Initial Study & Program Environmental Impact Report Addendum for El Dorado Hills Water Treatment Plant Improvements Project

Prepared for:

El Dorado Irrigation District

August 2026

Initial Study & Program Environmental Impact Report Addendum

El Dorado Hills Water Treatment Plant Improvements Project

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Abbreviations and Acronyms

µg/m 3	micrograms per cubic meter
AB	Assembly Bill
APE	Area of Potential Effect
AQMD	Air Quality Management District
CARB	California Air Resources Board
CBC	California Building Code
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO2e	carbon dioxide equivalent
CVRWQCB	Central Valley Regional Water Quality Control Board
DWR	Department of Water Resources
EDCAQMD	El Dorado County Air Quality Management District
EDHWTP	El Dorado Hills Water Treatment Plant
EID or District	El Dorado Irrigation District
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
GHG	greenhouse gas
IS	Initial Study
MT	metric tons
NMFS	National Marine Fisheries Service
NO	oxides of nitrogen
NOA	naturally occurring asbestos
PEIR	Program Environmental Impact Report
PM	particulate matter
ROG	reactive organic gasses

SMAQMD	Sacramento Metropolitan Air Quality Management District
SB	Senate Bill
SO_2	sulfur dioxide
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
UBC	Universal Building Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey

Addendum No. 2 to the El Dorado Hills Water Treatment Plant Expansion and Water Mains Program Environmental Impact Report

Project Description

The El Dorado Hills Water Treatment Plant Improvements Project (Project) is a comprehensive modernization and expansion effort at the El Dorado Hills Water Treatment Plant (EDHWTP) designed to replace aging infrastructure, enhance treatment reliability and resilience, address seasonal source-water challenges from Folsom Lake, and ensure the facility can continue meeting current and future drinking water regulations and demands through upgraded treatment processes and increased operational capacity. The Project would increase EDHWTP operational capacity from 19.5 million gallons per day (mgd) to 24 mgd, with infrastructure to accommodate a future buildout capacity of up to 31.5 mgd. The Project involves removal of outdated infrastructure and installation of new water treatment facilities, piping, electrical systems, and other associated infrastructure. Construction would occur intermittently over a 5-year period, with the exact commencement date depending upon the availability of grants or alternative financing. Expansion of the EDHWTP capacity was previously analyzed in a 2007 EDHWTP Expansion and Water Mains Program Environmental Impact Report (2007 PEIR) and a 2009 Subsequent Project EIR Addendum (State Clearinghouse No. 2006042106). The current modified Project includes the following components:

- Demolition and Site Preparation
- New Flash Mix
- New Flocculation/Sedimentation Basins
- New Filters
- Conversion of Raw Water Tank to Backwash Supply Tank
- New Chemical Storage and Feed Facility
- New UV Disinfection Facility
- New Generator and Electrical Service
- New Washwater Equalization Basin and Electrical Building
- New Plate Settlers
- New Solids Pump Station
- High Lift Pump Station Expansion and Electrical Building

Heavy excavation and construction equipment (e.g. dump trucks, cranes, backhoes, concrete trucks, pump trucks, welding equipment, loaders, generators, forklifts, and air compressors) would be used to prepare the site and construct the Project. Minor controlled blasting would be used where necessary to

fracture the rock mass for removal. Construction of these new components would be phased to ensure that operation of the existing EDHWTP is maintained.

Regulatory Context

Section 15162(a) of the California Environmental Quality Act (CEQA) Guidelines describes the conditions requiring preparation of a subsequent EIR as follows:

1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

    b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

    c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

    d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Based on the substantial evidence in light of the Project's whole record, as supplemented with the analysis provided in Section 3, "Environmental Checklist," none of the conditions in State CEQA Guidelines Section 15162(a) requiring a subsequent EIR have occurred. Since none of these conditions have occurred, the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation (State CEQA Guidelines Section 15162[b]).

Section 15164(a) of the State CEQA Guidelines states that a lead agency may prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. The District, as lead agency, has prepared this addendum in accordance with State CEQA Guidelines Section 15164 because this document demonstrates that the proposed modifications and refinements to the project constitute changes to the project but would not trigger any of the conditions in State CEQA Guidelines Section

15162(a), as specified above, requiring a subsequent EIR. The purpose of this addendum, therefore, is to provide additional substantial evidence and CEQA analysis necessary to address the technical changes to the project and supplement the administrative record for the project.

Findings

An Initial Study has been prepared under CEQA to assess the project's potential effects on the physical environment and the significance of those effects, and to compare them to the findings of the 2007 PEIR. Based on the analysis in the Initial Study, the 2007 PEIR, and substantial evidence in the record, it has been determined that the modified project would not have any new significant adverse effects on the physical environment (impacts) after implementation of mitigation measures.

An Initial Study documenting the reasons supporting the finding is attached. Based on the 2007 PEIR and the analysis in this Initial Study, modifications and refinements to the project since the preparation of the 2007 PEIR would result in none of the conditions described in Section 15162(a) of the State CEQA Guidelines that would trigger the need to prepare a subsequent EIR. Most importantly, the proposed minor technical changes evaluated in this addendum:

- Would not result in new significant environmental effects,
- Would not substantially increase the severity of previously identified significant effects,
- Would not result in mitigation measures or alternatives previously found to be infeasible becoming feasible, and
- Would not result in availability/implementation of mitigation measures or alternatives which are considerably different from those analyzed in the previous document that would substantially reduce one or more significant effects on the environment.

These conclusions confirm that a subsequent EIR is not required, and this addendum to the 2007 PEIR is the appropriate CEQA document in accordance with State CEQA Guidelines Section 15164 to evaluate the minor technical changes and resulting environmental impacts thereof.

Certification by Those Responsible for Preparation of This Document.

The El Dorado Irrigation District is responsible for the preparation of this Environmental Impact Report Addendum and the incorporated Initial Study. I believe this document meets the requirements of the California Environmental Quality Act and provides an accurate description of the proposed project modifications and refinements, and that the lead agency has the means and commitment to implement the project design measures that will assure the project does not have any significant adverse effects on the physical environment. I recommend approval of this document.

_____ _____

Name and Title Date

*(*To be signed upon completion of the public review process and preparation of a final project approval package including consideration of all comments, if any, on the environmental document and any necessary modifications to project design measures.)*

Initial Study

1. Introduction

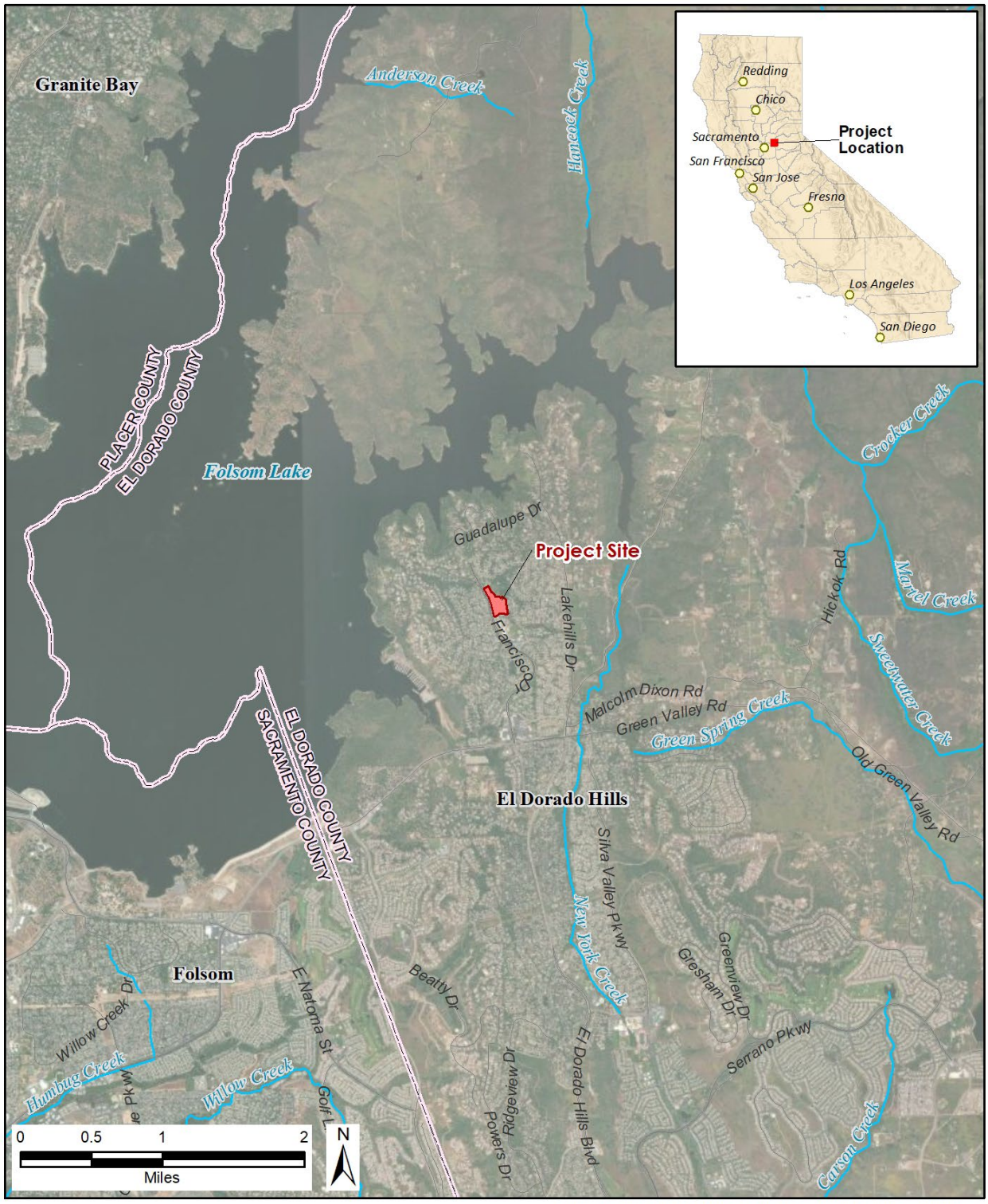
The District has prepared Addendum No. 2 to the 2007 PEIR (State Clearinghouse No. 2006042106), which was certified in 2007 and herein referred to as the 2007 PEIR. This addendum provides decision makers, the public, and responsible and trustee agencies with information regarding the environmental effects of modifications to the EDHWTP Improvements Project (modified project) since the 2007 PEIR and a prior Addendum No. 1 prepared in 2009. The 2009 Addendum No. 1 addressed a prior project-level analysis and modification to the project, referred to as the 2009 Subsequent Project, pursuant to CEQA Guidelines Section 15168(c), and concluded that project refinements were within the scope of the 2007 PEIR and would not result in new or more severe environmental impacts. The modified project that is the subject of Addendum No. 2 refines specific components of the existing water treatment facility to improve treatment reliability, meet increased water demand, and replace aging infrastructure. The modified project includes upgrades and reconfiguration of treatment processes and supporting infrastructure within the existing water treatment plant site. Although similar components were evaluated in the prior environmental documents, the current refinements to the project provide additional design detail not previously analyzed.

Addendum No. 2 has been prepared in accordance with CEQA Guidelines Section 15164 to evaluate whether the modified project would result in new significant environmental effects or a substantially increase in the severity of previously identified impacts. This addendum relies on and incorporates by reference the 2007 PEIR and the 2009 Addendum No. 1, which establish the environmental baseline and prior impact analyses. Based on this evaluation, this addendum documents that the proposed modified project remains within the scope of impacts previously analyzed and does not require subsequent review under CEQA Guidelines Section 15162.

1.1. Project Background and Context

EDHWTP is owned and operated by EID and provides potable water service to the El Dorado Hills community in El Dorado County, California. EDHWTP is located on Francisco Drive near Folsom Lake (**Figure 1**) and functions as a primary treatment facility within the District's water supply and distribution system. EDHWTP was originally constructed in the early 1960s on land acquired from the El Dorado Hills Community Services District (CSD) and was operated by the El Dorado County Water District until its transfer to EID in the 1970s (EID 2007). Raw water is pumped from Folsom Lake to the EDHWTP, treated, and distributed throughout the El Dorado Hills region via a system of storage tanks and water transmission lines. Since its original construction, EDHWTP has undergone multiple expansions to accommodate increasing water demand associated with regional growth of its service area. Incremental capacity upgrades have increased the plant's treatment capacity over time, including expansions to

Figure 1. Modified Project Location



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approximately 12 million gallons per day (mgd) in 1993, 14 mgd in 2000, 16 mgd in 2002, and 19.5 mgd in 2004 (EID 2007).

The 2007 PEIR evaluated expansion of the EDHWTP to increase treatment capacity and support continued growth in the El Dorado Hills service area, including infrastructure upgrades necessary to meet projected potable water demand and regulatory requirements. The 2007 project was designed to provide water treatment capacity up to 31.5 mgd through a phased approach to meet projected short-term, mid-term, and long-term water demands (EID 2007). Phase 1 of the project included capacity expansion from 19.5 to 24.4 mgd through increased filtration capacity, replacement of chemical storage tanks, upgrades to the chlorine system, installation of new finished water pumping facilities, and improvements to emergency access and backup power systems (EID 2007). Phase 1 also included upgrades to the Folsom Lake Raw Water Pump Station to increase raw water supply. Phase 2 included additional improvements to increase water treatment capacity to 31.5 mgd. These improvements included integration of treatment processes, such as membrane filtration, and construction of supporting facilities including a new control room, living quarters, security upgrades, and finished water pumping units (EID 2007).

In 2009, EID analyzed the 2009 Subsequent Project to refine design of the EDWTP expansion, including changes to facility layout, relocation and resizing of treatment components, addition of retaining walls, installation of backwash systems, and changes to chemical treatment processes, including replacement of chlorine gas disinfection with sodium hypochlorite and sodium hydroxide systems (EID 2009). Consistent with CEQA Guidelines 15162 and 15168(c)(2), an IS prepared for the 2009 Subsequent Project determined that the proposed refinements would not result in new significant environmental effects or a substantial increase in the severity of previously identified impacts, and the District adopted Addendum No. 1 to the 2007 PEIR. The 2009 Addendum No. 1 concluded that environmental conditions in the project area remained substantially unchanged from those described in the 2007 PEIR, and that no new mitigation measures were required.

The EDHWTP Improvements Project (modified project) currently being analyzed represents a further refinement of the previously evaluated expansion. The modified project would improve treatment reliability, accommodate increased water demand, and replace aging infrastructure through upgrade and reconfiguration of treatment processes and supporting facilities within the existing water treatment plant site. While these types of improvements were generally evaluated in the 2007 PEIR and the 2009 Subsequent Project IS and Addendum No. 1, the current proposed modifications provide additional design detail and updated facility components that were not previously described at the same level of specificity.

1.2. Document Organization

This document is divided into the following three key sections required under CEQA:

Addendum No. 2 to the El Dorado Hills Water Treatment Plant and Water Mains Program Environmental Impact Report. The Addendum, which precedes the presentation of the IS analysis in this document, briefly summarizes the modified project, summarizes the environmental conclusions, and

identifies the previously adopted mitigation measures that would be implemented in conjunction with the proposed modified project.

Initial Study. The Initial Study, referred to as "IS," constitutes the remaining portion of this document and includes an introduction, project description, environmental checklist, references cited, report preparers, and distribution list, as briefly summarized below:

Chapter 1 – Introduction. This chapter describes the purpose of the IS, summarizes findings, and describes the organization of this IS.

Chapter 2 – Project Description. This chapter describes the project location and background, and the modifications to the project characteristics, construction activities, and operations previously analyzed in the 2007 PEIR and the 2009 Addendum No. 1.

Chapter 3 – Environmental Checklist. This chapter presents an analysis of environmental issues identified in the CEQA environmental checklist and determines whether project implementation would result in no new significant impact, no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, a potentially significant impact, or a significant impact on the physical environment in each topic area. Should any new impacts be determined to be significant or should impacts be substantially more severe than was previously identified in the 2007 PEIR and 2009 Addendum No. 1, a subsequent EIR would be required. For this modified project, however, mitigation measures which were already adopted as part of the 2007 PEIR have been incorporated as needed to reduce potentially significant and significant impacts, and no new or substantially more severe significant impacts have been identified. Because the 2007 PEIR was prepared prior to the application of AB 52 in 2015, this project is not subject to AB 52 consultation requirements and this IS does not include a discussion of Tribal Cultural Resources.

Chapter 4 – References. This chapter lists the references used to prepare this IS.

Chapter 5 – Report Preparers. This chapter identifies report preparers who contributed to the preparation of this document.

2. Project Modifications and Refinements

2.1. Project Background

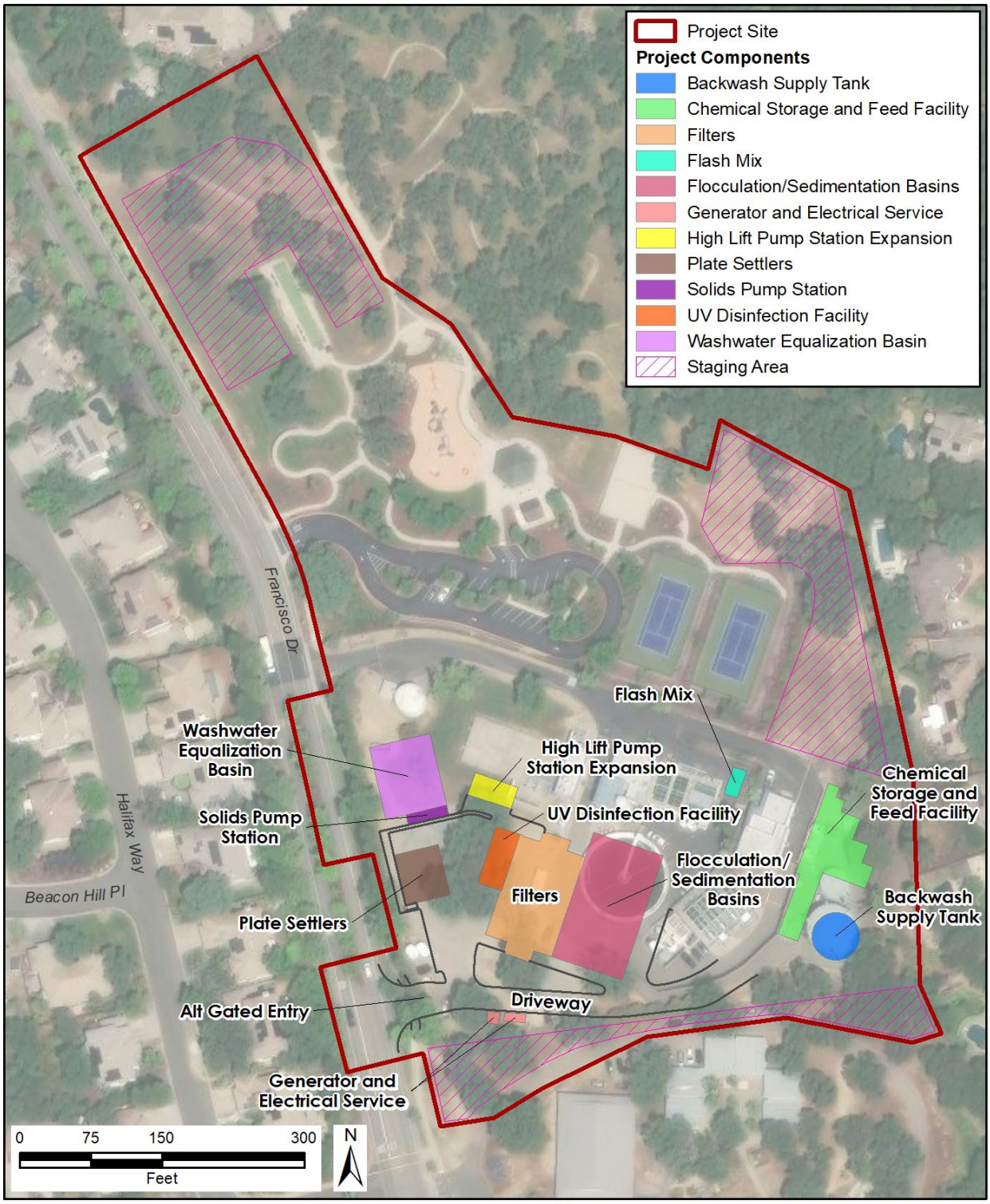
This IS and Addendum No. 2 addresses minor modifications and refinements to the project analyzed in the 2007 PEIR and the 2009 Addendum No. 1. The text in the following sections describes the modifications and refinements, with more general details concerning the elements of the project that are unchanged.

2.2. Modified Project Components

The modified project involves removal of outdated infrastructure and installation of new water treatment facilities, upgraded piping and electrical systems, and the addition of new facilities to provide treatment processes such as ultraviolet (UV) disinfection, improved filtration, and solids management. The modified project includes new flash mix facilities, flocculation and sedimentation basins with plate settlers, enhanced filters, and addition of UV disinfection to supplement existing chemical disinfection (**Figure 2**). A new flash mixing facility would be constructed to replace the existing flash mix system. The new flash mixing facility would use a pumped jet diffusion configuration incorporated in a single 36-inch raw water pipe to optimize limited free space at the project site. New flocculation and sedimentation basins would be constructed to improve removal of suspended solids and turbidity prior to filtration by forming large particles (floc) that can easily settle out during sedimentation. The flocculation basins would be constructed with multiple stages of mechanical mixers and ported baffle walls to prevent hydraulic short-circuiting and promote even flow through the basins. The sedimentation basins would incorporate high-rate settling using plate settlers to enhance solids removal efficiency while minimizing the overall footprint of facilities. The new filtration facilities would be enhanced with multiple dual-media filters that more efficiently remove suspended solids, turbidity, and microbial contaminants that were not removed during clarification.

Additionally, a new UV disinfection facility would be constructed downstream of the filters using a combined filter effluent UV reactor configuration. The UV system would utilize low-pressure, high-output lamps in a cross-flow reactor type to disinfect treated water prior to distribution. A new centralized storage and feed system would replace three existing chemical storage and feed areas onsite. The new facility would provide storage and feed for water treatment chemicals for corrosion control, coagulation, flocculation and disinfection. Improvements to backwash and solids management facilities would enhance management of filter backwash and treatment of residuals generated during plant operations. The modified project would convert the existing Raw Water Storage Tank to a backwash supply tank to provide a source for filter backwashing. A new Washwater Equalization (EQ) basin is proposed to store and equalize backwash waste from the filters. The EQ basin would be constructed of concrete and attach to a new solids pump station. The solids pump station would be located near the lowest elevation of the plant site to allow as much gravity flow as possible into the pump station. The pump station would receive solids from the sludge collectors in the sedimentation basins and in the EQ basin, and from the plate settler. The pump station would then discharge to the sewer at the existing sewer discharge location in the gravel parking lot south of the plant site. Plate

Figure 2. Modified Project Components



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settlers systems would be replaced to improve solids separation efficiency. After startup and commissioning of the new plate settlers system, the existing system would be demolished.

Electrical infrastructure would be upgraded to support new and modified treatment facilities, including installation of a new, larger Pacific Gas & Electric Company transformer, switchgear, and backup generator. The backup generator would consist of an approximately 2,750-kilowatt, Tier 4 diesel generator operating at 480 volts. The new generator would be used during emergency power outage conditions and for periodic maintenance and testing activities, similar to existing generator use. The High Lift Pump Station pumps finished water from the chlorine contact basin to the distribution system. Expansion of the high lift pump station is proposed to support increased treatment capacity. The modified project would also include demolition and removal of existing treatment and support facilities that would be replaced or upgraded as part of the modernization effort. Structures proposed for demolition include the Wash Water Reclamation Tank, Wash Water Reclamation Pump Station, Plate Settler, Flash Mix Facility, Backwash Supply Tank, Chemical Tanks and Containment, Backwash Supply Pumps, Wash Water Equalization Tank and Pump Station, Outlet Box and Weir Structure, and Clarifiers 1 through 6.

In addition to pumps, pipelines, and other utilities that would be relocated, abandoned, or demolished on the EDHWTP site, an electrical connection that extends across both northbound and southbound lanes of Francisco Drive would be demolished, and several improvements, including a new driveway connect, a new 48-inch pipe connection, and a new 18-inch pipeline would all be installed within the northbound lane of Francisco Drive.

2.3. Modified Project Construction

Construction of the modified project components would be phased to ensure that operation of the existing EDHWTP is maintained throughout construction. Primary construction activities would occur within the existing EDHWTP boundaries; however, temporary offsite staging, laydown, parking, and access areas may be on the park and school sites adjacent to the project site. Construction is anticipated to occur intermittently over a 5-year period, with work sequenced to maintain full operation of the existing treatment plant. Construction activities would occur during standard daytime construction hours. The exact commencement date for the start of project construction depends on the availability of grant funding or other financing opportunities. Construction activities would generally be as described in the 2007 PEIR, with a general overview and some specific modifications described in the following sections.

Modified project construction activities include demolition of existing facilities, site preparation, excavation and grading, installation of new treatment and support facilities, utility connections, concrete placement, equipment installation, and paving restoration. Construction activities including demolition would occur in multiple phases to maintain operation of the EDHWTP throughout implementation of the modified project. Work would involve typical construction equipment such as excavators, backhoes, loaders, haul trucks, skid-steer, concrete pumps, compactors, cranes, generators, and other standard heavy equipment. Controlled blasting may be required to remove subsurface rock in localized areas, as previously described in the 2007 PEIR. The total demolition footprint would encompass approximately 2,058 square feet (0.05 acre).

2.3.1. Staging Areas

Temporary staging and laydown areas may be established at portions of the adjacent middle school property and Lake Forest Park. At the middle school site, the narrow area between the fire road and existing fence line may be used for temporary staging, and up to 10 parking spaces may be available for construction workers during school hours, with additional parking potentially available outside school operating hours. At Lake Forest Park, staging and laydown activities may occur behind the tennis courts (accessed from the Wand on the hill north of the bocce court) with access from Francisco Drive. Construction staging at the park site would primarily involve material laydown and worker parking and would not include nighttime lighting, heavy equipment operations, grading, or closure of developed park facilities. Temporary fencing may be installed to secure staging and access areas during active construction. Grass cutting and placement of temporary mats or gravel may occur within staging areas as needed to support construction access and material storage. Lake Forest Park would remain open during construction, although temporary disruption associated with nearby staging, parking, and construction access activities could occur intermittently. Tree trimming may occur associated with staging areas, but tree removal is not planned in these areas.

2.3.2. Site Access and Transportation

Construction would involve material movement associated with grading, excavation, utility installations, and basin construction activities. During the approximately 5-year construction period, a total of about 194,000 cubic yards of material would be transported on- or off- the project site, representing an average of approximately 20 to 25 one-way truck trips per day. Haul activities would occur periodically throughout construction using designated haul routes connecting the project site to U.S. Highway 50. The number of construction workers would vary by phase, but would be less than 40 construction workers at any given time.

Construction traffic, including material hauling and construction workers, would use Francisco Drive and El Dorado Hills Boulevard to access U.S. Highway 50, although alternative routes could be designated if specified by El Dorado County or the California Department of Transportation. Haul distances for disposal activities are anticipated to be 22 miles, based on transport to the Kiefer Landfill in eastern Sacramento County. Material import is assumed to be obtained within the same 22-mile distance.

2.3.3. Construction in Francisco Drive

Construction of utilities within Francisco Drive may require temporary lane realignments and occasional partial road closures. These closures will occur intermittently throughout the 5-year duration of the project, with any closures being temporary and intermittent in nature. During lane closures and realignments, crews will redirect and control traffic using cones, flaggers and other industry standard traffic control equipment. In the event of a road closure requiring a detour, the community will be notified in advance of the closure and provided with alternative routing details.

2.3.4. Construction Schedule

The modified project would be constructed in phases to avoid disrupting treatment plant operations. Construction would occur over a 5-year period. Construction hours and general construction practices would not change from those previously evaluated in the 2007 PEIR, with construction occurring between 7 am and 7 pm on weekdays, or 8 am and 5 pm on weekends.

2.4. Operations and Maintenance

Operations and maintenance of the modified project would be consistent with the improvements described in the 2007 PEIR and 2009 Addendum No. 1. Normal maintenance and operations activities would be similar to (or reduced) compared to the current conditions due to more efficient equipment and operations; the number of workers at the EDHWTP would not increase.

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3. Environmental Checklist

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for a significant impact to any resource category from project operations and maintenance of the existing and proposed facilities.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required. “Beneficial impact” is also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.
4. “Less-than-Significant Impact with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a “Less-than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are a "Less-than-Significant Impact with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to less than significance.

Significance thresholds are identified for certain resources, but others are not explicitly identified because there is clearly no impact or the checklist question itself serves as the significance threshold.

This Initial Study compares the proposed project modifications and refinements described in Chapter 2, "Project Modifications and Refinements," to the 2007 PEIR to determine if the proposed changes result in new or worsened impacts. The analysis evaluates each resource topic area where the 2007 PEIR identified no impact, less-than-significant impact, potentially significant impact unless mitigation incorporated, and potentially significant impacts. The corresponding mitigation measures identified in the 2007 PEIR will also be implemented as part of the modified project.

3.1. Aesthetics

Except as provided in PRC Section 21099, would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
1a. Have a substantial adverse effect on a scenic vista?					No New Significant Impact
1b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?				No Impact	
1c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the modified project conflict with applicable zoning and other regulations governing scenic quality?					No New Significant Impact
1d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					No New Significant Impact

3.1.1. Environmental Setting

Setting information in Section 3.1, "Aesthetics," of the 2007 PEIR is still applicable to the modified project. Since the 2007 PEIR was prepared, Lake Forest Park has been developed. Generally, the project site can be viewed from publicly accessible areas along Francisco Drive, at Lake Forest Park, and at Marina Village Middle School. There are residences immediately east of the project site. The project site is not visible from the public roadway (Portsmouth Drive) beyond the adjacent residences.

El Dorado County has two designated State scenic highways, on portions of U.S. Highway 50 and State Route (SR 89). The project site is not visible from these roadways.

3.1.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.1, "Aesthetics," of the 2007 PEIR apply to the modified project:

- **Mitigation Measure #3.1-1a:** The contractor staging area perimeter will be marked by the EID project engineer in the field as indicated on Figures 2-4 and 3.1-11.
- **Mitigation Measure #3.1-1b:** Access to the staging area shall be from the EDHWTP site only.
- **Mitigation Measure #3.1-1c:** A temporary, secure chain-link fence will enclose the staging area. No vehicular or equipment access, storage or use within the park of any kind shall be permitted outside the staging area at any time.
- **Mitigation Measure #3.1-1d:** No project-related waste or debris shall be allowed at any time outside the staging area. Wastes shall be properly collected and disposed within the staging area and hauled away to a licensed waste facility when storage bins are full.
- **Mitigation Measure #3.1-1e:** The staging area shall be surfaced with 3 inches of aggregate base and kept free of soil.
- **Mitigation Measure #3.1-1f:** Upon completion of construction, the contractor staging area shall be cleared of all materials, graded to original contours, and reseeded with a grass seed mix similar to existing as approved by the CSD. Alternately, EID and the CSD may agree to rehabilitate the site in a different way consistent with CSD park objectives.
- **Mitigation Measure #3.1-2a:** A landscape plan for the EDHWTP site shall be developed by a licensed landscape architect. Perimeter plantings shall include evergreen trees, fast-growing species for short-term effect, and other species for longevity. Trees and shrubs shall be provided throughout the plant at strategic locations to reduce the visual impacts from offsite, with consideration given to security requirements. Landscape materials shall be drought-tolerant where feasible and include native oaks to provide continuity with the adjacent park and help meet requirements of Mitigation Measure #3.3-2. Specimen trees shall be provided at appropriate focal points as viewed from Francisco Drive and the park. The landscape plan shall provide maintenance guidelines.
- **Mitigation Measure #3.1-2b:** Landscape installation and maintenance at the EDHWTP shall be in conformance with the landscape plan. All plant materials and irrigation components shall be guaranteed for 2 years. Plants shall be replaced immediately when diseased or dead in conformance with the landscape plan. Landscaping at the EDHWTP shall be maintained through professional landscape maintenance crews.
- **Mitigation Measure #3.1-3a:** Additional lighting at the project site will conform to the El Dorado County Ordinance Code Section 17.14.170 regarding outdoor lighting and use International Dark-Sky Association (IDA)-Approved™ Dark-Sky Friendly fixtures. This includes the following requirements:
    - Outdoor lighting plans will be depicted on construction plans and will include lighting location, height, and style;
    - Lighting must be hooded or screened to direct the source of light downward and not negatively impact adjacent properties; and

- Parking lot and other security lighting must be top and side-shielded to prevent the light pattern from shining on adjacent property.

3.1.3. Discussion

a) Have a substantial adverse effect on a scenic vista? In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the modified project conflict with applicable zoning and other regulations governing scenic quality?

The 2007 PEIR identified a significant temporary impact on visual character and public views related to site construction, including the use of Lake Forest Park for staging, as proposed in the modified project. The 2007 PEIR identified Mitigation Measures 3.1-1a through 3.1-1f to reduce this impact to a less-than-significant level. These mitigation measures would be similarly effective in reducing temporary impacts on visual character and public views from construction of the modified project.

In addition to construction impacts, the 2007 PEIR identified significant impacts related to additional development on the project site and the loss of oak trees. These changes would affect views from Francisco Drive and students and faculty at the middle school. Views from Lake Forest Park would also be affected. Mitigation measures 3.1-2a and 3.1-2b were identified to reduce this impact, which would remain significant and unavoidable. The modified project would result in similar future aesthetic changes to those described in the 2007 PEIR—loss of oak trees, and a larger facility footprint with more operations enclosed by buildings. The modified project would also remove portions of the row of trees along the Francisco Drive fenceline which currently screen the facility views for travelers on Francisco Drive; however, Mitigation Measures 3.1-2a and 3.1-2b would require a landscape plan, including trees at appropriate focal points when viewed from Francisco Drive and the park, which would be effective in reducing this additional effect. Therefore, the modified project would not result in new or substantially more severe significant impacts than those disclosed in the 2007 PEIR.

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

The project site is not located in proximity to a State scenic highway. There would be no impact.

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

The 2007 PEIR identified a significant impact from new lighting being unintentionally directed toward offsite uses, which was reduced to a less-than-significant level after implementing Mitigation Measure 3.1-3a. The modified project would also have new lighting, resulting in the same potential impact related to new sources of light as the project described in the 2007 PEIR. Therefore, there would be no new or substantially more severe significant impact than was disclosed in the 2007 PEIR.

3.2. Agriculture and Forestry Resources

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
2a. 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	
2b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				No Impact	
2c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				No Impact	
2d. Result in the loss of forest land or conversion of forest land to non-forest use?					No New Significant Impact
2e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					No New Significant Impact

3.2.1. Environmental Setting

The project site does not include any Farmland, Timberland or parcels under Williamson Act contracts. The project site includes tree cover incidental to industrial land uses associated with the existing EDHWTP.

3.2.2. Discussion

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

The project site does not include any Farmland or land in agricultural use. There would be no impact.

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 PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The project site does not include any land zoned for forest or timberland use. There would be no impact.

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

The project site includes tree cover incidental to the existing industrial use at the project site. Impacts related to tree loss are addressed in Section 3.4, "Biological Resources."

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

The project includes tree cover incidental to the existing industrial use at the project site. Impacts related to tree loss are addressed in Section 3.4, "Biological Resources."

3.3. Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
3a. Conflict with or obstruct implementation of the applicable air quality plan?					No New Significant Impact
3b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?					No New Significant Impact
3c. Expose sensitive receptors to substantial pollutant concentrations?					No New Significant Impact
3d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?					No New Significant Impact

3.3.1. Environmental Setting

The project site is located within the Mountain Counties Air Basin (MCAB) and under the jurisdiction of the El Dorado County Air Quality Management District (EDCAQMD). The U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) establish ambient air quality standards for criteria pollutants, including ozone, carbon monoxide (CO), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). The EDCAQMD regulates stationary and area sources of air pollution within El Dorado County and implements federal, state, and local air quality regulations intended to attain and maintain ambient air quality standards. El Dorado County is currently designated nonattainment for the federal 2008 and 2015 ozone standards and the federal 2006 $PM_{2.5}$ standard (CARB 2026). The County is also designated nonattainment for the State ozone and PM_{10} standards and unclassified for the State $PM_{2.5}$ standard (CARB 2026).

Sensitive receptors in the vicinity of the modified project include nearby residential neighborhoods, Marina Village Middle School located south of the EDHWTP, Lake Forest Park immediately north of the facility, and recreational users in the surrounding Folsom Lake area.

The 2007 PEIR concluded that construction emissions of reactive organic gases (ROG) and NO_X would remain below EDCAQMD significance thresholds and that implementation of EDCAQMD fugitive dust control requirements and other standard construction measures would reduce construction-related air quality impacts to less-than-significant levels. The 2007 PEIR also determined that the project would be consistent with regional growth projections and applicable air quality planning efforts. The 2009 Addendum No. 1concluded that design refinements would not substantially change construction methods, development area, or project emissions evaluated in the 2007 PEIR. Therefore, the 2009 Addendum No. 1 determined that no new significant air quality impacts or substantial increases in previously identified impacts would occur.

3.3.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.2, "Air Quality," of the 2007 PEIR apply to the modified project:

- **Mitigation Measure #3.2-1a:** During construction and excavation activities, fresh soil and rock exposures shall be periodically evaluated by a registered geologist to check for asbestiform mineral deposits.
- **Mitigation Measure #3.2-1b:** EID shall ensure that construction contractors performing excavations and EID inspectors are educated regarding the appearance of rocks or soil potentially containing naturally occurring asbestos (NOA). Contractors and EID inspectors shall watch for rocks or soils with visible fibrous minerals. Should any such rocks or soils be suspected, construction in the affected area shall cease and the condition shall immediately be brought to the attention of a registered geologist for evaluation and control measures will be implemented.

  Control measures will conform with the California Air Resources Board Asbestos Airborne Toxic Control Measure (ATCM) Regulatory Text (17 CCR 93105), Final Regulation Order for Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. Control measures will also meet requirements of the El Dorado County Ordinance 4630 (June 2003) as contained in the El Dorado County Code Section 8.44. Finally, control measures will also meet the requirements of the El Dorado County Air Quality Management District (AQMD) Rule 223 for control of fugitive dust and will follow the AQMD's Prescriptive Standard -- Fugitive Dust Prevention and Control and Contingent Asbestos Hazard Dust Mitigation Plan (2000). The measures from the above regulatory sources include, but are not limited to, the following:

  - EID shall prepare an Asbestos Hazard Dust Mitigation Plan that shall be designed to eliminate, to the greatest extent possible, the emissions of fugitive dust from grading, excavation, blasting and other soil disturbing construction activity. This plan shall be prepared in coordination with the El Dorado County AQMD engineer, assigned to monitor and control airborne asbestos in the County, the prime contractor, and the registered blasting contractor. The plan will include at the minimum the steps outlined in Section 8.44.030 of the El Dorado County Code, General Requirements for Grading, Excavation and Construction Activities. These will include but are not limited to the following:

    1. Pre-wet work area and immediately follow with fine spray application on the immediate area being worked to eliminate visible dust to the greatest extent possible. Enough water should be applied to prevent visible emissions from crossing the project boundaries;

2. Limit off-road vehicle access and speed on exposed serpentine and rock containing asbestos material to reduce fiber releases;
3. Cover areas exposed to vehicle travel with non-asbestos cover material.
4. Maintain a high moisture condition of the disturbed surface or treat the disturbed surface of the work area with an approved "palliative" material to seal loose fibers together to the parent rock particle;
5. Keep material transfers of stockpiles of loose material adequately wet, and sealed by an approved palliative or covered when conditions warrant;
6. Provide employee notification of the potential health risk of airborne asbestos and requirements of the plan;
7. Limit construction vehicle speed at the work site to 15 miles per hour or less;
8. Wash equipment down before moving from the property onto a paved public road;
9. Clean visible track-out onto paved roads using wet sweeping or a High Efficiency Particulate Air (HEPA) filter-equipped vacuum device within 24 hours;
10. Revegetate all disturbed areas as rapidly as possible, and
11. Adhere to all elements of the Asbestos Hazard Dust Mitigation Plan throughout the duration of the construction activity.

3.3.3. Discussion

a, b) Conflict with or obstruct implementation of the applicable air quality plan? Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?

Construction of the modified project would generate temporary emissions of criteria air pollutants and fugitive dust from demolition, grading, excavation, material hauling, concrete placement, and installation of new treatment facilities. To conservatively evaluate potential construction emissions, the most intensive construction period of the modified project (Phase 2) was modeled in CalEEMod Version 2022.1.1.43. Phase 2 was selected because it includes the greatest concentration of overlapping heavy construction activities, the highest estimated material movement quantities, and the largest treatment facility improvements, including construction of the new flocculation and sedimentation basins, filters, UV facility, flash mix facility, and associated utilities. Phase 2 also includes extensive excavation, grading, concrete placement, and material hauling activities occurring concurrently over the longest duration of construction.

As shown in **Table 3.3-1**, construction of Phase 2 of the modified project scenario would generate maximum daily emissions of up to 1.7 pounds per day of ROG and 15.3 pounds per day of NO_X, which would remain below the EDCAQMD significance threshold of 82 pounds per day for each pollutant. PM_{10} emissions would range from approximately 68 to 89 pounds per day. Although EDCAQMD does not identify a numeric CEQA significance threshold for PM_{10}, the project would be required to implement applicable dust control measures and comply with EDCAQMD rules and standard construction best management practices (BMPs) to minimize fugitive dust emissions. Consistent with EDCAQMD CEQA

guidance, fugitive dust impacts may be considered less than significant where mitigation measures are incorporated to prevent visible dust from extending beyond project boundaries, and Mitigation Measure 3.2-1b requires dust control measures. CalEEMod did not quantify a reduction in PM_{10} emissions between the unmitigated and mitigated scenarios because the modeled PM_{10} emissions are primarily associated with worker vehicle trips on paved roads, rather than fugitive dust generated from unpaved construction activities.

Table 3.3-2 presents annual emissions of NO_x in comparison to the *de minimis* standards that apply to Federal projects to demonstrate General Conformity with local air quality plans. The modified project emissions would not exceed *de minimis* standards.

Table 3.3-1. Estimated Construction-related Criteria Pollutant Emissions

Construction year	ROG (pounds per day) unmitigated/mitigated	NOx (pounds per day) unmitigated/mitigated	PM_{10} (pounds per day) unmitigated/mitigated	$PM_{2.5}$ (pounds per day) unmitigated/mitigated
Year 1	1.59/1.59	11.3/11.3	67.6/67.6	7.1/7.1
EDCAQMD Threshold	82	82	None	None
Exceeds Threshold?	*No*	*No*	*N/A*	*N/A*
Year 2	1.4/1.4	15.3/15.3	88.8/88.8	9.3/9.3
EDCAQMD Threshold	82	82	None	None
Exceeds Threshold?	*No*	*No*	*N/A*	*N/A*
Year 3	*1.7/1.7*	*10.7/10.7*	*88.4/88.4*	*9.3/9.3*
EDCAQMD Threshold	82	82	None	None
Exceeds Threshold?	*No*	*No*	*N/A*	*N/A*

Notes: NO_x=oxides of nitrogen; PM_{10}=particulate matter with aerodynamic diameter less than 10 micrometers; $PM_{2.5}$=particulate matter with aerodynamic diameter less than 2.5 micrometers

Table 3.3-2. Estimated Annual Construction-related Criteria Pollutant Emissions

Construction year	NOx (tons per year) unmitigated/mitigated
Year 1	1.40/1.40
De minimis Standard	25
Exceeds Threshold?	*No*
Year 2	1.32/1.32
De minimis Standard	25
Exceeds Threshold?	*No*
Year 3	0.31/0.31
De minimis Standard	25
Exceeds Threshold?	*No*

Notes: NO_x=oxides of nitrogen

The modified project would be constructed within the existing EDHWTP site, with temporary use of adjacent staging areas, and would not change land uses or operations that would substantially increase long-term emissions. Construction would be temporary and phased to maintain water treatment operations. The modified project consists of upgrades of treatment processes and infrastructure within the existing facility site, consistent with the type of improvements previously evaluated in the 2007 PEIR and 2009 Addendum No. 1. The modified project would not conflict with or obstruct implementation of the applicable air quality plan, and there would be no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

c) Expose sensitive receptors to substantial pollutant concentrations?

Construction of the modified project would generate temporary criteria pollutant emissions and fugitive dust near sensitive receptors, including nearby residences, Marina Village Middle School, Lake Forest Park, and recreational users in the surrounding Folsom Lake area. However, construction emissions modeled for the most intensive construction phase would remain below the EDCAQMD significance thresholds for ROG and NO_X, and the project would be required to implement applicable fugitive dust control measures to minimize PM_{10} emissions. The proposed emergency generator would be used only during emergency power outages and periodic testing and maintenance. Therefore, the modified project would not expose sensitive receptors to substantial pollutant concentrations, and there would be no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As discussed in the 2007 PEIR and 2009 Addendum No. 1, construction activities would generate temporary and intermittent odors associated with diesel equipment exhaust, paving, and material handling activities; however, these emissions would be localized. Operation of the modified project would continue existing water treatment activities within the EDHWTP and would not introduce new sources of substantial odor emissions beyond those previously evaluated. Therefore, there would be no new or substantially more severe significant impact than was disclosed in the 2007 PEIR.

The 2007 PEIR also addressed the potential to encounter NOA in excavation at the EDHWTP project site. The modified project includes similar excavation and blasting to that analyzed in the 2007 PEIR, and implementing Mitigation Measures 3.2-1a and 3.2-1b would be effective in reducing this potential impact. Therefore, there would be no new or substantially more severe significant impact than was disclosed in the 2007 PEIR.

3.4. Biological Resources

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
4a. 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 Wildlife or U.S. Fish and Wildlife Service?					No New Significant Impact
4b. 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 Wildlife or U.S. Fish and Wildlife Service?				No impact.	
4c. Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				No impact.	
4d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					No New Significant Impact
4e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?					No New Significant Impact
4f. 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.	

3.4.1. Environmental Setting

This section summarizes the studies that were performed to characterize the environmental setting of the modified project area including vegetation communities and land cover types, sensitive natural communities, and wildlife movement corridors.

Studies Performed to Date

This section describes the methods used by GEI biologists to characterize the existing physical and biological setting of the project site and surrounding study area.

Desktop Review

Prior to conducting field investigations, GEI biologists performed database searches, reviewed site-specific documentation, and compiled other information on sensitive biological resources in the study area.

The following sources of information were reviewed:

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (USFWS 2024a)
- USFWS Critical Habitat Web Portal (USFWS 2024b)
- California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and QuickView Tool in BIOS 6 (CDFW 2024a)
- California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2024)
- National Marine Fisheries Service (NMFS) Endangered Species Act Critical Habitat Mapper (NMFS 2024a)
- NMFS Essential Fish Habitat Mapper (NMFS 2024b)
- U.S. Geologic Survey (USGS) Clarksville 7.5-minute topographic quadrangle
- Aerial imagery of the study area and vicinity (Google Earth 2024)
- California Department of Conservation California Geological Survey (CGS) (2010)

The USFWS Information for Planning and Consultation System (USFWS 2026a) was queried to identify USFWS-regulated species that have the potential to occur in the study area, and the USFWS Critical Habitat Web Portal (USFWS 2026b) was reviewed to identify designated critical habitat within the region. A query of the CNDDB QuickView Tool (CDFW 2026a) provided a list of mapped and unprocessed occurrences for special-status species in the Clarksville, California, USGS 7.5-minute quadrangle and all adjacent quadrangles including Rocklin, Pilot Hill, Colma, Folsom, Shingle Springs, Buffalo Creek, Folsom SE, and Latrobe. Next, the CNPS database (CNPS 2026) was queried to identify special-status plant species with the potential to occur in the aforementioned USGS quadrangles. Raw data from the USFWS, CNDDB, and CNPS species database queries are provided in Appendix B.

After conducting the database queries, topographic, soil, vegetation, and aerial data were reviewed to characterize the physical setting of the study area.

Field Investigations

The following field investigations were conducted by GEI biologists to verify and refine data collected during the desktop review.

Reconnaissance-Level Habitat Assessment

GEI biologist Lexi von Ehrenkrook conducted a reconnaissance-level habitat assessment of the study area on April 15, 2026. During the field assessment, habitats for special-status plants and wildlife were evaluated based on several factors, including presence or absence of potentially suitable habitat components or vegetation associations, level of human disturbance, soil types, and other microhabitat characteristics, supplemented by a review of known species occurrences. Habitat assessments for burrowing mammals and birds focused on evaluating potential burrowing or denning sites in and adjacent to the study area. Trees were surveyed for suitable raptor and passerine nesting sites and for evidence of current or past nesting activity. The entire study area was surveyed for the presence of elderberry shrubs (*Sambucus* spp.), the host plant for the federally threatened Valley Elderberry Longhorn Beetle. Aquatic resources in the study area were assessed to determine suitability for breeding, foraging, and rearing habitats for special-status species, such as western pond turtle (*Emys marmorata*).

Tree Survey

On April 15, 2026, GEI biologist and Master Arborist Collin Lesko (Certified Arborist #WE-13711BM) conducted a tree survey. Trees in the study area with a diameter at breast height (DBH) of 6 inches or greater were mapped. A follow-up survey to map trees as small as 4 inches in DBH was also conducted to align with County guidance. The tree survey included the following key tasks:

- Inventoried and assessed all trees within the project area and those documented on the 60% plan.
- Inventoried and assessed all trees within the project area and those documented on the 60% plan.
- Conducted a tree assessment that included species documentation, diameter at breast height (DBH), root conditions, trunk, canopy, health and vitality rating, structural conditions, and a photograph.
- Document all heritage trees, oak woodlands to quantify impacts to oak resources for in lieu fees as defined by El Dorado County.

Inventoried trees included both single-stem and multi-stemmed trees. For multi-stemmed trees, an aggregate diameter is the summation of all stems. Trunk diameter measurements were taken at a height of 4.5 feet above grade along the trunk axis, where possible, except for when the trunk split at breast height. In this case, DBH was measured at the main stems of the tree that best represented the diameter. Trunk diameters were measured using a diameter tape and were recorded in accordance with standard protocols described by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (2000), published by ISA. Tree height and canopy measurements were estimated visually, and any measurements used in the impact analysis were based on the diameter of the individual trees.

Results

This section discusses the results of the desktop review and field investigations. The existing vegetation communities and sensitive communities found in the study area are discussed below, along with the potential for special-status species to occur.

Vegetation Communities

There are five habitat types in the study area which described below. Each community was mapped and is described below based on data collected in the field. These descriptions include the dominant and common plant species identified in each community. The vegetation descriptions below are generally consistent with vegetation alliances described in the *Manual of California Vegetation* (Sawyer et al. 2009). The study area indicated recent vegetation management, including mowing of the ruderal habitat, and ongoing and recent grazing by goats in blue oak woodland and annual grassland habitats. Based on identifiable species, vegetation and species composition feature similar species previously identified in the 2007 PEIR.

Developed

Developed areas contain asphalt driving roads, concrete walking paths and railings, tennis courts, a bocce ball court, and the water treatment plant infrastructure. Fencing is additionally present separating Lake Forest Park and water treatment plant. The overstory features Raywood ash (*Fraxinus angustifolia*). Ornamental shrubs included bottle brush (*Callistemon sp.*), lavender (*Lavandula sp.*), rock rose (*Cistus sp.*), and fortnight lily (*Dietes iridioides*).

Disturbed

Fencing is present to the east and west of the habitat, as well as intersects the habitat in the south between the water treatment plant and Marina Village Middle School. The overstory features blue oak (*Quercus douglasii*) valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizeni*), and the fencelines are lined with Red Tip Photini (*Photinia spp.*). The understory primarily consisted of pebbles and bare ground. On the southern-most side, occasional and sparse non-native understory was present, including miner's lettuce (*Claytonia perfoliate*), common bedstraw (*Galium aparine*), and California burclover (*Medicago polymorpha*).

Blue Oak Woodland

Most of the study area is dominated by grey pine-oak woodland in which occasional grey pines (*Pinus sabiniana*) form an overstory above an open to partially closed sub-canopy composed mostly of blue oak with some interior live oak. This plant community also supports a ground cover of grassland species. The herbaceous understory is comprised of species characteristic of the adjacent non-native grassland described below.

Non-Native Annual Grassland

The open habitat and the understory of the foothill pine-oak woodland is non-native grassland, a plant community characterized by a dense cover of annual grasses with numerous species of non-native

annual forbs and native wildflowers. Characteristic grass species observed include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and medusa head grass (*Taeniatherum caput-medusae*). Common non-native forbs include filaree (*Erodium spp.*), rose clover (*Trifolium hirtum*), pineapple weed (*Chamomilla suaveolens*), winter vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), and knotted hedge-parsley (*Torilis nodosa*). Native common yarrow (*Achillea millefolium*) was observed in the study area.

Ruderal

The ruderal habitat featured similar species with the non-native annual grassland, however, had decreased species diversity and the identifiable species were only non-native. Identifiable species included filaree (*Erodium spp.*), common bedstraw (*Galium aparine*), cut leaf geranium (*Geranium dissectum*), prickly lettuce (*Lactuca serriola*).

Trees

A Tree Assessment and Oak Tree Impacts Evaluation prepared for the Project mapped 71 trees in the study area (Appendix C). Many of the trees in the study area are natives (56 total), the most common being blue oak, coast redwood, valley oak, and interior live oak. A total of 15 ornamental or non-native trees were mapped in the study area, including but not limited to Deodar cedar (*Cedrus deodara*), Bradford pear (*Pryus calleryana*), and Aleppo pine (*Pinus halepensis*).

The study area is in El Dorado County. The County's Oak Resources Conservation Ordinance (Chapter 130.39 of the Zoning Ordinance) and the Oak Resources Management Plan in the Long Range Planning Division's 2017 General Plan Biological Resources Policy Update Project provide protection guidance that applies to the proposed project. The County tree ordinance protects native oak trees, including any live native oak tree of the genus *Quercus* (including blue oak, valley oak, California black oak (*Quercus kelloggii*), interior live oak, canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring six inches dbh or greater. Furthermore, all protected oak trees with a DBH of 36 inches or greater, or a multiple trunked tree with the aggregate diameter of the three largest trunks measuring 36 inches dbh or greater, are considered heritage trees according to Chapter 130.39.030 - Definitions in the County Code of Ordinances. Although other native trees are not explicitly protected under County ordinances, they should be protected where possible, given the nature of the proposed project and the site conditions, where forested areas in the study area are characterized as existing or relict riparian areas associated with the American River floodplain.

Special-status Species

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

human conflict and intrusion. For the purposes of this biological review, special-status species are defined as the following:

- Listed, proposed, or candidates for listing under the Federal Endangered Species Act (ESA)
- Listed or candidate for listing under the California Endangered Species Act
- Designated as Species of Special Concern (SSC) by CDFW
- Designated as Fully Protected by CDFW
- Species that meet the definition of rare or endangered under CEQA include CNPS List Ranks 1B and 2.

The results of USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to occur in the study area**. Tables 3.4-1 and 3.4-2** summarize all special-status plant and wildlife species returned in the database queries, respectively, and describe the habitat requirements and conclusions regarding the potential for each species to occur or be impacted in the study area.

The "Impacts Analyzed" column in **Tables 3.4-1 and 3.4-2** present the determinations for each species regarding their potential to occur in the study area. Species that have a "No" in the" Impacts Analyzed" column, were determined to have no potential to occur in the study area. Species were removed from the analysis based on a combination of an absence of suitable habitat in the study area, the study area being outside the species known range, and/or the study area only providing foraging or overwintering habitats and not breeding. No special-status plants were determined to have the potential to occur in the project area and will, therefore, not be analyzed further in this document.

Special-status Wildlife

Due to the highly developed, urbanized and managed nature of the landscape within the study area, special-status wildlife species are not anticipated to be affected by project implementation, however, other nesting migratory birds and raptors may be present. Please see Table 2 for a summary of all special-status wildlife returned in the desktop review, along with rationales for removing from consideration in this impact analysis.

Table3.4-1. USFWS-regulated Plants with the Potential to Occur in the Study Area

Scientific Name	Common Name	Federal	State	Habitat Characteristics	Impacts Analyzed	Rationale
Allium jepsonii	Jepson's onion	None	None	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 985–4,330 feet. Blooming period: April–August	No	Study area is below the species elevation range and there are no suitable soils present.
Balsamorhiza macrolepis	big-scale balsamroot	None	None	Sometimes serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland. Elevation: 150–5,100 feet. Blooming period: March–June	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Calystegia stebbinsii	Stebbins' morning-glory	Endangered	Endangered	Sometimes in gabbro soils and sometimes in seeps of cismontane woodland and the openings of chaparral. Elevation: 605–3,575 feet. Blooming period: April–July	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Carex xerophila	chaparral sedge	None	None	Serpentine and gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 915–2,525 feet. Blooming period: March–June	No	Study area is below the species elevation range.
Ceanothus roderickii	Pine Hill ceanothus	Endangered	Rare	Sometimes serpentine and gabbro soils in chaparral and cismontane woodland. Elevation: 805–3,575 feet. Blooming period: April–June	No	No suitable habitat or soils present in study area.
Eryngium pinnatisectum	Tuolumne button-celery	None	None	Mesic soils in vernal pools, cismontane woodland, and lower montane coniferous forest. Elevation: 230–3,000 feet. Blooming period: May–August	No	No suitable habitat present in study area.
Fremontodendron decumbens	Pine Hill flannelbush	Endangered	Rare	Rocky soils that are sometimes gabbro or sometimes serpentine in chaparral and cismontane woodland. Elevation: 1,395–2,495 feet. Blooming period: April–July	No	Study area is below the species elevation range.

Scientific Name	Common Name	Federal	State	Habitat Characteristics	Impacts Analyzed	Rationale
Galium californicum ssp. sierrae	El Dorado bedstraw	Endangered	Rare	Gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 320–1,920 feet. Blooming period: May–June	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Gratiola heterosepala	Boggs Lake hedge-hyssop	None	Endangered	Clay soils in vernal pools and lake margins of marshes and swamps. Elevation: 35–7,790 feet. Blooming period: April–August	No	No suitable habitat present in study area.
Juncus leiospermus var. ahartii	Ahart's dwarf rush	None	None	Mesic soils in valley and foothill grassland. Elevation: 100–750 feet. Blooming period: March–May	No	No suitable habitat present in study area.
Legenere limosa	legenere	None	None	Vernal pools. Elevation: 5–2,885 feet. Blooming period: April–June	No	No suitable habitat present in study area.
Navarretia myersii ssp. myersii	pincushion navarretia	None	None	Often acidic soils in vernal pools. Elevation: 65–1,085 feet. Blooming period: April–May	No	No suitable habitat present in study area.
Orcuttia tenuis	slender Orcutt grass	Threatened	Endangered	Often in gravelly soils in vernal pools. Elevation: 110–5,775 feet. Blooming period: May–September(October)	No	No suitable habitat present in study area.
Orcuttia viscida	Sacramento Orcutt grass	Endangered	Endangered	Vernal pools. Elevation: 100–330 feet. Blooming period: April–July (September)	No	No suitable habitat present in study area.
Packera layneae	Layne's ragwort	Threatened	Rare	Rocky soils that are sometimes serpentine or sometimes gabbro in chaparral and cismontane woodland. Elevation: 655–3,560 feet. Blooming period: April–August	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Sagittaria sanfordii	Sanford's arrowhead	None	None	Shallow freshwater marshes and swamps. Elevation: 0–2,135 feet. Blooming period: May–October (November)	No	No suitable habitat present in study area.
Wyethia reticulata	El Dorado County mule ears	None	None	Sometimes clay or sometimes gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 605–2,065 feet. Blooming period: April–August	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.

Table 3.4-2. USFWS and NMFS-regulated Fish and Wildlife Species with the Potential to Occur in the Project Area

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Invertebrates						
Bombus crotchii	Crotch's bumble bee	None	Candidate Endangered	Species requires nesting, foraging, and overwintering habitat. Primary land cover types that provide the three habitat requirements are grasslands, chaparral, and scrub; oak woodlands and forest likely provide suitable habitat as well (H.T. Harvey & Associates 2024). Suitable nest sites are often located in open grasslands and scrub habitats in abandoned rodent nests underground or above ground in tufts of grass, old bird nests, rock piles, cavities in dead trees, hollow logs, or aboveground manmade structures. They are general foragers and have been reported visiting a wide variety of different habitats and flowering plants if there are suitable nectar sources. Crotch's specifically are best suited to forage at open flowers with short corollas. Food sources include Milkweed (*Asclepias*), Daisy (*Chaenactis*), Lupine (*Lupinus*), Burclover (*Medicago*), Scorpionweed (*Phacelia*), and Sage (*Salvia*) (CA Bumble Bee Atlas 2022, Williams et al. 2014). Plant families most commonly associated with Crotch's bumblebee include legumes (*Fabacea*), dogbanes (*Apocynaceae*), daisy (*Asteraceae*), mint (Lamiaceae), and borage (*Boraginaceae*). It should be noted, that floral associations do not necessarily represent this species' preference for these plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs. Little is known about hibernacula or overwintering, but generally, bumblebees overwinter in soft, disturbed soils or under leaf litter or other debris and they nest underground (Xerces Society 2018).	No	Project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Bombus occidentalis	western bumble bee	None	Candidate Endangered	Species requires nesting, foraging, and overwintering habitat. Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. This species is now largely confined to high elevation sites and a small handful of records on the northern California Coast (Xerces Society 2018). Typically nests underground in abandoned rodent burrows, such as old squirrel or other animal nests, and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nest sites may depend on rodent abundance (Xerces Society 2014). They are general foragers and have been reported visiting a wide variety of flowering plants. Western bumblebee specifically are best suited to forage at open flowers with short corollas. Species most commonly associated with western bumblebee include thistles (*Cirsium*), wild buckwheat (*Erigonum*), goldenrods (*Solidago*), daisy, buckthorn (*Ceanothus*), knapweeds (*Centaurea*), and beardtongues (*Penstemon*) (Xerces Society 2014). It should be noted, that floral associations do not necessarily represent this species' preference for these plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs.	No	Project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.
Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	Endemic to California and the Agate Desert of southern Oregon. Found only in ephemeral freshwater habitats, such as vernal pools and similar features, and have life histories highly adapted to the ephemeral environmental conditions. Can be found in a wide range of vernal pools, including extremely small or marginal ones that fill with water for just long enough to allow the individuals to complete their lifecycle (USFWS 2024c).	No	No suitable habitat present in study area.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Danaus plexippus	monarch butterfly	Proposed Threatened	None	Overwinters along the coast from Mendocino County south into Baja California in wind-protected groves of gum (*Eucalyptus spp*.), Monterey pine (*Pinus radiata*), or Monterey cypress (*Hesperocyparis macrocarpa*) with nectar and water sources nearby (IELP 2012, USFWS 2023a). Breeding habitat in California is characterized by the presence of early spring milkweeds (*Asclepias spp*.). Monarch larvae feed exclusively on milkweed species that can occur in a multitude of habitats, including agricultural, riparian, wetlands, meadows, roadsides, and more (Xerces Society 2015).	No	No milkweed is present for breeding habitat. The project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Threatened	None	Dependent on host plant, elderberry (*Sambucus spp*.), which most commonly grows in riparian woodlands, but also in some upland habitats such as oak savannas and annual grasslands. Adults feed on the elderberry leaves and mate within the elderberry canopy. Females deposit eggs on or adjacent to the host elderberry. The larvae bore into the wood of the host plant where they feed on the pith of the plant for 1 to 2 years. The larvae metamorphose between December and April; the adult then emerges from the chamber through an exit hole. Most records for adults occur from late April to mid-May (USFWS 2007a), although April 15 to June 15 is considered to be the "flight season" for the species. Current presumed range in Central Valley extends from Shasta County south to Fresno County, including the valley floor and lower foothills up to about 500 feet in elevation (USFWS 2017).	No	No suitable habitat present in study area.
Lepidurus packardi	vernal pool tadpole shrimp	Endangered	None	Found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other similar features. Limited to pools that are sufficiently large or are otherwise able to retain water for a long enough duration to complete its lifecycle. Endemic to the Central Valley and patchily distributed from Shasta County south to Tulare County; additionally have isolated occurrences in the San Francisco Bay area and South Coast Range (USFWS 2024d, USFWS 2007b).	No	No suitable habitat present in study area.
Fish						

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	Threatened	None	Includes naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries. This DPS does include steelhead from three artificial propagation programs: Coleman National Fish Hatchery Program, Feather River Fish Hatchery Program and the Mokelumne River Hatchery Program (NMFS 2024). Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NOAA 2019).	No	No suitable habitat present in study area.
Amphibians						
Rana boylii pop. 5	foothill yellow-legged frog - south Sierra DPS	Endangered	Endangered	Extends from the South Fork American River sub-basin to the transition zone between the Sierra Nevada and the Tehachapi Mountains that border the south end of the California Central Valley (USFWS 2021). Generally found in shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel (Thomson 2016). Occurs in a wide variety of vegetation types including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadow (Thomson 2016). The species has been documented traveling up to 1,086 feet, 331 meters, from aquatic habitat (Cook et al. 2012, as cited in USFWS 2021).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Rana draytonii	California red-legged frog	Threatened	None	Predominately inhabit permanent fresh water sources such as streams, lakes, marshes, natural and manmade ponds, and drainages in valley bottoms and foothills. Typically, aquatic habitat contains either riparian or emergent vegetation though California red-legged frogs also are known to inhabit ephemeral creeks, drainages, and ponds with minimal riparian and emergent vegetation. California red-legged frogs use these types of aquatic features for breeding and non-breeding activities (USFWS 2022). Aquatic breeding habitat is generally found in still or slow-moving water and can have a wide range of edge and emergent cover amounts. Non-breeding habitat is found in similar aquatic features as breeding habitat but these features may not hold water long enough for the species to successfully complete its aquatic life cycle. While generally found in freshwater habitats, adult California red-legged frogs can survive in saline water for short periods. Upland habitat consists of terrestrial areas adjacent to breeding and non-breeding aquatic habitats (USFWS 2022). The species has been documented traveling up to 2 miles, 3.2 kilometers, from aquatic habitat (USFWS 2022).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.
Spea hammondii	western spadefoot	Proposed Threatened	None	Generally found in grasslands, oak woodlands, coastal sage scrub, and chaparral in washes, floodplains, alluvial fans, playas, and alkali flats. Natural and artificial water bodies are used for breeding. Specifically, vernal pools used by this species have an average ponding duration of 81 days, and successful recruitment occurs in ponds that last on average 21 days longer than larval development time. Pool temperature requirements are from 48°F to 90°F. Pools with invasive species, such as crayfish (*Pacifasticus spp.*), or bullfrogs (*Lithobates catesbeianus*) often, but not always, exclude this species. (Thomson et al. 2016).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.
Reptiles						

Actinemys marmorata	northwestern pond turtle	Proposed Threatened	None	In California, NWPT ranges from the coastline to the Sierra Nevada Mountain range, from the northern state border with Oregon to Kern County, hugging the east side of the Coastal Range. Intermixing between the NWPT and southwestern pond turtle occurs on the San Francisco Peninsula south to Santa Cruz County and east to the border of Contra Costa County south to Santa Clara County (Spinks et al. 2014). Generally, occurs in various water bodies including permanent and ephemeral systems either natural or artificial. Aquatic habitat can include lakes, ponds, marshes, streams, vernal pools, livestock ponds (Tu, B. and L. Trulio. 2022), sewage detention basins (Germano 2010), and irrigation ditches. Aquatic habitat must be a minimum of 2 feet in depth and have basking sites and underwater shelter. Basking is primarily driven by the need to thermoregulate to allow for digestion and occurs diurnally (Boyer 1965). Suitable basking sites include: rocks, logs, vegetation mats and floating debris (Linderman 1999). Underwater shelter sites includes: undercut banks, submerged vegetation, mud, rocks, and logs (USFWS 2023c). Characteristics for suitable basking sites when in competition with invasive sliders in areas such as canals include: a lower frequency of human disturbance, steeper slopes, and shallower water adjacent to basking site (Lambert et al. 2013). Upland habitat includes annual grasslands, forested habitats, and even urban with landscaping. Nesting site selection requirements include: (1) short, sparse grasses and forbs, (2) no dense overhanging riparian or forested canopy, and (3) friable soils, can be compact and dry like edges of roads and levee shoulders (Thomson et al. 2016). Nesting occurs in the spring or early summer, approximately from May until the middle of July, and is generally within 155.5 meters of aquatic sources, however, nests have been documented up to 467 meters from water (Alvarez and Del Vecchio 2024, Nerhaus 206, Thomson et al. 2016). Females find a suitable site, dig a hole, lay eggs, and cover it back up. The eggs incubate naturally underground for 90-130 days, depending on summer temperatures (USFWS 2024e). Eggs hatch and overwinter underground until the following March. Adult turtles enter brumation in November through February and that may occur in uplands or in aquatic habitat.	No	No suitable habitat present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Thamnophis gigas	giant gartersnake	Threatened	Threatened	Formerly ranged in the Central Valley from Butte County to Buena Vista Lake in Kern County but now thought to be absent south of Fresno and in Stanislaus County. Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat near aquatic habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November- mid March). The upland habitat is used for thermoregulation and refugia. Require fresh-water aquatic components with protective emergent vegetative cover for foraging (USFWS 2020).	No	No suitable habitat present in study area.
Birds						
Agelaius tricolor	tricolored blackbird	None	Threatened	Endemic to California with small numbers extending into Oregon, Washington, Nevada, and Baja California. The breeding range is in two disjunct regions separated by the Transverse Ranges of southern California. The first extends from the lowlands west of the Sierra Nevada and extends west across the Central Valley to the coast from Sonoma County to Santa Barbara County. The second extends from the lowlands west of the deserts in southern California and south into northwestern Baja California. Sierra Nevada tricolored blackbirds typically reside in the Central Valley from March-September and migrate into the Sacramento-San Joaquin Delta, northern San Joaquin Valley, and coastal areas in the winter (CDFW 2018b). Require open, accessible water, including wetlands, streams, ponds, reservoirs, and agricultural canals and ditches. Breeding colonies typically occur in valleys or low-lying areas with nesting habitat and extensive grassland, certain agricultural crops, or other suitable foraging habitat. Nesting substrate typically consists of wetland vegetation, Himalayan blackberry, thistle, stinging nettle, or agricultural fields (especially triticale), and, less commonly, in mustard, willows, mallow, wild rose, tamarisk, or giant cane. Foraging habitat includes grasslands, low-density shrublands, pastures, dry seasonal pools, and certain agricultural crops (CDFW 2018b). Utilize rice fields, pastureland, recently cultivated cropland, and grain stores at dairies. Non-breeding colonies require cattails, bulrushes, and other wetland vegetation for shelter (USFWS 2019).	No	No suitable habitat present in study area.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Athene cunicularia	burrowing owl	None	Candidate Endangered	Resident in much of the state in open, dry grasslands and various desert habitats, while also known to occupy highly altered urban landscapes. Will nest or overwinter in a variety of suitable burrows especially those of California ground squirrel (*Otospermophilus beecheyi*), and others such as drainpipes, culverts, self-excavated burrows (Gervais et al. 2008). Species requires open areas in rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other land covers that have some levels of human disturbance such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CWHR Program Staff 1999d).	No	No ground squirrel burrows were observed on the project site. No suitable habitat is present.
Buteo swainsoni	Swainson's hawk	None	Threatened	Typically occurs in California only during the breeding season (March to September). Breeding resident in the Central Valley, Klamath Basin, Northeastern Plateau, and in juniper-sagebrush flats of Lassen County (CDFW 2016). Limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Increasingly also nests in sparse stands of gum trees (*Eucalyptus spp.*) and Australian pines (*Casuarina equisetifolia*) and often forage along roadsides and grassy highway medians. Winters primarily in Argentina or Mexico, with most birds absent from California October through February, though a few overwinter in the Sacramento-San Joaquin River Delta. Prolific migrant through southern California in spring and fall, with large mixed-age groups of birds frequently observed kettling high overhead on thermals or foraging together on freshly cut agricultural fields (CWHR Program Staff 2006).	No	The project site is outside the range and predicted habitat. Project site and surrounding area are urbanized, and frequent and heavy public recreational use.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	Permanent resident in the highest Coast Range mountains, across the Cascade Range, and down the Sierra Nevada to the eastern Transverse Ranges of San Bernardino and Riverside Counties. Uncommon migrant and winter visitor to lowland rivers, lakes, and reservoirs. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine (*Pinus ponderosa*) (CWHR Program Staff 1999a). Requires large bodies of water or rivers with abundant fish, and adjacent snags (CWHR Program Staff 1999a).	No	No suitable habitat present in study area. Project site and surrounding area are urbanized, and frequent and heavy public recreational use.
Laterallus jamaicensis coturniculus	California black rail	None	Threatened	Occurs in saline, brackish, and fresh emergent wetlands. Scarce, but true abundance difficult to determine due to small size and extremely secretive nature. Known to nest at scattered locations in the San Francisco Bay Area and Delta region, Point Reyes National Seashore, San Luis Obispo and Orange Counties, as well as the Imperial and Lower Colorado River Valleys. Appears intermittently and sparingly at a few locations in the Sacramento Valley (CWHR Program Staff 1999c).	No	No suitable habitat present in study area.
Riparia riparia	bank swallow	None	Threatened	A colonial nester in riparian and lacustrine bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks as well as sand and gravel pits. Declined drastically in the state over the 20th Century due to loss of riparian habitat and stabilization of natural banks. Currently most numerous in the Sacramento Valley along the Sacramento, Feather, and American Rivers, and Cache Creek in western Yolo County. Scarce and very local on the central coast. Occurs elsewhere in the state as an uncommon to rare migrant (CWHR Program Staff 1999b).	No	No suitable habitat present in study area.

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3.4.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.3, "Biological Resources," of the 2007 PEIR apply to the modified project:

Mitigation Measure #3.3-1: If construction is to occur during the raptor breeding season (February to July), pre-construction nest surveys will be conducted within the woodland on the CSD park site and within oaks on the EDHWTP site to identify active nests. Should an active nest be identified, EID will coordinate with CDFG to identify appropriate measures.

Mitigation Measure #3.3-2: EID shall create or enhance at least one acre of native oak woodland through plantings at the EDHWTP and (with the approval of the Rescue Union School District and the El Dorado Hills Community Services District) the Marina Village Middle School and the Lake Forest park site. Plantings should be made to create or enhance contiguous stands where feasible.

Mitigation Measure #3.3-3a: Project plans and specifications shall require orange construction barrier fencing at the construction easement perimeter to protect oak woodlands. In addition, a minimum one-foot buffer zone shall be established outside the dripline for oaks with trunk diameters of over 6 inches and with canopies that overhang the construction easement. Barriers shall remain in place until all construction and restoration work that involves heavy equipment is complete. Construction vehicles, equipment, or materials shall not be parked or stored beyond the barriers. No signs, ropes, cables, or other items shall be attached to trees.

Mitigation Measure #3.3-3b: Where oaks with trunk diameters of over 6 inches have branches that encroach within the construction easement, pruning to allow safe operation of equipment must be done by a licensed arborist with local native oak experience.

Mitigation Measure #3.3-4a: Where construction activities are to take place from March 1 – August 15, a qualified wildlife biologist shall conduct nest surveys for active special and nonspecial- status migratory bird and raptor nests. If no active nests are detected during surveys, no additional mitigation is required.

Mitigation Measure #3.3-4b: If active nests are found on the project site/corridor, and if construction activities must occur during the nesting period, a buffer shall be established around the site in consultation with CDFG to avoid disturbance or destruction of the nest site until young have fledged. Considerations in buffer design will depend on the level of noise or construction disturbance, line of site between the nest and the disturbance, ambient level of noise and other disturbances, and other topographical or other barriers.

Mitigation Measure #3.3-4c: If full construction activities begin before the breeding season (e.g., September – February), construction may proceed until it is determined that an active nest or other migratory bird nest is subject to abandonment as a result of construction activities. If migratory birds nest in the vicinity of the project under the pre-existing construction condition, it is assumed that they will not be disturbed by construction activities. Active nest sites should be monitored periodically until the young have fledged (usually late-June to mid-July).

3.4.3. Discussion

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 Wildlife or the U.S. Fish and Wildlife Service?

Several new special-status species have been identified since the 2007 PEIR and the 2009 Addendum No. 1. Table 3.4-1 and Table 3.4-2 include updated species occurrence tables. No special status species have potential to occur at the project site; therefore, the modified project would not result in new or substantially more severe significant impacts than those disclosed in the 2007 PEIR.

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 Wildlife or U.S. Fish and Wildlife Service?

The 2007 PEIR and 2026 Reconnaissance-Level Habitat Assessment did not identify riparian habitat or other sensitive natural communities at the project site; native oaks are addressed in detail under item (e). There would be no impact.

c) Have a substantial adverse effect on state- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The 2007 PEIR and 2026 Reconnaissance-Level Habitat Assessment did not identify wetlands at the project site. There would be no impact.

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?

The 2007 PEIR described the existing fencing at the EDHWTP site as an existing barrier restricting the movement of wildlife species. The modified project would include fencing at staging areas, consistent with the original 2007 project, but would not otherwise change the EDHWTP site footprint and would not present new restrictions on the movement of wildlife species. Therefore, this impact would be less than significant, and the modified project would not result in new or substantially more severe significant impacts than those disclosed in the 2007 PEIR.

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

The 2007 PEIR identified a significant impact related to the removal of "most of the mature native oak trees within the EDHWTP." The 2007 PEIR found that this would conflict with the Conservation and Open Space Element of the El Dorado County General Plan Objective 7.4.4, Forest and Oak Woodland Resources, which is to "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." The County has established a mechanism through its Integrated Natural Resources Management Plan (INRMP) conservation fund to mitigate for the loss of oak trees. Although

the modified project is exempt from this requirement as a domestic water supply project (Government Code Section 53091, subdivisions (d) and (e)), the District intends to mitigate for the loss of these trees through payment to the INRMP fund. Approximately 0.55 acre of the 1.0 acres of oak canopy on the EDHWTP site would be removed, 55% of the total canopy. The fee payment would be based on this acreage, combined with fees for 119.5 inches of non-heritage tree trunk diameter, and 230.5 inches of heritage tree trunk diameter. Mitigation Measure 3.3-2 of the 2007 PEIR called for the District to mitigate for loss of oak trees with habitat plantings in accordance with the County's General Plan; the District currently proposes to fulfill the requirements of the County's General Plan through another mechanism also specified in the ordinance, through payment of a fee to the INRMP conservation fund. With mitigation through the County program, the modified project would not result in new or substantially more severe significant impacts than those disclosed in the 2007 PEIR.

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?

As stated in the 2007 PEIR, no habitat conservation plans or natural community conservation plans cover the project site. There would be no impact.

3.5. Cultural Resources

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
5a. Cause a substantial adverse change in the significance of a historical resource pursuant to CCR Section 15064.5?					No New Significant Impact
5b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?					No New Significant Impact
5c. Disturb any human remains, including remains interred outside of dedicated cemeteries?					No New Significant Impact

3.5.1. Environmental Setting

See 2007 PEIR.

3.5.2. Discussion

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

The Final PEIR did not identify cultural resources at the EDHWTP project site. The modified project would include staging on a larger portion of the adjacent Lake Forest Park site and the Marina Village Middle School, but no cultural resources were identified during an updated records search or pedestrian surveys of the site conducted in May 2026. The project modifications do not require excavating new areas that weren't covered in the 2007 PEIR. Therefore, there would be no new or substantially more severe significant impact than were disclosed in the 2007 PEIR.

c) Disturb any human remains, including remains interred outside of dedicated cemeteries?

The Final PEIR did not identify human remains at the project site. Activities at staging areas would not include excavations or disturbance below about 6 inches of the ground surface, and are unlikely to encounter human remains. Therefore, there would be no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

3.6. Energy

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
6a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			Less-than-Significant Impact		
6b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?			Less-than-Significant Impact		

3.6.1. Environmental Setting

Energy was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR and 2009 Addendum No. 1. Therefore, new environmental setting information is presented below.

The EDHWTP consumes electricity and natural gas provided by Pacific Gas and Electric Company.

3.6.2. Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The modified project includes construction activities, including standard procedures and equipment. Demand for fuels during construction would vary throughout the construction period but would be temporary. This temporary, short-term energy consumption would not be considered unnecessary because construction contractors generally strive to complete construction projects in an efficient manner to meet project schedules and minimize cost; and therefore, it is assumed that only the necessary amount of fuel would be consumed to complete construction activities.

The modified project would expand the treatment capacity of the EDHWTP, resulting in an incremental increase in energy use. Operational changes would also include the use of UV disinfection to replace chemical disinfection of potable water. UV disinfection requires more energy compared to chemical disinfection (100-560 kilowatt hours per million gallons, compared to 60-250 kilowatt hours per million gallons for chlorinated disinfection systems [US Dept. of Energy 2021]). However, this increase in energy consumption results in substantial risk- and cost-reduction from reduced usage of chemical disinfection. While the change to UV disinfection would slightly increase energy consumption, this energy use would not be wasteful, inefficient, or unnecessary because it provides the benefit of not needing to handle,

transport, or store chemicals compared to chemical disinfection. Therefore, this impact would be less than significant.

While energy was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR, construction and operation of the modified project would not result in new significant impacts related to wasteful, inefficient, or unnecessary consumption of energy resources.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

The modified project is in an urbanized area and includes marginal increases in energy use in form of fuels during construction activities and electricity usage during treatment operations because of the change from chemical to UV disinfection. While energy was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR, construction and operation of the modified project would not result in new significant impacts related to conflict with or obstruction of a state or local renewable energy or energy efficiency plans.

3.7. Geology and Soils

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
7a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					No New Significant Impact
7a. i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)					No New Significant Impact
7a. ii. Strong seismic ground shaking?					No New Significant Impact
7a. iii. Seismic-related ground failure, including liquefaction?					No New Significant Impact
7a. iv. Landslides?					No New Significant Impact
7b. Result in substantial soil erosion or the loss of topsoil?					No New Significant Impact
7c. 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?					No New Significant Impact
7d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?					No New Significant Impact

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
7e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				No Impact.	
7f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					No New Significant Impact

3.7.1. Environmental Setting

The geology and soils conditions within the EDHWTP project area were evaluated in the 2007 PEIR, including seismic hazards, slope stability, erosion potential, and localized geotechnical conditions associated with construction of treatment facilities and pipelines. The project site is not located within an Alquist-Priolo Earthquake Fault Zone and the potential for liquefaction, lateral spreading, and subsidence was previously determined to be low due to local bedrock conditions.

3.7.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.5, "Geology and Soils," of the 2007 PEIR apply to the modified project:

- **Mitigation Measure #3.5-1:** Project design will be based on site-specific geotechnical design recommendations for each project component. These recommendations and Universal Building Code (UBC) Seismic Zone 3 requirements will be integrated into the final project structural design.
- **Mitigation Measure #3.5-2***:* Additional geotechnical studies shall be conducted by a registered Geotechnical Engineer for all pipeline alignments, when identified. These studies shall characterize local bedrock for access and site excavation. Geotechnical recommendations shall be incorporated into EID's construction specifications for the pipelines.

3.7.3. Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)

ii) ii, iii, iv) Strong seismic ground shaking, Seismic-related ground failure, including liquefaction, or Landsides?

The modified project would occur within the same previously evaluated project area, which is not located within an Alquist-Priolo Earthquake Fault Zone. No changes in geologic conditions or project location would occur that would expose the project to fault hazards not previously analyzed. Similar to previously analyzed conditions, the modified project could be exposed to seismic ground shaking during a seismic event; however, the 2007 PEIR determined that local geologic conditions are not conducive to liquefaction, lateral spreading, or subsidence due to underlying bedrock conditions. Construction activities may include localized controlled blasting to remove subsurface rock in limited areas. Blasting activities would be temporary and conducted in accordance with applicable federal, state, and local safety requirements and site-specific geotechnical recommendations. The modified project includes construction of new treatment facilities, retaining walls, utility infrastructure, and support buildings that would be designed in accordance with applicable California Building Code (CBC) seismic design standards and site-specific geotechnical recommendations. Existing Mitigation Measures 3.5-1 and 3.5-2, adopted in the 2007 PEIR, require incorporation of geotechnical recommendations into final design, and would continue to reduce seismic-related impacts to a less-than-significant level. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

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

Construction activities would involve excavation, grading, trenching, and temporary soil disturbance over multiple phases during the 5-year construction period. Soil disturbance could increase the potential for erosion and sediment transport during precipitation. Similar to prior CEQA analyses, because EID would prepare a Stormwater Pollution Prevention Plan (SWPPP) and comply with applicable Construction General Permit requirements and implementation of BMPs, erosion impacts would be less than significant. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

d) 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?

Similar to conditions analyzed in the 2007 PEIR, localized unstable soil or bedrock conditions could be encountered during construction activities. However, the 2007 PEIR determined that local geological conditions are not prone to liquefaction, lateral spreading, or subsidence due to underlying bedrock. Additionally, the modified project would be designed and constructed according to CBC and UBC requirements and site-specific geotechnical recommendations prepared by a registered engineer. Mitigation Measures 3.5-1 and 3.5-2 apply to the modified project and require incorporation of engineering geotechnical recommendations in the final design and construction specifications and would continue to reduce impacts associated with unstable soils or geologic conditions to a less-than-significant level. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

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

The modified project could encounter localized expansive soils during excavation and construction activities; however, the modified project would be designed and constructed according to CBC and UBC requirements and site-specific geotechnical recommendations prepared by a registered engineer. Mitigation Measures 3.5-1 and 3.5-2 apply to the modified project and require incorporation of engineering geotechnical recommendations in the final design and construction specifications and would continue to reduce impacts associated with expansive soils. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

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

The modified project is within the existing EDHWTP site and would not involve installation or use of septic tanks or alternative wastewater disposal systems. Therefore, no impacts related to soils supporting septic systems would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The modified project requires construction activities including excavation, grading, trenching, retaining wall construction, and localized controlled blasting in previously disturbed areas within and adjacent to the existing EDHWTP site. Based on the Geological Map of California (DOC 2026), the project site is underlain by undivided Mesozoic volcanic and metavolcanic rocks. Paleontological resources are typically encountered in sedimentary rocks, and these volcanic and metavolcanic rocks have extremely low paleontological sensitivity. Therefore, impacts would be less than significant, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

3.8. Greenhouse Gas Emissions

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
8a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			Less-than-Significant Impact		
8b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			Less-than-Significant Impact		

3.8.1. Environmental Setting

Greenhouse gas (GHG) emissions was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR and 2009 Addendum No. 1. Therefore, new environmental setting information is presented below.

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters the atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation (thermal heat) is absorbed by GHGs in the atmosphere; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

GHGs are present in the atmosphere naturally, released by natural sources, and formed from secondary reactions taking place in the atmosphere. GHG emissions associated with human activities are highly likely responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate (IPCC 2023). Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more carbon dioxide (CO_2) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Applicable Plans and Regulations

Statewide Greenhouse Gas Emission Targets and Climate Change Scoping Plan

State law sets forth the following requirements for reducing statewide levels of GHG emissions by 2020, 2030, and 2045. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5°C (United Nations 2015).

Assembly Bill 32, Health and Safety Code Section 38500 et seq.

Assembly Bill (AB) 32 codified the 2020 reduction target of Executive Order (EO) S-03-05 (i.e., reduce statewide GHG emissions to 1990 levels by 2020). AB 32 required CARB to develop a scoping plan that describes California's strategy for achieving the 2020 target and to update it every five years.

Senate Bill 32, Health and Safety Code Section 38566

Senate Bill (SB) 32 codified the 2030 reduction target of EO B-30-15 (i.e., reduce statewide GHG emissions to 40 percent below 1990 levels by 2030). Adopted in tandem with SB 32, AB 197 of 2016 (Chapter 250, Statutes of 2016) required CARB, in implementing SB 32's 2030 GHG-reduction target, to (1) prioritize emissions reductions to consider the "social costs" of GHG emissions and (2) prioritize "direct emission reductions" at large stationary sources and at mobile sources.

Assembly Bill 1279, Health and Safety Code 38562.2

On September 16, 2022, the California legislature enacted AB 1279, which codified stringent emissions targets for the state of achieving carbon neutrality no later than 2045 and negative emissions thereafter, and an 85 percent reduction in 1990 anthropogenic emissions level by 2045. (This superseded the previous GHG emissions-reduction target set forth by EO S-3-05).

2022 Scoping Plan for Achieving Carbon Neutrality

CARB adopted the 2022 Scoping Plan on December 16, 2022, which outlines the state's pathway to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045. The 2022 Scoping Plan identifies the reductions needed by each GHG emission sector (e.g., transportation [including off-road mobile source emissions], industry, electricity generation, agricultural, commercial and residential, pollutants with high global warming potential, and recycling and waste) to achieve these goals. The 2022 Scoping Plan details a multitude of strategies for reducing GHG emissions in each of these sectors.

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code, also known as the CALGreen Code, is a portion of the California Building Code developed by the California Energy Commission (CEC) that consists of both voluntary and requirements related to green building standards for statewide residential and non-

residential construction. The 2025 CALGreen Code was adopted on September 11, 2024, and relative to the 2022 CALGreen Code, the 2025 version includes increased requirements for EV charging infrastructure (i.e., a higher percentage of parking spaces that must be equipped with EV chargers and more stringent requirements for the types of chargers that must be installed) in both residential and non-residential buildings. The 2025 CALGreen Code also includes required analysis of Embodied Carbon in Building Materials, which was not required under the 2022 CALGreen Code. Lastly, the 2025 CALGreen Code includes updates to energy efficiency standards aimed at further reducing energy consumption in buildings and promoting the use of renewable energy sources.

3.8.2. Discussion

a), b) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction activities would generate temporary GHG emissions associated with operation of heavy-duty construction equipment, worker vehicle trips, material hauling, material production, and construction activities. The EDCAQMD, which has jurisdiction over the project site, has not established quantitative GHG thresholds for evaluating GHG emissions in CEQA analyses; however, the neighboring Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted CEQA thresholds for GHG emissions. In the absence of a local threshold, SMAQMD thresholds were used to evaluate the significance of GHG emissions from construction activities. The SMAQMD emissions significance thresholds consider any construction or operational phase of a project emitting over 1,100 metric tons (MT) of carbon dioxide equivalent (CO2e) to be a significant impact (SMAQMD 2015).

Construction-related GHG emissions for the modified project were estimated using CalEEMod Version 2022.1.1.43. **Table 3.8.2-1** below presents estimated annual GHG emissions during Phase 2 of the construction period, which represents the most intensive period of construction based on the extent of earthmoving, facility construction, and material hauling. Annual construction emissions would peak at approximately 821 MT CO_2e per year during 2030. Construction emissions would be temporary and would decrease substantially following completion of construction activities.

Table 3.8.2-1 Unmitigated Greenhouse Gas Emissions from Construction of Phase 2

Year	GHG Emissions (MT CO_2e per year)
SMAQMD Threshold	1,100
Year 1	821
Exceeds Threshold	*No*
Year 2	784
Exceeds Threshold	*No*
Year 3	221
Exceeds Threshold	*No*

Operation of the modified project would continue existing potable water treatment activities within the EDHWTP and would not substantially increase long-term operational emissions, vehicle trips, or energy demand beyond existing conditions. The modified project consists primarily of modernization and

replacement of existing treatment infrastructure within an existing developed facility and would not induce population growth or alter land use patterns. Although construction of the modified project would generate temporary GHG emissions, the modified project would not conflict with applicable statewide GHG reduction strategies, including AB 32, SB 32, and the CARB Climate Change Scoping Plan. In addition, the project would not result in a substantial increase in long-term operational GHG emissions compared to existing EDHWTP operations. Therefore, GHG impacts would be less than significant.

While GHG emissions was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR, construction and operation of the modified project would not result in new significant impacts related to GHG emissions or conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

3.9. Hazards and Hazardous Materials

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
9a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					No New Significant Impact
9b. 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?					No New Significant Impact
9c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					No New Significant Impact
9d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				No impact	
9e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the modified project result in a safety hazard or excessive noise for people residing or working in the project area?					No New Significant Impact
9f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				No impact	
9g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?					No New Significant Impact

3.9.1. Environmental Setting

Hazardous materials and management of chemicals at the EDHWTP were evaluated in the 2007 PEIR, including chlorine storage, delivery, and emergency response procedures. The 2007 PEIR identified mitigation measures related to construction activities occurring near active chemical storage and treatment systems. The 2009 Addendum No. 1 evaluated refinements to the treatment process that replaced chlorine gas disinfection with sodium hypochlorite and sodium hydroxide systems, which reduced risks associated with chlorine gas storage.

3.9.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.6, "Hazards and Hazardous Materials," in the 2007 PEIR apply to the modified project:

- **Mitigation Measure #3.6-1a:** The staging area will be fenced during construction.
- **Mitigation Measure #3.6-1b:** Contractors and subcontractors will be apprised of the presence of chlorine gas and its dangers as required by Risk Management and Process Safet Management Programs.
- **Mitigation Measure #3.6-1c:** Construction activities should temporarily cease in the immediate area of a chemical delivery process. The area between the gate and the travel way will be blocked while any truck is entering and exiting the chlorine building. No chemical deliveries shall be allowed if there is an unplated open trench in the access road.
- **Mitigation Measure #3.6-1d**: Nothing shall be lifted over the chlorine building at any time unless all chlorine cylinders are removed from the building in accordance with regulations and safety procedures.
- **Mitigation Measure #3.6-1e:** If the chlorine scrubber or emergency generator becomes inoperable or take off-line for upgrade at any time during construction of the Project, the chlorine cylinders will be disconnected and secured in accordance with regulations and safety procedures.
- **Mitigation Measure #3.6-1f:** Protect the generator and the underground electrical vault. All underground electrical lines shall be clearly identified.
- **Mitigation Measure #3.6-1g:** Shut down the treatment plant if the scrubber becomes inoperable from construction activities.

3.9.3. Discussion

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

Operation of the EDHWTP would continue with the modified project, including routine storage, transport, and use of water treatment chemicals. Similar to previously evaluated conditions, chemical deliveries would occur in compliance with applicable federal, state, and local hazardous materials

regulations. The modified project would include replacement of existing chemical storage and feed systems and addition of UV disinfection to supplement chemical disinfection processes. As a result, the modified project would not create new hazardous materials impacts or substantially increase the severity of previously identified impacts. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

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

Marina Village Middle School and other nearby sensitive receptors are in proximity to the EDHWTP. The modified project would update treatment systems and UV disinfection technology used during operations, resulting in reduced reliance on hazardous disinfection chemicals. Therefore, the modified project would not result in new hazardous emissions or substantially increase hazardous materials risks to nearby schools or sensitive receptors. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

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

The modified project is within the existing EDHWTP site. The project site is not identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or environment (DTSC 2026, SWCRB 2026). No impact would occur.

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

The project site has not changed since the 2007 PEIR and is not located in an area governed by an airport land use plan. Therefore, impacts would be unchanged from those identified in the 2007 PEIR, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction activities would be temporary and phased to maintain operation of the EDHWTP during construction. The modified project would not permanently obstruct roadway access or emergency response routes and would not impair implementation of adopted emergency response or evacuation plans. Therefore, no impact would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The modified project would occur within the existing developed EDHWTP facility and would not expand development into undeveloped wildland areas. Temporary construction activities could involve ignition sources typical of construction equipment. However, construction contractors would be required to comply with applicable fire prevention and safety requirements. The modified project would not

substantially increase wildfire exposure risks compared to existing conditions. Therefore, impacts would be less than significant, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

3.10. Hydrology and Water Quality

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
10a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?					No New Significant Impact
10b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?					No New Significant Impact
10c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					No New Significant Impact
10c. i. result in substantial erosion or siltation on- or off-site;					No New Significant Impact
10c. ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;					No New Significant Impact
10c. iii. 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; or					No New Significant Impact
10c. iv. impede or redirect flood flows?					No New Significant Impact
10d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?					No New Significant Impact
10e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?					No New Significant Impact

3.10.1. Environmental Setting

EDHWTP receives raw water from Folsom Lake via an existing intake and pump station and treats surface water for potable use within the EID service area. The project site consists primarily of existing developed water treatment facilities, paved access areas, and other previously disturbed lands within the El Dorado Hills Community Region. Stormwater runoff from the project site is conveyed through existing onsite drainage infrastructure and surrounding drainage features associated with the developed EDHWTP facility.

Water quality within the region is regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB) pursuant to the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) (CVRWQCB 2019). Construction activities disturbing one acre or more are subject to the State Water Resources Control Board Construction General Permit, including preparation and implementation of a SWPPP and BMPs to control erosion, sedimentation, and pollutant runoff.

The project site is not located within a California Department of Water Resources (DWR) designated groundwater basin (DWR 2018). Federal Emergency Management Agency (FEMA) mapping identifies the project site as Zone X, an area of minimal flood hazard located outside the 100-year floodplain (FEMA 2026). There are no waterbodies within the project site listed as impaired pursuant to Clean Water Act Section 303(d). The nearest listed impaired waterbody is Folsom Lake, located approximately 1 mile west of the project site, which is identified as impaired for mercury (SWRCB 2024).

3.10.2. Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction activities associated with the modified project could temporarily expose soils and disturbed areas to erosion, sedimentation, or pollutant runoff from equipment operation, material handling, excavation, grading, and concrete work. However, the modified project would be required to prepare a SWPPP and comply with the Construction General Permit including implementation of BMPs to minimize erosion, sedimentation, and pollutant discharge. The project site is not located within a designated groundwater basin and there would be no substantial groundwater extraction or recharge alteration as a result of the modified project. Additionally, there are no 303(d)-listed impaired waterbodies within the project site. The modified project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality, and impacts would be less than significant. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

EDHWTP treats surface water supplied from Folsom Lake and does not rely on groundwater as a primary water source. The project site is not located within a DWR designated groundwater basin and the modified project would occur primarily within and adjacent to the existing developed EDHWTP facility

and associated disturbed areas. Construction activities would not substantially alter groundwater recharge conditions because the project would largely replace or upgrade existing facilities within previously developed areas and would not create a substantial increase in impervious surfaces beyond existing conditions. The modified project would not substantially decrease groundwater supplies, interfere with groundwater recharge, or impede sustainable groundwater management, and impacts would be less than significant. Therefore, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i, ii, iii, iv) Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; 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; or Impede or redirect flood flows?

Construction activities, including excavation, grading, and demolition, could temporarily expose soils to erosion and sediment transport during storm events. However, the modified project would be required to prepare a SWPPP and comply with the Construction General Permit including implementation of BMPs to minimize erosion, sedimentation, and polluted runoff. The modified project would largely replace or upgrade existing treatment and support facilities within the existing EDHWTP site and would not substantially increase impervious surfaces or alter existing drainage patterns. Stormwater runoff would continue to be conveyed through existing onsite drainage infrastructure and surrounding drainage features associated with the EDHWTP facility. Therefore, impacts related to drainage patterns, erosion, runoff, flooding, and stormwater drainage would be less than significant, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

FEMA mapping identifies the project site as Zone X—an area of minimal flood hazard located outside the 100-year floodplain. The project site is inland and not within a tsunami hazard zone (CGS 2026). While the EDHWTP receives raw water from Folsom Lake, the modified project would occur at an existing developed water treatment facility and would not introduce substantial new risks associated with seiche-related inundation. Therefore, impacts related to flood hazard, tsunami, or seiche inundation would be less than significant, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The modified project would be consistent with the Basin Plan and comply with the Construction General Permit through preparation of a SWPPP and implementation of construction BMPs. There is no sustainable groundwater management plan associated with the project area. Additionally, the project site is not located within a DWR designated groundwater basin and the modified project would not require substantial groundwater extraction or interfere with or alter groundwater recharge beyond

existing conditions. Therefore, impacts would be less than significant, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

3.11. Land Use and Planning

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
11a. Physically divide an established community?				No Impact	
11b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?					No New Significant Impact

3.11.1. Environmental Setting

The project site and adjacent areas are zoned as RF-H (Recreational Facility High)

3.11.2. Discussion

a) Physically divide an established the community?

Similar to the previously evaluated project, all proposed improvements would occur within and adjacent to the existing EDHWTP site and would not introduce new linear infrastructure that would divide an established community. Therefore, the modified project would not divide an established community and there would be no impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The modified project would continue operation of an existing public utility facility and would remain consistent with applicable land use designations and policies governing public utility infrastructure in the project area. Policies 7.4.4.2, 7.4.4.4 and 7.4.4.5 of the El Dorado County General Plan call for protection, retention, and replacement of native tree canopy and maintaining continuity of oak corridor. Tree removal associated with the modified project would be within the scope described in the 2007 PEIR, and is discussed in detail in Section 3.4, "Biological Resources," and tree removal would be mitigated through payment of fees in compliance with El Dorado County's General Plan and ordinance.

Therefore, the modified project would not result in conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

3.12. Mineral Resources

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
12a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?				No Impact	
12b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				No Impact	

3.12.1. Environmental Setting

The El Dorado County General Plan identifies Mineral Resource (MR) overlay areas based on California Geological Survey mapping of MRZ-2 lands, which are considered important mineral resource areas, containing known or inferred significant mineral resources. However, MRZ-2 lands within established Community Regions and Rural Centers were generally excluded from the MR overlay designation due to existing developed land uses and incompatibility with mineral extraction activities (El Dorado County 2017). The project site is located within the developed El Dorado Hills Community Region at the existing EDHWTP site and is not identified as a locally important mineral resource recovery site (El Dorado County 2017).

3.12.2. Discussion

a), b) 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? 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?

The modified project would occur within and adjacent to the existing developed EDHWTP facility in the El Dorado Hills Community Region and would not interfere with access to or extraction of mineral resources. The project site is not identified as a MR overlay area or known mineral resource recovery site in the El Dorado County General Plan. Construction activities would occur within previously developed or disturbed areas associated with existing utility infrastructure. Therefore, no impact would occur.

3.13. Noise

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
13a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?					No New Significant Impact
13b. Generation of excessive groundborne vibration or groundborne noise levels?					No New Significant Impact
13c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the modified project expose people residing or working in the project area to excessive noise levels?				No Impact	

3.13.1. Environmental Setting

The project site is located within the existing EDHWTP facility in El Dorado Hills, adjacent to residential neighborhoods, Lake Forest Park, and a middle school. Existing noise sources in the project vicinity include traffic along Francisco Drive and El Dorado Hills Boulevard, operation of the existing water treatment plant and associated pumping facilities and typical residential noise sources.

Policy 6.5.1.11 of the El Dorado County General Plan, Noise Element, states that construction noise standards do not apply to construction activities occurring between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 5:00 p.m. on weekends and federally recognized holidays (El Dorado County 2024). The policy also exempts public projects intended to alleviate traffic congestion and safety hazards from applicable construction noise standards.

3.13.2. Previously Adopted Mitigation Measures

The following mitigation measures from Section 3.7, “Noise,” of the 2007 PEIR apply to the modified project:

- **Mitigation Measure #3.7-1a:** Where feasible, EID shall require the construction contractor to implement noise-reducing construction practices such that noise at the nearest residence does not exceed El Dorado County noise standards of 55 dBA Leq (75 dBA L_{max}) from 7:00 a.m. to 7:00 p.m. on weekdays, and 8:00 a.m. to 5:00 p.m. on weekends. Measures to reduce construction noise include, but are not limited to the following:
    - Requiring all equipment to have sound-control devices no less effective than those provided on the original equipment (no equipment shall have an unmuffled exhaust)
    - Limiting use of multiple pieces of heavy equipment between the hours of 7:00 p.m. and 7:00 a.m.
    - Limit use of back-up alarms by providing flaggers or non-audible warning devices consistent with applicable safety regulations between the hours of 7:00 p.m. and 7:00 a.m.
    - Changing the location of stationary construction equipment to maximize the distance and shielding between equipment and residences where practical
    - Shutting off idling equipment when practical
    - Rescheduling operational activity to less sensitive hours of the day
    - Identifying and using truck routes with the least amount of exposure to noise sensitive land uses
- **Mitigation Measure #3.7-1b:** EID shall disseminate essential information concerning construction activities and implement a complaint/response tracking program. Before construction begins, EID shall provide notice of the construction schedule. This notification shall include a description of the activity that will occur, measures that the contractor will be taking to control noise, and specific information as to when blasting will occur. EID will designate a noise disturbance coordinator who will be responsible for responding to complaints regarding construction noise. The coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem when feasible. A contact telephone number for the noise disturbance coordinator will be conspicuously posted on construction site fences and will be included in the written notification of the construction schedule sent to nearby residents.
- **Mitigation Measure #3.7-2:** EID will provide noise attenuation to prevent operational noise exceeding 45 dBA L_{eq}. EID shall design Phase 1 and 2 improvements at all permanent facilities such that noise from new equipment does not exceed 45 dBA L_{eq}1h at the nearest property line. Measures to reduce noise include, but are not limited to:
    - Using sound attenuating enclosures around noise generating equipment
    - Using exhaust mufflers on the emergency generators
    - Maximizing the distance between noise-generating equipment and the property line
- **Mitigation Measure #3.7-3:** EID shall require the construction contractor to prepare and implement a blasting plan. Primary components shall consist of the following applicable items:
    - Identification of blast officer
    - Scaled drawings of blast locations, and neighboring buildings, streets, or other locations that could be inhabited

- Blasting notification procedures and lead times, as well as public notification of potentially affected vibration receptors describing the expected extent and duration of the blasting and a list of those notified
- Description of means for transportation and on-site storage and security of explosives in accordance with local, state and federal regulations
- Minimum acceptable weather conditions for blasting and safety provisions for potential stray current (if electric detonation)
- Traffic control standards and traffic safety measures (if applicable)
- Requirement for provision and use of personal protective equipment
- Minimum standoff distances and description of blast impact zones, and procedures for clearing and controlling access to blast danger.
- Procedures for handling, setting, wiring, and firing explosives, including procedures for handling misfires per federal code
- Type and quantity of explosives and description of detonation devices. Sequence and schedule of blasting rounds, including general method of excavation, lift heights, etc.
- Methods of matting or covering of blast area to prevent fly-rock and excessive air blast pressure
- Description of a blast vibration and air blast monitoring program
- Dust control measures in compliance with applicable air pollution control regulations (to interface with a general construction dust control plan)
- Emergency action plan to provide emergency telephone numbers and directions to medical facilities, and procedures for action in the event of injury
- Material Safety Data Sheets for each explosive or other hazardous materials to be used
- Evidence of licensing, experience, and qualifications of blasters
- Description of insurance for the blasting work

The blasting plan shall also include the following applicable noise-reducing measures:

- Blasting activities shall be limited to daylight hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 9:00 a.m. and 5:00 p.m. on Saturday.
- The blasting plan shall establish vibration limits to protect structures from blasting activities and identify specific monitoring points. At a minimum, a pre-blast survey shall be conducted of any potentially affected structures and underground utilities within 250 feet of a blast area, as well as the nearest commercial or residential structure, prior to blasting.
- The blasting plan shall include visual inspection of the structures that could be affected, documentation of structures by means of photographs, video, and a level survey of the ground floor of structures or the crown of major and critical utility lines, and these shall be submitted to EID. This documentation shall be reviewed with the individual owners prior to

any blasting operations. EID and affected property owners shall be notified at least 48 hours prior to the visual inspections.

- Vibration and settlement threshold criteria (for example peak particle velocity of 0.5 inches per second) shall be submitted by the blaster to EID for review and approval during the design process. If the settlement or vibration criteria are exceeded at anytime or if damage is observed at any of the structures or utilities, then blasting shall immediately cease and EID shall be immediately notified. The stability of segmental retaining walls, existing slopes, creek canals, etc., shall be monitored and any evidence of instability due to blasting operations shall result in immediate termination of blasting. The blaster shall modify the blasting procedures or use alternative means of excavating to reduce the vibrations to below the threshold values, and prevent further settlement, slope instability, and further damage.
- Air blast overpressure limits shall be set and monitoring shall be conducted at the property line closest to the blast and at other above-ground structures identified in the blasting plan for vibration monitoring. Air blast overpressure limits shall be in accordance with applicable laws and shall be established to prevent damage to adjacent properties, new construction, and to prevent injuries to persons on-site and off-site.
- Prior to full-scale production blasting, the blaster shall conduct a series of test blasts at the sites where blasting is to occur. The tests shall start with reduced charge weights and shall increase incrementally to that of a full-scale production round. Monitoring shall be conducted as described in the blasting plan.
- Post-construction monitoring of structures shall be performed to identify (and repair if necessary) all damage, if any, from blasting vibrations. Any damage shall be documented by photograph, video, etc. This documentation shall be reviewed with the individual property owners.
- Reports of the results of the blast monitoring shall be provided to EID, the local fire department, and owners of any buried utilities on or adjacent to the site within 24 hours following blasting. Reports documenting damage, excessive vibrations, etc. shall be provided to EID and affected property owners.

3.13.3. Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?

Construction activities would occur in phases over 5 years using equipment similar to that evaluated in the 2007 PEIR, including excavators, loaders, cranes, generators, haul trucks, compactors, and other standard heavy equipment. Nearby noise-sensitive receptors include adjacent residential neighborhoods, Lake Forest Park, and a middle school. As identified in the 2007 PEIR, construction equipment noise levels could exceed applicable El Dorado County noise standards at nearby noise-sensitive receptors during certain construction activities. The modified project would involve similar construction methods, equipment types, haul activities, blasting activities, and proximity to nearby receptors as previously analyzed in the 2007 PEIR. Operational noise associated with upgraded pumps,

treatment equipment, and backup power generation would also be similar in nature or less than operational noise sources previously evaluated for EDHWTP in the 2007 PEIR, because more operations would take place within buildings compared to the existing EDHWTP operations.

The modified project would implement previously adopted mitigation measures from the 2007 PEIR to minimize noise impacts. Mitigation Measure #3.7-1a requires implementation of noise-reducing construction practices, including use of properly muffled equipment, limiting nighttime operation of heavy equipment, minimizing idling, maximizing distance and shielding between equipment and residences where feasible, limiting backup alarm use, and utilizing haul routes that minimize exposure to noise-sensitive land uses. Mitigation Measure #3.7-1b requires advance public notification of construction activities and blasting, implementation of a complaint response program, and designation of a noise disturbance coordinator. Mitigation Measure #3.7-2 requires incorporation of sound attenuation measures for permanent operational equipment and backup generators to ensure operational noise does not exceed 45 dBA Leq1h at the nearest property line. Mitigation Measure #3.7-3 requires preparation and implementation of a blasting plan incorporating vibration monitoring, notification procedures, restricted blasting hours, and other noise and vibration reduction measures. Implementation of these mitigation measures would reduce construction and operational noise impacts. However, as concluded in the 2007 PEIR, temporary construction noise associated with heavy equipment operation and blasting could continue to exceed applicable noise standards at nearby sensitive receptors during certain construction activities. Therefore, temporary construction noise impacts would remain potentially significant, but would not be more severe than those previously identified in the 2007 PEIR. Operational noise impacts would be reduced to less than significant through implementation of Mitigation Measure #3.7-2.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Construction activities associated with the modified project would involve use of heavy construction equipment, demolition activities, excavation, haul truck traffic, and controlled blasting that could generate temporary groundborne vibration and groundborne noise in the vicinity of the project site. Nearby vibration-sensitive receptors include adjacent residential neighborhoods, school facilities, and other developed land uses surrounding the EDHWTP. As described in the 2007 PEIR, blasting activities associated with excavation of subsurface rock could result in vibration and elevated noise levels at nearby receptors. The modified project would involve construction methods and equipment similar to those evaluated in the 2007 PEIR and could result in temporary vibration impacts during certain construction activities. The modified project would implement previously adopted Mitigation Measure #3.7-3 from the 2007 PEIR, which requires preparation and implementation of a blasting plan incorporating vibration monitoring, pre-blast surveys, vibration threshold criteria, controlled blasting procedures, restricted blasting hours, notification procedures, and post-construction inspections. Additional construction noise reduction practices identified in Mitigation Measure #3.7-1a would also reduce vibration-related disturbance to nearby receptors. Implementation of these mitigation measures would reduce vibration and groundborne noise impacts. However, as concluded in the 2007 PEIR, temporary vibration and groundborne noise associated with blasting and heavy equipment operation could continue to affect nearby receptors during certain construction activities. Therefore, impacts related to excessive groundborne vibration and groundborne noise would remain potentially significant but would not be more severe than those previously identified in the 2007 PEIR.

c) For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the modified project expose people residing or working in the project area to excessive noise levels?

The project site is not located within an airport land use plan area or within 2 miles of a public airport, public use airport, or private airstrip. Therefore, no impact would occur.

3.14. Population and Housing

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
14a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?					No New Significant Impact
14b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				No Impact	

3.14.1. Environmental Setting

The EDHWTP provides potable water service within the existing EID service area in El Dorado County. Since certification of the 2007 PEIR and preparation of the 2009 Addendum No. 1, the El Dorado Hills area has continued to experience regional growth consistent with local planning projections. The modified project would occur entirely within the existing EDHWTP facility and would continue to support water treatment operations within the existing EID service area.

3.14.2. Discussion

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The modified project consists of upgrades and modernization of existing treatment infrastructure within the existing EDHWTP facility and would not expand the EID service area or increase treatment capacity beyond levels previously evaluated in the 2007 PEIR. The 2007 PEIR previously evaluated expansion of the EDHWTP to support projected growth within the service area through phased increases in treatment capacity up to 31.5 mgd. The modified project remains within the scope of those previously evaluated improvements and growth projections. Therefore, the modified project would not induce substantial population growth, either directly or indirectly, and impacts would remain less than significant, there are no new or substantially more severe significant impacts than were disclosed in the 2007 PEIR.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The modified project would occur entirely within the existing EDHWTP facility boundaries and would not remove housing or displace residents. Therefore, the modified project would not require construction of housing elsewhere, and no impact would occur.

3.15. Public Services

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
15 -a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 public services:					
Fire protection?					No New Significant Impact
Police protection?					No New Significant Impact
Schools?					No New Significant Impact
Parks?					No New Significant Impact
Other public facilities?					No New Significant Impact

3.15.1. Environmental Setting

As described in the 2007 PEIR, the project would construct new facilities at the EDHWTP site and includes staging on the adjacent Lake Forest Park and Marina Village Middle School sites.

3.15.2. Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 public services:

The modified project would not require provision of new or physically altered government facilities associated with fire or police protection. Effects on Lake Forest Park are discussed in Section 3.16, "Recreation," and throughout this IS. Effects on the operation of Marina Village Middle School are similarly discussed throughout this IS. Because the modified project includes similar construction activities in similar locations to those described in the 2007 PEIR, there would be no new or substantially more severe significant impacts related to public services than were disclosed in the 2007 PEIR.

3.16. Recreation

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
16a. 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 New Significant Impact
16b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?					No New Significant Impact

3.16.1. Environmental Setting

The project site is adjacent to Lake Forest Park, an existing public recreation facility managed by the CSD. Amenities include children's playground, drinking fountain, group picnic area, sand volleyball, bocce ball courts, two tennis courts, a nature trail, outdoor classroom, and restrooms, and is open Monday through Friday 8am to 5pm (CSD 2026). These amenities had not yet been constructed at the time the 2007 PEIR was prepared.

3.16.2. Discussion

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

Temporary use of portions of Lake Forest Park for staging, laydown, worker parking, and construction access could result in intermittent disruption of recreational use during the 5-year construction period. However, the project would not permanently remove recreational facilities or close developed park amenities, and developed amenities at Lake Forest Park would remain open during construction. Temporary construction activities would primarily occur in peripheral staging and parking areas, which would be restored after construction is complete, and these activities would not substantially increase recreational use or accelerate physical deterioration of park facilities. The modified project does not include construction or expansion of recreational facilities. Additionally, the modified project involves upgrades to an existing water treatment facility and would not generate population growth or increased recreational demand. Therefore, impacts would be less than significant, and there are no new or more severe significant impacts than were disclosed in the 2007 PEIR.

3.17. Transportation

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
17a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?					No New Significant Impact
17b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?					No New Significant Impact
17c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?					No New Significant Impact
17d. Result in inadequate emergency access?					No New Significant Impact

3.17.1. Environmental Setting

The modified project would continue to be served by the same local roadway network evaluated in the 2007 PEIR, including Francisco Drive, El Dorado Hills Boulevard, and local access roads near the EDHWTP. Construction haul routes would primarily use Francisco Drive and El Dorado Hills Boulevard to access U.S. Highway 50, with disposal haul trips assumed to travel to Kiefer Landfill approximately 22 miles from the project site. The El Dorado County General Plan Transportation Element identifies U.S Highway 50 as the primary regional transportation corridor serving western El Dorado County, including El Dorado Hills (El Dorado County 2019). Francisco Drive and El Dorado Hills Boulevard provide local access to the EDHWTP and surrounding residential, recreational, and school uses. The General Plan also emphasizes the importance of maintaining facilities for motorized vehicles, bicycles, public transit, and pedestrian uses (El Dorado County 2019).

The following mitigation measures from Section 3.8, "Traffic and transportation," of the 2007 PEIR apply to the modified project:

- **Mitigation Measure 3.8-1a**: Project Prior to the onset of construction of the project, a Traffic Control Plan shall be prepared for all project-affected roadways and intersections. The Traffic Control Plan shall designate haul routes and comply with requirements in the encroachment

permit issued by El Dorado County. The Traffic Control Plan to be prepared by the construction contractor(s) should include the following measures

- Maintaining the maximum amount of travel lane capacity during nonconstruction periods.
- Maintaining alternate one-way traffic flow past the lay down area and site access when feasible.
- If larger construction equipment or articulate trucks will have difficulty maneuvering the turns at Francisco Drive to Guadalupe Drive to Planeta Way, providing a flagman for traffic control at the intersection on an as-needed basis.

- **Mitigation Measure 3.8-1b**: EID shall arrange for a telephone hotline to address public questions and complaints during project construction.
- **Mitigation Measure 3.8-2a**: As part of the Traffic Control Plan for roadway segments and intersections, designated haul routes shall be specified for the project after consultation with relevant agencies (e.g., Caltrans and El Dorado County Department of Transportation).
- **Mitigation Measure 3.8-2b**: Heavy trucks and other construction transport vehicles shall avoid the busiest commute hours (7 to 8:00 a.m. and 5 to 6:00 p.m. on weekdays).
- **Mitigation Measure 3.8-3**: Construction contracts shall require that contractor(s) park in the staging area or designate an offsite parking area.

3.17.2. Discussion

a and b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The modified project would occur within and adjacent to the existing EDHWTP and would not introduce new permanent roadways or alter the existing transportation system. Construction activities would temporarily increase vehicle trips associated with construction workers, haul trucks, equipment and material deliveries, and staging activities. However, these impacts would be temporary and similar to those evaluated in the 2007 PEIR. Temporary staging and worker parking areas in the adjacent school and park properties would not permanently affect the circulation network or public access to these facilities. Additionally, the modified project would not induce population growth, alter land use patterns, or generate substantial operational traffic for sustained periods of time. Therefore, the modified project would not result in substantial increases in vehicle miles traveled, and there are no new or more severe significant impacts than were disclosed in the 2007 PEIR. Furthermore, implementation of previously adopted mitigation measures, including preparation of a traffic control plan and operation of a telephone hotline to address public questions, would further reduce impacts.

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

Temporary construction traffic, including haul trucks and heavy equipment transport, could intermittently affect local traffic patterns near the project site and staging areas. However, these activities would be temporary and managed through implementation of traffic control mitigation measures 3.8-1a, 3.8-1b, 3.8-2a, 3.8-2b, and 3.8-3, which require implementation of a traffic control

plan, avoiding heavy truck traffic during commuting hours, and requiring contractors to use designated staging area or offsite parking areas. The modified project would not introduce incompatible roadway uses or substantially increase traffic hazards for motorists, bicyclists, or pedestrians. Therefore, impacts would be less than significant with mitigation incorporated, and there are no new or more severe significant impacts than were disclosed in the 2007 PEIR.

d) Result in inadequate emergency access?

Emergency access would be managed through implementation of a traffic control plan, encroachment permit requirements, and coordination with applicable emergency service providers, consistent with Mitigation Measure 3.8-1a, adopted in the 2007 PEIR. Therefore, the modified project would not result in inadequate emergency access. Impacts would be less than significant with mitigation incorporated, and there are no new or more severe significant impacts than were disclosed in the 2007 PEIR.

3.18. Utilities and Service Systems

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
19a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?					No New Significant Impact
19b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				No Impact	
19c. 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	
19d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?					No New Significant Impact
19e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?					No New Significant Impact

3.18.1. Environmental Setting

The EDHWTP is a public utility facility for water supply treatment. Refer to the 2007 PEIR for a description of other utilities in the project site and vicinity.

3.18.2. Discussion

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications

facilities, the construction or relocation of which could cause significant environmental effects?

The 2007 PEIR, 2009 Addendum No. 1, and the modified project analyzed in this IS all address construction of expanded water treatment facilities at the EDHWTP site. The modified project does not include any changes that would affect other utilities. The impacts of this expansion are identified throughout the IS. There are no new or more severe significant impacts than were disclosed in the 2007 PEIR.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

No additional water supplies are required to implement the modified project. No impact would occur.

c) 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?

The modified project would not generate additional wastewater. No impact would occur.

d and e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, State, and local management and reduction statues and regulations related to solid waste?

Construction of the modified project would create solid waste and demolition debris that would require disposal in compliance with applicable regulations, similar to the waste generation described in the 2007 PEIR and 2009 Addendum No. 1. Operating the modified project would not change solid waste disposal needs compared to the existing condition. Therefore, this impact would be less than significant, and there are no new or more severe significant impacts than were disclosed in the 2007 PEIR.

3.19. Wildfire

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
20a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			Less-than-Significant Impact		
20b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			Less-than-Significant Impact		
20c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			Less-than-Significant Impact		
20d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			Less-than-Significant Impact		

3.19.1. Environmental Setting

Wildfire was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR and 2009 Addendum No. 1. Therefore, new environmental setting information is presented below.

The project site and adjacent staging areas are located within a Moderate Fire Hazard Severity Zone (FHSZ) in the State Responsibility Area (SRA) (CAL FIRE 2026). EDHWTP is an existing developed utility facility located within the El Dorado Hills Community Region adjacent to residential development, roadway infrastructure, and recreational land uses near Folsom Lake. Access to the project site is primarily provided by Francisco Drive and surrounding local roadways. Emergency response services in the area are provided by CAL FIRE and the El Dorado Hills Fire Department (El Dorado County 2026).

3.19.2. Discussion

a, b, c, and d) Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site and adjacent staging areas are located within a Moderate FHSZ in the SRA; however, the modified project consists primarily of upgrades and modernization of existing water treatment infrastructure and would not introduce new residential development or substantially expand development into undeveloped wildland areas. Construction activities could temporarily increase ignition risk through operation of vehicles, equipment, welding, or other construction activities. However, construction activities would be required to comply with applicable fire safety regulations, permit requirements, and standard construction BMPs intended to minimize wildfire ignition risk. The modified project would not substantially alter existing site topography, emergency access routes, or evacuation patterns. Access to the project site would continue to occur primarily via existing roadways, including Francisco Drive and El Dorado Hills Boulevard. Temporary construction-related traffic or lane restrictions would be managed through traffic control measures, as listed in Section 3.17 "Transportation") and would not substantially impair emergency response or evacuation access. Utility and infrastructure improvements would primarily occur within the existing developed EDHWTP site and previously disturbed areas. Additionally, the project would not substantially alter drainage patterns or slope conditions in a manner that would expose people or structures to significant post-fire flooding, erosion, or landslide hazards. Therefore, impacts related to wildfire would be less than significant.

While wildfire was added to the Appendix G of the State CEQA Guidelines after preparation of the 2007 PEIR, construction and operation of the modified project would not result in new significant impacts related to wildfire.

3.20. Mandatory Findings of Significance

Would the modified project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have No New Significant Impact?
21a. Have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?					No New Significant Impact
21b. 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)?					No New Significant Impact
21c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					No New Significant Impact

3.20.1. Discussion

a) Would the modified project have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

As described throughout this IS, the modified project would not include new or more severe significant impacts than were disclosed in the 2007 PEIR.

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

As described throughout this IS, the modified project would not include new or more severe significant impacts than were disclosed in the 2007 PEIR. The 2007 PEIR addressed cumulative impacts in detail.

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

As described throughout this IS, the modified project would not include new or more severe significant impacts than were disclosed in the 2007 PEIR and 2009 Addendum No. 1.

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Appendix A. Air Quality Model Results

EDHWTP Improvements Project Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	EDHWTP Improvements Project
Construction Start Date	2/7/2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30000
Precipitation (days)	10.4000
Location	38.72339963304651, -121.08716992848571
County	El Dorado-Mountain County
City	Unincorporated
Air District	El Dorado County AQMD
Air Basin	Mountain Counties
TAZ	405
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.43

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.000000	User Defined Unit	8.00000	0.00000	0.00000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87084	1.59032	14.9608	20.6997	0.06771	0.25031	88.6178	88.8206	0.23081	9.09039	9.28012	—	7,438.89	7,438.89	0.25936	0.54650	5.77579	7,491.04
Mit.	1.87084	1.59032	14.9608	20.6997	0.06771	0.25031	88.6178	88.8206	0.23081	9.09039	9.28012	—	7,438.89	7,438.89	0.25936	0.54650	5.77579	7,491.04
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.94626	1.65515	15.2988	19.9618	0.07968	0.31240	88.6178	88.8206	0.29052	9.09039	9.33441	—	8,262.39	8,262.39	0.21250	0.58044	0.14983	8,440.81
Mit.	1.94626	1.65515	15.2988	19.9618	0.07968	0.31240	88.6178	88.8206	0.29052	9.09039	9.33441	—	8,262.39	8,262.39	0.21250	0.58044	0.14983	8,440.81
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.32130	1.11525	7.65371	12.8320	0.04350	0.18709	46.2690	46.4144	0.17290	4.73607	4.87086	—	4,902.14	4,902.14	0.15880	0.21026	1.11382	4,961.56
Mit.	1.32130	1.11525	7.65371	12.8320	0.04350	0.18709	46.2690	46.4144	0.17290	4.73607	4.87086	—	4,902.14	4,902.14	0.15880	0.21026	1.11382	4,961.56

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24114	0.20353	1.39680	2.34185	0.00794	0.03414	8.44409	8.47063	0.03155	0.86433	0.88893	—	811.606	811.606	0.02629	0.03481	0.18441	821.442
Mit.	0.24114	0.20353	1.39680	2.34185	0.00794	0.03414	8.44409	8.47063	0.03155	0.86433	0.88893	—	811.606	811.606	0.02629	0.03481	0.18441	821.442
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.87084	1.59032	11.0605	18.3331	0.06771	0.25031	67.3910	67.6380	0.23081	6.91373	7.14342	—	7,438.89	7,438.89	0.25936	0.45396	4.94067	7,491.04
2031	1.53247	1.28577	14.9608	20.6997	0.06670	0.20279	88.6178	88.8206	0.18972	9.09039	9.28012	—	6,699.78	6,699.78	0.17657	0.54650	5.77579	6,871.81
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.76720	1.48981	11.3140	16.2276	0.06771	0.24700	67.3910	67.6380	0.22968	6.91373	7.14342	—	7,173.55	7,173.55	0.18842	0.47496	0.12782	7,319.92
2031	1.70445	1.43603	15.2988	19.9618	0.06670	0.21808	88.6178	88.8206	0.20079	9.09039	9.28012	—	6,619.81	6,619.81	0.17922	0.57349	0.14983	6,794.34
2032	1.94626	1.65515	10.6702	14.5078	0.07968	0.31240	88.1681	88.4805	0.29052	9.04388	9.33441	—	8,262.39	8,262.39	0.21250	0.58044	0.13238	8,440.81
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.32130	1.11525	7.65371	12.8320	0.04350	0.18709	40.2909	40.4780	0.17290	4.12264	4.29554	—	4,902.14	4,902.14	0.15880	0.18253	1.04988	4,961.56
2031	1.15591	0.97341	7.22122	12.0334	0.04236	0.14544	46.2690	46.4144	0.13479	4.73607	4.87086	—	4,670.56	4,670.56	0.14223	0.21026	1.11382	4,737.88
2032	0.33864	0.28834	1.68848	2.52510	0.01236	0.05380	12.7097	12.7635	0.04991	1.30352	1.35343	—	1,311.64	1,311.64	0.03627	0.07464	0.31203	1,335.10
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2030	0.24114	0.20353	1.39680	2.34185	0.00794	0.03414	7.35309	7.38723	0.03155	0.75238	0.78394	—	811.606	811.606	0.02629	0.03022	0.17382	821.442
2031	0.21095	0.17765	1.31787	2.19610	0.00773	0.02654	8.44409	8.47063	0.02460	0.86433	0.88893	—	773.264	773.264	0.02355	0.03481	0.18441	784.410
2032	0.06180	0.05262	0.30815	0.46083	0.00226	0.00982	2.31953	2.32935	0.00911	0.23789	0.24700	—	217.157	217.157	0.00601	0.01236	0.05166	221.041

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.54546	1.29380	9.91930	14.6080	0.05582	0.24379	0.00341	0.24451	0.22428	0.00052	0.22439	—	6,040.52	6,040.52	0.24503	0.04901	0.00000	6,061.25
2031	1.14479	0.95326	10.3760	16.7100	0.03871	0.16334	0.00440	0.16774	0.15027	0.00067	0.15094	—	4,123.61	4,123.61	0.16727	0.03345	0.00000	4,137.76
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	0.00341	0.23095	0.21228	0.00052	0.21231	—	3,918.66	3,918.66	0.15896	0.03179	0.00000	3,932.11
2031	1.49065	1.24761	10.3760	16.7100	0.03871	0.21620	0.00440	0.21641	0.19890	0.00067	0.19893	—	4,123.61	4,123.61	0.16727	0.03345	0.00000	4,137.76
2032	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	0.00435	0.27775	0.25153	0.00066	0.25219	—	4,338.03	4,338.03	0.17597	0.03519	0.00000	4,352.92
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.11288	0.93362	6.28943	10.8311	0.03348	0.17731	0.00109	0.17840	0.16313	0.00017	0.16329	—	3,553.40	3,553.40	0.14414	0.02883	0.00000	3,565.59
2031	0.92961	0.77785	5.62956	9.91289	0.02997	0.13305	0.00138	0.13443	0.12241	0.00021	0.12262	—	3,082.83	3,082.83	0.12505	0.02501	0.00000	3,093.41
2032	0.28809	0.24184	1.10358	2.03558	0.00724	0.04869	0.00057	0.04926	0.04479	0.00009	0.04488	—	772.527	772.527	0.03134	0.00627	0.00000	775.178
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.20310	0.17039	1.14782	1.97667	0.00611	0.03236	0.00020	0.03256	0.02977	0.00003	0.02980	—	588.305	588.305	0.02386	0.00477	0.00000	590.324
2031	0.16965	0.14196	1.02740	1.80910	0.00547	0.02428	0.00025	0.02453	0.02234	0.00004	0.02238	—	510.397	510.397	0.02070	0.00414	0.00000	512.149
2032	0.05258	0.04414	0.20140	0.37149	0.00132	0.00889	0.00010	0.00899	0.00817	0.00002	0.00819	—	127.901	127.901	0.00519	0.00104	0.00000	128.340

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.33111	0.29652	3.79163	3.72512	0.03129	0.03053	67.3876	67.4181	0.03053	6.91322	6.94374	—	3,315.98	3,315.98	0.02549	0.42217	4.94067	3,447.36
2031	0.38768	0.33251	4.58484	3.98972	0.03945	0.03945	88.6134	88.6529	0.03945	9.08973	9.12918	—	4,176.32	4,176.32	0.03327	0.52603	5.77579	4,339.68
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.28260	0.23931	4.04513	2.60200	0.03129	0.03053	67.3876	67.4181	0.03053	6.91322	6.94374	—	3,254.89	3,254.89	0.02946	0.44317	0.12782	3,387.82
2031	0.36355	0.30662	4.92279	3.25187	0.03945	0.03945	88.6134	88.6529	0.03945	9.08973	9.12918	—	4,096.35	4,096.35	0.03679	0.55301	0.14983	4,262.22
2032	0.32855	0.29712	4.47315	3.07728	0.03899	0.03899	88.1638	88.2028	0.03899	9.04322	9.08222	—	3,924.36	3,924.36	0.03653	0.54525	0.13238	4,087.89
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.20842	0.18163	1.36428	2.00096	0.01002	0.00977	40.2898	40.2996	0.00977	4.12248	4.13225	—	1,348.75	1,348.75	0.01466	0.15370	1.04988	1,395.96
2031	0.22630	0.19556	1.59166	2.12054	0.01239	0.01239	46.2676	46.2800	0.01239	4.73586	4.74824	—	1,587.73	1,587.73	0.01718	0.18525	1.11382	1,644.47
2032	0.05055	0.04650	0.58489	0.48952	0.00512	0.00512	12.7092	12.7143	0.00512	1.30344	1.30855	—	539.113	539.113	0.00494	0.06837	0.31203	559.924
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.03804	0.03315	0.24898	0.36517	0.00183	0.00178	7.35289	7.35467	0.00178	0.75235	0.75414	—	223.300	223.300	0.00243	0.02545	0.17382	231.118
2031	0.04130	0.03569	0.29048	0.38700	0.00226	0.00226	8.44383	8.44609	0.00226	0.86429	0.86655	—	262.866	262.866	0.00284	0.03067	0.18441	272.262
2032	0.00923	0.00849	0.10674	0.08934	0.00093	0.00093	2.31942	2.32036	0.00093	0.23788	0.23881	—	89.2563	89.2563	0.00082	0.01132	0.05166	92.7018

2.2.4. Total Construction Emissions by Year, Mitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.87084	1.59032	11.0605	18.3331	0.06771	0.25031	67.3910	67.6380	0.23081	6.91373	7.14342	—	7,438.89	7,438.89	0.25936	0.45396	4.94067	7,491.04
2031	1.53247	1.28577	14.9608	20.6997	0.06670	0.20279	88.6178	88.8206	0.18972	9.09039	9.28012	—	6,699.78	6,699.78	0.17657	0.54650	5.77579	6,871.81

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.76720	1.48981	11.3140	16.2276	0.06771	0.24700	67.3910	67.6380	0.22968	6.91373	7.14342	—	7,173.55	7,173.55	0.18842	0.47496	0.12782	7,319.92
2031	1.70445	1.43603	15.2988	19.9618	0.06670	0.21808	88.6178	88.8206	0.20079	9.09039	9.28012	—	6,619.81	6,619.81	0.17922	0.57349	0.14983	6,794.34
2032	1.94626	1.65515	10.6702	14.5078	0.07968	0.31240	88.1681	88.4805	0.29052	9.04388	9.33441	—	8,262.39	8,262.39	0.21250	0.58044	0.13238	8,440.81
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.32130	1.11525	7.65371	12.8320	0.04350	0.18709	40.2909	40.4780	0.17290	4.12264	4.29554	—	4,902.14	4,902.14	0.15880	0.18253	1.04988	4,961.56
2031	1.15591	0.97341	7.22122	12.0334	0.04236	0.14544	46.2690	46.4144	0.13479	4.73607	4.87086	—	4,670.56	4,670.56	0.14223	0.21026	1.11382	4,737.88
2032	0.33864	0.28834	1.68848	2.52510	0.01236	0.05380	12.7097	12.7635	0.04991	1.30352	1.35343	—	1,311.64	1,311.64	0.03627	0.07464	0.31203	1,335.10
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.24114	0.20353	1.39680	2.34185	0.00794	0.03414	7.35309	7.38723	0.03155	0.75238	0.78394	—	811.606	811.606	0.02629	0.03022	0.17382	821.442
2031	0.21095	0.17765	1.31787	2.19610	0.00773	0.02654	8.44409	8.47063	0.02460	0.86433	0.88893	—	773.264	773.264	0.02355	0.03481	0.18441	784.410
2032	0.06180	0.05262	0.30815	0.46083	0.00226	0.00982	2.31953	2.32935	0.00911	0.23789	0.24700	—	217.157	217.157	0.00601	0.01236	0.05166	221.041

2.2.5. Onsite Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.54546	1.29380	9.91930	14.6080	0.05582	0.24379	0.00341	0.24451	0.22428	0.00052	0.22439	—	6,040.52	6,040.52	0.24503	0.04901	0.00000	6,061.25
2031	1.14479	0.95326	10.3760	16.7100	0.03871	0.16334	0.00440	0.16774	0.15027	0.00067	0.15094	—	4,123.61	4,123.61	0.16727	0.03345	0.00000	4,137.76
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	0.00341	0.23095	0.21228	0.00052	0.21231	—	3,918.66	3,918.66	0.15896	0.03179	0.00000	3,932.11
2031	1.49065	1.24761	10.3760	16.7100	0.03871	0.21620	0.00440	0.21641	0.19890	0.00067	0.19893	—	4,123.61	4,123.61	0.16727	0.03345	0.00000	4,137.76
2032	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	0.00435	0.27775	0.25153	0.00066	0.25219	—	4,338.03	4,338.03	0.17597	0.03519	0.00000	4,352.92

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	1.11288	0.93362	6.28943	10.8311	0.03348	0.17731	0.00109	0.17840	0.16313	0.00017	0.16329	—	3,553.40	3,553.40	0.14414	0.02883	0.00000	3,565.59
2031	0.92961	0.77785	5.62956	9.91289	0.02997	0.13305	0.00138	0.13443	0.12241	0.00021	0.12262	—	3,082.83	3,082.83	0.12505	0.02501	0.00000	3,093.41
2032	0.28809	0.24184	1.10358	2.03558	0.00724	0.04869	0.00057	0.04926	0.04479	0.00009	0.04488	—	772.527	772.527	0.03134	0.00627	0.00000	775.178
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.20310	0.17039	1.14782	1.97667	0.00611	0.03236	0.00020	0.03256	0.02977	0.00003	0.02980	—	588.305	588.305	0.02386	0.00477	0.00000	590.324
2031	0.16965	0.14196	1.02740	1.80910	0.00547	0.02428	0.00025	0.02453	0.02234	0.00004	0.02238	—	510.397	510.397	0.02070	0.00414	0.00000	512.149
2032	0.05258	0.04414	0.20140	0.37149	0.00132	0.00889	0.00010	0.00899	0.00817	0.00002	0.00819	—	127.901	127.901	0.00519	0.00104	0.00000	128.340

2.2.6. Offsite Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.33111	0.29652	3.79163	3.72512	0.03129	0.03053	67.3876	67.4181	0.03053	6.91322	6.94374	—	3,315.98	3,315.98	0.02549	0.42217	4.94067	3,447.36
2031	0.38768	0.33251	4.58484	3.98972	0.03945	0.03945	88.6134	88.6529	0.03945	9.08973	9.12918	—	4,176.32	4,176.32	0.03327	0.52603	5.77579	4,339.68
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.28260	0.23931	4.04513	2.60200	0.03129	0.03053	67.3876	67.4181	0.03053	6.91322	6.94374	—	3,254.89	3,254.89	0.02946	0.44317	0.12782	3,387.82
2031	0.36355	0.30662	4.92279	3.25187	0.03945	0.03945	88.6134	88.6529	0.03945	9.08973	9.12918	—	4,096.35	4,096.35	0.03679	0.55301	0.14983	4,262.22
2032	0.32855	0.29712	4.47315	3.07728	0.03899	0.03899	88.1638	88.2028	0.03899	9.04322	9.08222	—	3,924.36	3,924.36	0.03653	0.54525	0.13238	4,087.89
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.20842	0.18163	1.36428	2.00096	0.01002	0.00977	40.2898	40.2996	0.00977	4.12248	4.13225	—	1,348.75	1,348.75	0.01466	0.15370	1.04988	1,395.96
2031	0.22630	0.19556	1.59166	2.12054	0.01239	0.01239	46.2676	46.2800	0.01239	4.73586	4.74824	—	1,587.73	1,587.73	0.01718	0.18525	1.11382	1,644.47
2032	0.05055	0.04650	0.58489	0.48952	0.00512	0.00512	12.7092	12.7143	0.00512	1.30344	1.30855	—	539.113	539.113	0.00494	0.06837	0.31203	559.924
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2030	0.03804	0.03315	0.24898	0.36517	0.00183	0.00178	7.35289	7.35467	0.00178	0.75235	0.75414	—	223.300	223.300	0.00243	0.02545	0.17382	231.118
2031	0.04130	0.03569	0.29048	0.38700	0.00226	0.00226	8.44383	8.44609	0.00226	0.86429	0.86655	—	262.866	262.866	0.00284	0.03067	0.18441	272.262
2032	0.00923	0.00849	0.10674	0.08934	0.00093	0.00093	2.31942	2.32036	0.00093	0.23788	0.23881	—	89.2563	89.2563	0.00082	0.01132	0.05166	92.7018

3. Construction Emissions Details

3.1. Site Retaining Walls Ph 2 (2030)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24526	1.04581	7.26887	13.6256	0.03642	0.21647	—	0.21647	0.19916	—	0.19916	—	3,918.66	3,918.66	0.15896	0.03179	—	3,932.11
Dust From Material Movement	—	—	—	—	—	—	0.00341	0.00341	—	0.00052	0.00052	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24526	1.04581	7.26887	13.6256	0.03642	0.21647	—	0.21647	0.19916	—	0.19916	—	3,918.66	3,918.66	0.15896	0.03179	—	3,932.11
Dust From Material Movement	—	—	—	—	—	—	0.00341	0.00341	—	0.00052	0.00052	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31046	0.26074	1.81224	3.39706	0.00908	0.05397	—	0.05397	0.04965	—	0.04965	—	976.981	976.981	0.03963	0.00793	—	980.334
Dust From Material Movement	—	—	—	—	—	—	0.00085	0.00085	—	0.00013	0.00013	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05666	0.04758	0.33073	0.61996	0.00166	0.00985	—	0.00985	0.00906	—	0.00906	—	161.750	161.750	0.00656	0.00131	—	162.305
Dust From Material Movement	—	—	—	—	—	—	0.00015	0.00015	—	0.00002	0.00002	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23757	0.21469	0.13162	2.72081	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	616.012	616.012	0.00794	0.00397	1.60132	618.995
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.06716	0.04808	3.66001	0.45559	0.03129	0.03053	30.1772	30.2077	0.03053	3.12097	3.15149	—	2,699.96	2,699.96	0.01755	0.41820	3.33934	2,828.37

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21773	0.19352	0.15847	2.13496	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	554.753	554.753	0.01190	0.02421	0.04139	562.305
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.06487	0.04579	3.88666	0.46704	0.03129	0.03053	30.1772	30.2077	0.03053	3.12097	3.15149	—	2,700.14	2,700.14	0.01755	0.41896	0.08643	2,825.51
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05461	0.04858	0.03852	0.54088	0.00000	0.00000	9.01599	9.01599	0.00000	0.91926	0.91926	—	141.291	141.291	0.00264	0.00571	0.17197	143.229
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01655	0.01180	0.95949	0.11473	0.00780	0.00761	7.31292	7.32053	0.00761	0.75696	0.76457	—	673.160	673.160	0.00438	0.10445	0.35859	704.755
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00997	0.00887	0.00703	0.09871	0.00000	0.00000	1.64542	1.64542	0.00000	0.16777	0.16777	—	23.3923	23.3923	0.00044	0.00094	0.02847	23.7132
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00302	0.00215	0.17511	0.02094	0.00142	0.00139	1.33461	1.33600	0.00139	0.13815	0.13953	—	111.449	111.449	0.00072	0.01729	0.05937	116.680

3.1.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24526	1.04581	7.26887	13.6256	0.03642	0.21647	—	0.21647	0.19916	—	0.19916	—	3,918.66	3,918.66	0.15896	0.03179	—	3,932.11
Dust From Material Movement	—	—	—	—	—	—	0.00341	0.00341	—	0.00052	0.00052	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24526	1.04581	7.26887	13.6256	0.03642	0.21647	—	0.21647	0.19916	—	0.19916	—	3,918.66	3,918.66	0.15896	0.03179	—	3,932.11
Dust From Material Movement	—	—	—	—	—	—	0.00341	0.00341	—	0.00052	0.00052	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31046	0.26074	1.81224	3.39706	0.00908	0.05397	—	0.05397	0.04965	—	0.04965	—	976.981	976.981	0.03963	0.00793	—	980.334
Dust From Material Movement	—	—	—	—	—	—	0.00085	0.00085	—	0.00013	0.00013	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05666	0.04758	0.33073	0.61996	0.00166	0.00985	—	0.00985	0.00906	—	0.00906	—	161.750	161.750	0.00656	0.00131	—	162.305
Dust From Material Movement	—	—	—	—	—	—	0.00015	0.00015	—	0.00002	0.00002	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23757	0.21469	0.13162	2.72081	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	616.012	616.012	0.00794	0.00397	1.60132	618.995
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.06716	0.04808	3.66001	0.45559	0.03129	0.03053	30.1772	30.2077	0.03053	3.12097	3.15149	—	2,699.96	2,699.96	0.01755	0.41820	3.33934	2,828.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21773	0.19352	0.15847	2.13496	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	554.753	554.753	0.01190	0.02421	0.04139	562.305
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.06487	0.04579	3.88666	0.46704	0.03129	0.03053	30.1772	30.2077	0.03053	3.12097	3.15149	—	2,700.14	2,700.14	0.01755	0.41896	0.08643	2,825.51
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05461	0.04858	0.03852	0.54088	0.00000	0.00000	9.01599	9.01599	0.00000	0.91926	0.91926	—	141.291	141.291	0.00264	0.00571	0.17197	143.229
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01655	0.01180	0.95949	0.11473	0.00780	0.00761	7.31292	7.32053	0.00761	0.75696	0.76457	—	673.160	673.160	0.00438	0.10445	0.35859	704.755
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00997	0.00887	0.00703	0.09871	0.00000	0.00000	1.64542	1.64542	0.00000	0.16777	0.16777	—	23.3923	23.3923	0.00044	0.00094	0.02847	23.7132
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00302	0.00215	0.17511	0.02094	0.00142	0.00139	1.33461	1.33600	0.00139	0.13815	0.13953	—	111.449	111.449	0.00072	0.01729	0.05937	116.680

3.2. Site Yard Utilities - Electrical and I&C (2030)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.53973	1.29380	7.24107	14.6080	0.05582	0.24379	—	0.24379	0.22428	—	0.22428	—	6,040.52	6,040.52	0.24503	0.04901	—	6,061.25
Dust From Material Movement	—	—	—	—	—	—	0.00073	0.00073	—	0.00011	0.00011	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39231	0.32965	1.84498	3.72203	0.01422	0.06212	—	0.06212	0.05715	—	0.05715	—	1,539.09	1,539.09	0.06243	0.01249	—	1,544.37
Dust From Material Movement	—	—	—	—	—	—	0.00019	0.00019	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07160	0.06016	0.33671	0.67927	0.00260	0.01134	—	0.01134	0.01043	—	0.01043	—	254.814	254.814	0.01034	0.00207	—	255.689
Dust From Material Movement	—	—	—	—	—	—	0.00003	0.00003	—	0.00001	0.00001	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31676	0.28625	0.17549	3.62775	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	821.350	821.350	0.01058	0.00529	2.13510	825.326
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01435	0.01027	0.78220	0.09737	0.00669	0.00652	6.44933	6.45586	0.00652	0.66700	0.67352	—	577.025	577.025	0.00375	0.08938	0.71367	604.466
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07442	0.06619	0.05249	0.73703	0.00000	0.00000	12.2855	12.2855	0.00000	1.25262	1.25262	—	192.528	192.528	0.00360	0.00777	0.23433	195.169
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00362	0.00258	0.20957	0.02506	0.00170	0.00166	1.59724	1.59890	0.00166	0.16533	0.16699	—	147.027	147.027	0.00096	0.02281	0.07832	153.927
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01358	0.01208	0.00958	0.13451	0.00000	0.00000	2.24211	2.24211	0.00000	0.22860	0.22860	—	31.8753	31.8753	0.00060	0.00129	0.03880	32.3125
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00066	0.00047	0.03825	0.00457	0.00031	0.00030	0.29150	0.29180	0.00030	0.03017	0.03048	—	24.3419	24.3419	0.00016	0.00378	0.01297	25.4844

3.2.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	1.53973	1.29380	7.24107	14.6080	0.05582	0.24379	—	0.24379	0.22428	—	0.22428	—	6,040.52	6,040.52	0.24503	0.04901	—	6,061.25
Dust From Material Movement	—	—	—	—	—	—	0.00073	0.00073	—	0.00011	0.00011	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.39231	0.32965	1.84498	3.72203	0.01422	0.06212	—	0.06212	0.05715	—	0.05715	—	1,539.09	1,539.09	0.06243	0.01249	—	1,544.37
Dust From Material Movement	—	—	—	—	—	—	0.00019	0.00019	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.07160	0.06016	0.33671	0.67927	0.00260	0.01134	—	0.01134	0.01043	—	0.01043	—	254.814	254.814	0.01034	0.00207	—	255.689
Dust From Material Movement	—	—	—	—	—	—	0.00003	0.00003	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31676	0.28625	0.17549	3.62775	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	821.350	821.350	0.01058	0.00529	2.13510	825.326
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01435	0.01027	0.78220	0.09737	0.00669	0.00652	6.44933	6.45586	0.00652	0.66700	0.67352	—	577.025	577.025	0.00375	0.08938	0.71367	604.466
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07442	0.06619	0.05249	0.73703	0.00000	0.00000	12.2855	12.2855	0.00000	1.25262	1.25262	—	192.528	192.528	0.00360	0.00777	0.23433	195.169
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00362	0.00258	0.20957	0.02506	0.00170	0.00166	1.59724	1.59890	0.00166	0.16533	0.16699	—	147.027	147.027	0.00096	0.02281	0.07832	153.927
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01358	0.01208	0.00958	0.13451	0.00000	0.00000	2.24211	2.24211	0.00000	0.22860	0.22860	—	31.8753	31.8753	0.00060	0.00129	0.03880	32.3125
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00066	0.00047	0.03825	0.00457	0.00031	0.00030	0.29150	0.29180	0.00030	0.03017	0.03048	—	24.3419	24.3419	0.00016	0.00378	0.01297	25.4844

3.3. New Flocc Sed Basins (2030)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	—	0.23073	0.21228	—	0.21228	—	3,909.10	3,909.10	0.15857	0.03171	—	3,922.51
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	—	0.23073	0.21228	—	0.21228	—	3,909.10	3,909.10	0.15857	0.03171	—	3,922.51
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41011	0.34323	2.63221	3.71200	0.01018	0.06123	—	0.06123	0.05633	—	0.05633	—	1,037.33	1,037.33	0.04208	0.00842	—	1,040.89
Dust From Material Movement	—	—	—	—	—	—	0.00006	0.00006	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.07484	0.06264	0.48038	0.67744	0.00186	0.01117	—	0.01117	0.01028	—	0.01028	—	171.741	171.741	0.00697	0.00139	—	172.330
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23757	0.21469	0.13162	2.72081	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	616.012	616.012	0.00794	0.00397	1.60132	618.995
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00416	0.00298	0.22657	0.02820	0.00194	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	167.141	167.141	0.00109	0.02589	0.20672	175.089
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21773	0.19352	0.15847	2.13496	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	554.753	554.753	0.01190	0.02421	0.04139	562.305
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00402	0.00283	0.24060	0.02891	0.00194	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	167.151	167.151	0.00109	0.02594	0.00535	174.913
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05813	0.05170	0.04100	0.57570	0.00000	0.00000	9.59630	9.59630	0.00000	0.97843	0.97843	—	150.385	150.385	0.00281	0.00607	0.18304	152.448
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00109	0.00078	0.06322	0.00756	0.00051	0.00050	0.48184	0.48234	0.00050	0.04988	0.05038	—	44.3540	44.3540	0.00029	0.00688	0.02363	46.4358
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01061	0.00944	0.00748	0.10506	0.00000	0.00000	1.75132	1.75132	0.00000	0.17856	0.17856	—	24.8980	24.8980	0.00046	0.00101	0.03030	25.2395

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00020	0.00014	0.01154	0.00138	0.00009	0.00009	0.08794	0.08803	0.00009	0.00910	0.00919	—	7.34331	7.34331	0.00005	0.00114	0.00391	7.68797

3.3.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	—	0.23073	0.21228	—	0.21228	—	3,909.10	3,909.10	0.15857	0.03171	—	3,922.51
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54546	1.29345	9.91930	13.9884	0.03836	0.23073	—	0.23073	0.21228	—	0.21228	—	3,909.10	3,909.10	0.15857	0.03171	—	3,922.51
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.41011	0.34323	2.63221	3.71200	0.01018	0.06123	—	0.06123	0.05633	—	0.05633	—	1,037.33	1,037.33	0.04208	0.00842	—	1,040.89
Dust From Material Movement	—	—	—	—	—	—	0.00006	0.00006	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07484	0.06264	0.48038	0.67744	0.00186	0.01117	—	0.01117	0.01028	—	0.01028	—	171.741	171.741	0.00697	0.00139	—	172.330
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23757	0.21469	0.13162	2.72081	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	616.012	616.012	0.00794	0.00397	1.60132	618.995
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00416	0.00298	0.22657	0.02820	0.00194	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	167.141	167.141	0.00109	0.02589	0.20672	175.089
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21773	0.19352	0.15847	2.13496	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	554.753	554.753	0.01190	0.02421	0.04139	562.305

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00402	0.00283	0.24060	0.02891	0.00194	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	167.151	167.151	0.00109	0.02594	0.00535	174.913
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05813	0.05170	0.04100	0.57570	0.00000	0.00000	9.59630	9.59630	0.00000	0.97843	0.97843	—	150.385	150.385	0.00281	0.00607	0.18304	152.448
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00109	0.00078	0.06322	0.00756	0.00051	0.00050	0.48184	0.48234	0.00050	0.04988	0.05038	—	44.3540	44.3540	0.00029	0.00688	0.02363	46.4358
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01061	0.00944	0.00748	0.10506	0.00000	0.00000	1.75132	1.75132	0.00000	0.17856	0.17856	—	24.8980	24.8980	0.00046	0.00101	0.03030	25.2395
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00020	0.00014	0.01154	0.00138	0.00009	0.00009	0.08794	0.08803	0.00009	0.00910	0.00919	—	7.34331	7.34331	0.00005	0.00114	0.00391	7.68797

3.4. New Flocc Sed Basins (2031)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49065	1.24761	9.66767	13.9510	0.03836	0.21620	—	0.21620	0.19890	—	0.19890	—	3,909.14	3,909.14	0.15857	0.03171	—	3,922.56
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03150	0.02637	0.20433	0.29485	0.00081	0.00457	—	0.00457	0.00420	—	0.00420	—	82.6198	82.6198	0.00335	0.00067	—	82.9034
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00575	0.00481	0.03729	0.05381	0.00015	0.00083	—	0.00083	0.00077	—	0.00077	—	13.6787	13.6787	0.00055	0.00011	—	13.7256
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20979	0.18559	0.15715	1.99805	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	546.298	546.298	0.01058	0.02421	0.03706	553.813
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Hauling	0.00402	0.00283	0.22577	0.02816	0.00189	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	161.328	161.328	0.00109	0.02494	0.00481	168.793
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00443	0.00392	0.00284	0.04313	0.00000	0.00000	0.76431	0.76431	0.00000	0.07793	0.07793	—	11.7947	11.7947	0.00022	0.00048	0.01309	11.9575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00009	0.00006	0.00472	0.00059	0.00004	0.00004	0.03838	0.03842	0.00004	0.00397	0.00401	—	3.40947	3.40947	0.00002	0.00053	0.00169	3.56884
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00081	0.00072	0.00052	0.00787	0.00000	0.00000	0.13949	0.13949	0.00000	0.01422	0.01422	—	1.95275	1.95275	0.00004	0.00008	0.00217	1.97971
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00002	0.00001	0.00086	0.00011	0.00001	0.00001	0.00700	0.00701	0.00001	0.00072	0.00073	—	0.56448	0.56448	< 0.000005	0.00009	0.00028	0.59086

3.4.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49065	1.24761	9.66767	13.9510	0.03836	0.21620	—	0.21620	0.19890	—	0.19890	—	3,909.14	3,909.14	0.15857	0.03171	—	3,922.56
Dust From Material Movement	—	—	—	—	—	—	0.00021	0.00021	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.03150	0.02637	0.20433	0.29485	0.00081	0.00457	—	0.00457	0.00420	—	0.00420	—	82.6198	82.6198	0.00335	0.00067	—	82.9034
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00575	0.00481	0.03729	0.05381	0.00015	0.00083	—	0.00083	0.00077	—	0.00077	—	13.6787	13.6787	0.00055	0.00011	—	13.7256
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20979	0.18559	0.15715	1.99805	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	546.298	546.298	0.01058	0.02421	0.03706	553.813
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00402	0.00283	0.22577	0.02816	0.00189	0.00189	1.86811	1.87000	0.00189	0.19320	0.19509	—	161.328	161.328	0.00109	0.02494	0.00481	168.793
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00443	0.00392	0.00284	0.04313	0.00000	0.00000	0.76431	0.76431	0.00000	0.07793	0.07793	—	11.7947	11.7947	0.00022	0.00048	0.01309	11.9575
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00009	0.00006	0.00472	0.00059	0.00004	0.00004	0.03838	0.03842	0.00004	0.00397	0.00401	—	3.40947	3.40947	0.00002	0.00053	0.00169	3.56884
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00081	0.00072	0.00052	0.00787	0.00000	0.00000	0.13949	0.13949	0.00000	0.01422	0.01422	—	1.95275	1.95275	0.00004	0.00008	0.00217	1.97971
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00002	0.00001	0.00086	0.00011	0.00001	0.00001	0.00700	0.00701	0.00001	0.00072	0.00073	—	0.56448	0.56448	< 0.000005	0.00009	0.00028	0.59086

3.5. UV Building & Facility (2031)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14479	0.95326	10.3760	16.7100	0.02725	0.16334	—	0.16334	0.15027	—	0.15027	—	2,523.46	2,523.46	0.10236	0.02047	—	2,532.12
Dust From Material Movement	—	—	—	—	—	—	0.00440	0.00440	—	0.00067	0.00067	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14479	0.95326	10.3760	16.7100	0.02725	0.16334	—	0.16334	0.15027	—	0.15027	—	2,523.46	2,523.46	0.10236	0.02047	—	2,532.12

Dust From Material Movement	—	—	—	—	—	—	0.00440	0.00440	—	0.00067	0.00067	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31991	0.26639	2.89959	4.66963	0.00761	0.04565	—	0.04565	0.04199	—	0.04199	—	705.187	705.187	0.02861	0.00572	—	707.607
Dust From Material Movement	—	—	—	—	—	—	0.00123	0.00123	—	0.00019	0.00019	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05838	0.04862	0.52917	0.85221	0.00139	0.00833	—	0.00833	0.00766	—	0.00766	—	116.752	116.752	0.00474	0.00095	—	117.152
Dust From Material Movement	—	—	—	—	—	—	0.00022	0.00022	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.30089	0.27037	0.14674	3.41769	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	808.705	808.705	0.01058	0.00529	1.91149	812.457
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08679	0.06213	4.43810	0.57202	0.03945	0.03945	38.9995	39.0390	0.03945	4.03339	4.07284	—	3,367.62	3,367.62	0.02268	0.52074	3.86430	3,527.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27972	0.24745	0.20953	2.66407	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	728.397	728.397	0.01411	0.03228	0.04941	738.418
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08383	0.05917	4.71326	0.58780	0.03945	0.03945	38.9995	39.0390	0.03945	4.03339	4.07284	—	3,367.95	3,367.95	0.02268	0.52074	0.10042	3,523.80
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07817	0.06915	0.05003	0.76030	0.00000	0.00000	13.4744	13.4744	0.00000	1.37384	1.37384	—	207.937	207.937	0.00394	0.00853	0.23080	210.807
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02398	0.01709	1.30307	0.16151	0.01102	0.01102	10.5933	10.6043	0.01102	1.09651	1.10753	—	941.127	941.127	0.00634	0.14552	0.46743	985.118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01427	0.01262	0.00913	0.13875	0.00000	0.00000	2.45909	2.45909	0.00000	0.25073	0.25073	—	34.4263	34.4263	0.00065	0.00141	0.03821	34.9015
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00438	0.00312	0.23781	0.02947	0.00201	0.00201	1.93328	1.93529	0.00201	0.20011	0.20213	—	155.814	155.814	0.00105	0.02409	0.07739	163.098

3.5.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14479	0.95326	10.3760	16.7100	0.02725	0.16334	—	0.16334	0.15027	—	0.15027	—	2,523.46	2,523.46	0.10236	0.02047	—	2,532.12

Dust From Material Movement	—	—	—	—	—	—	0.00440	0.00440	—	0.00067	0.00067	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14479	0.95326	10.3760	16.7100	0.02725	0.16334	—	0.16334	0.15027	—	0.15027	—	2,523.46	2,523.46	0.10236	0.02047	—	2,532.12
Dust From Material Movement	—	—	—	—	—	—	0.00440	0.00440	—	0.00067	0.00067	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31991	0.26639	2.89959	4.66963	0.00761	0.04565	—	0.04565	0.04199	—	0.04199	—	705.187	705.187	0.02861	0.00572	—	707.607
Dust From Material Movement	—	—	—	—	—	—	0.00123	0.00123	—	0.00019	0.00019	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05838	0.04862	0.52917	0.85221	0.00139	0.00833	—	0.00833	0.00766	—	0.00766	—	116.752	116.752	0.00474	0.00095	—	117.152

Dust From Material Movement	—	—	—	—	—	—	0.00022	0.00022	—	0.00003	0.00003	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30089	0.27037	0.14674	3.41769	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	808.705	808.705	0.01058	0.00529	1.91149	812.457
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08679	0.06213	4.43810	0.57202	0.03945	0.03945	38.9995	39.0390	0.03945	4.03339	4.07284	—	3,367.62	3,367.62	0.02268	0.52074	3.86430	3,527.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27972	0.24745	0.20953	2.66407	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	728.397	728.397	0.01411	0.03228	0.04941	738.418
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08383	0.05917	4.71326	0.58780	0.03945	0.03945	38.9995	39.0390	0.03945	4.03339	4.07284	—	3,367.95	3,367.95	0.02268	0.52074	0.10042	3,523.80
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07817	0.06915	0.05003	0.76030	0.00000	0.00000	13.4744	13.4744	0.00000	1.37384	1.37384	—	207.937	207.937	0.00394	0.00853	0.23080	210.807
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02398	0.01709	1.30307	0.16151	0.01102	0.01102	10.5933	10.6043	0.01102	1.09651	1.10753	—	941.127	941.127	0.00634	0.14552	0.46743	985.118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01427	0.01262	0.00913	0.13875	0.00000	0.00000	2.45909	2.45909	0.00000	0.25073	0.25073	—	34.4263	34.4263	0.00065	0.00141	0.03821	34.9015
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00438	0.00312	0.23781	0.02947	0.00201	0.00201	1.93328	1.93529	0.00201	0.20011	0.20213	—	155.814	155.814	0.00105	0.02409	0.07739	163.098

3.6. New Flash Mix Facility and Raw Water Valves/Meter STation (2031)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03887	0.87160	4.53800	8.89111	0.03871	0.14883	—	0.14883	0.13693	—	0.13693	—	4,123.61	4,123.61	0.16727	0.03345	—	4,137.76
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03887	0.87160	4.53800	8.89111	0.03871	0.14883	—	0.14883	0.13693	—	0.13693	—	4,123.61	4,123.61	0.16727	0.03345	—	4,137.76
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.57819	0.48509	2.52565	4.94840	0.02154	0.08283	—	0.08283	0.07621	—	0.07621	—	2,295.02	2,295.02	0.09310	0.01862	—	2,302.90
Dust From Material Movement	—	—	—	—	—	—	0.00015	0.00015	—	0.00002	0.00002	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10552	0.08853	0.46093	0.90308	0.00393	0.01512	—	0.01512	0.01391	—	0.01391	—	379.967	379.967	0.01541	0.00308	—	381.271
Dust From Material Movement	—	—	—	—	—	—	0.00003	0.00003	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22567	0.20278	0.11005	2.56327	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	606.528	606.528	0.00794	0.00397	1.43362	609.343
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00523	0.00374	0.26724	0.03444	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	202.784	202.784	0.00137	0.03136	0.23269	212.395
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20979	0.18559	0.15715	1.99805	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	546.298	546.298	0.01058	0.02421	0.03706	553.813

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00505	0.00356	0.28381	0.03540	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	202.805	202.805	0.00137	0.03136	0.00605	212.189
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11676	0.10329	0.07472	1.13566	0.00000	0.00000	20.1267	20.1267	0.00000	2.05210	2.05210	—	310.595	310.595	0.00589	0.01274	0.34475	314.882
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00288	0.00205	0.15627	0.01937	0.00132	0.00132	1.27041	1.27173	0.00132	0.13150	0.13282	—	112.866	112.866	0.00076	0.01745	0.05606	118.141
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02131	0.01885	0.01364	0.20726	0.00000	0.00000	3.67313	3.67313	0.00000	0.37451	0.37451	—	51.4225	51.4225	0.00098	0.00211	0.05708	52.1323
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00052	0.00037	0.02852	0.00353	0.00024	0.00024	0.23185	0.23209	0.00024	0.02400	0.02424	—	18.6862	18.6862	0.00013	0.00289	0.00928	19.5596

3.6.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03887	0.87160	4.53800	8.89111	0.03871	0.14883	—	0.14883	0.13693	—	0.13693	—	4,123.61	4,123.61	0.16727	0.03345	—	4,137.76
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.03887	0.87160	4.53800	8.89111	0.03871	0.14883	—	0.14883	0.13693	—	0.13693	—	4,123.61	4,123.61	0.16727	0.03345	—	4,137.76
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57819	0.48509	2.52565	4.94840	0.02154	0.08283	—	0.08283	0.07621	—	0.07621	—	2,295.02	2,295.02	0.09310	0.01862	—	2,302.90
Dust From Material Movement	—	—	—	—	—	—	0.00015	0.00015	—	0.00002	0.00002	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10552	0.08853	0.46093	0.90308	0.00393	0.01512	—	0.01512	0.01391	—	0.01391	—	379.967	379.967	0.01541	0.00308	—	381.271
Dust From Material Movement	—	—	—	—	—	—	0.00003	0.00003	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22567	0.20278	0.11005	2.56327	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	606.528	606.528	0.00794	0.00397	1.43362	609.343
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00523	0.00374	0.26724	0.03444	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	202.784	202.784	0.00137	0.03136	0.23269	212.395
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20979	0.18559	0.15715	1.99805	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	546.298	546.298	0.01058	0.02421	0.03706	553.813
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00505	0.00356	0.28381	0.03540	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	202.805	202.805	0.00137	0.03136	0.00605	212.189
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11676	0.10329	0.07472	1.13566	0.00000	0.00000	20.1267	20.1267	0.00000	2.05210	2.05210	—	310.595	310.595	0.00589	0.01274	0.34475	314.882
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00288	0.00205	0.15627	0.01937	0.00132	0.00132	1.27041	1.27173	0.00132	0.13150	0.13282	—	112.866	112.866	0.00076	0.01745	0.05606	118.141
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02131	0.01885	0.01364	0.20726	0.00000	0.00000	3.67313	3.67313	0.00000	0.37451	0.37451	—	51.4225	51.4225	0.00098	0.00211	0.05708	52.1323
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00052	0.00037	0.02852	0.00353	0.00024	0.00024	0.23185	0.23209	0.00024	0.02400	0.02424	—	18.6862	18.6862	0.00013	0.00289	0.00928	19.5596

3.7. New Flash Mix Facility and Raw Water Valves/Meter STation (2032)

3.7.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02659	0.02232	0.10187	0.18790	0.00067	0.00449	—	0.00449	0.00413	—	0.00413	—	71.3101	71.3101	0.00289	0.00058	—	71.5549
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00485	0.00407	0.01859	0.03429	0.00012	0.00082	—	0.00082	0.00075	—	0.00075	—	11.8062	11.8062	0.00048	0.00010	—	11.8467
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18426	0.17897	0.13558	1.88535	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	538.484	538.484	0.01058	0.02288	0.03300	545.601
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00505	0.00356	0.26148	0.03433	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	195.327	195.327	0.00137	0.03136	0.00538	204.711
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00301	0.00294	0.00216	0.03178	0.00000	0.00000	0.59446	0.59446	0.00000	0.06061	0.06061	—	9.04233	9.04233	0.00015	0.00007	0.00907	9.07464
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00008	0.00006	0.00425	0.00056	0.00004	0.00004	0.03752	0.03756	0.00004	0.00388	0.00392	—	3.21059	3.21059	0.00002	0.00052	0.00147	3.36623
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00054	0.00039	0.00580	0.00000	0.00000	0.10849	0.10849	0.00000	0.01106	0.01106	—	1.49706	1.49706	0.00003	0.00001	0.00150	1.50241
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00002	0.00001	0.00078	0.00010	0.00001	0.00001	0.00685	0.00686	0.00001	0.00071	0.00072	—	0.53155	0.53155	< 0.000005	0.00009	0.00024	0.55732

3.7.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92
Dust From Material Movement	—	—	—	—	—	—	0.00026	0.00026	—	0.00004	0.00004	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02659	0.02232	0.10187	0.18790	0.00067	0.00449	—	0.00449	0.00413	—	0.00413	—	71.3101	71.3101	0.00289	0.00058	—	71.5549
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00485	0.00407	0.01859	0.03429	0.00012	0.00082	—	0.00082	0.00075	—	0.00075	—	11.8062	11.8062	0.00048	0.00010	—	11.8467
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18426	0.17897	0.13558	1.88535	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	538.484	538.484	0.01058	0.02288	0.03300	545.601
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00505	0.00356	0.26148	0.03433	0.00238	0.00238	2.34840	2.35077	0.00238	0.24287	0.24525	—	195.327	195.327	0.00137	0.03136	0.00538	204.711
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00301	0.00294	0.00216	0.03178	0.00000	0.00000	0.59446	0.59446	0.00000	0.06061	0.06061	—	9.04233	9.04233	0.00015	0.00007	0.00907	9.07464
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00008	0.00006	0.00425	0.00056	0.00004	0.00004	0.03752	0.03756	0.00004	0.00388	0.00392	—	3.21059	3.21059	0.00002	0.00052	0.00147	3.36623
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00054	0.00039	0.00580	0.00000	0.00000	0.10849	0.10849	0.00000	0.01106	0.01106	—	1.49706	1.49706	0.00003	0.00001	0.00150	1.50241
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00002	0.00001	0.00078	0.00010	0.00001	0.00001	0.00685	0.00686	0.00001	0.00071	0.00072	—	0.53155	0.53155	< 0.000005	0.00009	0.00024	0.55732

3.8. New Filters (2032)

3.8.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92
Dust From Material Movement	—	—	—	—	—	—	0.00435	0.00435	—	0.00066	0.00066	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18172	0.15255	0.69611	1.28398	0.00457	0.03071	—	0.03071	0.02825	—	0.02825	—	487.286	487.286	0.01977	0.00395	—	488.958
Dust From Material Movement	—	—	—	—	—	—	0.00049	0.00049	—	0.00007	0.00007	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03316	0.02784	0.12704	0.23433	0.00083	0.00560	—	0.00560	0.00516	—	0.00516	—	80.6758	80.6758	0.00327	0.00065	—	80.9526
Dust From Material Movement	—	—	—	—	—	—	0.00009	0.00009	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24568	0.23863	0.18078	2.51380	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	717.979	717.979	0.01411	0.03051	0.04400	727.469
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08286	0.05849	4.29237	0.56348	0.03899	0.03899	38.5499	38.5889	0.03899	3.98689	4.02588	—	3,206.38	3,206.38	0.02242	0.51473	0.08838	3,360.42
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02740	0.02680	0.01971	0.28952	0.00000	0.00000	5.41620	5.41620	0.00000	0.55223	0.55223	—	82.3857	82.3857	0.00139	0.00059	0.08265	82.6801
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00953	0.00679	0.47657	0.06242	0.00438	0.00438	4.20899	4.21337	0.00438	0.43567	0.44005	—	360.138	360.138	0.00252	0.05782	0.16536	377.597
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00500	0.00489	0.00360	0.05284	0.00000	0.00000	0.98846	0.98846	0.00000	0.10078	0.10078	—	13.6399	13.6399	0.00023	0.00010	0.01368	13.6886
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00174	0.00124	0.08697	0.01139	0.00080	0.00080	0.76814	0.76894	0.00080	0.07951	0.08031	—	59.6250	59.6250	0.00042	0.00957	0.02738	62.5155

3.8.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92
Dust From Material Movement	—	—	—	—	—	—	0.00435	0.00435	—	0.00066	0.00066	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.18172	0.15255	0.69611	1.28398	0.00457	0.03071	—	0.03071	0.02825	—	0.02825	—	487.286	487.286	0.01977	0.00395	—	488.958
Dust From Material Movement	—	—	—	—	—	—	0.00049	0.00049	—	0.00007	0.00007	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.03316	0.02784	0.12704	0.23433	0.00083	0.00560	—	0.00560	0.00516	—	0.00516	—	80.6758	80.6758	0.00327	0.00065	—	80.9526
Dust From Material Movement	—	—	—	—	—	—	0.00009	0.00009	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24568	0.23863	0.18078	2.51380	0.00000	0.00000	49.6139	49.6139	0.00000	5.05634	5.05634	—	717.979	717.979	0.01411	0.03051	0.04400	727.469
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.08286	0.05849	4.29237	0.56348	0.03899	0.03899	38.5499	38.5889	0.03899	3.98689	4.02588	—	3,206.38	3,206.38	0.02242	0.51473	0.08838	3,360.42
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02740	0.02680	0.01971	0.28952	0.00000	0.00000	5.41620	5.41620	0.00000	0.55223	0.55223	—	82.3857	82.3857	0.00139	0.00059	0.08265	82.6801
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00953	0.00679	0.47657	0.06242	0.00438	0.00438	4.20899	4.21337	0.00438	0.43567	0.44005	—	360.138	360.138	0.00252	0.05782	0.16536	377.597
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00500	0.00489	0.00360	0.05284	0.00000	0.00000	0.98846	0.98846	0.00000	0.10078	0.10078	—	13.6399	13.6399	0.00023	0.00010	0.01368	13.6886
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00174	0.00124	0.08697	0.01139	0.00080	0.00080	0.76814	0.76894	0.00080	0.07951	0.08031	—	59.6250	59.6250	0.00042	0.00957	0.02738	62.5155

3.9. Temporary Chemical Storage Facility (2032)

3.9.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92
Dust From Material Movement	—	—	—	—	—	—	0.00157	0.00157	—	0.00024	0.00024	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07978	0.06697	0.30561	0.56370	0.00201	0.01348	—	0.01348	0.01240	—	0.01240	—	213.930	213.930	0.00868	0.00174	—	214.665
Dust From Material Movement	—	—	—	—	—	—	0.00008	0.00008	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01456	0.01222	0.05577	0.10288	0.00037	0.00246	—	0.00246	0.00226	—	0.00226	—	35.4186	35.4186	0.00144	0.00029	—	35.5402
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18426	0.17897	0.13558	1.88535	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	538.484	538.484	0.01058	0.02288	0.03300	545.601
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02998	0.02116	1.55311	0.20388	0.01411	0.01411	13.9486	13.9627	0.01411	1.44258	1.45669	—	1,160.17	1,160.17	0.00811	0.18625	0.03198	1,215.90
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00902	0.00883	0.00649	0.09533	0.00000	0.00000	1.78338	1.78338	0.00000	0.18183	0.18183	—	27.1270	27.1270	0.00046	0.00020	0.02721	27.2239
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00151	0.00108	0.07570	0.00992	0.00070	0.00070	0.66861	0.66931	0.00070	0.06921	0.06990	—	57.2089	57.2089	0.00040	0.00918	0.02627	59.9823
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00165	0.00161	0.00118	0.01740	0.00000	0.00000	0.32547	0.32547	0.00000	0.03318	0.03318	—	4.49118	4.49118	0.00008	0.00003	0.00451	4.50723
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00028	0.00020	0.01382	0.00181	0.00013	0.00013	0.12202	0.12215	0.00013	0.01263	0.01276	—	9.47159	9.47159	0.00007	0.00152	0.00435	9.93075

3.9.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61771	1.35803	6.19705	11.4306	0.04068	0.27340	—	0.27340	0.25153	—	0.25153	—	4,338.03	4,338.03	0.17597	0.03519	—	4,352.92

Dust From Material Movement	—	—	—	—	—	—	0.00157	0.00157	—	0.00024	0.00024	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07978	0.06697	0.30561	0.56370	0.00201	0.01348	—	0.01348	0.01240	—	0.01240	—	213.930	213.930	0.00868	0.00174	—	214.665
Dust From Material Movement	—	—	—	—	—	—	0.00008	0.00008	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01456	0.01222	0.05577	0.10288	0.00037	0.00246	—	0.00246	0.00226	—	0.00226	—	35.4186	35.4186	0.00144	0.00029	—	35.5402
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18426	0.17897	0.13558	1.88535	0.00000	0.00000	37.2104	37.2104	0.00000	3.79225	3.79225	—	538.484	538.484	0.01058	0.02288	0.03300	545.601
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02998	0.02116	1.55311	0.20388	0.01411	0.01411	13.9486	13.9627	0.01411	1.44258	1.45669	—	1,160.17	1,160.17	0.00811	0.18625	0.03198	1,215.90
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00902	0.00883	0.00649	0.09533	0.00000	0.00000	1.78338	1.78338	0.00000	0.18183	0.18183	—	27.1270	27.1270	0.00046	0.00020	0.02721	27.2239
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00151	0.00108	0.07570	0.00992	0.00070	0.00070	0.66861	0.66931	0.00070	0.06921	0.06990	—	57.2089	57.2089	0.00040	0.00918	0.02627	59.9823
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00165	0.00161	0.00118	0.01740	0.00000	0.00000	0.32547	0.32547	0.00000	0.03318	0.03318	—	4.49118	4.49118	0.00008	0.00003	0.00451	4.50723
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00028	0.00020	0.01382	0.00181	0.00013	0.00013	0.12202	0.12215	0.00013	0.01263	0.01276	—	9.47159	9.47159	0.00007	0.00152	0.00435	9.93075

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Retaining Walls Ph 2	Site Preparation	2/7/2030	5/23/2030	6.00000	91.0000	—
Site Yard Utilities - Electrical and I&C	Site Preparation	5/24/2030	9/9/2030	6.00000	93.0000	—
New Flocc Sed Basins	Grading	9/10/2030	1/9/2031	6.00000	105.000	—
UV Building & Facility	Building Construction	1/10/2031	5/8/2031	6.00000	102.000	—
New Flash Mix Facility and Raw Water Valves/Meter STation	Building Construction	5/9/2031	1/7/2032	6.00000	209.000	—
New Filters	Building Construction	1/29/2032	3/16/2032	6.00000	41.0000	—
Temporary Chemical Storage Facility	Building Construction	1/8/2032	1/28/2032	6.00000	18.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Retaining Walls Ph 2	Excavators	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Site Retaining Walls Ph 2	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	367.000	0.40000
Site Retaining Walls Ph 2	Plate Compactors	Diesel	Average	1.000000	8.00000	8.00000	0.43000
Site Yard Utilities - Electrical and I&C	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.40000
Site Yard Utilities - Electrical and I&C	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	84.0000	0.37000
New Flocc Sed Basins	Excavators	Diesel	Average	4.00000	8.00000	36.0000	0.38000

New Flocc Sed Basins	Pumps	Diesel	Average	1.000000	8.00000	148.000	0.41000
New Flocc Sed Basins	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	367.000	0.40000
UV Building & Facility	Excavators	Diesel	Average	4.00000	8.00000	84.0000	0.37000
UV Building & Facility	Pumps	Diesel	Average	1.000000	8.00000	367.000	0.29000
UV Building & Facility	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	82.0000	0.20000
New Flash Mix Facility and Raw Water Valves/Meter STation	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
New Flash Mix Facility and Raw Water Valves/Meter STation	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
New Flash Mix Facility and Raw Water Valves/Meter STation	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000
New Filters	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
New Filters	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
New Filters	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000
Temporary Chemical Storage Facility	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
Temporary Chemical Storage Facility	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Temporary Chemical Storage Facility	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Retaining Walls Ph 2	Excavators	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Site Retaining Walls Ph 2	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	367.000	0.40000

Site Retaining Walls Ph 2	Plate Compactors	Diesel	Average	1.000000	8.00000	8.00000	0.43000
Site Yard Utilities - Electrical and I&C	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.40000
Site Yard Utilities - Electrical and I&C	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	84.0000	0.37000
New Flocc Sed Basins	Excavators	Diesel	Average	4.00000	8.00000	36.0000	0.38000
New Flocc Sed Basins	Pumps	Diesel	Average	1.000000	8.00000	148.000	0.41000
New Flocc Sed Basins	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	367.000	0.40000
UV Building & Facility	Excavators	Diesel	Average	4.00000	8.00000	84.0000	0.37000
UV Building & Facility	Pumps	Diesel	Average	1.000000	8.00000	367.000	0.29000
UV Building & Facility	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	82.0000	0.20000
New Flash Mix Facility and Raw Water Valves/Meter STation	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
New Flash Mix Facility and Raw Water Valves/Meter STation	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
New Flash Mix Facility and Raw Water Valves/Meter STation	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000
New Filters	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
New Filters	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
New Filters	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000
Temporary Chemical Storage Facility	Excavators	Diesel	Average	4.00000	8.00000	367.000	0.29000
Temporary Chemical Storage Facility	Pumps	Diesel	Average	1.000000	8.00000	82.0000	0.20000
Temporary Chemical Storage Facility	Other Material Handling Equipment	Diesel	Average	2.00000	8.00000	14.0000	0.74000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Retaining Walls Ph 2	Worker	60.0000	14.3000	LDA,LDT1,LDT2
Site Retaining Walls Ph 2	Vendor	—	8.80000	HHDT,MHDT
Site Retaining Walls Ph 2	Hauling	34.6154	20.0000	HHDT
Site Retaining Walls Ph 2	Onsite truck	—	—	HHDT
Site Yard Utilities - Electrical and I&C	Worker	80.0000	14.3000	LDA,LDT1,LDT2
Site Yard Utilities - Electrical and I&C	Vendor	—	8.80000	HHDT,MHDT
Site Yard Utilities - Electrical and I&C	Hauling	7.39785	20.0000	HHDT
Site Yard Utilities - Electrical and I&C	Onsite truck	—	—	HHDT
New Flocc Sed Basins	Worker	60.0000	14.3000	LDA,LDT1,LDT2
New Flocc Sed Basins	Vendor	—	8.80000	HHDT,MHDT
New Flocc Sed Basins	Hauling	2.14286	20.0000	HHDT
New Flocc Sed Basins	Onsite truck	—	—	HHDT
UV Building & Facility	Worker	80.0000	14.3000	LDA,LDT1,LDT2
UV Building & Facility	Vendor	0.00000	8.80000	HHDT,MHDT
UV Building & Facility	Hauling	44.7353	20.0000	HHDT
UV Building & Facility	Onsite truck	—	—	HHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Worker	60.0000	14.3000	LDA,LDT1,LDT2
New Flash Mix Facility and Raw Water Valves/Meter STation	Vendor	0.00000	8.80000	HHDT,MHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Hauling	2.69378	20.0000	HHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Onsite truck	—	—	HHDT
New Filters	Worker	80.0000	14.3000	LDA,LDT1,LDT2

New Filters	Vendor	0.00000	8.80000	HHDT,MHDT
New Filters	Hauling	44.2195	20.0000	HHDT
New Filters	Onsite truck	—	—	HHDT
Temporary Chemical Storage Facility	Worker	60.0000	14.3000	LDA,LDT1,LDT2
Temporary Chemical Storage Facility	Vendor	0.00000	8.80000	HHDT,MHDT
Temporary Chemical Storage Facility	Hauling	16.0000	20.0000	HHDT
Temporary Chemical Storage Facility	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Retaining Walls Ph 2	Worker	60.0000	14.3000	LDA,LDT1,LDT2
Site Retaining Walls Ph 2	Vendor	—	8.80000	HHDT,MHDT
Site Retaining Walls Ph 2	Hauling	34.6154	20.0000	HHDT
Site Retaining Walls Ph 2	Onsite truck	—	—	HHDT
Site Yard Utilities - Electrical and I&C	Worker	80.0000	14.3000	LDA,LDT1,LDT2
Site Yard Utilities - Electrical and I&C	Vendor	—	8.80000	HHDT,MHDT
Site Yard Utilities - Electrical and I&C	Hauling	7.39785	20.0000	HHDT
Site Yard Utilities - Electrical and I&C	Onsite truck	—	—	HHDT
New Flocc Sed Basins	Worker	60.0000	14.3000	LDA,LDT1,LDT2
New Flocc Sed Basins	Vendor	—	8.80000	HHDT,MHDT
New Flocc Sed Basins	Hauling	2.14286	20.0000	HHDT
New Flocc Sed Basins	Onsite truck	—	—	HHDT
UV Building & Facility	Worker	80.0000	14.3000	LDA,LDT1,LDT2
UV Building & Facility	Vendor	0.00000	8.80000	HHDT,MHDT
UV Building & Facility	Hauling	44.7353	20.0000	HHDT
UV Building & Facility	Onsite truck	—	—	HHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Worker	60.0000	14.3000	LDA,LDT1,LDT2

New Flash Mix Facility and Raw Water Valves/Meter STation	Vendor	0.00000	8.80000	HHDT,MHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Hauling	2.69378	20.0000	HHDT
New Flash Mix Facility and Raw Water Valves/Meter STation	Onsite truck	—	—	HHDT
New Filters	Worker	80.0000	14.3000	LDA,LDT1,LDT2
New Filters	Vendor	0.00000	8.80000	HHDT,MHDT
New Filters	Hauling	44.2195	20.0000	HHDT
New Filters	Onsite truck	—	—	HHDT
Temporary Chemical Storage Facility	Worker	60.0000	14.3000	LDA,LDT1,LDT2
Temporary Chemical Storage Facility	Vendor	0.00000	8.80000	HHDT,MHDT
Temporary Chemical Storage Facility	Hauling	16.0000	20.0000	HHDT
Temporary Chemical Storage Facility	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Retaining Walls Ph 2	0.00000	25,200.0	0.00000	0.00000	0.00000
Site Yard Utilities - Electrical and I&C	0.00000	5,500.00	0.00000	0.00000	0.00000
New Flocc Sed Basins	0.00000	1,800.00	8.00000	0.00000	0.00000

UV Building & Facility	0.00000	36,500.0	8.00000	0.00000	0.00000
New Flash Mix Facility and Raw Water Valves/Meter STation	0.00000	4,500.00	8.00000	0.00000	0.00000
New Filters	0.00000	14,500.0	8.00000	0.00000	0.00000
Temporary Chemical Storage Facility	0.00000	2,300.00	8.00000	0.00000	0.00000

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
New Flocc Sed Basins	User Defined Industrial	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2030	0.00000	203.983	0.03300	0.00400
2031	0.00000	203.983	0.03300	0.00400
2032	0.00000	203.983	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	30.5200	annual days of extreme heat
Extreme Precipitation	7.05000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	7.04000	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	1	1	1	2
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1008
AQ-PM	13.6279
AQ-DPM	6.44680
Drinking Water	19.3830
Lead Risk Housing	3.50347

Pesticides	44.1724
Toxic Releases	12.2531
Traffic	8.32500
Effect Indicators	—
CleanUp Sites	0.00000
Groundwater	0.00000
Haz Waste Facilities/Generators	16.6380
Impaired Water Bodies	12.4528
Solid Waste	0.00000
Sensitive Population	—
Asthma	8.87338
Cardio-vascular	24.0030
Low Birth Weights	3.96459
Socioeconomic Factor Indicators	—
Education	8.98507
Housing	26.6667
Linguistic	8.48559
Poverty	11.6709
Unemployment	39.2113

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	94.13576286
Employed	47.36301809
Median HI	95.03400488
Education	—

Bachelor's or higher	83.90863596
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	69.12613884
Active commuting	19.88964455
Social	—
2-parent households	76.18375465
Voting	90.02951367
Neighborhood	—
Alcohol availability	83.62633132
Park access	81.35506224
Retail density	20.89054279
Supermarket access	29.77030669
Tree canopy	95.66277428
Housing	—
Homeownership	96.06056718
Housing habitability	55.85782112
Low-inc homeowner severe housing cost burden	60.27203901
Low-inc renter severe housing cost burden	8.315154626
Uncrowded housing	96.93314513
Health Outcomes	—
Insured adults	84.53740536
Arthritis	0.0
Asthma ER Admissions	89.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0

Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	62.0
Cognitively Disabled	74.6
Physically Disabled	71.5
Heart Attack ER Admissions	68.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	1.7
SLR Inundation Area	0.0
Children	94.5
Elderly	56.5
English Speaking	91.8
Foreign-born	19.4
Outdoor Workers	92.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	89.3
Traffic Density	15.9

Traffic Access	0.0
Other Indices	—
Hardship	10.1
Other Decision Support	—
2016 Voting	94.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	1.000000
Healthy Places Index Score for Project Location (b)	93.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	information provided by design team

Construction: Construction Phases	Based on design team input
Construction: Off-Road Equipment	Based on information from design team
Construction: Dust From Material Movement	Based on information from the design team
Construction: Trips and VMT	Based on information from design team
Construction: On-Road Fugitive Dust	Based on design team
Construction: Architectural Coatings	based on design team

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	0.00000	8.00000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value
Site Retaining Walls Ph 2	Other Material Handling Equipment	Number per Day	3.00000	2.00000
Site Yard Utilities - Electrical and I&C	Excavators	Number per Day	3.00000	4.00000
Site Yard Utilities - Electrical and I&C	Other Material Handling Equipment	Number per Day	4.00000	2.00000
New Flocc Sed Basins	Excavators	Number per Day	1.000000	4.00000
New Flocc Sed Basins	Other Material Handling Equipment	Number per Day	1.000000	2.00000
UV Building & Facility	Excavators	Number per Day	3.00000	4.00000
UV Building & Facility	Excavators	Hours Per Day	7.00000	8.00000
UV Building & Facility	Pumps	Hours Per Day	7.00000	8.00000
UV Building & Facility	Other Material Handling Equipment	Number per Day	3.00000	2.00000
New Flash Mix Facility and Raw Water Valves/Meter STation	Excavators	Number per Day	1.000000	4.00000

New Flash Mix Facility and Raw Water Valves/Meter STation	Excavators	Hours Per Day	7.00000	8.00000
New Flash Mix Facility and Raw Water Valves/Meter STation	Pumps	Number per Day	3.00000	1.000000
New Flash Mix Facility and Raw Water Valves/Meter STation	Other Material Handling Equipment	Number per Day	1.000000	2.00000
New Filters	Excavators	Number per Day	1.000000	4.00000
New Filters	Excavators	Hours Per Day	7.00000	8.00000
New Filters	Pumps	Number per Day	3.00000	1.000000
New Filters	Other Material Handling Equipment	Number per Day	1.000000	2.00000
Temporary Chemical Storage Facility	Excavators	Number per Day	1.000000	4.00000
Temporary Chemical Storage Facility	Excavators	Hours Per Day	7.00000	8.00000
Temporary Chemical Storage Facility	Pumps	Number per Day	3.00000	1.000000
Temporary Chemical Storage Facility	Other Material Handling Equipment	Number per Day	1.000000	2.00000

8.4.4. Dust from Material Movement

Phase Name	Model Parameter	Units	Default Value	New Value
New Flocc Sed Basins	Material Imported	Cubic Yards	—	0.00000
New Flocc Sed Basins	Material Exported	Cubic Yards	—	1,800.00
New Flocc Sed Basins	Material Import/Export Phased?	—	—	No
New Flocc Sed Basins	Total Acres Graded	acres	0.00000	8.00000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Site Retaining Walls Ph 2	Worker	One-Way Trips per Day	17.5000	60.0000
Site Yard Utilities - Electrical and I&C	Worker	One-Way Trips per Day	15.0000	80.0000
New Flocc Sed Basins	Worker	One-Way Trips per Day	17.5000	60.0000
UV Building & Facility	Worker	One-Way Trips per Day	0.00000	80.0000

New Flash Mix Facility and Raw Water Valves/Meter STation	Worker	One-Way Trips per Day	0.00000	60.0000
New Filters	Worker	One-Way Trips per Day	0.00000	80.0000
Temporary Chemical Storage Facility	Worker	One-Way Trips per Day	0.00000	60.0000

8.4.7. On-Road Fugitive Dust

Phase Name	Model Parameter	Units	Default Value	New Value
Site Retaining Walls Ph 2	Onsite Truck Trip Paved	%	0.00000	95.0000
Site Yard Utilities - Electrical and I&C	Onsite Truck Trip Paved	%	0.00000	95.0000
New Flocc Sed Basins	Onsite Truck Trip Paved	%	0.00000	95.0000
UV Building & Facility	Onsite Truck Trip Paved	%	0.00000	95.0000
New Flash Mix Facility and Raw Water Valves/Meter STation	Onsite Truck Trip Paved	%	0.00000	95.0000
New Filters	Onsite Truck Trip Paved	%	0.00000	95.0000
Temporary Chemical Storage Facility	Onsite Truck Trip Paved	%	0.00000	95.0000

Appendix B. Biological Resources Existing Conditions Evaluation

Technical Memorandum

11010 White Rock Road, Suite 200 ● Rancho Cordova, CA 95670 ● 916.631.4500

Via Email:

To:	Michael C. Baron, El Dorado Irrigation District
From:	Drew Sutton and Melinda Mohamed, GEI Consultants, Inc.
cc:	
Date:	August 6, 2026
Re:	Biological Resources Existing Conditions El Dorado Hills Water Treatment Plant Improvements Project El Dorado County, CA
Project No.	2601578

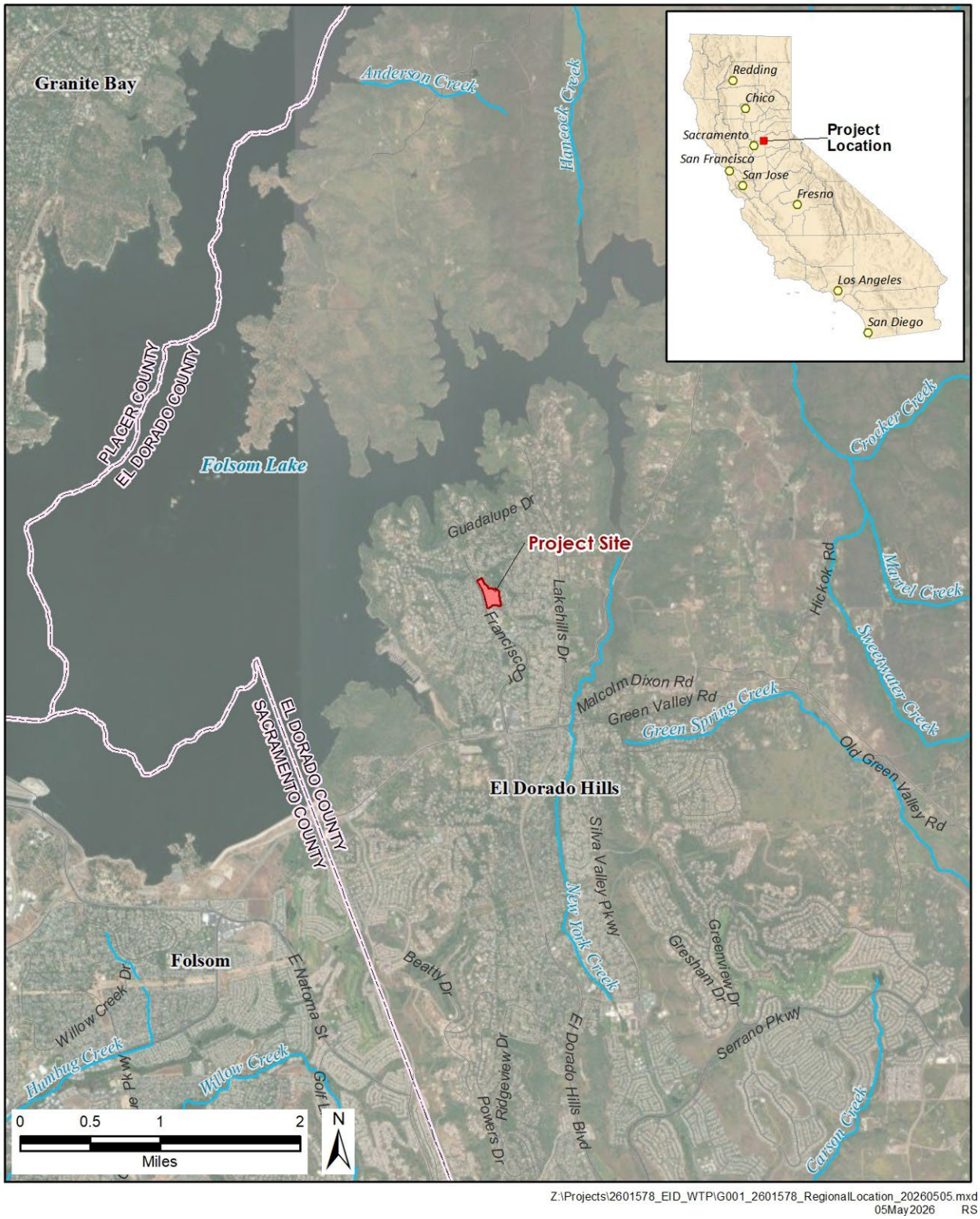
This technical memorandum describes existing biological conditions associated with the El Dorado Hills Water Treatment Plant Improvements Project (project; EDHWTP) proposed by the El Dorado Irrigation District (District). Existing habitat at the location surveyed in 2026 and evaluated for project activities is described, including potential for special-status plant and wildlife species to occur at these locations.

Project Location and Components

EDHWTP is owned and operated by EID and provides potable water service to the El Dorado Hills community in El Dorado County, California. EDHWTP is located on Francisco Drive near Folsom Lake (**Figure 1**) and functions as a primary treatment facility within the District's water supply and distribution system. EDHWTP was originally constructed in the early 1960s on land acquired from the El Dorado Hills Community Services District (CSD) and was operated by the El Dorado County Water District until its transfer to EID in the 1970s (EID 2007). Raw water is pumped from Folsom Lake to the EDHWTP, treated, and distributed throughout the El Dorado Hills region via a system of storage tanks and water transmission lines. Since its original construction, EDHWTP has undergone multiple expansions to accommodate increasing water demand associated with regional growth of its service area. Incremental capacity upgrades have increased the plant's treatment capacity over time, including expansions to approximately 12 million gallons per day (mgd) in 1993, 14 mgd in 2000, 16 mgd in 2002, and 19.5 mgd in 2004 (EID 2007).

The 2007 PEIR evaluated expansion of the EDHWTP to increase treatment capacity and support continued growth in the El Dorado Hills service area, including infrastructure upgrades necessary to meet projected potable water demand and regulatory requirements. The 2007 project was designed to provide water treatment capacity up to 31.5 mgd through a phased approach to meet projected short-term, mid-term, and long-term water demands (EID 2007). Phase 1 of the project included capacity expansion from 19.5 to 24.4 mgd through increased filtration capacity, replacement of chemical storage tanks, upgrades to the chlorine system, installation of new finished water pumping facilities, and improvements to emergency access and backup power systems (EID 2007). Phase 1 also included

Figure 1. Regional Location



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Source: GEI Consultants, Inc. 2026

upgrades to the Folsom Lake Raw Water Pump Station to increase raw water supply. Phase 2 included additional improvements to increase water treatment capacity to 31.5 mgd. These improvements included integration of advanced treatment technologies, such as membrane filtration, and construction of supporting facilities including a new control room, living quarters, security upgrades, and finished water pumping units (EID 2007).

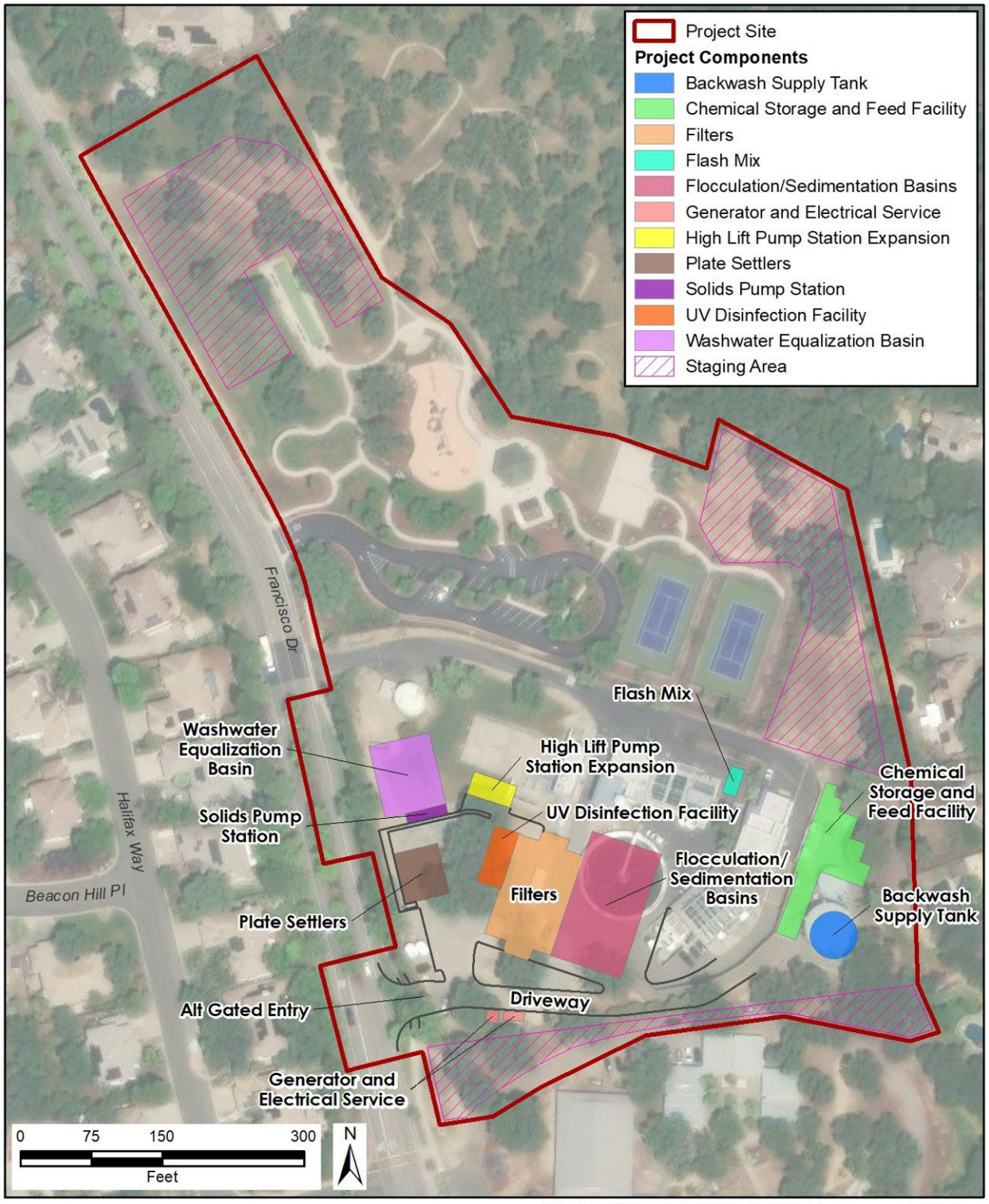
In 2009, EID analyzed the 2009 Subsequent Project to refine design of the EDWTP expansion, including changes to facility layout, relocation and resizing of treatment components, addition of retaining walls, installation of backwash systems, and changes to chemical treatment processes, including replacement of chlorine gas disinfection with sodium hypochlorite and sodium hydroxide systems (EID 2009). Consistent with CEQA Guidelines 15162 and 15168(c)(2), an IS prepared for the 2009 Subsequent Project determined that the proposed refinements would not result in new significant environmental effects or a substantial increase in the severity of previously identified impacts, and the District adopted Addendum No. 1 to the 2007 PEIR. The 2009 Subsequent Project concluded that environmental conditions in the project area remained substantially unchanged from those described in the 2007 PEIR, and that no new mitigation measures were required.

The EDHWTP Improvements Project (modified project) currently being analyzed represents a further refinement of the previously evaluated expansion. The modified project would improve treatment reliability, accommodate increased water demand, and replace aging infrastructure through upgrade and reconfiguration of treatment processes and supporting facilities within the existing water treatment plant site. While these types of improvements were generally evaluated in the 2007 PEIR and the 2009 Subsequent Project IS and Addendum No. 1, the current proposed modifications provide additional design detail and updated facility components that were not previously described at the same level of specificity.

The modified project includes upgrades to core treatment processes, including new flash mix facilities, flocculation and sedimentation basins with plate settlers, enhanced filters, and addition of ultraviolet (UV) disinfection to supplement existing chemical disinfection (**Figure 2**). A new flash mixing facility would be constructed to replace the existing flash mix system. The new flash mixing facility would use a pumped jet diffusion configuration incorporated in a single 36-inch raw water pipe to optimize limited free space at the project site. New flocculation and sedimentation basins would be constructed to improve removal of suspended solids and turbidity prior to filtration by forming large particles (floc) that can easily settle out during sedimentation. The flocculation basins would be constructed with multiple stages of mechanical mixers and ported baffle walls to prevent hydraulic short-circuiting and promote even flow through the basins. The sedimentation basins would incorporate high-rate settling using plate settlers to enhance solids removal efficiency while minimizing the overall footprint of facilities. The new filtration facilities would be enhanced with multiple dual-media filters that more efficiently remove suspended solids, turbidity, and microbial contaminants that were not removed during clarification.

Additionally, a new UV disinfection facility would be constructed downstream of the filters using a combined filter effluent UV reactor configuration. The UV system would utilize low-pressure, high-output lamps in a cross-flow reactor type to disinfect treated water prior to distribution. A new centralized storage and feed system would replace three existing chemical storage and feed areas onsite. The new facility would provide storage and feed for water treatment chemicals for corrosion control, coagulation,

Figure 2. Modified Project Components



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flocculation and disinfection. Improvements to backwash and solids management facilities would enhance management of filter backwash and treatment of residuals generated during plant operations. The modified project would convert the existing Raw Water Storage Tank to a backwash supply tank to provide a source for filter backwashing. A new Washwater Equalization (EQ) basin is proposed to store and equalize backwash waste from the filters. The EQ basin would be constructed of concrete and attach to a new solids pump station. The solids pump station would be located near the lowest elevation of the plant site to allow as much gravity flow as possible into the pump station. The pump station would receive solids from the sludge collectors in the sedimentation basins and in the EQ basin, and from the plate settler. The pump station would then discharge to the sewer at the existing sewer discharge location in the gravel parking lot south of the plant site. Plate settlers systems would be replaced to improve solids separation efficiency. After startup and commissioning of the new plate settlers system the existing system would be demolished.

Biological Study Area

The biological study area (BSA) for this investigation includes the project site shown in Figure 2.

Investigation Methods

This section summarizes the data collection methodologies used by GEI Consultants, Inc. (GEI) biologists to characterize the biological setting of the BSA.

Desktop Review

Before conducting the field survey, GEI biologists reviewed the following sources for information on habitat conditions and biological resources in the BSA and larger project vicinity:

- Aerial U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (IPaC; USFWS 2026a) (See Appendix B)
- USFWS Critical Habitat Web Portal (USFWS 2026b)
- California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and QuickView Tool in BIOS 6 (CDFW 2026a)
- California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2026)
- National Marine Fisheries Service (NMFS) Endangered Species Act Critical Habitat Mapper (NMFS 2026a)
- NMFS Essential Fish Habitat Mapper (NMFS 2026b)
- U.S. Geologic Survey (USGS) Clarksville 7.5-minute topographic quadrangle
- Aerial imagery of the study area and vicinity (Google Earth 2026)
- California Department of Conservation California Geological Survey (CGS, CGS 2010)

The USFWS Information for Planning and Consultation System (USFWS 2026a) was queried to identify USFWS-regulated species that have the potential to occur in the study area, and the USFWS Critical

Habitat Web Portal (USFWS 2026b) was reviewed to identify designated critical habitat within the region. A query of the CNDDB QuickView Tool (CDFW 2026a) provided a list of mapped and unprocessed occurrences for special-status species in the Clarksville, California, USGS 7.5-minute quadrangle and all adjacent quadrangles including Rocklin, Pilot Hill, Colma, Folsom, Shingle Springs, Buffalo Creek, Folsom SE, and Latrobe. Next, the CNPS database (CNPS 2026) was queried to identify special-status plant species with the potential to occur in the aforementioned USGS quadrangles. Raw data from the USFWS, CNDDB, and CNPS species database queries are provided in Appendix B.

After conducting the database queries, topographic, soil, vegetation, and aerial data were reviewed to characterize the physical setting of the study area.

Field Investigations

The following field investigations were conducted by GEI biologists to verify and refine data collected during the desktop review.

Reconnaissance-Level Habitat Assessment

GEI biologist Lexi von Ehrenkrook conducted a reconnaissance-level habitat assessment of the study area on April 15, 2026. During the field assessment, habitats for special-status plants and wildlife were evaluated based on several factors, including presence or absence of potentially suitable habitat components or vegetation associations, level of human disturbance, soil types, and other microhabitat characteristics, supplemented by a review of known species occurrences. Habitat assessments for burrowing mammals and birds focused on evaluating potential burrowing or denning sites in and adjacent to the study area. Trees were surveyed for suitable raptor and passerine nesting sites and for evidence of current or past nesting activity. The entire study area was surveyed for the presence of elderberry shrubs (*Sambucus* spp.), the host plant for the federally threatened Valley Elderberry Longhorn Beetle. Aquatic resources in the study area were assessed to determine suitability for breeding, foraging, and rearing habitats for special-status species, such as northwestern pond turtle (*Actinemys marmorata*).

Tree Survey

On April 15, 2026, GEI biologist and Master Arborist Collin Lesko (Certified Arborist #WE-13711BM) conducted a tree survey. Trees in the study area with a diameter at breast height (DBH) of 6 inches or greater were mapped. A follow-up survey to map trees as small as 4 inches in DBH was also conducted to align with County guidance. The tree survey included the following key tasks:

- Inventoried and assessed all trees within the project area and those documented on the 60% plan.
- Inventoried and assessed all trees within the project area and those documented on the 60% plan.
- Conducted a tree assessment that included species documentation, diameter at breast height (DBH), root conditions, trunk, canopy, health and vitality rating, structural conditions, and a photograph.

- Document all heritage trees, oak woodlands to quantify impacts to oak resources for in lieu fees as defined by El Dorado County.

Inventoried trees included both single-stem and multi-stemmed trees. For multi-stemmed trees, an aggregate diameter is the summation of all stems. Trunk diameter measurements were taken at a height of 4.5 feet above grade along the trunk axis, where possible, except for when the trunk split at breast height. In this case, DBH was measured at the main stems of the tree that best represented the diameter. Trunk diameters were measured using a diameter tape and were recorded in accordance with standard protocols described by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (2000), published by ISA. Tree height and canopy measurements were estimated visually, and any measurements used in the impact analysis were based on the diameter of the individual trees.

Biological Conditions

This section discusses the results of the desktop review and field investigations. The existing vegetation communities and sensitive communities found in the study area are discussed below, along with the potential for special-status species to occur.

Results

Vegetation Communities

There are five habitat types in the study area which described below. Each community was mapped and is described below based on data collected in the field. These descriptions include the dominant and common plant species identified in each community. The vegetation descriptions below are generally consistent with vegetation alliances described in the *Manual of California Vegetation* (Sawyer et al. 2009). The study area indicated recent vegetation management, including mowing of the ruderal habitat, and ongoing and recent grazing by goats in blue oak woodland and annual grassland habitats. Based on identifiable species, vegetation and species composition feature similar species previously identified in the 2007 PEIR.

Developed

Developed areas contain asphalt driving roads, concrete walking paths and railings, tennis courts, a bocce ball court, and the water treatment plant infrastructure. Fencing is additionally present separating Lake Forest Park and water treatment plant. The overstory features Raywood ash (*Fraxinus angustifolia*). Ornamental shrubs included bottle brush (*Callistemon sp.*), lavender (*Lavandula sp.*), rock rose (*Cistus sp.*), and fortnight lily (*Dietes iridioides*).

Disturbed

Fencing is present to the east and west of the habitat, as well as intersects the habitat in the south between the water treatment plant and Marina Village Middle School. The overstory features blue oak (*Quercus douglasii*) valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizeni*), and the fencelines are lined with Red Tip Photini (*Photinia spp.*). The understory primarily consisted of pebbles and bare ground. On the southern-most side, occasional and sparse non-native understory was present,

including miner's lettuce (*Claytonia perfoliate*), common bedstraw (*Galium aparine*), and California burclover (*Medicago polymorpha*).

Blue Oak Woodland

Most of the study area is dominated by grey pine-oak woodland in which occasional grey pines (*Pinus sabiniana*) form an overstory above an open to partially closed sub-canopy composed mostly of blue oak with some interior live oak. This plant community also supports a ground cover of grassland species. The herbaceous understory is comprised of species characteristic of the adjacent non-native grassland described below.

Non-Native Annual Grassland

The open habitat and the understory of the foothill pine-oak woodland is non-native grassland, a plant community characterized by a dense cover of annual grasses with numerous species of non-native annual forbs and native wildflowers. Characteristic grass species observed include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and medusa head grass (*Taeniatherum caput-medusae*). Common non-native forbs include filaree (*Erodium spp.*), rose clover (*Trifolium hirtum*), pineapple weed (*Chamomilla suaveolens*), winter vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), and knotted hedge-parsley (*Torilis nodosa*). Native common yarrow (*Achillea millefolium*) was observed in the study area.

Ruderal

The ruderal habitat featured similar species with the non-native annual grassland, however, had decreased species diversity and the identifiable species were only non-native. Identifiable species included filaree (*Erodium spp.*), common bedstraw (*Galium aparine*), cut leaf geranium (*Geranium dissectum*), prickly lettuce (*Lactuca serriola*).

Trees

There were 71 trees mapped in the study area. Many of the trees in the study area are native species (56 total), the most common being blue oak, coast redwood, valley oak, and interior live oak. A total of 15 ornamental or non-native trees were mapped in the study area, including but not limited to Deodar cedar (*Cedrus deodara*), Bradford pear (*Pryus calleryana*), and Aleppo pine (*Pinus halepensis*).

The study area is in El Dorado County. The County's Oak Resources Conservation Ordinance (Chapter 130.39 of the Zoning Ordinance) and the Oak Resources Management Plan in the Long Range Planning Division's 2017 General Plan Biological Resources Policy Update Project provide protection guidance that applies to the proposed project. The County tree ordinance protects native oak trees, including any live native oak tree of the genus *Quercus* (including blue oak, valley oak, California black oak (*Quercus kelloggii*), interior live oak, canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring six inches dbh or greater. Furthermore, all protected oak trees with a DBH of 36 inches or greater, or a multiple trunked tree with the aggregate diameter of the three largest trunks measuring 36 inches dbh or greater, are considered heritage trees according to Chapter 130.39.030 - Definitions in the County Code of

Ordinances. Although other native trees are not explicitly protected under County ordinances, they should be protected where possible, given the nature of the proposed project and the site conditions, where forested areas in the study area are characterized as existing or relict riparian areas associated with the American River floodplain.

Special-status Species

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

- Listed, proposed, or candidates for listing under the Federal Endangered Species Act (ESA)
- Listed or candidate for listing under the California Endangered Species Act
- Designated as Species of Special Concern (SSC) by CDFW
- Designated as Fully Protected by CDFW
- Species that meet the definition of rare or endangered under CEQA include CNPS List Ranks 1B and 2.

The results of USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to occur in the study area**. Tables 1** and **2** summarize all special-status plant and wildlife species returned in the database queries, respectively, and describe the habitat requirements and conclusions regarding the potential for each species to occur or be impacted in the study area.

The "Impacts Analyzed" column in **Tables 1** and **2** present the determinations for each species regarding their potential to occur in the study area. Species that have a "No" in the" Impacts Analyzed" column, were determined to have no potential to occur in the study area. Species were removed from the analysis based on a combination of an absence of suitable habitat in the study area, the study area being outside the species known range, and/or the study area only providing foraging or overwintering habitats and not breeding. No special-status plants were determined to have the potential to occur in the project area and will, therefore, not be analyzed further in this document.

Special-status Wildlife with Potential to Occur in the Biological Study Area

Due to the highly developed, urbanized and managed nature of the landscape within the study area, special-status wildlife species are not anticipated to be affected by project implementation, however, other nesting migratory birds and raptors may be present. Please see **Table 2** for a summary of all special-status wildlife returned in the desktop review, along with rationales for removing from consideration in this impact analysis.

Table 1. Summary of Special-status Plants with the Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Allium jepsonii	Jepson's onion	None	None	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 985–4,330 feet. Blooming period: April–August	No	Study area is below the species elevation range and there are no suitable soils present.
Balsamorhiza macrolepis	big-scale balsamroot	None	None	Sometimes serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland. Elevation: 150–5,100 feet. Blooming period: March–June	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Calystegia stebbinsii	Stebbins' morning-glory	Endangered	Endangered	Sometimes in gabbro soils and sometimes in seeps of cismontane woodland and the openings of chaparral. Elevation: 605–3,575 feet. Blooming period: April–July	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Carex xerophila	chaparral sedge	None	None	Serpentine and gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 915–2,525 feet. Blooming period: March–June	No	Study area is below the species elevation range.
Ceanothus roderickii	Pine Hill ceanothus	Endangered	Rare	Sometimes serpentine and gabbro soils in chaparral and cismontane woodland. Elevation: 805–3,575 feet. Blooming period: April–June	No	No suitable habitat or soils present in study area.
Eryngium pinnatisectum	Tuolumne button-celery	None	None	Mesic soils in vernal pools, cismontane woodland, and lower montane coniferous forest. Elevation: 230–3,000 feet. Blooming period: May–August	No	No suitable habitat present in study area.
Fremontodendron decumbens	Pine Hill flannelbush	Endangered	Rare	Rocky soils that are sometimes gabbro or sometimes serpentine in chaparral and cismontane woodland. Elevation: 1,395–2,495 feet. Blooming period: April–July	No	Study area is below the species elevation range.
Galium californicum ssp. sierrae	El Dorado bedstraw	Endangered	Rare	Gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 320–1,920 feet. Blooming period: May–June	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Gratiola heterosepala	Boggs Lake hedge-hyssop	None	Endangered	Clay soils in vernal pools and lake margins of marshes and swamps. Elevation: 35–7,790 feet. Blooming period: April–August	No	No suitable habitat present in study area.
Juncus leiospermus var. ahartii	Ahart's dwarf rush	None	None	Mesic soils in valley and foothill grassland. Elevation: 100–750 feet. Blooming period: March–May	No	No suitable habitat present in study area.
Legenere limosa	legenere	None	None	Vernal pools. Elevation: 5–2,885 feet. Blooming period: April–June	No	No suitable habitat present in study area.
Navarretia myersii ssp. myersii	pincushion navarretia	None	None	Often acidic soils in vernal pools. Elevation: 65–1,085 feet. Blooming period: April–May	No	No suitable habitat present in study area.
Orcuttia tenuis	slender Orcutt grass	Threatened	Endangered	Often in gravelly soils in vernal pools. Elevation: 110–5,775 feet. Blooming period: May–September(October)	No	No suitable habitat present in study area.
Orcuttia viscida	Sacramento Orcutt grass	Endangered	Endangered	Vernal pools. Elevation: 100–330 feet. Blooming period: April–July (September)	No	No suitable habitat present in study area.
Packera layneae	Layne's ragwort	Threatened	Rare	Rocky soils that are sometimes serpentine or sometimes gabbro in chaparral and cismontane woodland. Elevation: 655–3,560 feet. Blooming period: April–August	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.
Sagittaria sanfordii	Sanford's arrowhead	None	None	Shallow freshwater marshes and swamps. Elevation: 0–2,135 feet. Blooming period: May–October (November)	No	No suitable habitat present in study area.
Wyethia reticulata	El Dorado County mule ears	None	None	Sometimes clay or sometimes gabbro soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 605–2,065 feet. Blooming period: April–August	No	Preferred soils are not present, and ongoing vegetation management likely precludes species from occurring in the study area.

Sources: USFWS 2026a, CDFW 2026a, CNPS 2026

Table 2. Summary of Special-status Wildlife with the Potential to Occur in the Biological Study Area

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Invertebrates						
Bombus crotchii	Crotch's bumble bee	None	Candidate Endangered	Species requires nesting, foraging, and overwintering habitat. Primary land cover types that provide the three habitat requirements are grasslands, chaparral, and scrub; oak woodlands and forest likely provide suitable habitat as well (H.T. Harvey & Associates 2024). Suitable nest sites are often located in open grasslands and scrub habitats in abandoned rodent nests underground or above ground in tufts of grass, old bird nests, rock piles, cavities in dead trees, hollow logs, or aboveground manmade structures. They are general foragers and have been reported visiting a wide variety of different habitats and flowering plants if there are suitable nectar sources. Crotch's specifically are best suited to forage at open flowers with short corollas. Food sources include Milkweed (*Asclepias*), Daisy (*Chaenactis*), Lupine (*Lupinus*), Burclover (*Medicago*), Scorpionweed (*Phacelia*), and Sage (*Salvia*) (CA Bumble Bee Atlas 2022, Williams et al. 2014). Plant families most commonly associated with Crotch's bumblebee include legumes (*Fabacea*), dogbanes (*Apocynaceae*), daisy (*Asteraceae*), mint (Lamiaceae), and borage (*Boraginaceae*). It should be noted, that floral associations do not necessarily represent this species' preference for these plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs. Little is known about hibernacula or overwintering, but generally, bumblebees overwinter in soft, disturbed soils or under leaf litter or other debris and they nest underground (Xerces Society 2018).	No	Project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Bombus occidentalis	western bumble bee	None	Candidate Endangered	Species requires nesting, foraging, and overwintering habitat. Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. This species is now largely confined to high elevation sites and a small handful of records on the northern California Coast (Xerces Society 2018). Typically nests underground in abandoned rodent burrows, such as old squirrel or other animal nests, and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nest sites may depend on rodent abundance (Xerces Society 2014). They are general foragers and have been reported visiting a wide variety of flowering plants. Western bumblebee specifically are best suited to forage at open flowers with short corollas. Species most commonly associated with western bumblebee include thistles (*Cirsium*), wild buckwheat (*Erigonum*), goldenrods (*Solidago*), daisy, buckthorn (*Ceanothus*), knapweeds (*Centaurea*), and beardtongues (*Penstemon*) (Xerces Society 2014). It should be noted, that floral associations do not necessarily represent this species' preference for these plants over other flowering plants, but rather may represent the prevalence of these flowers in the landscape where this species occurs.	No	Project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.
Branchinecta lynchi	vernal pool fairy shrimp	Threatened	None	Endemic to California and the Agate Desert of southern Oregon. Found only in ephemeral freshwater habitats, such as vernal pools and similar features, and have life histories highly adapted to the ephemeral environmental conditions. Can be found in a wide range of vernal pools, including extremely small or marginal ones that fill with water for just long enough to allow the individuals to complete their lifecycle (USFWS 2024c).	No	No suitable habitat present in study area.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Danaus plexippus	monarch butterfly	Proposed Threatened	None	Overwinters along the coast from Mendocino County south into Baja California in wind-protected groves of gum (*Eucalyptus spp*.), Monterey pine (*Pinus radiata*), or Monterey cypress (*Hesperocyparis macrocarpa*) with nectar and water sources nearby (IELP 2012, USFWS 2023a). Breeding habitat in California is characterized by the presence of early spring milkweeds (*Asclepias spp*.). Monarch larvae feed exclusively on milkweed species that can occur in a multitude of habitats, including agricultural, riparian, wetlands, meadows, roadsides, and more (Xerces Society 2015).	No	No milkweed is present for breeding habitat. The project site and surrounding area are urbanized, and the vegetation experiences managed irrigation frequent mowing and grazing, and heavy public recreational use.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Threatened	None	Dependent on host plant, elderberry (*Sambucus spp*.), which most commonly grows in riparian woodlands, but also in some upland habitats such as oak savannas and annual grasslands. Adults feed on the elderberry leaves and mate within the elderberry canopy. Females deposit eggs on or adjacent to the host elderberry. The larvae bore into the wood of the host plant where they feed on the pith of the plant for 1 to 2 years. The larvae metamorphose between December and April; the adult then emerges from the chamber through an exit hole. Most records for adults occur from late April to mid-May (USFWS 2007a), although April 15 to June 15 is considered to be the "flight season" for the species. Current presumed range in Central Valley extends from Shasta County south to Fresno County, including the valley floor and lower foothills up to about 500 feet in elevation (USFWS 2017).	No	No suitable habitat present in study area.
Lepidurus packardi	vernal pool tadpole shrimp	Endangered	None	Found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other similar features. Limited to pools that are sufficiently large or are otherwise able to retain water for a long enough duration to complete its lifecycle. Endemic to the Central Valley and patchily distributed from Shasta County south to Tulare County; additionally have isolated occurrences in the San Francisco Bay area and South Coast Range (USFWS 2024d, USFWS 2007b).	No	No suitable habitat present in study area.
Fish						

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	Threatened	None	Includes naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries; excludes such fish originating from San Francisco and San Pablo Bays and their tributaries. This DPS does include steelhead from three artificial propagation programs: Coleman National Fish Hatchery Program, Feather River Fish Hatchery Program and the Mokelumne River Hatchery Program (NMFS 2024). Spawning habitat includes gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning habitat includes estuarine and marine waters (NOAA 2019).	No	No suitable habitat present in study area.
Amphibians						
Rana boylii pop. 5	foothill yellow-legged frog - south Sierra DPS	Endangered	Endangered	Extends from the South Fork American River sub-basin to the transition zone between the Sierra Nevada and the Tehachapi Mountains that border the south end of the California Central Valley (USFWS 2021). Generally found in shallow flowing streams and rivers with at least cobble sized substrate. Breeding generally occurs at the margins of wide shallow channels with reduced flow variation near tributary confluences. Specifically, egg masses are placed in low flow locations on or under rocks with preferred substrates being boulders, cobbles, or gravel (Thomson 2016). Occurs in a wide variety of vegetation types including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadow (Thomson 2016). The species has been documented traveling up to 1,086 feet, 331 meters, from aquatic habitat (Cook et al. 2012, as cited in USFWS 2021).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Rana draytonii	California red-legged frog	Threatened	None	Predominately inhabit permanent fresh water sources such as streams, lakes, marshes, natural and manmade ponds, and drainages in valley bottoms and foothills. Typically, aquatic habitat contains either riparian or emergent vegetation though California red-legged frogs also are known to inhabit ephemeral creeks, drainages, and ponds with minimal riparian and emergent vegetation. California red-legged frogs use these types of aquatic features for breeding and non-breeding activities (USFWS 2022). Aquatic breeding habitat is generally found in still or slow-moving water and can have a wide range of edge and emergent cover amounts. Non-breeding habitat is found in similar aquatic features as breeding habitat but these features may not hold water long enough for the species to successfully complete its aquatic life cycle. While generally found in freshwater habitats, adult California red-legged frogs can survive in saline water for short periods. Upland habitat consists of terrestrial areas adjacent to breeding and non-breeding aquatic habitats (USFWS 2022). The species has been documented traveling up to 2 miles, 3.2 kilometers, from aquatic habitat (USFWS 2022).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.
Spea hammondii	western spadefoot	Proposed Threatened	None	Generally found in grasslands, oak woodlands, coastal sage scrub, and chaparral in washes, floodplains, alluvial fans, playas, and alkali flats. Natural and artificial water bodies are used for breeding. Specifically, vernal pools used by this species have an average ponding duration of 81 days, and successful recruitment occurs in ponds that last on average 21 days longer than larval development time. Pool temperature requirements are from 48°F to 90°F. Pools with invasive species, such as crayfish (*Pacifasticus spp.*), or bullfrogs (*Lithobates catesbeianus*) often, but not always, exclude this species. (Thomson et al. 2016).	No	No pooling breeding habitat is present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.
Reptiles						

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Actinemys marmorata	northwestern pond turtle	Proposed Threatened	None	In California, NWPT ranges from the coastline to the Sierra Nevada Mountain range, from the northern state border with Oregon to Kern County, hugging the east side of the Coastal Range. Intermixing between the NWPT and southwestern pond turtle occurs on the San Francisco Peninsula south to Santa Cruz County and east to the border of Contra Costa County south to Santa Clara County (Spinks et al. 2014). Generally, occurs in various water bodies including permanent and ephemeral systems either natural or artificial. Aquatic habitat can include lakes, ponds, marshes, streams, vernal pools, livestock ponds (Tu, B. and L. Trulio. 2022), sewage detention basins (Germano 2010), and irrigation ditches. Aquatic habitat must be a minimum of 2 feet in depth and have basking sites and underwater shelter. Basking is primarily driven by the need to thermoregulate to allow for digestion and occurs diurnally (Boyer 1965). Suitable basking sites include: rocks, logs, vegetation mats and floating debris (Linderman 1999). Underwater shelter sites includes: undercut banks, submerged vegetation, mud, rocks, and logs (USFWS 2023c). Characteristics for suitable basking sites when in competition with invasive sliders in areas such as canals include: a lower frequency of human disturbance, steeper slopes, and shallower water adjacent to basking site (Lambert et al. 2013). Upland habitat includes annual grasslands, forested habitats, and even urban with landscaping. Nesting site selection requirements include: (1) short, sparse grasses and forbs, (2) no dense overhanging riparian or forested canopy, and (3) friable soils, can be compact and dry like edges of roads and levee shoulders (Thomson et al. 2016). Nesting occurs in the spring or early summer, approximately from May until the middle of July, and is generally within 155.5 meters of aquatic sources, however, nests have been documented up to 467 meters from water (Alvarez and Del Vecchio 2024, Nerhaus 206, Thomson et al. 2016). Females find a suitable site, dig a hole, lay eggs, and cover it back up. The eggs incubate naturally underground for 90-130 days, depending on summer temperatures (USFWS 2024e). Eggs hatch and overwinter underground until the following March. Adult turtles enter brumation in November through February and that may occur in uplands or in aquatic habitat.	No	No suitable habitat present in study area. Folsom Lake is approximately 0.5 miles northwest of the project site and outside of the species' travel range.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Thamnophis gigas	giant gartersnake	Threatened	Threatened	Formerly ranged in the Central Valley from Butte County to Buena Vista Lake in Kern County but now thought to be absent south of Fresno and in Stanislaus County. Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, rice fields and their associated uplands. Upland habitat near aquatic habitat should have burrows or other soil crevices suitable for snakes to reside during their dormancy period (November- mid March). The upland habitat is used for thermoregulation and refugia. Require fresh-water aquatic components with protective emergent vegetative cover for foraging (USFWS 2020).	No	No suitable habitat present in study area.
Birds						
Agelaius tricolor	tricolored blackbird	None	Threatened	Endemic to California with small numbers extending into Oregon, Washington, Nevada, and Baja California. The breeding range is in two disjunct regions separated by the Transverse Ranges of southern California. The first extends from the lowlands west of the Sierra Nevada and extends west across the Central Valley to the coast from Sonoma County to Santa Barbara County. The second extends from the lowlands west of the deserts in southern California and south into northwestern Baja California. Sierra Nevada tricolored blackbirds typically reside in the Central Valley from March-September and migrate into the Sacramento-San Joaquin Delta, northern San Joaquin Valley, and coastal areas in the winter (CDFW 2018b). Require open, accessible water, including wetlands, streams, ponds, reservoirs, and agricultural canals and ditches. Breeding colonies typically occur in valleys or low-lying areas with nesting habitat and extensive grassland, certain agricultural crops, or other suitable foraging habitat. Nesting substrate typically consists of wetland vegetation, Himalayan blackberry, thistle, stinging nettle, or agricultural fields (especially triticale), and, less commonly, in mustard, willows, mallow, wild rose, tamarisk, or giant cane. Foraging habitat includes grasslands, low-density shrublands, pastures, dry seasonal pools, and certain agricultural crops (CDFW 2018b). Utilize rice fields, pastureland, recently cultivated cropland, and grain stores at dairies. Non-breeding colonies require cattails, bulrushes, and other wetland vegetation for shelter (USFWS 2019).	No	No suitable habitat present in study area.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Athene cunicularia	burrowing owl	None	Candidate Endangered	Resident in much of the state in open, dry grasslands and various desert habitats, while also known to occupy highly altered urban landscapes. Will nest or overwinter in a variety of suitable burrows especially those of California ground squirrel (*Otospermophilus beecheyi*), and others such as drainpipes, culverts, self-excavated burrows (Gervais et al. 2008). Species requires open areas in rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other land covers that have some levels of human disturbance such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CWHR Program Staff 1999d).	No	No ground squirrel burrows were observed on the project site. No suitable habitat is present.
Buteo swainsoni	Swainson's hawk	None	Threatened	Typically occurs in California only during the breeding season (March to September). Breeding resident in the Central Valley, Klamath Basin, Northeastern Plateau, and in juniper-sagebrush flats of Lassen County (CDFW 2016). Limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley. Nests in oak savanna and cottonwood riparian areas adjacent to foraging habitat of grasslands, agricultural fields, and pastures where they often follow farm equipment to gather killed and maimed rodents. Increasingly also nests in sparse stands of gum trees (*Eucalyptus spp.*) and Australian pines (*Casuarina equisetifolia*) and often forage along roadsides and grassy highway medians. Winters primarily in Argentina or Mexico, with most birds absent from California October through February, though a few overwinter in the Sacramento-San Joaquin River Delta. Prolific migrant through southern California in spring and fall, with large mixed-age groups of birds frequently observed kettling high overhead on thermals or foraging together on freshly cut agricultural fields (CWHR Program Staff 2006).	No	The project site is outside the range and predicted habitat. Project site and surrounding area are urbanized, and frequent and heavy public recreational use.

Scientific Name	Common Name	Federal Status	State Status	Habitat Characteristics	Impacts Analyzed	Rationale
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	Permanent resident in the highest Coast Range mountains, across the Cascade Range, and down the Sierra Nevada to the eastern Transverse Ranges of San Bernardino and Riverside Counties. Uncommon migrant and winter visitor to lowland rivers, lakes, and reservoirs. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine (*Pinus ponderosa*) (CWHR Program Staff 1999a). Requires large bodies of water or rivers with abundant fish, and adjacent snags (CWHR Program Staff 1999a).	No	No suitable habitat present in study area. Project site and surrounding area are urbanized, and frequent and heavy public recreational use.
Laterallus jamaicensis coturniculus	California black rail	None	Threatened	Occurs in saline, brackish, and fresh emergent wetlands. Scarce, but true abundance difficult to determine due to small size and extremely secretive nature. Known to nest at scattered locations in the San Francisco Bay Area and Delta region, Point Reyes National Seashore, San Luis Obispo and Orange Counties, as well as the Imperial and Lower Colorado River Valleys. Appears intermittently and sparingly at a few locations in the Sacramento Valley (CWHR Program Staff 1999c).	No	No suitable habitat present in study area.
Riparia riparia	bank swallow	None	Threatened	A colonial nester in riparian and lacustrine bluffs or cliffs with fine-textured or sandy soils into which the nest cavities are dug. Also nests in earthen banks as well as sand and gravel pits. Declined drastically in the state over the 20th Century due to loss of riparian habitat and stabilization of natural banks. Currently most numerous in the Sacramento Valley along the Sacramento, Feather, and American Rivers, and Cache Creek in western Yolo County. Scarce and very local on the central coast. Occurs elsewhere in the state as an uncommon to rare migrant (CWHR Program Staff 1999b).	No	No suitable habitat present in study area.

Sources: USFWS 2026a, CDFW 2026a, NMFS 2026a, NMFS 2026b

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration under state and federal regulations.

Sensitive Natural Communities

CDFW identifies and ranks natural communities of special concern that are of limited distribution statewide or within a county or region. Specifically, communities assigned a S1 (critically impaired) through S3 (vulnerable) ranking in the California Sensitive Natural Communities list (CDFW 2025b) are considered sensitive. None of the land cover types in the BSA are on the CDFW sensitive communities list.

Critical Habitat

No critical habitat is present within the project area.

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Appendices

Appendix A Representative Photos

https://geiconsultant-my.sharepoint.com/personal/dresut2326_geiconsultants_com/Documents/EID EDHWTP/Biological Memo/Bio Tech Memo/Draft Bio TM_EID WTPIP 07022026.docx

Appendix A Representative Photos



View of oak from southern portion of project area, looking northward.



Mature oak in between Utility Road and Marina Village Middle School directly to the south of the project area.



View of water tank along Utility Rd, near intersection of Utility Rd and Francisco Dr within the project area.



Grazing domestic goat herd north of utility road within the project area.



Grazed oak woodland to the north of the project area, near the intersection of Francisco Dr and Promontory Point Dr.



Grazing domestic goat herd to the north of the project area.



Driveway to Lake Forest Park recreational areas, in the north of the project area.



Landscaping along utility road, looking north toward Lake Forest Park tennis courts.

Appendix C. Tree Assessment and Oak Tree Impacts Evaluation

Technical Memorandum

11010 White Rock Road, Suite 200 ● Rancho Cordova, CA 95670 ● 916.631.4500

Via Email:	mbaron@eid.org
To:	Michael Baron, El Dorado Irrigation District
From:	Julie De Barros, GEI
cc:	Collin Lesko, GEI; Drew Sutton, GEI
Date:	July 16, 2026
Re:	Tree Assessment and Oak Tree Impacts Evaluation El Dorado Hills Water Treatment Plant Improvement Project El Dorado County, CA
Project No.:	2601578

This technical memorandum (TM) details the results of a tree assessment and oak tree impacts evaluation conducted by GEI Consultants, Inc. (GEI) on behalf of the El Dorado Irrigation District (the District) for the El Dorado Hills Water Treatment Plant (EDHWTP) Improvement Project. The 5.73 acres EDHWTP boundary is part of the larger assessed project site, which was expanded to include adjacent areas (**Figure 1**). The project site is located within a residential neighborhood near the Folsom Reservoir. The purpose of this TM is to provide the GEI Arborist's observations, impact evaluation results, and opinions regarding the anticipated construction impacts on trees within the project site.

Under Government Code Section 53091, subsections (d) and (e), the proposed project is exempt from County land use jurisdiction as a domestic water supply project. Additionally, the El Dorado County's *Oak Resources Conservation Ordinance* (the ordinance, Chapter 130.39 of the Zoning Ordinance) applies only to projects on privately-owned land. However, the ordinance specifies that where mitigation to oak woodlands is required under California Environmental Quality Act (Public Resources Code [PRC] Section 21083.4), the mitigation requirements of the ordinance *may be* applied.

Therefore, the District is applying the oak tree removal and mitigation requirements in the ordinance to this project. The format of this TM meets the requirements for the Oak Resources Technical Report, as required by the County of El Dorado for oak tree removals.

Figure 1. Regional Location

Scope

The scope of the tree assessment includes the following services:

- Conduct an International Society of Arboriculture's (ISA) Level 2: Basic Assessment of tree resources within the boundary of the water treatment plant footprint.
- Documentation includes: location, species, trunk diameter (DBH), height, canopy radius, and general health and structural condition;
- Provide an assessment of oak tree impacts based on the EDHWTP Improvements Construction Plans at 60% Design (January 2026);
- Provide recommended mitigation measures for retained oak trees to prevent unintentional construction impacts;
- Habitat and vegetation community mapping within the project site; and
- Document all the above-listed services in a written report submitted to the District.

The scope of this report does not include the analysis of risks of tree failure.

Limitations

Limitations of the tree assessment presented in this TM include the level of survey performed, which pertains to the level of information that can be gathered at each tree to conduct an impact analysis. The ISA's Tree Risk Assessment Manual (2017) defines three levels of tree risk assessment:

- Level 1: Limited Visual
    - Drive-by survey, walk-by, aerial patrol
- Level 2: Basic Assessment
    - 360-degree inspection of each tree at ground level with use of simple tools
- Level 3: Advanced Assessment
    - Aerial inspections by a climber, use of decay-detection devices, load testing, and advanced tools

The survey conducted for this task order was a Level 2 Basic Assessment. This level of survey is ground-based and allows the arborist to fully inspect a tree's buttress roots, trunk, branches, and surrounding site conditions. This level of assessment allows for a synthesis of the information collected but can only detect visible defects. Internal, below ground, and upper-crown factors can be difficult or impossible to see and assess. No decay detection through drilling or tomography, aerial crown inspections, or root crown examinations were performed for this TM (Level 3 Advanced Assessment). Additionally, this TM provides little to no discussion regarding targets that could become damaged or injured if trees were to fail.

The project site includes areas located outside of the boundary of the EDHWTP, which includes Lake Forest Park. Activities in areas outside of the EDHWTP boundaries are currently unknown. Trees located

within Lake Forest Park were not surveyed or assessed. The most recent reporting provided by EID was completed by ABACUS in 2009. Any impacts to trees within the park would need to be reassessed. This report does not represent legal advice and, as such, should not be used or relied upon for such advice.

Qualifications Statement

Julie De Barros is a multidisciplinary environmental professional with over 13 years of experience as an ISA Certified Arborist (WE-11439A), 10 years as a Tree Risk Assessment Qualified (TRAQ) professional, and 7 years as an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist (RCA #699). She is a third-generation consulting arborist and has experience in a variety of arboricultural disciplines. She has participated in or led projects such as dead and dying tree inventories, complete tree inventories, tree management plans, tree canopy impact analyses, tree risk assessments, carbon sequestration calculations, tree mitigation, restoration plans, construction monitoring for pruning and removal, construction management for tree protection zones, and on-call consultations for urban landscapes. Ms. De Barros received her Bachelor of Science degree in Environmental Science and Policy, with a minor in Biology, from California State University-Long Beach (CSULB) in 2013. Additionally, she received her Master of Science degree in Geographic Information Science from CSULB in 2014.

Collin Lesko is involved in wide range of duties in the arboriculture field with over 7 years of experience. He is an ISA Board Certified Master Arborist (WE-13711BM) and holds multiple other certifications including TRAQ, ISA Urban Forest Professional, and California Pesticide Applicator Qualification (QAL). His diverse experiences range from arborist climbing foreman, plant healthcare professional, inventory specialist, consulting arborist, to leading tree planning crews with non-profits and includes experiences in Belgium where he first began his arboriculture career. He has completed a plethora of reports for multiple municipalities around the Bay Area and beyond in tree preservation, construction monitoring, tree risk assessment, and tree health evaluations. He earned his Bachelor of Science in Urban Forestry from Oregon State University in 2019 and is in his final term at University of British Columbia to complete his Master of Science in Urban Forestry.

Methodology

Tree Assessments

Tree assessments were conducted by GEI Arborist Collin Lesko on April 15, 2026, with assistance from GEI biologist Lexi von Ehrenkrook. Individuals present to discuss clearance issues included Michael Baron (the District's Environmental Review Analyst).

The following key tasks were performed during the survey:

- Inventoried and assessed all trees within the EDHWTP boundary and those documented on the 60% design plans;
- Assessment details included species documentation, DBH, root conditions, trunk, canopy, health and vitality rating, structural conditions, and a photograph;
- Minimum diameter for inclusion in the assessment was 6 inches DBH;

- Documented all impacts to heritage trees and oak woodlands for quantification of in lieu fees as defined by El Dorado County.

Tree Condition Evaluations

Factors such as biological, structural, anthropogenic, environmental surroundings, and construction activities are considered when determining an individual tree's condition. Trees were evaluated and rated using **Appendix A**. It should be noted that tree condition and vitality ratings are subjective and based on the combined observed characteristics noted during the time of the survey and the arborist's best professional judgment. Examples of each of the factors used to determine tree condition include:

- Biological: amount of deadwood in the canopy; presence of mechanical damage and/or evidence of closure (callous); evidence of stress (amount of leaf surface), disease, decay, or infestation
- Structural: root collar condition, branch and trunk configuration and attachments, canopy balance, general structural defects
- Anthropogenic: proximity to hardscape, utility lines, fences, guardrails, and other structures
- Environmental: topography, tree location relative to stand of trees (inside tree or edge tree), prevailing wind and weather conditions, understory vegetation
- Construction: proximity to ground disturbing activities (e.g. trenching or filling), equipment clearance, and final grade.

The factor details that helped determine an individual's trees condition were recorded for each assessed tree and can be found in the narrative below or within three columns (root notes, trunk notes, and canopy notes) in **Appendix B**.

Tree Diameter Measurements

Inventoried trees included both single-stem and multi-stemmed trees. For multi-stemmed trees, an aggregate diameter is the summation of the three largest stems. Individual trunk measurements and aggregate diameters, as well as structural notes for each tree can be found in **Appendix B**. Trunk diameter measurements were taken at a height of 4.5 feet above grade along the trunk axis, where possible, with the exception of when the trunk split at breast height. In this case, DBH was measured at the main stems of the tree that best represented the diameter. Trunk diameters were measured using a diameter tape and were recorded in accordance with standard protocols described by the Council of Tree and Landscape Appraisers in the *Guide for Plant Appraisal* (2000), published by ISA. Tree height and canopy measurements were estimated visually, and any measurements used in the impact analysis were based on the diameter of the individual trees.

Vegetation Community Mapping

As required by El Dorado County's Oak Resources Conservation Ordinance (see below), vegetation community mapping specifically oak woodlands resources was completed in accordance with California Department of Fish and Game 2009 *Protocols for Surveying and Evaluation Impacts to Special Status*

Native Plant Populations and Natural Communities and the *List of Vegetation Alliances and Associations* (CDFG 2010). Vegetation community mapping was conducted by GEI Biologist Lexi von Ehrenkrook on April 15, 2026, utilizing ESRI's Field Maps application. Vegetation community mapping was completed for the entire project site, which includes areas outside of the EDHWTP.

El Dorado County's Oak Resources Conservation Ordinance

Definitions and exemptions from El Dorado County's *Oak Resources Conservation Ordinance* (Chapter 130.39 of the Zoning Ordinance) are included here for reference and understanding of the reporting requirements.

Definitions

The following are verbatim definitions:

- *Arborist* means a person certified by the ISA that provides professional advice regarding trees in the County.
- *Diameter at breast height (DBH)* means the measurement of the diameter of a tree in inches, specifically four feet six inches above natural grade on the uphill side of the tree. In case of trees with multiple trunks, the diameter of the three largest stems (trunks) at breast height shall be combined to calculate the diameter at breast height of the tree.
- *Heritage trees* means any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring 36 inches DBH or greater, or a multiple trunked tree with the aggregate diameter of the three largest trunks measuring 36 inches DBH or greater.
- *Impacts*, for individual native oak trees, means the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. Impact includes regulated activities within the tree protection zone. For oak woodlands, tree and land clearing associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities.
- *In-lieu fee* means cash payments that may be paid into the County's Oak Woodland Conservation Fund by an owner or developer as a substitute for a deed restriction, conservation easement or replacement planting. In-lieu fee amounts for individual native oak trees, heritage trees, and oak woodlands as presented in the ORMP may be adjusted by the County over time to reflect changes in land values, labor costs, and nursery stock costs.
    - Total Cost per Acre (Oak Woodlands) $8,285
    - Total Cost per Inch (Non-Heritage Trees) $153
    - Total Cost Per Inch (Heritage Trees) – 3:1 Ratio $459
- *Individual native oak tree(s)* means any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasi*i), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus*

garryana), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring six inches DBH or greater, but less than 36 inches DBH, or with a multiple trunk with an aggregate trunk diameter measuring greater than ten inches DBH and is not a heritage tree.

- *Minor trimming* means the cutting of dead or diseased limbs or twigs, parts which may result in damage to an existing dwelling, parts which must be removed for safety or public utilities or pruning to promote the health or growth of the tree. Safety includes, but is not limited to, minor trimming to comply with defensible space requirements outlined in Chapter 8.09 of the code. Trimming which substantially reduces the overall size, density or alters the natural shape of the tree is not considered minor trimming.
- *Oak resources,* collectively, oak woodlands, individual native oak trees, and heritage trees.
- *Oak resources technical report* means a stand-alone report prepared by a qualified professional containing information, documents and formatting as specified in Section 2.5 (Oak Resources Technical Reports) of the Oak Resources Management Plan (ORMP).
- *Oak woodland(s)* means an oak stand with a greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover (California Fish and Game Code Section 1361).
- *Oak woodland removal permit* means a permit issued by the county allowing the removal of oak trees that are a component of an oak woodland. Where two acres or more of oak woodlands will be impacted, an oak woodland removal permit is required. Otherwise, an oak tree removal permit is required. An oak resources technical report shall accompany any oak woodland removal permit application submitted to the county. Conditions of approval may be imposed on the permit.
- *Tree Protection Zone* (*TPZ)* means the area surrounding a tree where the majority of the tree's roots take place. The TPZ shall be the greater of the following:
    - one foot diameter for every inch of trunk diameter, or
    - the area of ground beneath the tree's canopy.

Exemptions

Oak resources impact mitigation is required for any non-exempt action requiring discretionary development entitlements or approvals from El Dorado County, or ministerial actions requiring a building permit or grading permit issued by El Dorado County. With the exception of dead, dying, and diseased trees, trees that have fallen or sustained damage due to natural disasters/incidents or trees considered hazardous vegetation pursuant to Section 8.09 of [the Ordinance] (Hazardous Vegetation and Defensible Space), all impacts to heritage trees, individual valley oak trees, and valley oak woodlands shall be subject to the provisions and mitigation requirements contained in the ORMP, regardless of whether or not the action requires a development permit. With the above-noted exceptions, the provisions of Chapter 130.39 do not apply to the following activities except where provisions of a memorandum of understanding between the County and another governmental agency provide for County regulatory authority or otherwise provided by law. Although County permission is not required to remove oak trees for certain activities detailed in Section 130.39.070, property owner documentation of oak removal is strongly encouraged. Exemptions from mitigation requirements, including insurance-required removal, are listed below but not detailed:

- Fire Safe Activities

- Dead, Dying, or Diseased Trees
- Natural Disaster Damaged Trees
- Utility Line Location, Construction or Maintenance
- Agricultural Activities
- Emergency Operations
- Timber Harvest Plans, and
- Minor Trimming.

Results

Vegetation Community Mapping

There are five vegetation community types within the project site, with each community mapped and described based on data collected in the field (**Figure 2**). The descriptions below include the dominant and common plant species identified in each community. Evidence throughout the project site indicate that recent vegetation management occurred, such as mowing of the ruderal habitat and ongoing and recent grazing by goats in blue oak woodland and annual grassland habitats.

Developed

Developed areas contain asphalt driving roads, concrete walking paths and railings, tennis courts, a bocce ball court, landscaped areas, and the water treatment plant infrastructure. Fencing is additionally present separating Lake Forest Park and water treatment plant. The overstory features Raywood ash (*Fraxinus angustifolia*). Ornamental shrubs included bottle brush (*Callistemon* sp.), lavender (*Lavandula* sp.), rock rose (*Cistus* sp.), and fortnight lily (*Dietes iridioides*).

Disturbed

Fencing is present to the east and west of the disturbed habitat and intersects the habitat in the south between the water treatment plant and Marina Village Middle School. The overstory features blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizeni*), and the fencelines are lined with red tip photinia (*Photinia* spp.). The understory primarily consisted of pebbles and bare ground. On the southernmost side, occasional and sparse native understory was present, including miner's lettuce (*Claytonia perfoliata*), common bedstraw (*Galium aparine*), and non-natives such as California burclover (*Medicago polymorpha*) were also present.

Blue Oak Woodland

Most of the project site, located outside of the EDHWTP boundaries, is dominated by blue oak woodland in which occasional gray pines (*Pinus sabiniana*) form an overstory above an open to partially closed sub-canopy composed mostly of blue oak with some interior live oak. This plant community also supports ground cover of grassland species. The herbaceous understory is comprised of species characteristic of the adjacent annual grassland described below.

Figure 2. Vegetation Community Mapping

Annual Grassland

The open habitat and the understory of the blue oak woodland is non-native annual grassland, a plant community characterized by a dense cover of annual grasses with numerous species of non-native annual forbs and native wildflowers. Characteristic grass species observed include wild oat (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and medusa head (*Taeniatherum caput-medusae*). Common non-native forbs include filaree (*Erodium* spp.), rose clover (*Trifolium hirtum*), pineapple weed (*Chamomilla suaveolens*), winter vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), and knotted hedge-parsley (*Torilis nodosa*). Native common yarrow (*Achillea millefolium*) was observed on the project site.

Ruderal

The ruderal habitat featured similar species with the annual grassland, however, had decreased species diversity and the identifiable species were only non-native. Identifiable species included filaree, common bedstraw, cut leaf geranium (*Geranium dissectum*), and prickly lettuce.

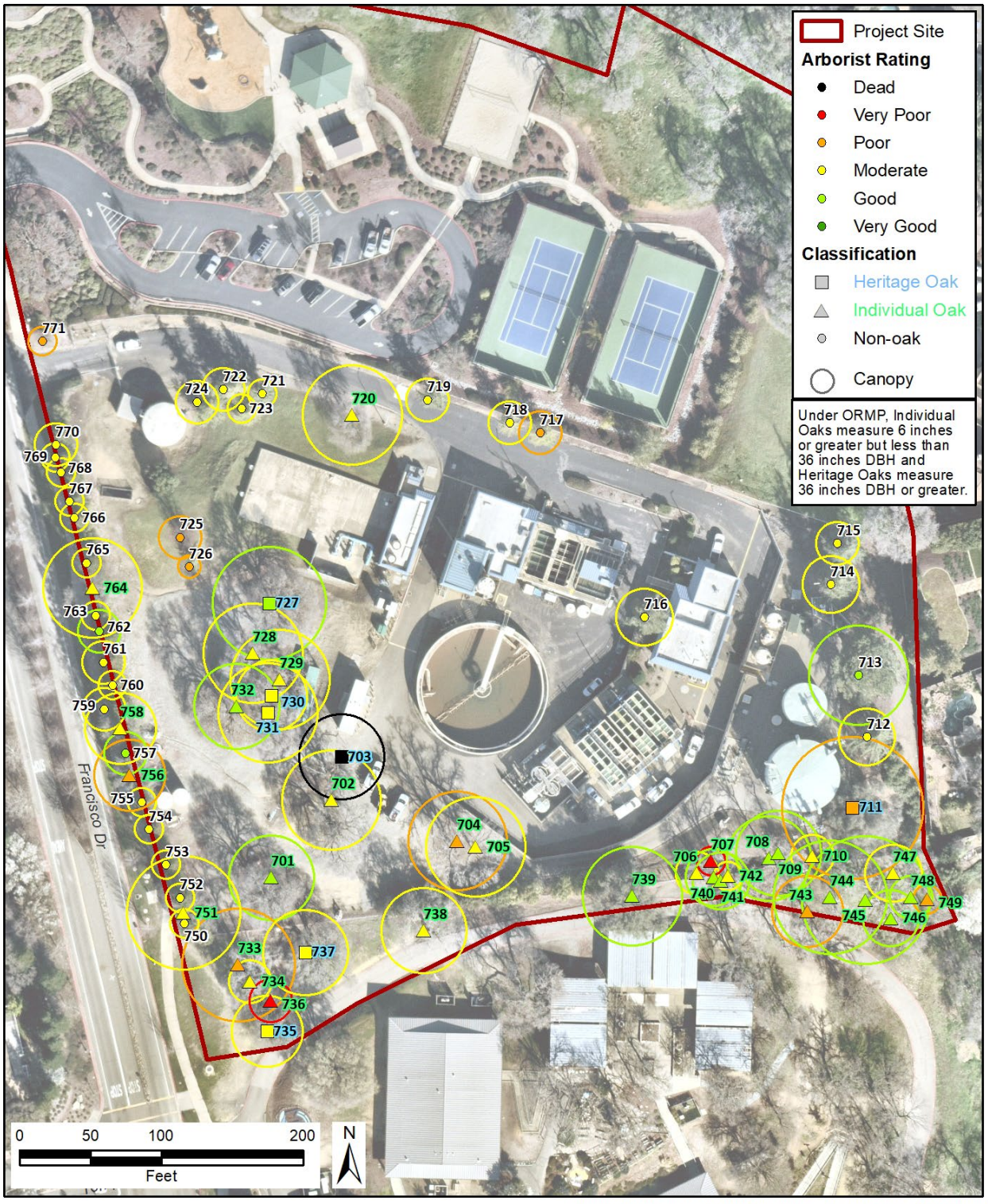
Tree Inventory

A total of seventy-one (71) trees were inventoried within the water treatment plant boundaries and south of the fenceline between the treatment plant and Marina Village Middle School (**Figure 3; Appendix B**). Thirty-two (32) of these trees were non-oaks that comprised five species, and thirty-nine (39) were oak trees composed of three species (**Table 1**). El Dorado County tree ordinance only provides protection for oak tree resources, therefore the rest of the report will focus on impacts to these resources.

Table 1. Inventoried Trees

Common Name	Scientific Name	Count
Non-Oaks		
Aleppo Pine	*Pinus halepensis*	2
Bradford Pear	*Pyrus calleryana*	2
Coast Redwood	*Sequoia sempervirens*	17
Deodora Cedar	*Cedrus deodara*	11
Totals	*32*	
Oaks		
Blue Oak	*Quercus douglasii*	32
Interior Live Oak	*Quercus wislizeni*	2
Valley Oak	*Quercus lobata*	5
Totals	*39*	

Figure 3. Tree Survey Information



Anticipated Project Activities

The EDHWTP project plans indicate new buildings and facilities such as a washwater equalization basin, solids pump station, high lift pump station expansion, UV disinfection facility, plate settlers, filters and generator and electrical service will require tree removal mostly along the western side of the treatment plant facility (**Figure 4**). Staging of equipment will likely be done within the existing hard structures of the facility, but areas located along the southern end of the project site, the northeast in an open grassland, and possibly within Lake Forest Park.

Oak Tree Impacts Evaluation

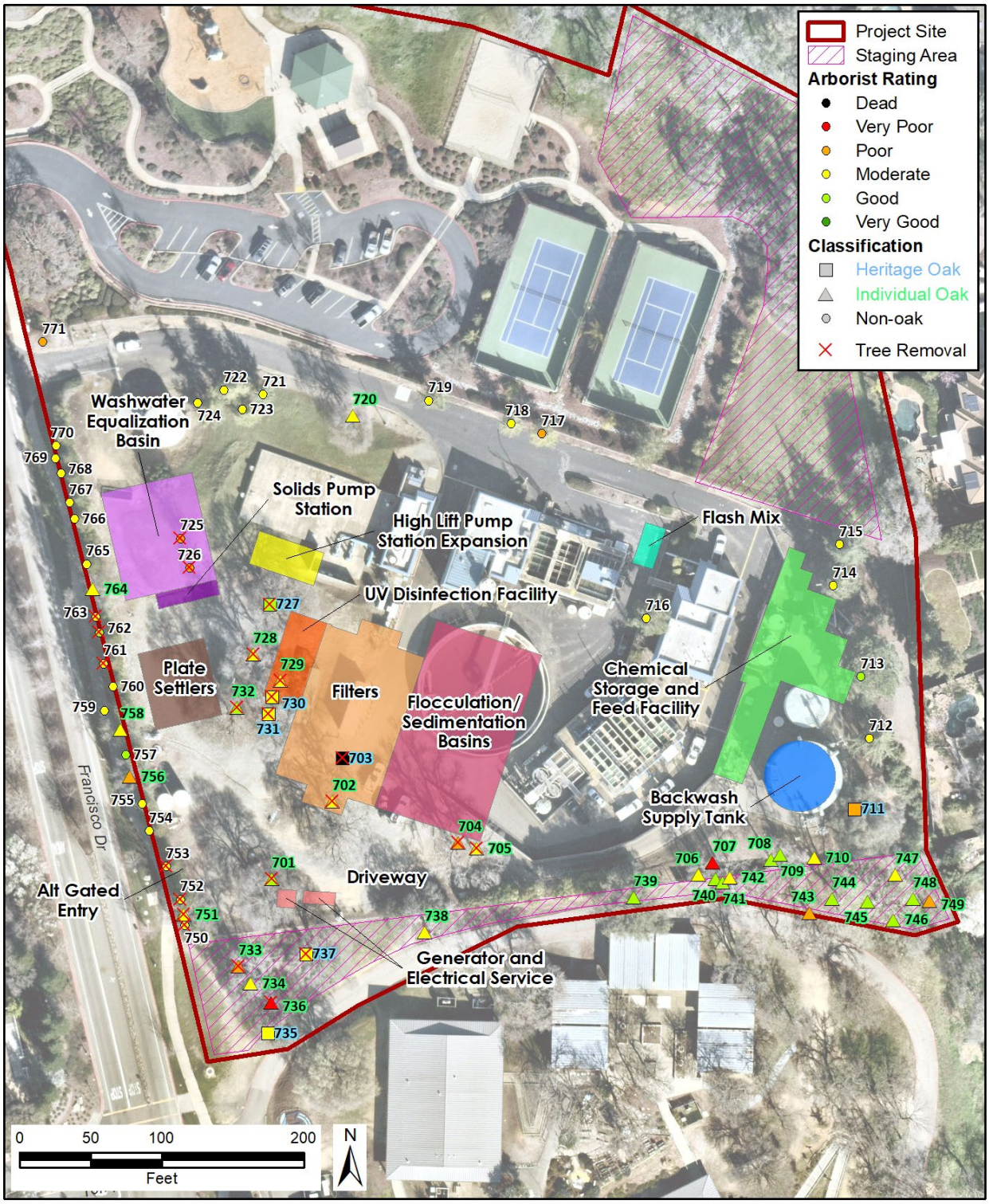
The EDHWTP is approximately 5.73 acres with 1 acre of oak canopy coverage, which equates to 17.45% of oak canopy coverage on the parcel. Of the 1 acre of oak canopy coverage, planned impacts would remove 0.47 acres of oak canopy coverage, leaving 0.53 acres and reducing the total canopy coverage to 8.20% (**Figure 5**).

A total of 8 blue oaks, 1 valley oaks, and 5 heritage blue oaks are planned for removal (**Table 2** and **3**). One of the heritage blue oaks that is planned for removal is dead and therefore is not included in the DBH calculations. The aggregate diameter of the three largest stems was used to determine total trunk diameter impacts. As requested by the Board of Supervisors for the ORMP and Oak Resources Conservation Ordinance (No.5061) **Table 4** provides impacts to individual native oak trees with diameters greater than 24 inches but less than 36 inches.

Table 2. Oak Tree Removal Quantities

	Blue Oak	Valley Oak
Individual Native Oak Trees		
Quantity to be removed, by species	8	1
Quantity to be removed, greater than 24 inches DBH and less than 36 inches DBH, by species	6	0
Total Trunk Diameter to be removed (inches)	*252.50*	
Heritage Oak Trees		
Quantity to be removed, greater than 36 inches DBH, by species	5	0
Total Trunk Diameter to be removed (inches)	*178.50*	

Figure 4. Project Activities



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Figure 5. Oak Tree Canopy Impacts

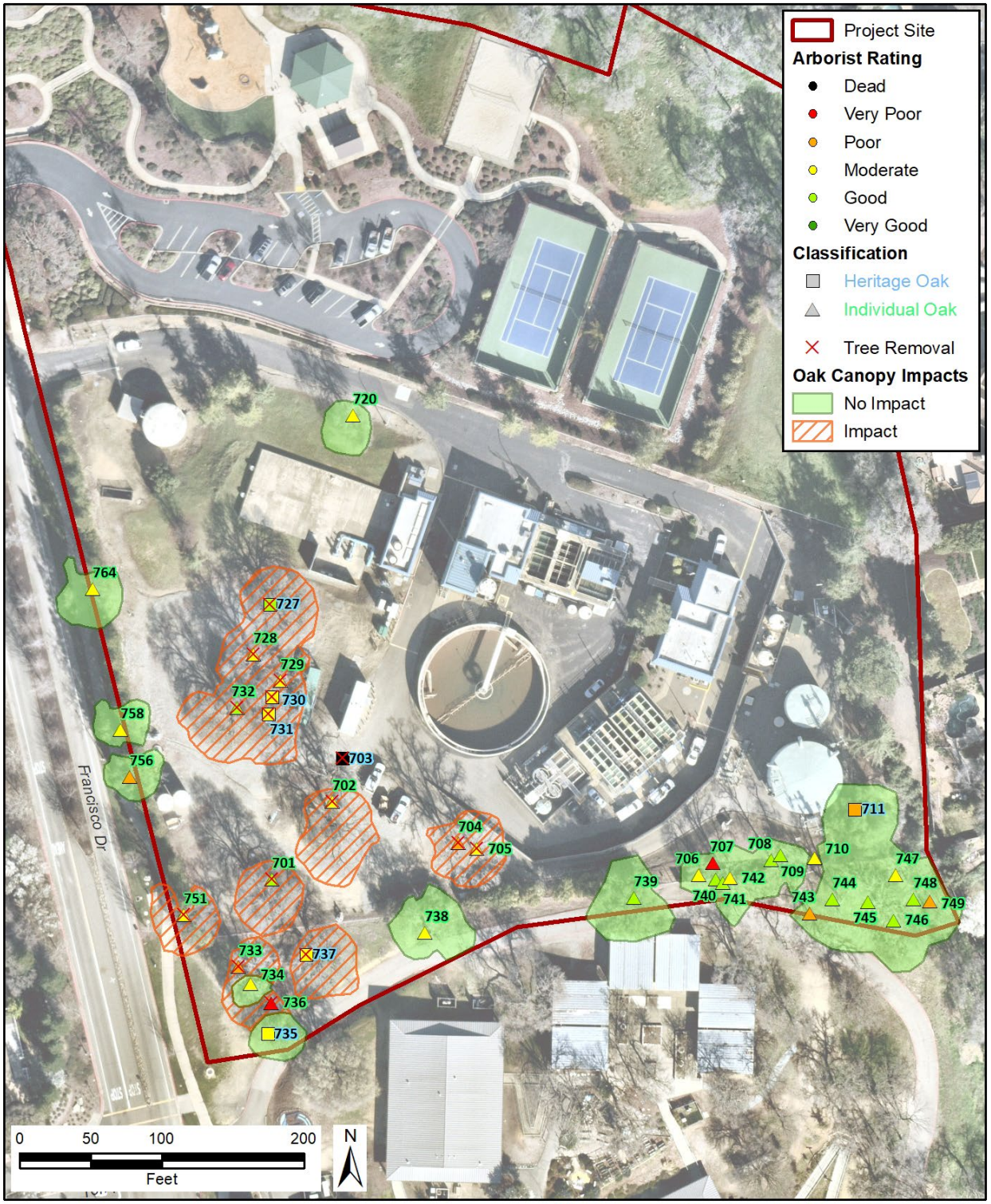


Table 3. Oak Tree Classification and Removal or Retention Status

Bolded text – Heritage Oaks; Red text – Removal; Green text – Retain; Black text – Not included in mitigation calculations.

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Arborist Rating	Classification	Impact
701	Blue oak	30	0	0	30	55	30	4 - Good	Individual Oak	Removal
702	Blue oak	35	0	0	35	45	35	3 - Moderate	Individual Oak	Removal
703	**Blue oak**	**28**	**24**	**0**	**52**	**60**	**30**	**0 - Dead**	**Heritage Oak**	**Removal**
704	Blue oak	32	0	0	32	55	35	2 - Poor	Individual Oak	Removal
705	Blue oak	23	0	0	23	50	35	3 - Moderate	Individual Oak	Removal
706	Blue oak	13	0	0	13	30	15	3 - Moderate	Individual Oak	Retain
707	Blue oak	11	0	0	11	40	10	1 - Very Poor	Individual Oak	Retain
708	Blue oak	20	0	0	20	65	30	4 - Good	Individual Oak	Retain
709	Blue oak	18	0	0	18	50	30	4 - Good	Individual Oak	Retain
710	Blue oak	12	0	0	12	32	15	3 - Moderate	Individual Oak	Retain
711	**Interior live oak**	**24**	**20**	**0**	**44**	**45**	**50**	**2 - Poor**	**Heritage Oak**	**Retain**
720	Valley oak	17	0	0	17	45	35	3 - Moderate	Individual Oak	Retain
727	**Blue oak**	**40**	**0**	**0**	**40**	**55**	**40**	**4 - Good**	**Heritage Oak**	**Removal**
728	Blue oak	22	0	0	22	50	35	3 - Moderate	Individual Oak	Removal
729	Blue oak	30	0	0	30	45	35	3 - Moderate	Individual Oak	Removal
730	**Blue oak**	**14.5**	**14**	**11.5**	**40**	**45**	**25**	**3 - Moderate**	**Heritage Oak**	**Removal**
731	**Blue oak**	**20**	**18**	**0**	**38**	**50**	**35**	**3 - Moderate**	**Heritage Oak**	**Removal**
732	Blue oak	34.5	0	0	34.5	50	30	4 - Good	Individual Oak	Removal
733	Blue oak	25	0	0	25	55	40	2 - Poor	Individual Oak	Removal
734	Blue oak	16	13.5	0	29.5	30	15	3 - Moderate	Individual Oak	Retain
735	**Blue oak**	**20**	**16.5**	**0**	**36.5**	**45**	**25**	**3 - Moderate**	**Heritage Oak**	**Retain**
736	Blue oak	24	0	0	24	30	15	1 - Very Poor	Individual Oak	Removal
737	**Blue oak**	**29**	**20**	**11.5**	**60.5**	**40**	**30**	**3 - Moderate**	**Heritage Oak**	**Removal**
738	Blue oak	35	0	0	35	45	30	3 - Moderate	Individual Oak	Retain
739	Interior live oak	30	0	0	30	50	35	4 - Good	Individual Oak	Retain
740	Blue oak	13	0	0	13	55	20	4 - Good	Individual Oak	Retain
741	Blue oak	22.5	0	0	22.5	60	20	4 - Good	Individual Oak	Retain
742	Blue oak	14	0	0	14	35	10	3 - Moderate	Individual Oak	Retain
743	Blue oak	21	0	0	21	40	25	2 - Poor	Individual Oak	Retain
744	Blue oak	23.5	0	0	23.5	65	40	4 - Good	Individual Oak	Retain
745	Blue oak	29	0	0	29	65	45	4 - Good	Individual Oak	Retain
746	Blue oak	23	0	0	23	40	20	4 - Good	Individual Oak	Retain
747	Blue oak	18	0	0	18	30	20	3 - Moderate	Individual Oak	Retain
748	Blue oak	15.5	0	0	15.5	40	15	4 - Good	Individual Oak	Retain
749	Blue oak	8.5	0	0	8.5	25	10	2 - Poor	Individual Oak	Retain
751	Valley oak	21	0	0	21	45	40	3 - Moderate	Individual Oak	Removal
756	Valley oak	18.5	0	0	18.5	45	25	2 - Poor	Individual Oak	Retain
758	Valley oak	16	0	0	16	50	25	3 - Moderate	Individual Oak	Retain
764	Valley oak	19	0	0	19	45	35	3 - Moderate	Individual Oak	Retain

Table 4. Impacted Individual Native Oak Trees Greater than 24 inches and less than 36 inches DBH

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Arborist Rating	Classification	
701	Blue oak	30	0	0	30	55	30	4 - Good	Native Oak	
702	Blue oak	35	0	0	35	45	35	3 - Moderate	Native Oak	
704	Blue oak	32	0	0	32	55	35	2 - Poor	Native Oak	
729	Blue oak	30	0	0	30	45	35	3 - Moderate	Native Oak	
732	Blue oak	34.5	0	0	34.5	50	30	4 - Good	Native Oak	
733	Blue oak	25	0	0	25	55	40	2 - Poor	Native Oak	

Mitigation for Oak Tree Removals

To mitigate for impacts to oak resources, the District plans on paying the in-lieu payment fees to be consistent with the requirements in the ORMP. Oak trees with a health and vitality rating of *0 – Dead* or *1 – Very Poor* are excluded from oak tree mitigation calculations (**Table 3**).

According to the County Ordinance, the total cost of per inch of non-heritage oak tree removal is equal to $153. The total cost per inch for heritage oak tree removal, based on a 3 to 1 ratio, is $459.

Individual Native Oak Trees

$153 (252.5 inches) = $38,632.50

Heritage Oak Trees

$459 (178.5 inches) = $81,931.50

Total In-Lieu Fees

$120, 564.00

Since no replacement plantings or conservation easements will occur for mitigation of oak tree removals, applicable measures related to maintenance, monitoring, and reporting requirements do not apply to the District for this project.

Oak Tree Retention Protection Measures

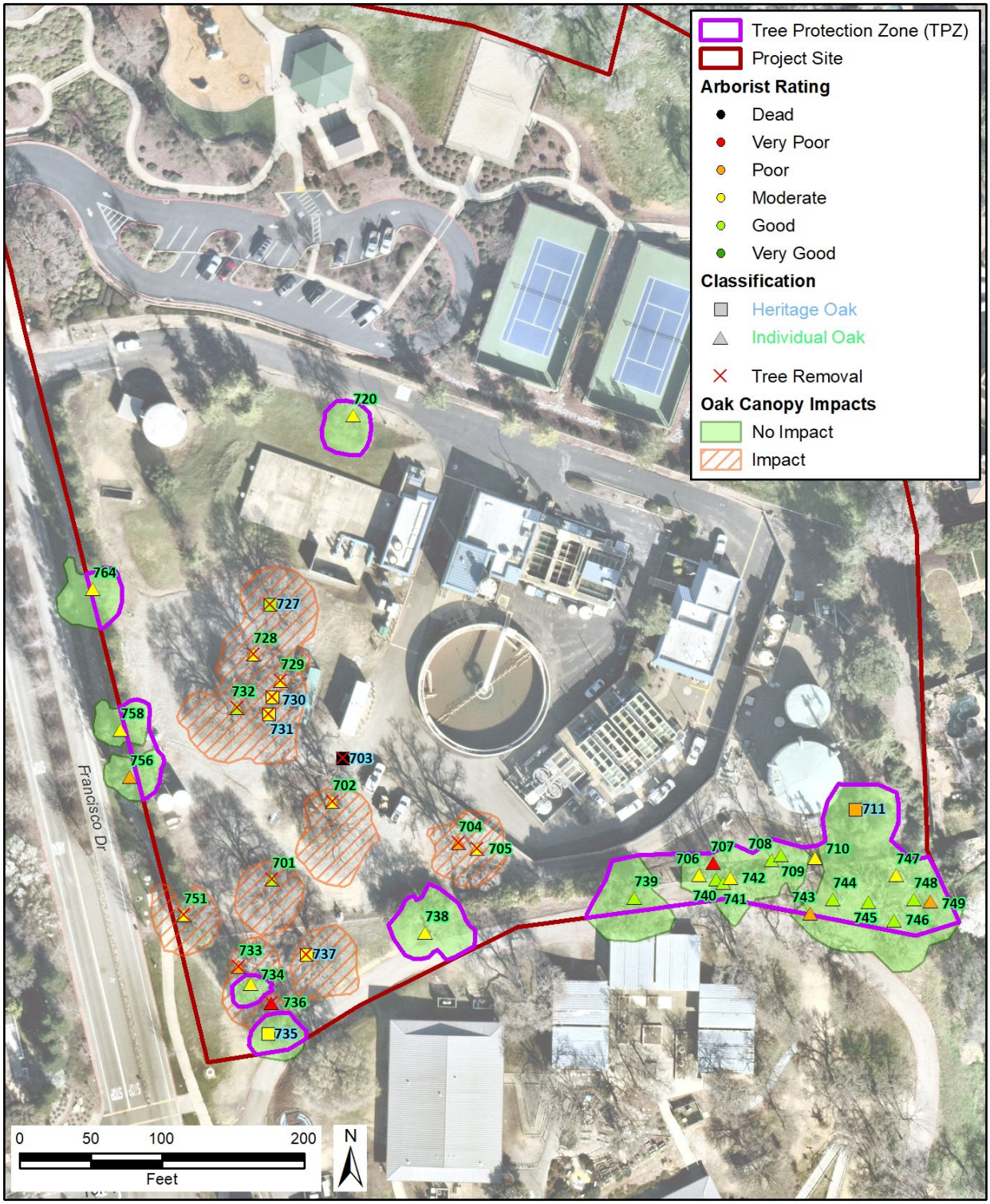
Fence off Work Area and Tree Protection Zone

To limit additional and unanticipated impacts to trees marked for preservation placement of orange construction fencing located outside the dripline or 1 foot for every 1-inch diameter, whichever is greater is required by the County Ordinance. No foot traffic, equipment traffic, construction activities or storage will occur in this area. The location of the fencing shall follow the guidelines provided in **Figure 6**, and/or shall be installed under the supervision of the project Arborist.

Alleviation of Soil Compaction

While no work is anticipated within the dripline of any tree planned for protection, if necessary, work in the TPZ shall be under the supervision of an ISA Certified Arborist. To prevent root compaction while working within the dripline of preservation trees, placement of 6 inches in depth of mulch is required. After impacts are completed, spreading mulch to a depth of 3 to 4 inches throughout the dripline to allow for oxygen circulation to the roots. Do not place mulch within 2 feet of the tree trunk. Trees that are being removed shall be chipped onsite and the mulch shall be placed within the designated areas.

Figure 6. Tree Protection Zones



Accidental Damage

- Any additional accidental injuries to the crown of any tree during construction shall have the wound cleaned up as soon as possible under the supervision of a Certified Arborist if the branches are over 2 inches in diameter.
- Any accidental injuries to the trunks of any tree during construction shall be assessed by the Certified Arborist to determine mitigation measures such as wound tracing, pruning, or other measures.

Post-construction Assessment

After completion of all construction activities, a Certified Arborist shall reassess all retained oak trees for unanticipated impacts incurred by construction activities. Based on that assessment, additional mitigation measures could be required to ensure health and vitality of oak trees or may require additional mitigation if trees have been severely impacted.

If any questions arise during the review of this technical memorandum, please do not hesitate to contact Julie. Julie can be reached at jdebarros@geiconsultants.com.

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Senior Wildlife Biologist & Arborist

Drew Sutton
Senior Project Manager

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Appendices

A - Tree Health and Vitality Ratings

B - Tree Inventory Table

C - El Dorado Hills WTP Improvements Project 60 Percent Design Submittal (January 2026)

D - Oak Resources Technical Report Checklist

E - Code of Compliance

F - Qualifications, Assumptions, Limiting Conditions, and Arborist Disclosure Statement

G - Certificate of Performance

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Glossary

Term	Definition
aggregate diameter	The summation of all individual tree diameters. For El Dorado County, it is the summation of the largest 3 stems.
callous	Undifferentiated tissue formed by the cambium, usually as a result of wounding.
compartmentalization of decay in trees (CODIT)	Natural defense process in trees by which chemical and physical boundaries are created that act to limit the spread of disease and decay organisms.
diameter at breast height (DBH)	Acronym for the tree diameter at breast height. Measured at 1.4 meters (4.5 feet) above ground in the U.S.
diameter tape	A measuring tape used to estimate the diameter of a cylinder object.
dieback	Condition in which the branches in the tree or other plant crown die from the tips toward the main stem.
dripline	Imaginary line defined by the branch spread of a single plant or group of plants.
epicormic sprouts	A shoot arisen from a dormant bud or from newly formed adventitious tissue.
failure	In tree risk assessment, the professional assessment of the likelihood for a tree or tree part to fail within a defined time frame.
flare	Transition zone from trunk to roots where the trunk expands into the buttress or structural roots.
leaf surface	The amount of surface area provided by the total amount of leaves expected of a tree.
mechanical damage	The loss of material due to a mechanical action; in the case of trees, damage incurred to parts of the trunk, roots, or branches.
multi-stemmed trees	A tree with more than one stem growing close to the ground from a common root system
root collar	Flared area at the tree trunk base where the roots and trunk come together.
root crown	Area where the main roots join the plant stem, usually at or near ground level (root collar).
root zones	Horizontal spread of tree roots from the trunk. Typically, the root zone of a tree extends well beyond the dripline.
structural defects	Feature, condition, or deformity of a tree that indicates a weak structure or instability that could contribute to tree failure.
taper	Change in diameter over the length of trunks, branches, and roots.
targets	People, property, or activities that could be injured, damaged, or disrupted by a tree failure.
tree crown	Upper part of a tree, measured from the lowest branch, including all the branches and foliage (canopy).
tree failure	Uprooting or mechanical breakage of a tree, its parts, and/or surrounding soil.

Appendix A Tree Health and Vitality Ratings

Table B.1. Tree Health and Vitality Ratings

Tree Condition Rating	Vitality Rating	Description	Life Expectancy
0	Dead	Tree is dead and shows no sign of life or vigor.	Not applicable
1	Very Poor	Tree is in severe decline and is lacking vigor. Visual signs of decline include severe dieback of leaf surface and dead scaffold branches, and most of the canopy leaf surface is epicormic sprouts.	Nearing end of life expectancy
2	Poor	Tree is in decline and has structural defects that cannot be abated. Visual signs of decline include extensive dieback of medium to large branches, poor to fair leaf surface, and numerous epicormic sprouts.	Short life expectancy
3	Moderate	Tree has moderate vigor with few structural defects that might be mitigated with regular care. Visual signs of decline include moderate to small branch dieback, fair to good leaf surface, few epicormic sprouts, and a small amount of thinning crown.	Moderate life expectancy
4	Good	Tree has good vigor with minor structural defects that could be mitigated. Visual signs of decline include small to no dieback in twigs and branches, good leaf surface, and little to no epicormic sprouts.	Moderate to long life expectancy
5	Excellent	Tree is vigorous and reasonably free of signs and symptoms of diseases and structural issues, with no visual signs of decline. Tree is in the typical structure and form of its species.	Long life expectancy

Notes: The visual signs of tree health and vitality ratings are not necessarily required or limited to the above descriptions. The arborist's or biologist's experience, best professional judgement, and surrounding environment conditions help determine the tree condition.

Appendix B Tree Inventory Details

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Root Note	Trunk Note	Canopy Notes	Other Note	Arborist Rating	Classification	Impact
701	Blue oak	30	0	0	30	55	30	Partial excavation in well.	Bifurcated at 15ft	Good foliage color and amount		4 - Good	Native Oak	Removal
702	Blue oak	35	0	0	35	45	35	Gravel road compacting 65% roots	Bifurcation at 10 ft	Large 2in+ deadwood, moderate canopy density, color.	Blue bird hanging out near cavity in deadwood.	3 - Moderate	Native Oak	Removal
703	Blue oak	28	24	0	52	60	30				Dead, remove.	0 - Dead	Heritage Oak	Removal
704	Blue oak	32	0	0	32	55	35	6 in. buried root collar. Bark coming off at 6 in above grade.	Bifurcation at 10 ft	Moderate Dieback, large deadwood over 2 in.		2 - Poor	Native Oak	Removal
705	Blue oak	23	0	0	23	50	35	Root collar buried 6 in, road 3 ft covering 40% roots.	Bifurcation at 8 ft	Minor tip dieback.		3 - Moderate	Individual Oak	Removal
706	Blue oak	13	0	0	13	30	15	Root collar buried		Moderate density.		3 - Moderate	Individual Oak	Retain
707	Blue oak	11	0	0	11	40	10	Root collar buried, decay	Trunk hazardous, only 30% live trunk above grade to 2.5 ft	Poor vigor	Hazard tree.	1 - Very Poor	Individual Oak	Retain
708	Blue oak	20	0	0	20	65	30	Root collar OK	Straight, good form.	Moderate vigor, minor deadwood		4 - Good	Individual Oak	Retain
709	Blue oak	18	0	0	18	50	30	Root collar buried 2-4 in.	Straight trunk	Good vigor		4 - Good	Individual Oak	Retain
710	Blue oak	12	0	0	12	32	15	Root collar buried,	Minor decay 6 ft to 8 ft	Large deadwood over 6 in	Touching fence	3 - Moderate	Individual Oak	Retain
711	Interior live oak	24	20	0	44	45	50	Buried root collar	Bifurcation at 2 ft	Moderate vigor, large deadwood.	Decay on stem, many ants	2 - Poor	Heritage Oak	Retain
712	Deodora	18	0	0	18	45	20	Root plate lifting			Hazard tree, root plate upheaval	3 - Moderate	Non-oak	Retain
713	Aleppo pine	33.5	0	0	33.5	70	35	On hill, 55% roots on grade	Bifurcation at 10	Deadwood over 2in, weighted, cracking limbs over 6 in.		4 - Good	Non-oak	Retain

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Root Note	Trunk Note	Canopy Notes	Other Note	Arborist Rating	Classification	Impact
714	Deodora	16.5	0	0	16.5	40	20	On hill, limited rooting space		Minor dieback, dead top		3 - Moderate	Non-oak	Retain
715	Deodora	18	0	0	18	55	15	Buried root collar	Minor lean	Moderate vigor, minor dieback		3 - Moderate	Non-oak	Retain
716	Aleppo pine	22	0	0	22	50	20	On hill next to concrete retaining wall, limited rooting space	Sphinx moth suspected, lots of bleeding	Moderate vigor.		3 - Moderate	Non-oak	Retain
717	Deodora	9	8.5	0	17.5	35	15	Road 1 ft from trunk, impacting 50% root	Bifurcation at 1 ft, poor stem connection	Low vigor	Minor bleeding on trunk, sap sucker damage.	2 - Poor	Non-oak	Retain
718	Deodora	11	0	0	11	40	15					3 - Moderate	Non-oak	Retain
719	Deodora	18	0	0	18	55	15	Road 1 ft from root	Damage from trucks			3 - Moderate	Non-oak	Retain
720	Valley oak	17	0	0	17	45	35	Roots exposed, damage from lawnmower	Trunk bifurcation at 18 ft	Broken 6 in branch on ground	Mistletoe in tree	3 - Moderate	Individual Oak	Retain
721	Deodora	9	0	0	9	30	10					3 - Moderate	Non-oak	Retain
722	Deodora	12.5	0	0	12.5	45	15					3 - Moderate	Non-oak	Retain
723	Deodora	9	0	0	9	32	10					3 - Moderate	Non-oak	Retain
724	Deodora	12	0	0	12	45	15					3 - Moderate	Non-oak	Retain
725	Bradford pear	13	8	0	21	32	15					2 - Poor	Non-oak	Removal
726	Deodora	7	0	0	7	20	8					2 - Poor	Non-oak	Removal
727	Blue oak	40	0	0	40	55	40	Open root zone	Bifurcation at 6 ft.	Deadwood over 2 inches. Good vigor		4 - Good	Heritage Oak	Removal
728	Blue oak	22	0	0	22	50	35	Root zone unimpacted	Bifurcation at 10 ft.	Deadwood over 2 in. Minor dieback		3 - Moderate	Individual Oak	Removal
729	Blue oak	30	0	0	30	45	35	Construction debris in root zone	Bifurcation at 5 feet	Moderate dieback, low vigor.	Deadwood over 2 in.	3 - Moderate	Native Oak	Removal
730	Blue oak	14.5	14	11.5	40	45	25	Construction debris in root zone	Trifurcation at 3 ft	Minor dieback. Moderate vigor.		3 - Moderate	Heritage Oak	Removal
731	Blue oak	20	18	0	38	50	35	Cavity at 1 ft west, construction debris in root zone	Bifurcation at 3 ft	Moderate vigor, good color, deadwood under 2 in.		3 - Moderate	Heritage Oak	Removal

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Root Note	Trunk Note	Canopy Notes	Other Note	Arborist Rating	Classification	Impact
732	Blue oak	34.5	0	0	34.5	50	30	Root collar buried by dirt, rocks.	Bifurcation at 5 ft, cavity at seam.	Moderate vigor, deadwood over 2 in.		4 - Good	Native Oak	Removal
733	Blue oak	25	0	0	25	55	40	Root zone unimpacted	Bifurcation at 17 ft	Moderate dieback, thin crown		2 - Poor	Native Oak	Removal
734	Blue oak	16	13.5	0	29.5	30	15	Root collar buried	Damage trunk 0-2 ft south side. Bifurcation at 2 feet	Average vigor, deadwood over 2 in		3 - Moderate	Native Oak	Retain
735	Blue oak	20	16.5	0	36.5	45	25	Driveway within 4 ft, whole root zone compacted from cars.	Bifurcation at 4 ft	Good vigor		3 - Moderate	Heritage Oak	Retain
736	Blue oak	24	0	0	24	30	15	Large cavity at root collar	Cavity present up 6 ft, decay spreads up into other stems	Moderate vigor.	Hazard tree hangs over driveway and inside nearby tree.	1 - Very Poor	Native Oak	Removal
737	Blue oak	29	20	11.5	60.5	40	30	Off-road pathway over 20% root zone	Trifurcation at 1 ft	Moderate vigor, deadwood over 2 in		3 - Moderate	Heritage Oak	Removal
738	Blue oak	35	0	0	35	45	30	Car park next to trees, road within 2 feet. 65% compacted root zone	Bifurcation at 6 ft	Moderate to low vigor, broken branches 2-6 in.		3 - Moderate	Native Oak	Retain
739	Interior live oak	30	0	0	30	50	35	Driveway 1 ft from trunk. 40% root zone impacted	Bifurcation at 6 ft.	Uneven canopy weighted west. Deadwood under 2 in		4 - Good	Native Oak	Retain
740	Blue oak	13	0	0	13	55	20	Root zone unimpacted	Fence touching trunk	Moderate vigor		4 - Good	Individual Oak	Retain
741	Blue oak	22.5	0	0	22.5	60	20	Cars parking 2 ft from trunk, compacted soil 50% root zone.	Bifurcation at 12 ft	Good vigor, deadwood over 2 in.		4 - Good	Individual Oak	Retain
742	Blue oak	14	0	0	14	35	10	Parking space within 15 ft, 15% compacted soil	Good, straight trunk	Suppressed canopy, deadwood over 2 in		3 - Moderate	Individual Oak	Retain

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Root Note	Trunk Note	Canopy Notes	Other Note	Arborist Rating	Classification	Impact
743	Blue oak	21	0	0	21	40	25	Driveway within 1 ft, 20% root zone impacted	Bifurcation at 10 ft	Low vigor, deadwood over 2 in		2 - Poor	Individual Oak	Retain
744	Blue oak	23.5	0	0	23.5	65	40	Unimpacted	Bifurcation at 10 ft	Good vigor, signs of broken branches over 2 in		4 - Good	Individual Oak	Retain
745	Blue oak	29	0	0	29	65	45	Unimpacted	Bifurcation at 20 ft	Good vigor, signs of broken branch over 8 in		4 - Good	Native Oak	Retain
746	Blue oak	23	0	0	23	40	20	Root collar buried	Bifurcation at 10 ft	Uneven canopy, suppressed		4 - Good	Individual Oak	Retain
747	Blue oak	18	0	0	18	30	20	Unimpacted		Suppressed, uneven		3 - Moderate	Individual Oak	Retain
748	Blue oak	15.5	0	0	15.5	40	15	Unimpacted		Uneven crown, suppressed		4 - Good	Individual Oak	Retain
749	Blue oak	8.5	0	0	8.5	25	10	Root collar buried		Suppressed		2 - Poor	Individual Oak	Retain
750	Coast redwood	12	0	0	12	30	10					3 - Moderate	Non-oak	Removal
751	Valley oak	21	0	0	21	45	40	Mower damage to surface roots	Bifurcation at 15 ft	Deadwood over 2 in	Mistletoe in tree	3 - Moderate	Individual Oak	Removal
752	Coast redwood	17	0	0	17	50	10					3 - Moderate	Non-oak	Removal
753	Coast redwood	16.5	0	0	16.5	50	10					3 - Moderate	Non-oak	Removal
754	Coast redwood	16.5	0	0	16.5	50	10					3 - Moderate	Non-oak	Retain
755	Coast redwood	17	0	0	17	50	10					3 - Moderate	Non-oak	Retain
756	Valley oak	18.5	0	0	18.5	45	25	4 ft from sidewalk, 35% root zone compacted	Bifurcation at 12 ft	Moderate dieback, deadwood over 2 in	Mistletoe	2 - Poor	Individual Oak	Retain
757	Coast redwood	21	0	0	21	55	15					4 - Good	Non-oak	Retain
758	Valley oak	16	0	0	16	50	25	Cracking pavement, 4 ft from trunk	Bifurcation at 15 ft	Moderate vigor	Mistletoe	3 - Moderate	Individual Oak	Retain
759	Coast redwood	19	0	0	19	65	15					3 - Moderate	Non-oak	Retain
760	Coast redwood	17.5	0	0	17.5	60	10					3 - Moderate	Non-oak	Retain
761	Coast redwood	18.5	0	0	18.5	65	15					3 - Moderate	Non-oak	Removal

ID	Common Name	Largest DBH	DBH 2	DBH 3	Aggregate DBH	Height ft	Canopy ft	Root Note	Trunk Note	Canopy Notes	Other Note	Arborist Rating	Classification	Impact
762	Coast redwood	24.5	0	0	24.5	65	15					4 - Good	Non-oak	Removal
763	Coast redwood	13	0	0	13	45	10					3 - Moderate	Non-oak	Removal
764	Valley oak	19	0	0	19	45	35	Sprinklers 3 ft from trunk, sidewalk 3 ft	Bifurcation at 10 ft	Good vigor, deadwood under 2 in	Mistletoe	3 - Moderate	Individual Oak	Retain
765	Coast redwood	17	0	0	17	55	10					3 - Moderate	Non-oak	Retain
766	Coast redwood	15	0	0	15	55	10					3 - Moderate	Non-oak	Retain
767	Coast redwood	14.5	0	0	14.5	50	10					3 - Moderate	Non-oak	Retain
768	Coast redwood	17	0	0	17	50	10					3 - Moderate	Non-oak	Retain
769	Coast redwood	17.5	0	0	17.5	55	10					3 - Moderate	Non-oak	Retain
770	Coast redwood	20	0	0	20	60	15					3 - Moderate	Non-oak	Retain
771	Bradford pear	7	0	0	7	15	10					2 - Poor	Non-oak	Retain

Appendix C El Dorado Hills WTP Improvements Project 60 Percent Design Submittal (January 2026)

Appendix D Oak Resources Technical Report Checklist

Appendix E Code of Compliance

Appendix F Qualifications, Assumptions, Limiting Conditions, and Arborist Disclosure Statement

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation by Julie De Barros, Consulting Arborist, as to the sufficiency or accuracy of said information.

Unless otherwise expressed: (a) this report covers only the examined items and their condition at the time of inspection; and (b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist’s services, such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risks associated with trees is to eliminate all trees.

Appendix G Certificate of Performance

I, Collin Lesko, Certify that on June 17th, 2026 that:

- I have personally inspected the tree and property referred to in this report and I have stated my findings accurately.
- I have no current or prospective interest in the tree or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.
-

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture.

Thank you,



Collin Lesko
ISA Certified Arborist (WE-134711BM)
ISA Tree Risk Assessment Qualified
ISA Urban Forest Professional
ISA, and WCISA Member
Clesko@geiconsultants.com