's cabin to its confluence with the Rubicon River. It was constructed on pilot Creek at Bacon Canyon where a reservoir was constructed to aid in supplying the ditch (Map Four). Today the old diversion dam for this early ditch would be found, "near the upstream end of present Stumpy Meadows Reservoir" (Brown 2003:1). A tributary of the Onion, or Silver Creek, omission in text! Ditch carried water from that creek to the Pilot Creek Reservoir. The Onion, or Silver Creek, Ditch was two feet wide on the top, sixteen inches wide on the bottom and was sixteen inches deep (Bowman 1874:177).

The Old Pilot Creek Ditch was built at a cost of \$200,000 and paid stockholders dividends of 18 percent (Alblinger 1995:6). In 1874, Bowman described the ditch as three and a half feet wide on top, two and a half feet wide on the bottom and two feet deep. It was originally constructed to carry 900 inches of water; after it was later enlarged, it carried 1,800 to 2,000 inches of water. The size of the ditch increased between Mutton Canon and Georgetown where it was six and a half feet wide on the top, four feet wide on the bottom and three feet deep (Bowman 1874:176). . . .

The Pilot Creek Ditch supplied the Bottle Hill Ditch and others in the vicinity. Bowman describes it as, "a well-constructed ditch, and in good condition" (Bowman 1874:176). The Pilot Creek Ditch became known as the Main Line or Main Ditch following the construction of the new Pilot Creek Ditch, a separate branch taking, water from a different diversion point on Pilot Creek (Map Five).

By 1868, J. Ross Browne described the Pilot Creek Ditch as being 60 miles long (probably a miss-print as it was 28 miles long) with 65 miles of branches. The total cost to construct the system had been a half million dollars, and its value, according to him, in 1868 was \$18,000. The ditch was considered one of the best in the State as it had few flumes and suffered few breaches in the winter. It also had segments which could be used to reverse the flow of water to supply diverse regions. Its largest flume was 300 feet long and 95 feet high. Browne added, "The capacity of the ditch is 1,500 inches, but it is seldom full." For three months of the year the ditch only carried 300 inches of water (Browne 1868: 197).

New Pilot Creek Ditch

The new Pilot Creek Ditch, also known as the new main ditch, was five miles long with a capacity of 800 inches. Its headwaters were on Pilot Creek about two miles below the Pilot Creek Reservoir, located today within the Stumpy Meadows Reservoir area (Brown 2003:1) (Map Four). This ditch was three and a half feet on the top, two and a half feet on the bottom and two and a half feet deep until it reached Mutton Canyon (Bowman 1874:177). At Mutton Canyon the old and new Pilot Creek Ditches junctioned to form a single ditch. From Mutton Canyon, the ditch was enlarged in order to carry the waters of both ditches (Bowman 1874:176; Sioli 1883:110).

The purpose in constructing this new ditch below the reservoir was to pick up leakage from the reservoir and to carry more water down the Divide than the old Pilot Creek Ditch could carry.

From the Georgetown Reservoir, the New Pilot Creek Ditch, or Main Line continued to reservoirs in Greenwood (Section 9 of Township 12 North Range 10 East on the Georgetown Quadrangle). At this point, the 17 mile long Pilot Hill Ditch began carrying water southwesterly to a reservoir in the southeast corner of Section 31 Township 13 North Range 10 East of the Greenwood Quadrangle. The Pilot Hill Ditch continued to reservoirs in the southeast corner of Section 7 Township 11 North range 9 East. This is just east of Pilot Hill (the hill, not the town) and Cooper's Canyon. In the vicinity of the Section 7 reservoirs, the historic Cooper's Ravine and Wild Goose Flat Ditch began and conveyed water to Wild Goose Flat, and beyond.

Pilot Creek and Pilot Hill Ditches

Ultimately, the Pilot Creek Ditch system extended from two points of diversion on Pilot Creek to a big reservoir in Georgetown and from there to Greenwood, crossing Greenwood canyon by means of a mile long (5,500 foot) pipe which could bear 300 feet of pressure. The size of the ditch was five feet on top, three feet at the bottom, and twenty inches deep (Bowman 1874:180). Sioli gives the mile long pipe size as 52 inches with a capacity of about 800 inches (Sioli 1883:110). It was supplied with feeder water from Rock Creek and Rock Canyon.

With the addition of the Pilot Hill Ditch, the Pilot Creek system ran 28 miles to connect with the Wild Goose Flat Ditch system (Bowman 1874:175, 176). Thus water was conveyed east and west of Georgetown. Twenty-eight branch ditches to the large Main Ditch conveyed water to reservoirs in Georgetown, Greenwood, and to mines in Volcanoville, Mamaluke Hill, Bottle Hill, Jones Hill, New York Hill, Georgia Slide, Kelsey's Ditch and the Bear Creek mining area.

The Pilot Creek Ditch Today: The Georgetown Divide Ditch

The Georgetown Divide Ditch is the name given to the old and new Pilot Creek Ditches. The portion that was the old Pilot Creek Ditch extends westerly through Tunnel Hill by means of a tunnel close to a mile long and conveys water from Pilot Creek to a reservoir above Otter Creek. The mile long tunnel was constructed when the El Dorado Ditch was constructed and is described in more detail in the section for that ditch.

It is possible to follow a portion of the historic new Pilot Creek ditch system from its modern headwaters at Stumpy Meadows Reservoir (Lake Edison) in Section 11 Township 12 North Range 12 East. It conveys water from Stumpy Meadows reservoir to a reservoir in Georgetown in the southwest corner of Section 2 Township 12 North Range 10 East. Many of the reservoirs on modern USGS topographic quadrangles appear to be the same reservoirs, with modern upgrades, as those shown on historic GLO plats.

In 1858, Stone sold all of his ditches, flumes, canals, reservoirs, etc. lying between the Middle and South Forks of the American River to the Pilot and Rock Creek Canal Company and joined that Company as a trustee. The Pilot and Rock Creek Company operated the ditch system for about 15 years running water from Silver Creek to Pilot Creek and then from Pilot and Rock Creeks to Georgetown, Kelsey, American Flat, Spanish Dry Diggings, Bottle Hill, Pilot Hill and Wild Goose Flat (El Dorado County Deeds, Book D:276, 277).

Pilot Hill Ditch

Amos Bowman reported that the old Pilot Creek line supplied the Nagler (French) Mine as well as a number of smaller ditches in Greenwood. However, it seems likely he was describing the combined Pilot Creek and Pilot Hill Ditch system, designed to carry more water further than the reservoir at Georgetown. The enlarged ditch system also provided the summer supply of water to the Boulder Mine at Pilot Hill through 3,400 feet of 11 inch riveted iron pipe in an inverted siphon. Summer supplies were carried to several ranches for irrigation, also, including Pollards', Brown's, Tennessee's, Lovejoy's, Taylor's, Blue Tent and several others (Hutchins 1880:6B). Hutchins states that the ditch was nine miles long and took water from the Pilot Creek Reservoir and intersected with a ditch at Mutton Canyon (probably the "New Pilot Creek Ditch"). Water was then carried through a quarter mile long tunnel at Tunnel Hill (Hutchins 1880:61).

The ditch segment from Greenwood to Pilot Hill was known as the Pilot Hill Ditch. The ditch began in the vicinity of the French, Fenton and St. Lawrence mines (not to be confused with the St. Lawrence Quartz mine off of Dutch Creek) and was supplied

with water from the Main Line which ran from a reservoir in Georgetown north to another reservoir. The Pilot Hill Ditch extended north and west supplying homes, ranches and claims in the vicinity of Cool and Pilot Hill. It had a confluence with the Wild Goose Branch at which point it became the Wild Goose Ditch and conducted water to the region of Wild Goose Flat. The ditch was 30 inches on the top, 20 inches on the bottom and 18 inches deep (Bowman 1874:183). Its capacity was 1,500 inches and it supplied the Boulder Hydraulic Gravel Mine at Pilot Hill (Hutchins 1880:5B, 6B).

Auxiliary ditches from the Pilot Hill Ditch had a combined length of seven miles and a combined capacity of 600 inches. They received their water from winter rains draining from the adjacent watershed of Norton and Pittsfield Ravines. The main Pilot Hill Ditch furnished the summer supply of 3,400 feet of water to the Boulder Mine and other mines in the area, including Hogg's Diggings and the ranches of Brown, Lovejoy, Taylor, Grey and others in the Cool-Pilot Hill area (Hutchins 1880:5-6) (Map Ten).

The Bottle Hill Ditch and Jones Hill Ditch

An 1882 "Notes from the Past #7" from the Georgetown Gazette reported that Bottle Hill received its name in 1850 when Thomas Pearson and Company took a break from prospecting; while resting along the Canon Creek ridge they discovered a bottle containing whiskey and decided to imbibe. One of the men remarked that the bottle had been the ruin of many a man, but perhaps their bottle would result in their good fortune. They prospected around and discovered diggings on the hill which they then called "Bottle Hill" (Georgetown Gazette, 1882 and Deibert 1999:111-112). In 1854 Bottle Hill incorporated as a town, with two stores, a boarding house and several saloons. By 1882, however, the town had died out (Davis and Rambeau, 1987:18, 19). The Bouie Hill diggings were about one mile square of a deep gold bearing Tertiary channel; it had high yields. Tunnels were used to dig the mines such as the North Star, Cuyahoga, St. Louis. Gravoy and Hell (Raymond 1872:6e-7e in Hutchins 1880; Alblinger 1995:5). The Bottle Hill Ditch traverses the hills known as the Hornblende Mountains between 'Canyon and Creeks on the Divide. It took water from the Pilot Creek Ditch to the east and carried it south of little O Mountain and Cement Hill over to Bottle Hill. From here it continued on as the Jones Hill Ditch (Alblinger 1995:4). Bowman's 1873 map of the Bottle Hill Ditch shows it extending past Darling's sheep corral. This is probably from Stumpy Meadows reservoir to a reservoir in Georgetown in the southwest corner of Section 2 Township 12 North Range 10 East. Many of the reservoirs on modern USGS topographic quadrangles appear to be the same reservoirs with modern upgrades, as those shown on historic GLO plats. In 1858 Stone sold all of his ditches, flumes, canals, reservoirs, etc. lying between the Middle and South Forks of the American River to the Pilot and Rock Creek Canal Company and joined that Company as a trustee. The Pilot and Rock Creek Company operated the ditch system for about 15 years running water from Silver Creek to Pilot Creek and then from Pilot and Rock Creek to Georgetown, Kelsey, American Flat, Spanish Dry Diggings, Bottle Hill, Pilot Hill and Wild Goose Flat (El Dorado County Deeds, Book D:276, 277).

At the present time the Georgetown Divide Ditch generally follows its historic route. However, in places it has been realigned or otherwise modified, and at numerous locations it has been lined with gunite to reduce leakage, and throughout its route it has been stabilized and maintained by ditch tenders. Within the segment recorded for this project, the ditch is approximately 15 feet wide by 5 feet deep. It is supported on the downhill side by an earthen berm which varies in width from 10 to 20 feet wide and as much as 15 feet high. The berm runs along the south side of the ditch.

P3b. Resource Attributes: AH6. Water conveyance system; AH8. Reservoir

P4. Resources Present: Building Structure Object Site District Element of District Other (describe): Segment of a linear feature

P5a. Photograph or Drawing (see attached): LN 06-9-1:21-23; 06-11-6:22-29

P6. Date Constructed/Age: Prehistoric Historic 1850s Both

P7. Owner and Address: Georgetown Divide Public Utility District, Georgetown

P8. Recorded by (Name, affiliation, and address): L. K. Napton, Ph. D., and E. A. Greathouse, M.A., Consulting Archaeologists, 2241 Aldersgate Court, Turlock, CA 95382

P9. Date Recorded: 6 September 2006

P10. Survey Type: (Describe) Intensive survey of proposed of Greenwood Lake Water Treatment Plant and Treated Water Pipeline Project for the Georgetown Divide Public Utility District and Planning Partners, 7620 Lakehill Road, Elk Grove, California 95624.

P11. Report Citation: Napton, L. K., and E. A. Greathouse, 2006, Cultural Resources Investigations of the Proposed Greenwood Lake Water Treatment Plant and Treated Water Pipeline Project, El Dorado County, California. Planning Partners, Elk Grove. Georgetown Divide Public Utilities District.

Additional references:

Bowman, A., 1874. *Report on the Properties and Domain of the California Water Company Situated on Georgetown Divide: Embracing the Mining, Water and Landed Resources of the Country Between the South and Middle Forks of the American River, in El Dorado County, California.* A.L. Bancroft and Co., San Francisco.

Holland, R. F., 1986. *Preliminary Description of the Terrestrial Natural Communities of California*. Prepared for the Non-Heritage Game Program, California Department of Fish and Game, Sacramento.

Starns, J. E., 2004. *Wealth From Gold Rush Waters*. J. E. Starns, Georgetown, and Word Dancer Press, Sanger, CA.

Attachments:

Location Map Sketch Map Building, Structure, and Object Record
 Archaeological Record Linear Feature Record Milling Station Record
 Rock Art Record Artifact Record Other (List): Historic Map and Photographs

L1. Historic and/or Common Name: Georgetown Divide/Pilot Hill Ditch

L2a. Portion Described: Entire Resource Segment Point Observation Elevation:
Northeast end: 2400 feet
Southwest end: 2200 feet

L2b. Location of point or segment: UTM Coordinates, Zone 10:

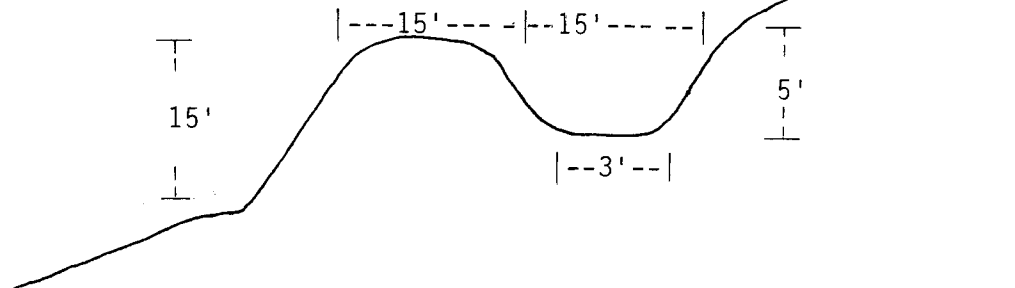
Northeast end at Greenwood Lake: 682420 m E / 4310640 m N
Southwest end: 681920 m E / 4310260 m N

L3. Description: Earthen ditch, partially lined with gunite

L4. Dimensions

- a. Top Width 15 feet
- b. Bottom Width 3 feet
- c. Height or Depth 5 feet
- d. Length of segment 2600 feet
- e. Width of berm 10-20 feet

L4e. Sketch or Cross-Section View west



L6. Setting: Sierra Mixed Conifer Forest, Natural Diversity Data Base 84230 (Holland 1986:108-109)

L7. Integrity Considerations: This ditch generally follows the historic alignment. It has been altered and stabilized over the years by various modifications and maintenance, including lining the interior of the ditch with gunite.

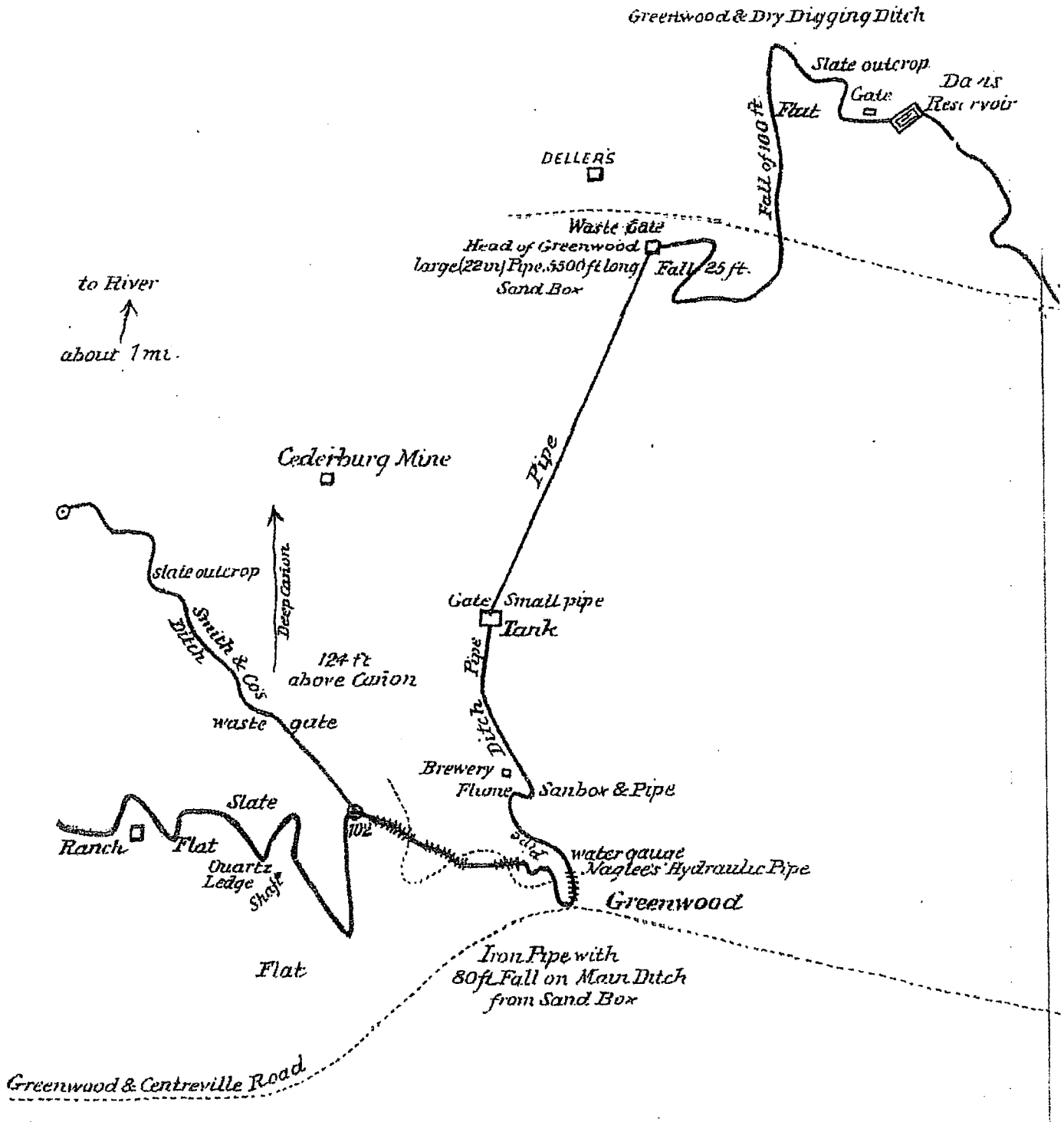
L8a. Photograph, Map or Drawing (see attached)

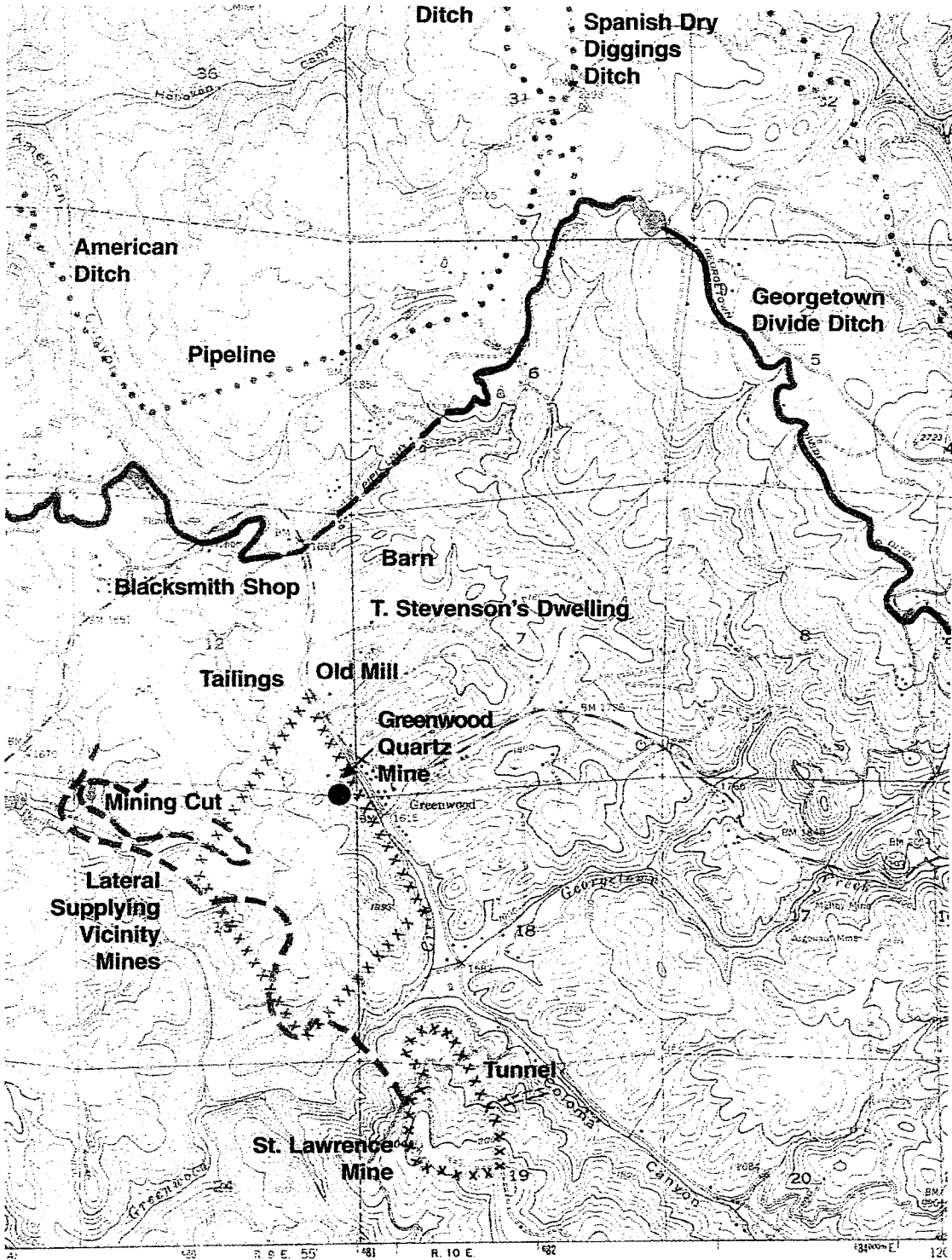
L8b. Description of Photo, Map or Drawing (see attached photos and descriptions)

L9. Remarks: A 700 foot segment of the ditch immediately adjacent to the west side of the Greenwood Reservoir will be modified by the Greenwood Lake Water Treatment Plant and Treated Water Pipeline Project by piping the water previously carried by the ditch. The ditch alignment will be maintained and the overall function will not be substantially impaired.

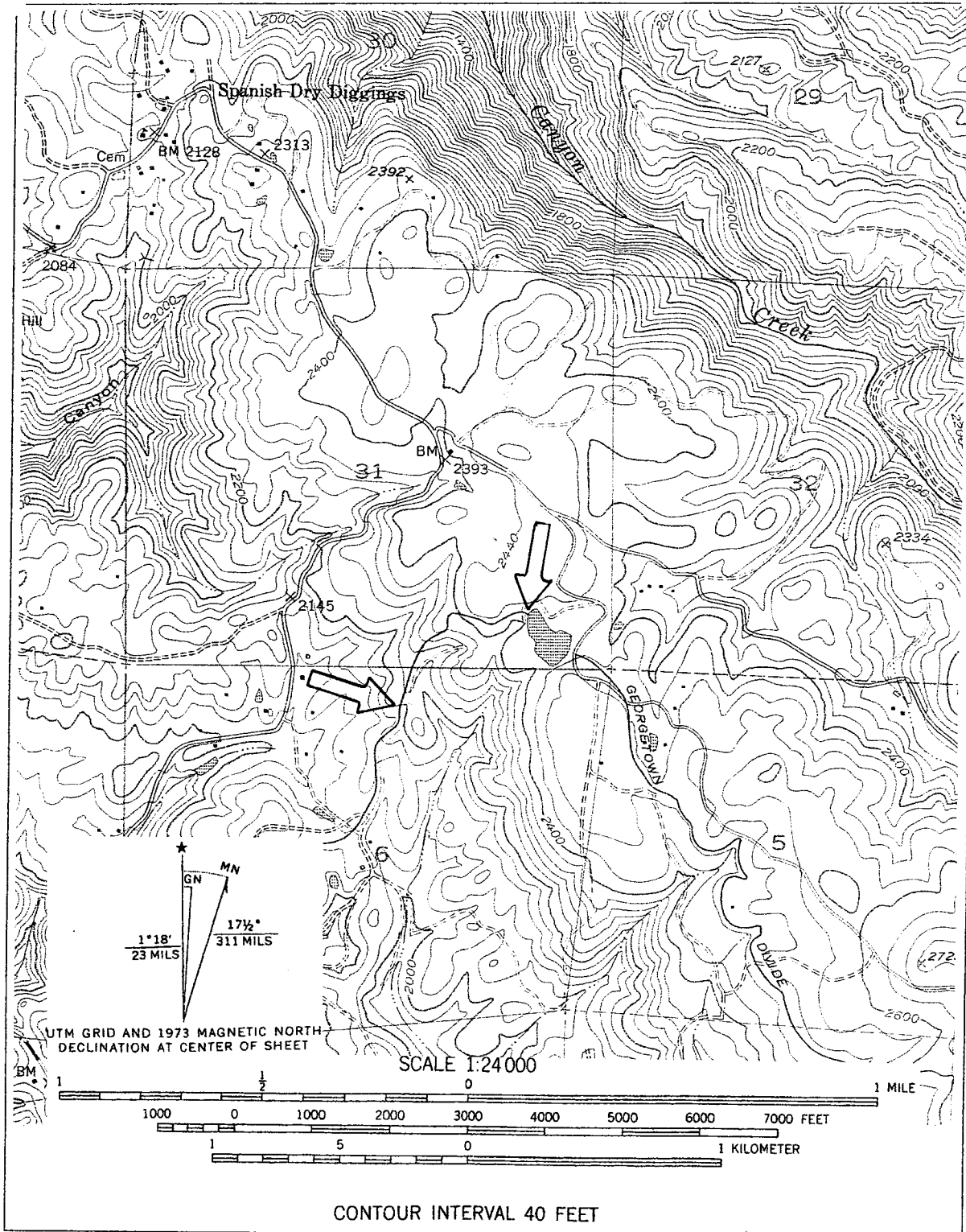
L10. Form Prepared by: L. K. Napton, Ph. D., E. A. Greathouse, M.A

L11. Date September 6, 2006





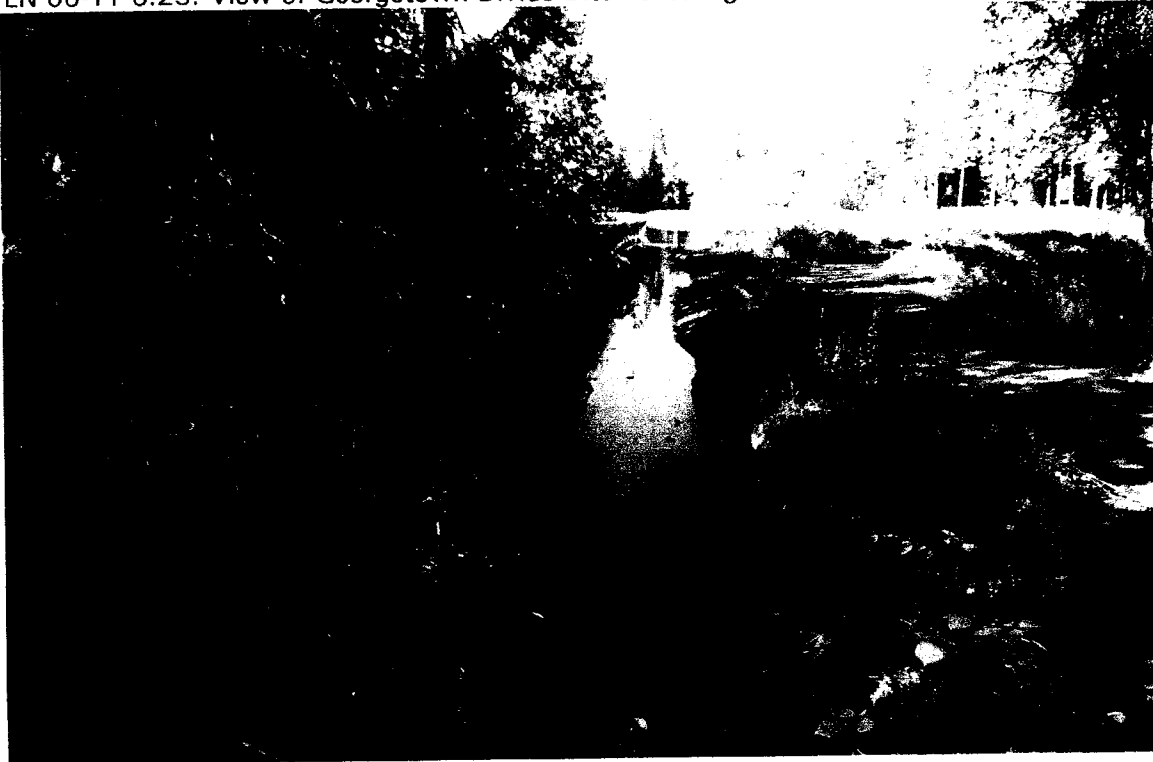
Map Nine. Greenwood Quadrangle. (Courtesy GDPUD)





LN 06-11-6:22: View N50W showing Greenwood Lake reservoir.

LN 06-11-6:23: View of Georgetown Divide Ditch entering Greenwood Lake, background.





LN 06-11-25: View S70W showing portion of the Georgetown Divide Ditch (gunite-lined) that will be piped as part of the proposed Greenwood Lake WTP project.

LN 06-11-27: View N70W showing portion of the Georgetown Divide Ditch.





LN 06-11-6:28: View S40W, Georgetown Divide Ditch within project area (gunitite-lined).

LN 06-11-6:29: View north showing deeply entrenched portion of the ditch.



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

UPDATE

Page 1 of 5 *Resource Name or #: (Assigned by recorder) Georgetown Main Ditch #2

P1. Other Identifier: Georgetown Main Ditch #2, Pilot Hill Segment 1

*P2. Location: Not for Publication Unrestricted *a. County El Dorado
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Greenwood Date 1949 (1973) T 13N; R 10E; 1/4 of SE 1/4 of Sec 31; MDM B.M.

c. Address _____ vicinity _____ City Georgetown Zip 95634

d. UTM: (Give more than one for large and/or linear resources) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

UTM A/ Zone 10: 682470mE; 4310440mN

UTM B/ Zone 10: 681410mE; 4309430mN

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This segment of the Georgetown Main Ditch #2 derives its water from Greenwood Reservoir. For the first 1200 feet of its length, the ditch is cement-lined. At the end of this first reach of cement-lined ditch, water enters a short wooden, gated flume. One gate controls water to the Spanish Dry Diggings Ditch while the other gate dumps water directly downhill. This downhill shoot is overgrown with dense blackberry bushes. From the flumed section, the ditch carries water downhill in a southwesterly direction for a distance of approximately one mile. At that point, the water is piped to Highway 193.

*P3b. Resource Attributes: (List attributes and codes) AH6. Water Conveyance System

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photographer Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession #) _____

*P6. Date Constructed/Age and Source: Historic

Prehistoric Both

Constructed 1850s

Most recent modifications

late 1960s, early 1970s

*P7. Owner and Address:

Georgetown Divide Public

Utilities District

P.O. Box 4240

Georgetown, CA 95634

*P8. Recorded by: (Name, affiliation, and address) Ric Windmiller

Consulting Archaeologist

9145 Elk Grove Blvd.

Elk Grove, CA 95624

*P9. Date Recorded: 11/19/97

*P10. Survey Type: (Describe)

Intensive

CEQA review

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Windmiller, R. and J. Russell. 1997. Cultural Resources Inventory, Pilot Hill Ranch Water Treatment Facility and Off-site Water Line Corridors, El Dorado County, California. Ric Windmiller, (see continuation sheet)

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record Archaeological Record

District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record

Other (List): Sketch Map

8086

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION LINEAR FEATURE RECORD	Primary# _____
	HRI # _____
	Trinomial _____

Page 2 of 5 Resource Name or #: (Assigned by recorder) Georgetown Main Ditch #2

L1. Historic and/or Common Name: "Main Ditch" or "Main Ditch No. 2"

L2a. Portion Described: Entire Resource Segment Point Observation Designation: Pilot Hill Segment 1

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map.)

UTM A/ Zone 10: 682470mE; 4310440mN

UTM B/ Zone 10: 681410mE; 4309430mN

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

First 1200 feet of ditch beginning at Greenwood Reservoir is cement-lined. This cement-lined segment ends at a short, gated, wooden flume that diverts water to Spanish Dry Diggings. However, the main flow of water is turned 90 degrees, directly downhill (southwest) where it drops into a blackberry-shrouded ditch coursing approximately one mile to a pipeline. The segment recorded on these forms ends at the pipeline.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width 5 feet

b. Bottom Width 3 feet

c. Height or Depth 3 feet

d. Length of Segment 1.3 miles (approximate)

L5. Associated Resources:

None.

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.):

West-facing slope. Mixed fir-cedar forest with some oak.

L7. Integrity Considerations:

Because of extensive, recent modifications, including some rerouting of the ditch at Greenwood Reservoir, this segment of the ditch no longer conveys its historical importance.

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.)

See Sketch Map.

L9. Remarks:

None.

L10. Form Prepared by: (Name, affiliation, and address)

Ric Windmiller
Consulting Archaeologist
9145 Elk Grove Blvd.
Elk Grove, CA 95624

L11. Date: 11/19/1997

P-9-1212

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary# _____
HRI # _____
Trinomial _____

Page 3 of 5 *Resource Name or # (Assigned by recorder) Georgetown Main Ditch #2
*Recorded by: Ric Windmiller *Date 11/19/1997 Continuation Update

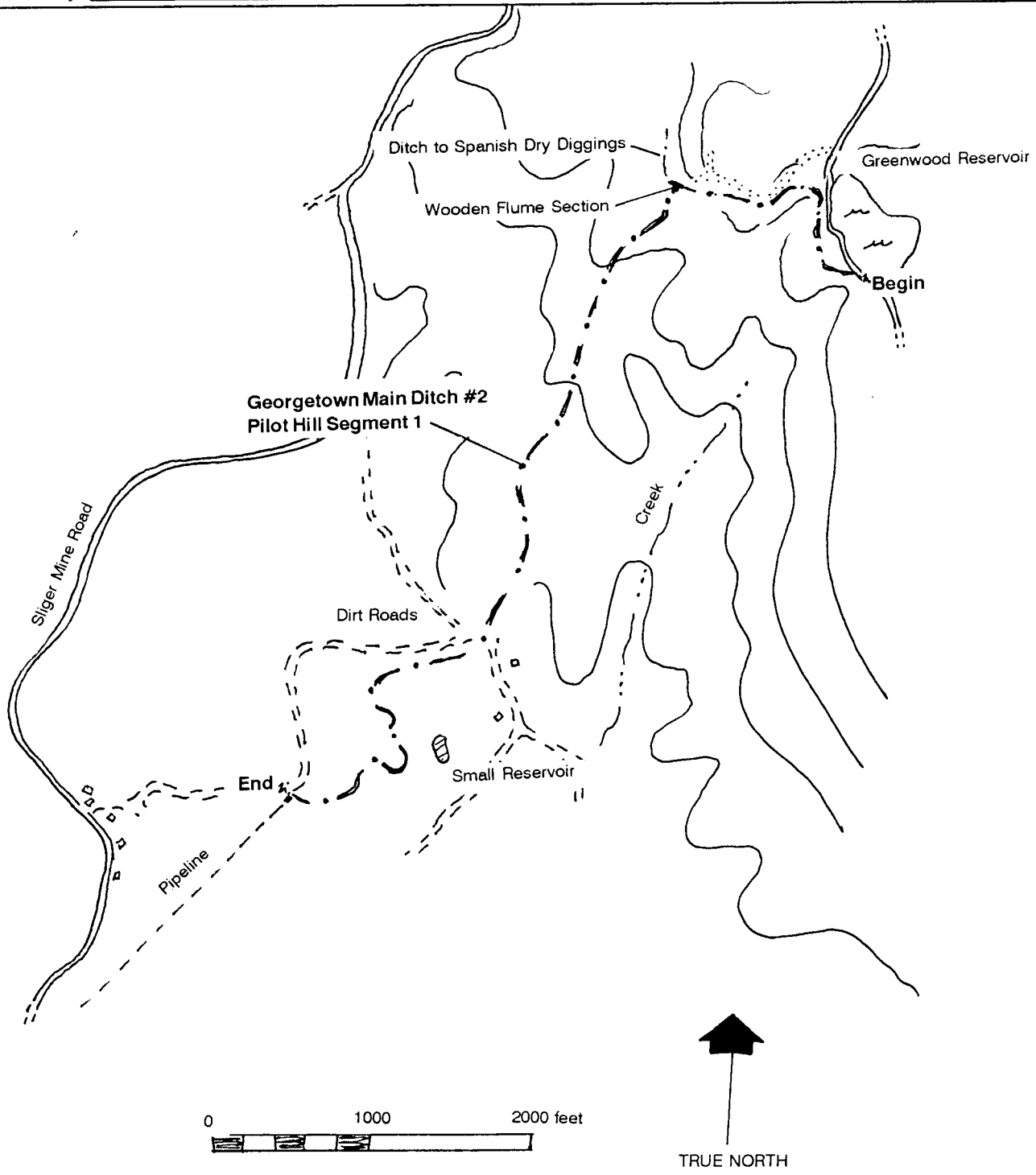
P11. Report Citation (continued)

Consulting Archaeologist. Submitted to Pacific Municipal Consultants. Copies available from the North Central Information Center, California State University, Sacramento.

P-9-1212

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION SKETCH MAP	Primary # _____
	HRI# _____
	Trinomial _____

Page 4 of 5 *Resource Name or # (Assigned by recorder) Georgetown Main Ditch #2
 *Drawn by: Ric Windmiller *Date of map: 11/19/1997



NOTE: Include bar scale and north arrow.

P-9-1212

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI# _____
Trinomial _____

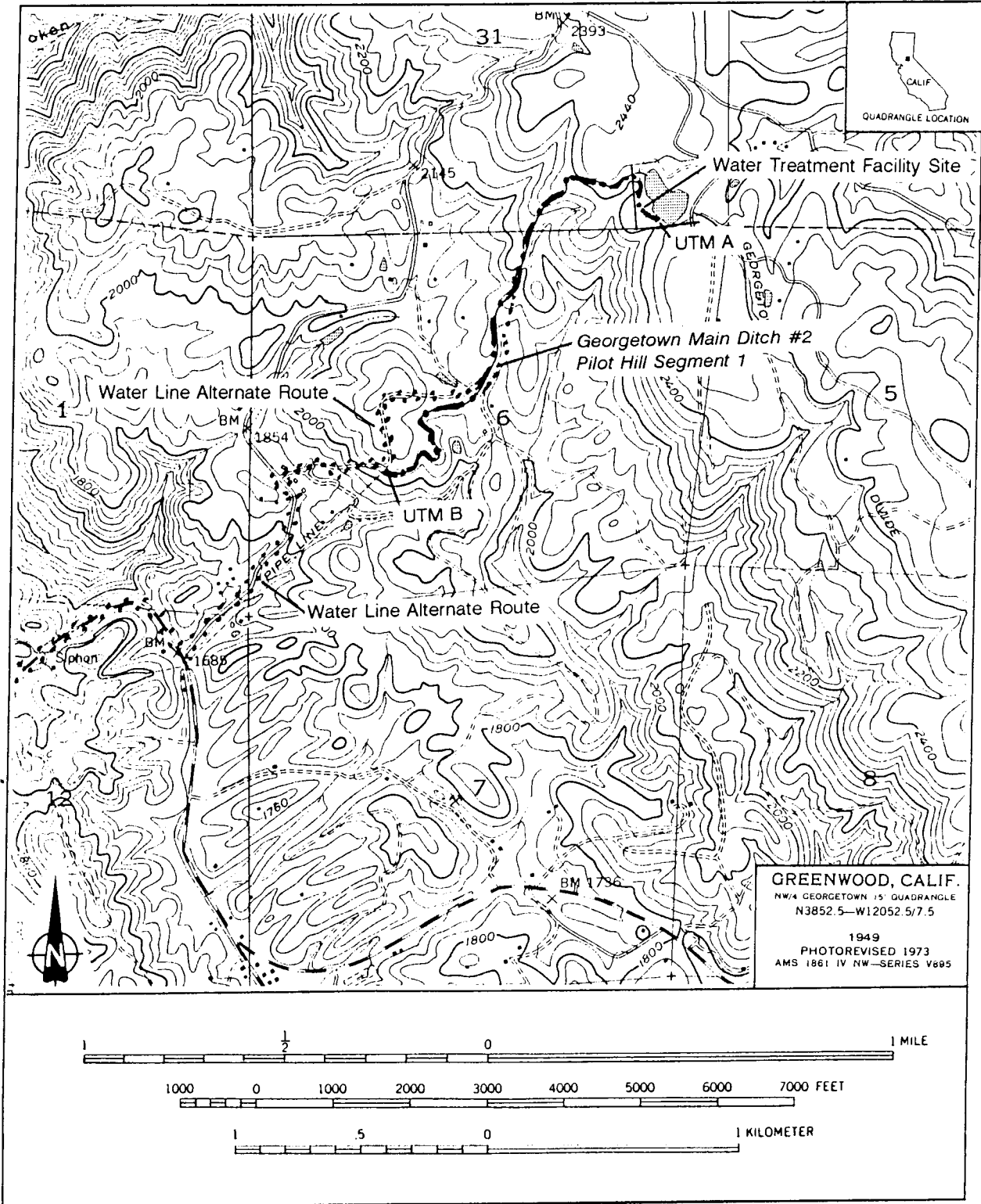
Page 5 of 5

*Resource Name or # (Assigned by recorder) Georgetown Main Ditch #2

*Map Name: Greenwood, Calif.

*Scale: 1:24,000

*Date of map: 1949 (1973)



Appendix F — State Historic Preservation Officer Concurrence Letter

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



May 05, 2014

Reply to: EPA_2014_0404_001

Bridget Binning, Senior Environmental Scientist
Environmental Review Unit
California Department of Public Health, MS 7400
P. O. Box 997377
Sacramento, California 95899-7377

RE: Request Concurrence for Section 106 Compliance and No Historic Properties Affected Finding for the Auburn Lake Trails Water Treatment Upgrades proposed by Georgetown Divide Public Utility District – Safe Drinking Water State Revolving Fund Project No. SRF-0910013-005C (your letter of April 4, 2014)

Dear Ms. Binning:

Thank you for requesting my comments on the above cited undertaking, in accordance with Section 106 of the *National Historic Preservation Act*, as amended. My staff has reviewed the documentation that you provided and I would like to offer the following comments.

The Georgetown Divide Public Utility District (GDPUD) proposes to modify the existing Auburn Lake Trails Water Treatment Plant (WTP) by constructing a new storage tank adjacent to the WTP, adding two on-site drying beds, a new raw water pump building, and miscellaneous equipment (project). The proposed undertaking is expected to bring the WTP into compliance with the *Safe Drinking Water Act*. You have described the Area of Potential Effect (APE) as including 7.52 acres in two locations, which consists of the 2.4 acres Auburn Lake Trails (ALT) facility and the 5.12 acre Greenwood area. The ALT portion of the APE is an existing facility that consists of multiple structures, tanks, effluent ponds, underground components, fencing and utilities. The location of the proposed 500,000 gallon tank consists of a moderately steep slope covered by grass. The Greenwood portion of the APE is located adjacent to the existing Greenwood Dam and Reservoir which has been extensively disturbed by construction activities associated with the dam and reservoir.

As documentation for your finding of effect, you provided a report entitled: *Archaeological Inventory Survey – Auburn Lake Trails Water Treatment Project, ca. 7.5-acres, El Dorado County, California*, dated January 4, 2010. The report was prepared by Sean Michael Jensen (Foothill Associates), who also did the records review at the North Central Information Center at CSU – Sacramento and the pedestrian survey of the APE, which resulted in no historic properties being identified in the APE. The records review identified: (1) one cultural resource (CA-ELD-959H) as being located within and adjacent to the APE; and (2) three area-specific cultural resources inventories that addressed parts of the APE or were adjacent to it, but with negative results for the APE except for the previously described site. In 2007, the Environmental Protection Agency (EPA) determined, in a previous submission to this office, that CA-ELD-959H was ineligible for listing on the National Register of Historic Places. In a letter dated July 9, 2007, I concurred with EPA's determination of ineligibility. In the current submission, the California Department of Public Health (CDPH) is requesting that I concur with its description of the APE and concur with its finding that "No Historic Properties will be Affected" by the project.

On August 13, 2012, the Region 9 office of EPA had submitted a request for Section 106 consultation for the same project. In that submission, GDPUD had applied to EPA for funding for the project (i.e., EPA Grant #XP-96966501) and EPA requested review and comment on the proposed project. The following comments are reflective of my previous comments to the EPA and for the current submittal.

The EPA contacted the Native American Heritage Commission (NAHC) and requested a record search of their sacred land file and to provide them with a list of Native American individuals and organizations, which may have knowledge of cultural resources in the project area. The EPA sent a request for comment letters to the five tribes or tribal groups identified by NAHC. The EPA did not receive any responses from the recipients of those letters.

After reviewing the information submitted with your letter, I offer the following comments:

- I have no objections to your identification and delineation of the APE, pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d);
- Based on the information provided by Foothill Associates, CDPH has determined that no historic properties will be affected by the proposed undertaking;
- I concur with the determination that no historic properties will be affected by the proposed undertaking;
- In the response letter to EPA which was dated October 4, 2012, I also concurred with their determination that no historic properties will be affected by their proposed undertaking; and
- For your information, I have attached a copy of our response letter to EPA.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should you encounter cultural artifacts during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact the following member of my staff: Tristan Tozer at (916) 445-7027 or via e-mail at Tristan.Tozer@parks.ca.gov.

Sincerely,



Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

Attachment

Response letter to EPA dated October 4, 2012 (EPA120813A)