CEQA ADDENDUM

MITIGATED NEGATIVE DECLARATON

SCH No. 2017032025

SHASTA COUNTY SERVICE AREA NO. 17

WASTEWATER COLLECTION AND TREATMENT IMPROVEMENT PROJECT

SHASTA COUNTY, CALIFORNIA

LEAD AGENCY:

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SECTION 1. INTRODUCTION AND PURPOSE

Shasta County (County), as Lead Agency, prepared an Initial Study (IS) and adopted a Mitigated Negative Declaration (MND) for the Shasta County Service Area No. 17 (CSA 17) Wastewater Collection and Treatment Improvement Project on April 18, 2017. Included in **Appendix A** are the IS/MND, Notice of Determination, and Mitigation Monitoring and Reporting Program (MMRP). The IS/MND addressed improvements to the CSA 17 wastewater collection and treatment system, including improvements to the existing wastewater treatment plant (WWTP), Black Lane Lift Station, Quail Lane Lift Station, and Cottonwood Lift Station; repair of approximately eight manholes; installation of parallel or replacement collection lines in approximately seven locations; and spot repairs of the collection lines at approximately 16 locations.

For construction purposes, the project has been treated as two separate phases. Phase 1 (WWTP improvements) is now complete. Phase 2 consists of the wastewater collection system improvements. Phase 2 construction is expected to start in October 2023 and be completed by August 2024.

Following adoption of the 2017 MND, County staff and PACE Engineering (PACE) re-evaluated the project and determined that additional improvements were needed. **Figure 1** provides a vicinity map showing the study areas for both the original project and the additional improvements; an overview of the project sites is show in **Figure 2.** Five temporary staging areas were identified for the original project. No changes in the staging areas are proposed. Work would be confined to County road rights-of-way and utility easements on private property. The additional improvements include the following:

1. Crowley Creek Lift Station:

   Replace existing pumps in kind, install a new shade structure over the existing electrical controls, and install a new spare pump lockable enclosure. All improvements would either be within the existing wet well (new pump), or on the existing concrete pad (new shade structure and lockable enclosure) (See **Figure 3**).

2. Collection System:

   - Replace ±230 feet of 8-inch pipeline with 10-inch pipeline between manhole (MH) 708 and MH 194, and replace ±40 feet of 8-inch pipeline with 10-inch pipeline between MH 708 and MH 190 using open-cut trenching (See **Figure 4**).
   - Raise manhole rings and install bolt-down lids at MH 14 and MH 10 (See **Figure 5**).
   - Replace ±380 feet of 12-inch pipeline from MH 76 to MH 220, and from MH 220 toward MH 10 using open-cut trenching. The current design is to only replace about 60 feet from MH 220 toward MH 10. However, depending upon conditions encountered during construction, the entire pipeline section may be replaced (See **Figure 5**).

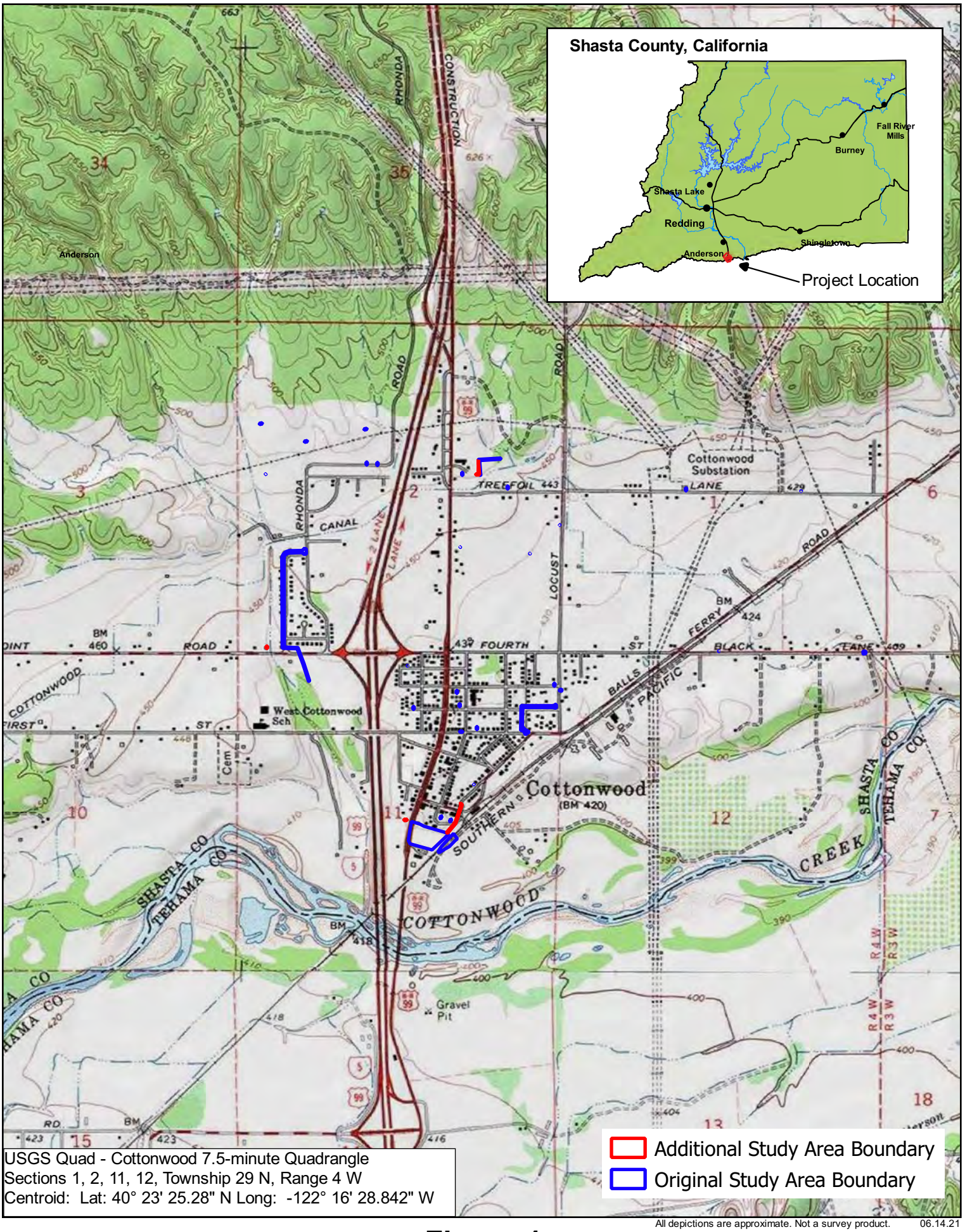
   In addition, the original project included the replacement of undersized 12-inch collection system pipeline within private property from Main Street to the Main Lift Station; and undersized 6-inch pipeline within the public road rights-of-way of Park Drive and Gas Point Road, and adjacent to a paved access road that runs between a shopping center and West Cottonwood School. The original project proposed replacing and upsizing these lines with 15-inch and 8-inch pipelines; however, due to flat slopes and the potential for sewer overflows, the modified project includes upsizing these pipelines to 12-, 18-, and 20-inches.

For purposes of this evaluation, “additional study area” and “additional improvements” includes the Crowley Creek Lift Station improvements (refer to **Figure 3**) and the collection system improvements identified above (refer to **Figures 4 and 5**).

This document constitutes an Addendum to the 2017 MND and evaluates whether modifications to the approved project would result in any new or substantially more adverse significant effects or require any new mitigation measures not identified in the 2017 MND. In addition, this document:

- Updates the biological records search and documents the results of the spring 2021 botanical survey addressing the entirety of the modified Phase 2 project.

- Updates the air quality analysis using the current version of CalEEMod and anticipated dates of construction.
- Addresses new CEQA requirements with respect to wildfire hazards, traffic analysis (vehicle miles travelled), and energy consumption.
- Confirms that no resource-agency permits are required with respect to the additional improvements.



Path: N:\companyfiles\01-Jobs Active\032-75 PACE - Cottonwood Sewer Improvements Addendum\3-Project GIS\3-Map Documents\Addendum\Figure 1 Vicinity Map 033121.ggz

USGS Quad - Cottonwood 7.5-minute Quadrangle
Sections 1, 2, 11, 12, Township 29 N, Range 4 W
Centroid: Lat: 40° 23' 25.28" N Long: -122° 16' 28.842" W

All depictions are approximate. Not a survey product. 06.14.21

0 1,000 2,000 Feet

Figure 1
Project Vicinity

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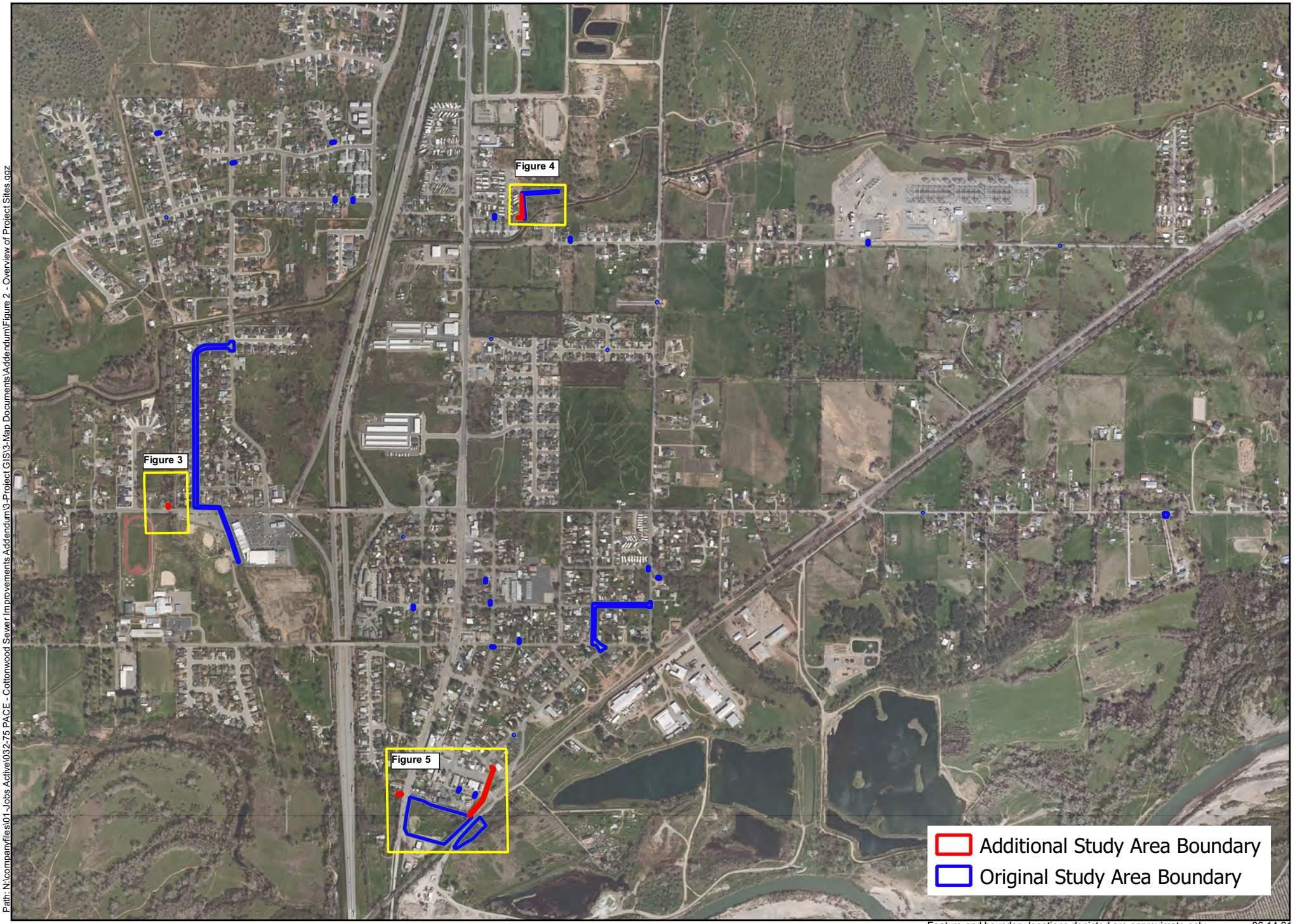

Path: N:\companyfiles\01-Jobs Active\032-75 PACE - Cottonwood Sewer Improvements Addendum\3-Project GIS\3-Map Documents\Addendum\Figure 2 - Overview of Project Sites.qgz

0 600 1,200 Feet

Feature and boundary locations depicted are approximate only.
This is not a survey product.

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Figure 2

Overview of Project Sites

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All depictions are approximate. Not a survey product. 06.14.21

0 25 50 Feet

Figure 3

Project Site - Crowley Creek Lift Station

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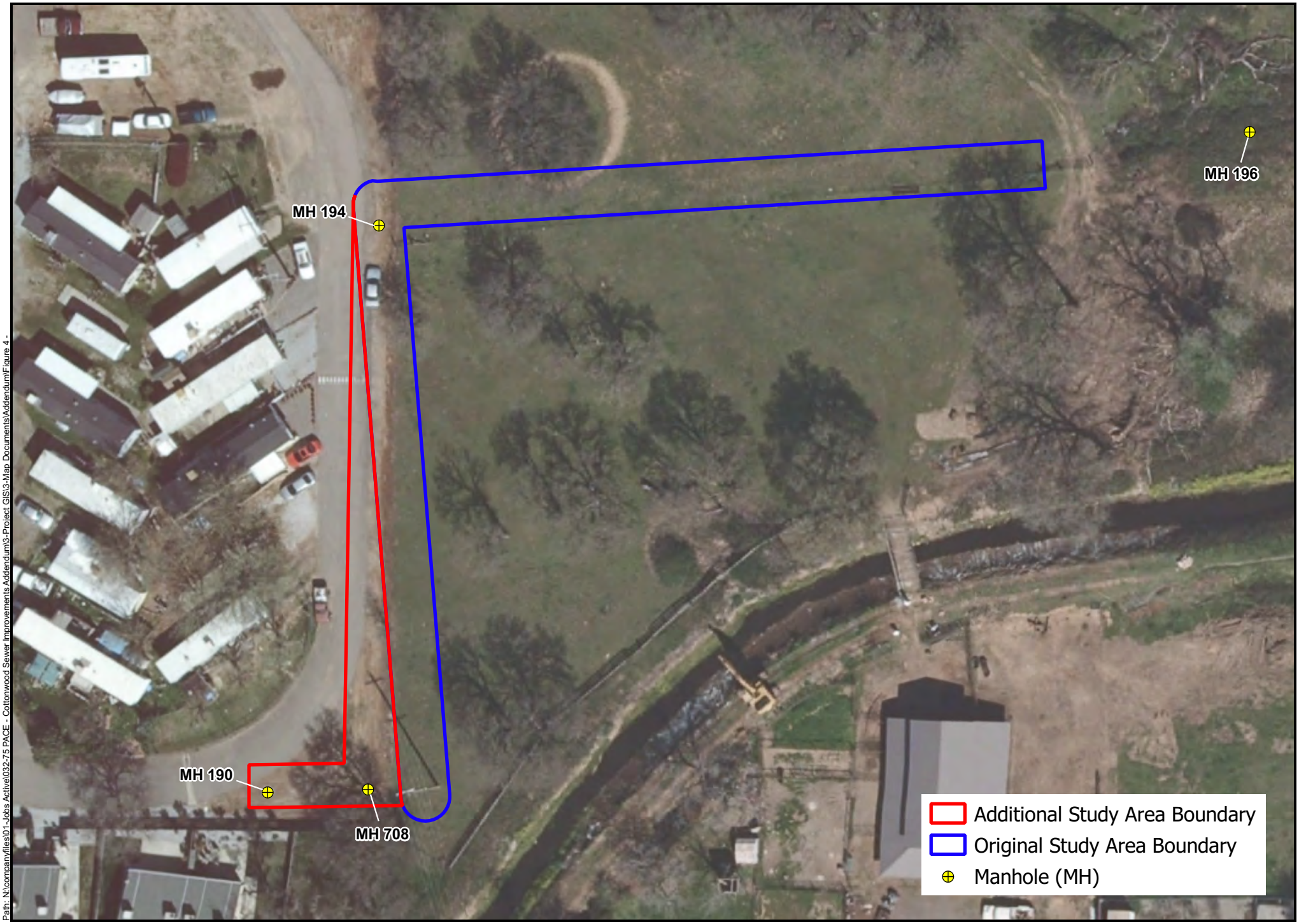

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North American Vertical Datum 1988 All depictions are approximate. Not a survey product. 06.14.21

0 25 50 Feet

Figure 4

Project Site - ACID Canal Pipeline

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0 75 150 Feet

North American Vertical Datum 1988 All depictions are approximate. Not a survey product. 06.14.21

Figure 5

Project Site - UPRR Pipeline and Manhole Improvements

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SECTION 2. CEQA FRAMEWORK FOR ADDENDUM

The California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3) recognize the possibility for a project to be modified after an EIR has been certified or a Negative Declaration has been adopted, and identify various levels of additional environmental review that may be undertaken to provide appropriate environmental disclosure.

Pursuant to Section 15164 (b) of the CEQA Guidelines, "An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for preparation of a subsequent EIR or negative declaration have occurred." The conditions in Section 15162 are as follow:

1. Substantial changes are proposed in the project which will require major revision 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 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 or negative declaration;
    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.

SECTION 3. ENVIRONMENTAL EFFECTS OF THE MODIFIED PROJECT

3.1 Aesthetics

As documented in the IS/MND, the approved project would have less-than-significant impacts related to aesthetics, and no mitigation measures were necessary.

Crowley Creek Lift Station:
The proposed amendment includes improvements to the existing Crowley Creek Lift Station adjacent to Gas Point Road. These improvements would be located within the existing area of use and no vegetation would be removed. The new shade structure and pump enclosure would not be visually intrusive to the area; therefore, the modified project's impacts on aesthetics would remain less than significant.

Collection System:
The additional pipeline improvements would be underground, while the manhole extensions would be only slightly above ground level and would not be visually intrusive. Removal or pruning of a non-native and invasive tree (tree-of-heaven) may be required near the pipeline improvements between MH 220 and MH 10 (refer to **Figure 5**); however, visual impacts would be minimal due to the relatively small amount of vegetation that would be removed.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.2 Agriculture and Forest Resources

As documented in the IS/MND, the approved project would have no impact related to agriculture and forest resources, and no mitigation measures were necessary.

According to the Farmland Mapping and Monitoring Program (FMMP), the new project sites are on lands designated as "urban and built-up land". In addition, none of the properties adjacent to the new project sites are zoned for or used for agricultural or timber production, nor are they subject to a Williamson Act contract. Therefore, there would be no impact.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.3 Air Quality

As documented in the IS/MND, the approved project would have less-than-significant impacts related to air quality with implementation of **Mitigation Measure MM 4.3.1:**

MM 4.3.1 The County shall ensure through contractual obligations that the following SCAQMD Standard Mitigation Measures are implemented

a. All material excavated, stockpiled, or graded shall be sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of ambient air quality standards. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.

b. Unpaved areas with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.

c. All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.

d. All land clearing, grading, earth moving or excavation activities on the project site shall be suspended when winds are expected to exceed 20 miles per hour.

e. The contractor shall be responsible for applying non-toxic stabilizers (according to manufacturer's specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours), in accordance with the Shasta County Grading Ordinance.

f. All trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least two feet of free board in accordance with the requirements of CVC §23114. This provision is enforced by local law enforcement agencies.

g. During grading and earth disturbance in undeveloped areas, the project shall be required to construct a paved (or dust palliative treated apron, at least 100 feet in length, onto the project site from the adjacent paved road(s).

h. Paved streets adjacent to construction areas shall be swept or washed at the end of the day to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the development site.

Emissions that would be generated by the original project were analyzed using CalEEMod Version 2016.3.1 and included the WWTP improvements as well as the collection system improvements. As noted above, the WWTP improvements have been completed as Phase 1 of the project.

To provide an accurate account of emissions, all improvements proposed under Phase 2 of the project, including the additional improvements covered under this Addendum, were analyzed using the current CalEEMod version (2016.3.2). CalEEMod output files, including all the site-specific inputs and assumptions, are provided in **Appendix B**. As shown in **Table 3.3-1**, Shasta County has adopted air quality thresholds for emissions of Reactive Organic Gases (ROG), Oxides of Nitrogen (NOx) and Particulate Matter, 10 microns in size (PM_{10}) to determine the level of significance for projects subject to CEQA review (Shasta County Rule 2:1, New Source Review, Part 300).

TABLE 3.3-1
Thresholds of Significance for Criteria Pollutants of Concern

Level	ROG	NOx	PM_{10}
Level A: Indirect Source	25 lbs/day	25 lbs/day	80 lbs/day
Level B: Indirect Source	137 lbs/day	137 lbs/day	137 lbs/day
Direct Sources	25 tons/year	25 tons/year	25 tons/year

Source: 2004 Shasta County General Plan, Chapter 6.5 (Air Quality).

The modified project does not include any components that would result in an increase in long-term operational emissions. **Table 3.3-2** shows the highest daily levels of project construction emissions regardless of construction phase. Because the County is applying for funding through the Clean Water State Revolving Fund (CWSRF) Program, which is partially funded by the US Environmental Protection Agency, **Table 3.3-2** also shows estimated emissions in tons per year in accordance with CWSRF requirements.

TABLE 3.3-2
Projected Construction Emissions

Year	Pollutants of Concern											
	ROG		NOx		PM_{10}		$PM_{2.5}$		CO		SO_2	
	Maximum lbs/day	Tons/ year	Maximum lbs/day	Tons/ year	Maximum lbs/day	Tons/ year	Maximum lbs/day	Tons/ year	Maximum lbs/day	Tons/ year	Maximum lbs/day	Tons/ year
2022	0.91	0.06	11.39	0.55	1.09	0.04	0.64	0.03	8.67	0.60	0.03	Trace

As shown in **Table 3.3-2,** construction of the additional improvements would not exceed the SCAQMD Level A or Level B thresholds shown in **Table 3.3-1**. Furthermore, the Federal General Conformity Rule does not apply to the proposed project because Shasta County is designated as attainment or unclassified for all federal ambient air quality standards.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.4 Biological Resources

As documented in the IS/MND, the approved project would have less-than-significant impacts related to biological resources with implementation of **Mitigation Measures MM 4.4.1 through MM 4.4.7:**

MM 4.4.1 A botanical field survey shall be conducted by a qualified biologist in the spring when special-status plants known to occur in the region would be identifiable. In the unlikely event that special-status plant species are present, a suitable buffer zone(s) shall be determined by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW) and exclusionary fencing shall be placed prior to commencement of construction.

If avoidance is not possible, the project proponent shall consult with the CDFW to determine a satisfactory method of mitigation. Typical mitigation includes collecting and propagating seeds, and replanting the seedlings in a protected area, or transplanting the individual plants to a protected area. A detailed mitigation plan shall be submitted to CDFW for review and approval. The plan shall identify the mitigation site, methods to be employed to create offsetting special-status plant habitat, success criteria, monitoring requirements, remedial measures, and/or other pertinent data to ensure successful replacement of the affected plant populations. Mitigation shall be undertaken concurrently with or in advance of the start of project construction.

MM 4.4.2 * Potential impacts to the Valley Elderberry Longhorn Beetle (VELB) shall be mitigated as follows:

1. Exclusionary fencing shall be placed at least 100 feet from the dripline of the elderberry shrubs prior to commencement of construction.
2. Signs shall be placed every 50 feet along the avoidance area which state the following: "*This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."* The signs shall be readily visible from a distance of 20 feet and shall be maintained for the duration of construction.
3. Prior to commencement of construction, construction workers shall be instructed about the status of the VELB and the need to protect its elderberry host plant.
4. The USFWS shall be consulted before any disturbances within the buffer area occur. Any necessary mitigation measures prescribed by the USFWS shall be implemented.

MM 4.4.3 Final improvement plans for the following locations shall be modified to the maximum extent feasible to avoid impacts to healthy oak trees 12-inch diameter at breast height (DBH) or larger (e.g., tunneling under roots, placing improvements outside of the drip line, etc.).

a. Trade Way site west of the Union Pacific Railroad (UPRR); and the Main (Cottonwood) Lift Station east of the UPRR [formerly SPRR].

b. Rhonda Road site north of the Anderson-Cottonwood Irrigation Canal.

MM 4.4.4 The following measures shall be implemented to ensure retention of the oak trees that are designated for preservation. The County shall ensure compliance through the enforcement of contractual obligations:

Fencing shall be provided at least 6 feet outside of the dripline of all trees to be preserved. The fencing is to remain throughout construction.

a. No storage of materials shall occur within the fenced area.

b. No construction activities (grading, cutting or trenching), including vehicle parking or materials stockpiling, shall occur within the fenced area.

MM 4.4.5 * Prior to commencement of construction, the County shall verify the Project is eligible for coverage under a USACE Nationwide Permit. If necessary, the wetland delineation report shall be submitted to and verified by the USACE, and pre-construction notification shall be submitted to the USACE. Following completion of the improvements, all jurisdictional areas shall be restored to pre-construction contours.

MM 4.4.6 * For fill requiring a USACE permit, water quality certification shall be obtained from the RWQCB prior to discharge of dredged or fill material. Prior to any activities that would obstruct the flow of, or alter the bed, channel, or bank of any intermittent or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW; and, if required, a streambed alteration agreement shall be obtained.

MM 4.4.7 To ensure that active nests of migratory birds are not disturbed, vegetation removal and construction activities shall occur between August 31 and February 1, if feasible. If vegetation removal or construction occurs during the nesting season, a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area. The survey shall be conducted no more than one week prior to the initiation of vegetation removal or facility construction. If vegetation removal or other construction activities are delayed or suspended for more than two weeks after the pre-construction survey, the site shall be resurveyed.

If nesting birds are found, the nest sites shall not be disturbed until after the young have fledged. Further, to prevent nest abandonment and mortality of chicks and eggs, no vegetation removal or construction activities shall occur within 500 feet of an active nest, unless a smaller buffer zone is authorized by the CDFW and the USFWS (the size of the construction buffer zone may vary depending on the species of nesting birds present).

A qualified biologist shall delineate the buffer zone with construction tape or pin flags that shall remain in place until the young have fledged. The biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. Guidance from CDFW will be requested if the nestlings within the active nest appear disturbed. The monitoring biologist shall have the authority to stop any work determined to be adversely affecting the nesting activity. The monitoring biologist shall report any "take" of active nests to CDFW.

*** Comments on Adopted Mitigation Measures**

MM 4.4.2
In May 2017, following adoption of the MND, the U.S. Fish and Wildlife Service (USFWS) published the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*[1], which calls for an evaluation of potential impacts from work occurring within 50 meters (165 feet) of elderberry shrubs. In conjunction with the National Environmental Policy Act (NEPA) consultation process for the CWSRF program, MM 4.4.2 was revised to reflect the updated USFWS-recommended measures as follows:

- Fencing. All areas to be avoided during construction activities shall be fenced and/or flagged as close to the construction limits as feasible.
- Avoidance Area. Activities that may damage or kill an elderberry shrub (i.e. trenching, paving, etc.) shall be set back at least 6 meters (20 feet) from the driplines of the elderberries.
- Worker Education. A qualified biologist shall provide training to all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.
- Construction Monitoring. A qualified biologist shall monitor the work area at least weekly during construction of the UPRR/Main Lift Station crossing to ensure that all avoidance and minimization measures are implemented.
- Timing. As much as feasible, all activities that could occur within 50 meters (165 feet) of an elderberry shrub, shall be conducted outside of the March-July flight season of the VELB.
- Trimming. No trimming of elderberries shall occur.

MM 4.4.5 and MM 4.4.6
As currently proposed, none of the Phase 2 improvements would impact wetlands or other waters of the U.S. or State and a Section 404 permit from the USACE and Section 401 permit from the RWQCB are not required. In addition, a streambed alteration agreement from CDFW is not required.

[1] U.S. Fish and Wildlife Service. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). https://www.fws.gov/sacramento/documents/VELB_Framework.pdf

To determine potential impacts associated with the additional improvements, an updated records search and field evaluation were completed. Field surveys were completed by an ENPLAN biologist on April 16, 20, and 27, 2021, that covered all improvements proposed under Phase 2 of the project, including the additional study area.

The records search included a review of U.S. Fish and Wildlife Service (USFWS) records for federally listed, proposed, and Candidate plant and animal species under jurisdiction of the USFWS; USFWS records for birds of conservation concern; National Marine Fisheries Services (NMFS) records for critical habitat, essential fish habitat (EFH), and anadromous fish species under the jurisdiction of the NMFS; California Natural Diversity Data Base (CNDDB) records for special-status plants, animals, and natural communities; and California Native Plant Society (CNPS) records for rare and endangered plants. The CNDDB records search covered a five-mile radius around the study area, which includes portions of the U.S. Geological Survey (USGS) Balls Ferry, Bend, Cottonwood, Hooker, and Olinda quadrangles. Included in **Appendix C** are the updated USFWS and NMFS species lists and CNDDB summary report.

Natural Communities

The field surveys confirmed that no sensitive natural communities are present in the additional study area. Improvements at the Crowley Creek Lift Station (refer to **Figure 3**) would be located in previously disturbed areas and no vegetation would be removed. The additional pipeline improvements adjacent to the ACID canal (refer to **Figure 4**) would occur in a graveled area devoid of vegetation. Pipeline improvements in the additional study area would occur in paved road rights-of-way (ROW) and previously disturbed areas; however, removal or pruning of a non-native and invasive tree (tree-of-heaven) may be required near the pipeline improvements between MH 220 and MH 10 (refer to **Figure 5**). It should be noted that one small elderberry shrub that was observed in 2017 in the original study area, generally west of the Main Lift Station on the west side of the railroad tracks (refer to Figure 4.4-1 of the IS/MND) is no longer present.

As documented in the IS/MND, in order to minimize indirect effects, erosion and sediment control measures must be employed throughout construction in accordance with County regulations and conditions of regulatory agency permits. This includes implementation of Best Management Practices (BMPs) to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. Implementation of BMPs ensures that indirect impacts are less than significant. No additional mitigation measures are required.

Special-Status Plant Species

Review of the USFWS species list identified slender Orcutt grass as potentially being present in the additional study area. The project area does not contain designated critical habitat for federally listed plant species. Review of CNDDB records showed that no special-status plants have been reported in the additional study area. In addition to slender Orcutt grass, two special-status plants have been reported within an approximate 5-mile radius of the additional study area: pink creamsacs and silky cryptantha (see Appendix B of the IS/MND). CNPS records identify three rare plants in the USGS Cottonwood quadrangle that were not addressed with the original project:

Red Bluff dwarf rush (Rare Plant Rank 1B.1) is an annual herb that typically occurs along the edges of vernal pools and vernal drainages, or on clay-rich terrace soils. The species is found between ±100 and ±3,400 feet in elevation. The flowering period is March through May. No suitable habitat for this species is present in the study area.

Legenere (Rare Plant Rank 1B.1) is an annual herb that occurs in vernal pools. The species is found between ±1 and ±2885 feet in elevation. The flowering period is April through June. No suitable habitat for this species is present in the study area.

Brazilian watermeal (Rare Plant Rank 2B.3) is an aquatic perennial herb that occurs in marshes and swamps (shallow freshwater). The species is found between ±65 and ±330 feet in elevation. The flowering period is April through December. No suitable habitat for this species is present in the study area.

Plant species with a potential to occur in the study area would have been identifiable at the time the field surveys were completed. No special-status plants were observed during the surveys, nor are any expected to be present. No additional mitigation measures are necessary with respect to special-status plants.

Special-Status Wildlife Species
Review of the USFWS species list for the additional study area identified the following federally listed wildlife species as potentially being present in the study area: Delta smelt, valley elderberry longhorn beetle, monarch butterfly, conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp. The USFWS species list does not identify designated critical habitat in the study area for any federally listed wildlife species.

Review of CNDDB records showed that no special-status wildlife species have been reported in the additional study area. Thirteen special-status wildlife species have been reported within an approximate five-mile radius of the extended project area: bald eagle, bank swallow, Chinook salmon – Sacramento River winter-run (SRWR) ESU, foothill yellow-legged frog, green sturgeon – southern DPS, least Bell's vireo, steelhead – Central Valley (CV) DPS, Townsend's big-eared bat, tricolored blackbird, valley elderberry longhorn beetle, western pond turtle, western red bat, and western spadefoot. The following non-status animals have also been mapped within the search radius: California linderiella, hoary bat, nugget pebblesnail, osprey, silver-haired bat, Tehama chaparral, and Yuma myotis.

Review of the NMFS species list found that SRWR Chinook salmon, Central Valley spring-run (CVSR) Chinook salmon, CV steelhead, and green sturgeon are present in the USGS Cottonwood quadrangle. Critical habitat is designated in the Cottonwood quadrangle for SRWR and CVSR Chinook salmon, CV steelhead, and green sturgeon. Essential fish habitat (EFH) is designated for chinook salmon. In the study area, Cottonwood Creek, ±0.35 miles to the south, is designated critical habitat for CVSR Chinook salmon and CV steelhead and EFH for Chinook salmon.

Some of the special-status species potentially occurring in the study area would not have been evident at the time the fieldwork was conducted; however, a determination of their presence could readily be made based on habitat characteristics observed during the field surveys. No special-status animal species were observed during the field surveys, nor was any suitable habitat for such species observed in the additional study area.

The potential for indirect effects would be avoided/minimized with implementation of BMPs to control erosion and sedimentation and prevent damage to streams, watercourses, and aquatic habitat. No additional mitigation measures are necessary with respect to special-status animals.

Nesting Birds
Areas adjacent to the additional study area include suitable nesting habitat for birds, and the potential for birds to nest in the area is relatively high. Project construction has some potential to directly affect nesting birds if trees are removed during the nesting season. Project construction could also indirectly affect nesting birds by causing adults to abandon their nests in response to loud noise levels and other human-induced disturbances during construction. As required by **Mitigation Measure 4.4.7,** the potential for adversely affecting nesting birds will be minimized by conducting construction activities outside of the nesting season (between September 1 and January 31), or conducting pre-construction nesting surveys. No additional mitigation measures are warranted.

Wetlands and Waters
Field surveys of the additional study area did not identify any wetlands or other jurisdictional waters. Manhole 10 (refer to **Figure 5**) was observed to be located within a constructed drainage ditch. The manhole is proposed to be elevated so that storm water does not overtop the opening, which would involve work in the drainage ditch. CDFW staff was contacted to determine if such work would trigger the need for a Streambed Alteration Agreement (SAA), and confirmed that an SAA was not required because the feature is manmade (A. McKannay, pers. comm.). Corps of Engineers staff commented that ditches constructed in uplands and draining to uplands are typically not subject to federal jurisdictional (M. Roberts, pers. comm.). Likewise, Regional Water Quality Control Board staff confirmed that work at Manhole 10 would not be subject to Waste Discharge Requirements (L. Coster, pers. comm.) because the ditch is a constructed feature.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.5 Cultural Resources

As documented in the IS/MND, the approved project would have less-than-significant impacts related to cultural resources with implementation of **Mitigation Measures MM 4.5.1 through MM 4.5.3:**

MM 4.5.1 In order to comply with California Clean Water State Revolving Fund Program requirements, prior to commencement of construction, the State Water Board Cultural Resources Officer and Environmental Review Unit shall evaluate the Section 106 Report and provide a summary to SHPO in a letter seeking concurrence with the appropriate finding. Any necessary mitigation measures would be identified through the Section 106 consultation process pursuant to the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* and/or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*.

MM 4.5.2 In the event of any inadvertent discovery of archaeological or paleontological resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.), all such finds shall be subject to PRC §21083.2 and CEQA Guidelines §15064.5. Procedures for inadvertent discovery include the following:

a. If the find is an archaeological resource, all work within 50 feet of the find shall be halted until a professional archaeologist can evaluate the significance of the find in accordance with NRHP and CRHR criteria.

b. If the find is a paleontological resource, all work within 50 feet of the find shall be halted until a professional paleontologist can evaluate the significance of the resource.

c. If any find is determined to be significant by the archaeologist, or paleontologist as appropriate, then representatives of the County shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action. If necessary, a Treatment Plan prepared by an archeologist (or paleontologist), outlining recovery of the resource, analysis, and reporting of the find shall be prepared. The Treatment Plan shall be reviewed and approved by the County prior to resuming construction.

d. All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist, or paleontologist, according to current professional standards.

MM 4.5.3 In the event that human remains are encountered during construction activities, the County shall comply with §15064.5 (e) (1) of the CEQA Guidelines and PRC §7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the NAHC to identify the most likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed in §15064.5 (e) has been completed.

A Cultural Resources Inventory (CRI) for the original project was prepared by ENPLAN in 2016. This included a Sacred Lands Search, Native American consultation, and field survey. A supplemental records search at the NEIC/CHRIS was not undertaken for the modified project because the records search completed for the original project fully covered the modified Area of Potential Effects (APE). As part of the prior Native American outreach effort in conjunction with National Environmental Policy Act (NEPA) compliance for the CWSRF program, comments were received only from Kelli Hayward of the Wintu Tribe of Northern California. In response to the comments from Ms. Hayward, a Native American Monitoring Plan was developed (ENPLAN, 2019). The monitoring plan calls for a Native American monitor to be present during all initial ground-disturbing work within geologically young soils, which have a relatively high potential to harbor buried cultural resources. In addition, a requirement for cultural awareness training for all employees participating in earth disturbing activities was added.

As part of the current work, the age of soils within the additional study area was reviewed, a cultural resources field survey was conducted on May 19, 2021, to address the new project areas, and the Wintu Tribe of Northern California was contacted to discuss the new project components.

The soils map review showed that none of the new project components is located in relatively young soil; therefore, no changes to the existing Native American Monitoring Plan are warranted. All of the additional APE has been subject to modern disturbance, including asphalt pavement, utility infrastructure, and urban development. Although the Cottonwood Historic District and a portion of the Central and Southern Pacific Railroad (now Union Pacific Railroad) are adjacent to the extended project APEs, no cultural resources were identified as a result of the 2021 pedestrian survey. Kelli Hayward of the Wintu Tribe of Northern California was contacted by email and telephone on June 16, 2021; she confirmed the need for cultural awareness training for the construction crew and for construction monitoring by a Wintu representative when initial earthwork is conducted in relatively young soils (see below).

Conclusions

As with the original project, the new APEs contain a considerable amount of modern disturbance but there is always some potential for previously unknown cultural resources to be encountered during site excavation. **Mitigation Measures MM 4.5.1 through MM 4.5.3** address the inadvertent discovery of cultural resources and human remains.

In addition, as required through the NEPA environmental review process, construction crew members and their supervisors who will be responsible for conducting earthwork activities must obtain cultural resources awareness training from representatives of the Wintu Tribe prior to beginning work. The training will address the recognition of cultural materials that might be encountered in the project area and actions to be taken in the event that cultural resources are encountered during construction. Further, Native American monitoring will be conducted in accordance with the existing Native American Monitoring Plan.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.6 Energy

The IS/MND did not directly address impacts associated with energy use because it was prepared prior to the State's adoption of revisions to the CEQA Guidelines that required an analysis of energy impacts for MNDs.

Construction-Related Energy Use

Energy consumption during construction of the additional improvements would occur from diesel and gasoline used for construction equipment, haul trucks, and construction workers travelling to and from the work site. Construction equipment must be in compliance with State regulations that require the use of fuel-efficient equipment. Idling of construction equipment when not in use would also be prohibited (see **Mitigation Measure MM 4.12.3** of the IS/MND).

Operational Energy Use

The modified project includes replacement of old, inefficient pumps at the Crowley Creek Lift Station with a new energy-efficient model. This would result in a decrease in energy use at the Lift Station. The project does not include any energy-intensive stationary sources or operational activities that would result in wasteful, inefficient, or unnecessary consumption of energy resources.

Determination:

As documented above, the project would not result in significant impacts associated with energy use and no mitigation measures are required.

3.7 Geology and Soils

As documented in the IS/MND, the approved project would have less-than-significant impacts related to geology and soils, and no mitigation measures were necessary.

Soil types in the additional study area are identified in **Table 3.7-1**. All of these soil types are present in the original study area.

Table 3.7-1:
Soil Types and Characteristics

Soil Name	Landform and Parent Material	Erosion Potential	Drainage	Surface runoff	Permeability	Shrink-swell potential
Perkins loam, moist, 0 to 3 percent slopes, MLRA 17	Alluvium derived from igneous, metamorphic and sedimentary rock	None to slight	Well drained	High	Slow	Low
Moda loam, shallow, 0 to 5 percent slopes	Terraces; alluvium	Slight	Well drained	Very High	Slow	Low
Anderson gravelly sandy loam	Flood plains; alluvium	None to slight	Somewhat excessively	Very Low	Rapid	Low
Churn gravelly loam, 0 to 3 percent slopes	Terraces; alluvium	None	Well drained	Slow	Moderately slow	Low
Churn gravelly loam, deep, 0 to 3 percent slopes	Terraces; alluvium	Slight to moderate	Moderately well drained	Slow to Medium	Slow	Low

Sources: U.S. Department of Agriculture, Natural Resources Conservation Service, 2021; U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Shasta County Area, California. 1974.

Potential impacts associated with erosion would be addressed with implementation of BMPs. In addition, any potential issues related to geologic and soils hazards would be addressed through proper engineering design in accordance with local and State regulations.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.8 Greenhouse Gas Emissions

As documented in the IS/MND, the approved project would have less-than-significant impacts related to greenhouse gas (GHG) emissions, and no mitigation measures were necessary.

As stated in Section 3.3 above, emissions that would be generated by the original project were analyzed using CalEEMod Version 2016.3.1 and included the WWTP improvements as well as the collection system improvements. As noted above, the WWTP improvements have been completed as Phase 1 of the project.

To provide an accurate account of GHG emissions, all improvements proposed under Phase 2 of the project, including the additional improvements covered under this Addendum, were analyzed using the current CalEEMod version (2016.3.2). CalEEMod output files, including all the site-specific inputs and assumptions, are provided in **Appendix B**.

Because there are no local quantitative GHG thresholds, predicted project-related GHG emissions were compared to thresholds established by the Sacramento Metropolitan Air Quality Management District (1,100 metric tons CO_2e per year for both construction and operational emissions). If emissions exceed 1,100 metric tons of CO_2e per year, then the impact is considered significant.

The modified project does not include any components that would result in an increase in long-term operational emissions. **Table 3.8-1** shows construction-related greenhouse gas emissions for all improvements proposed under Phase 2. As indicated, construction emissions are well below the referenced threshold.

Table 3.8-1:
Construction-Related Greenhouse Gas Emissions

Project Phase	Maximum Emissions (Total Metric Tons)			
	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	Carbon Dioxide Equivalent (CO_2e)
2022	96.09	0.02	0	96.69

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.9 Hazards and Hazardous Materials

As documented in the IS/MND, the approved project would have less-than-significant impacts related to hazards and hazardous materials with implementation of **Mitigation Measure MM 4.8.1:**

> **MM 4.8.1** During construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a fire break.

The following databases were reviewed to locate "Cortese List" sites in proximity to the modified project elements:

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor database.
- SWRCB GeoTracker Database
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of “active” Cease and Desist Orders and Clean-Up and Abatement Orders from the SWRCB.

Cortese List records revealed that the nearest active clean-up site is a leaking underground storage tank (LUST) at the Cross Country Travel Center, located approximately 0.86 miles south of the modified project. The site is separated from the project area by Cottonwood Creek, which serves as a hydrological barrier for contaminant migration. Due to the distance from the clean-up site and the intervening hydrological barrier, there is no potential for the project to affect or be affected by the clean-up site. No other potential concerns were identified through the records review.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.10 Hydrology and Water Quality

As documented in the IS/MND, the approved project would have less-than-significant impacts related to hydrology and water quality, and no mitigation measures were necessary.

Construction activities associated with the additional improvements would result in the temporary disturbance of soil and would expose disturbed areas to potential storm events, which could generate accelerated runoff, localized erosion, and sedimentation. However, this is a temporary impact during construction and no long-term impacts would occur. BMPs for erosion/sediment control would be implemented in accordance with State and local requirements. The modified project would not require new groundwater supplies for construction of the project. In addition, the modified project would not increase the amount of impervious surface that could prevent the infiltration of water into the soil.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Panel 06089C1945G, 03/17/2011), the additional improvements are not located within a flood hazard area. In addition, the project area is not in a tsunami zone or seiche zone, and there is no risk of release of pollutants due to project inundation. The project does not include any components that would impede or redirect flood flows or otherwise adversely affect the natural value and functions of the floodplain.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.11 Land Use and Planning

As documented in the IS/MND, the approved project would have no impact related to land use and planning, and no mitigation measures were necessary.

Land use impacts are considered significant if a proposed project would physically divide an existing community (a physical change that interrupts the cohesiveness of the neighborhood). The proposed project modifications would not result in a physical change that would create a barrier for existing or planned development. Therefore, there would be no impact.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.12 Mineral Resources

As documented in the IS/MND, the approved project would have no impact related to mineral resources, and no mitigation measures were necessary. According to the California Geological Survey, the additional study area is not located within a designated Mineral Resource Zone, and the Shasta County General Plan does not identify Mining Resource Buffers in the study area. The modified project would not result in a change in land use patterns and would have no impact on the on-site or off-site availability of mineral resources. Therefore, there would be no impact on mineral resources.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.13 Noise

As documented in the IS/MND, the approved project would have less-than-significant impacts related to noise with implementation of **Mitigation Measures MM 4.12.1 through 4.12.4.**

MM 4.12.1 Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7:00 A.M. and 7:00 P.M., Monday through Friday, and 8:00 A.M. and 5:00 P.M., on

Saturdays. Construction activities shall be prohibited on Sundays and federal/state recognized holidays.

MM 4.12.2 Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.

MM 4.12.3 When not in use, motorized construction equipment shall not be left idling for more than five minutes.

MM 4.12.4 Stationary equipment (generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses. If necessary, noise attenuation measures sufficient to achieve compliance with the Shasta County General Plan Noise Element shall be implemented.

Implementation of the proposed project would generate temporary noise associated with the use and movement of construction equipment during construction activities. Noise generated by construction activities would be intermittent and temporary. The additional pipeline improvements would be located within residential and light industrial areas off of Pine Street, Front Street and Williams Lane; manhole improvements would be located in a mix of commercial, residential, and light industrial areas near the Union Pacific Railroad and along Main Street; and the Crowley Creek Lift Station improvements would be located adjacent to a residential area. However, with implementation of **Mitigation Measures MM 4.12.1 through 4.12.4.**, the temporary increase in construction noise would be less than significant.

The additional improvements would not result in a perceptible permanent increase in noise levels. Periodic maintenance of the various project components may result in temporary sources of noise, as is currently the case. At the Crowley Creek Lift Station, noise levels may decrease because the pumps are over 20 years old and would be replaced with more efficient pumps. Therefore, operational noise would not increase above existing levels.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.14 Population and Housing

As documented in the IS/MND, the approved project would have no impact related to population and housing, and no mitigation measures were necessary. The modified project includes upsizing of collection system pipelines due to flat slopes and little topographical relief. However, these improvements are necessary to reduce the potential for sewer overflows. The modified project would not result in an increase in capacity in the sewer system and would not induce substantial population growth in the area, either directly or indirectly; there would be no impact on population or housing from the modified project.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.15 Public Services

As documented in the IS/MND, the approved project would have no impact related to public services, and no mitigation measures were necessary.

The modified project would not result in the need for additional long-term fire protection or police services nor would it directly or indirectly result in an increase in population requiring additional schools or parks, or the expansion of existing schools or parks. Therefore, there would be no impact.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.16 Recreation

As documented in the IS/MND, the approved project would have no impact related to recreation, and no mitigation measures were necessary. The modified project does not include the construction of houses or businesses that would increase the number of residents or employees in the area. Therefore, the modified project would not result in an increased demand for recreational facilities and there would be no impact.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional measures are required.

3.17 Transportation/Traffic

As documented in the IS/MND, the approved project would have less-than-significant impacts related to transportation/traffic, and no mitigation measures were necessary.

The modified project would not cause a permanent increase in traffic or vehicle miles traveled in the area; remove or change the location of any sidewalk, bicycle lane, trail, or public transportation facility; or conflict with adopted policies, plans or programs related to alternative transportation.

Short-term increases in traffic volume associated with construction workers and equipment on the local road network would occur during construction, and this increased traffic could interfere with emergency response times. However, temporary traffic control would be required in accordance with State requirements and must adhere to the procedures, methods, and guidance given in the current edition of the California MUTCD.

Additionally, the modified project does not include any components that would permanently increase the potential for hazards due to a design feature or incompatible uses. Because no permanent impacts to the circulation system would occur, and safety measures would be employed to safeguard travel by the general public and emergency response vehicles during construction, impacts would be less than significant.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No mitigation measures are required.

3.18 Tribal Cultural Resources

As documented in the IS/MND, the approved project would have less-than-significant impacts related to tribal cultural resources with implementation of **Mitigation Measures MM 4.5.2 and MM 4.5.3.**

As discussed under Section 3.5, a Native American Monitoring Plan was developed for the original project (ENPLAN, 2019). The monitoring plan calls for a Native American monitor to be present during all initial ground-disturbing work within geologically young soils, which have a relatively high potential to harbor buried cultural resources. In addition, a requirement for cultural awareness training for all employees participating in earth disturbing activities was added.

As part of the current work, the age of soils within the extended project area was reviewed, a cultural resources field survey was conducted to address the new project areas, and the Wintu Tribe of Northern California was contacted to discuss the new project components. The soils map review showed that none of the new project components is located in relatively young soil; therefore, no changes to the existing Native American Monitoring Plan are warranted. Kelli Hayward of the Wintu Tribe of Northern California was contacted by email and telephone on June 16, 2021; she confirmed the need for cultural awareness training for the construction crew and for construction monitoring by a Wintu representative when initial earthwork is conducted in relatively young soils.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. As required through the NEPA environmental review, the construction crew responsible for earthwork will obtain cultural resources awareness training from Wintu representatives, and Native American monitoring will be conducted during construction work in relatively young soils that have a higher potential to contain buried cultural resources. No additional mitigation measures are required.

3.19 Utilities and Service Systems

As documented in the IS/MND, the approved project would have no impact related to utilities and service systems, and no mitigation measures were necessary.

The modified project does not include the construction of houses or businesses that would increase the number of residents or employees in the area; as such, the project would not result in the need for new or expanded water, natural gas, or telecommunications facilities. In addition, no water, electric power, natural gas, or telecommunications facilities would need to be relocated to accommodate the modified project.

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.20 Wildfire

The IS/MND did not directly address impacts associated with wildfire because it was prepared prior to the State's adoption of revisions to the CEQA Guidelines that required an analysis of wildfire impacts for MNDs.

According to the California Department of Forestry and Fire Protection (CAL FIRE), the additional study area is not located within a Fire Hazard Severity Zone (FHSZ).

The modified project does not include any development or improvements that would increase the long-term risk of wildland fires or expose people or structures to wildland fires. The project would not require installation of infrastructure that could exacerbate fire hazards (e.g., power lines in vegetated areas); would not construct public roads or otherwise intrude into natural spaces in a manner that would increase wildlife hazards in the long term; and would not require construction of fuel breaks that may result in temporary on on-going impacts to the environment.

Further, the project does not have any components that would expose people to significant post-fire risks such as flooding and landslides. The modified project does not involve a use or activity that could interfere with long-term emergency response or emergency evacuation plans for the area. Temporary traffic control during completion of activities that require work in the public right-of-way is required and must adhere to the procedures, methods and guidance given in the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD).

Determination:

No new significant environmental effects, or substantial increase in the severity of previously identified significant effects, would occur. No additional mitigation measures are required.

3.21 Mandatory Findings of Significance

As documented in the IS/MND and this Addendum, design features incorporated into the project would avoid or reduce certain potential environmental impacts, as would compliance with existing regulations. Remaining impacts can be reduced to levels that are less than significant through implementation of the mitigation measures identified above.

The previously adopted mitigation measures (as amended) extend to the modified project and are included as conditions of project approval, and the County is responsible for ensuring their implementation. Therefore, the modified project would not have a significant adverse impact on the environment.

SECTION 4. DETERMINATION

Based on substantial evidence documented in this Addendum, Shasta County, as lead agency, has determined that the proposed modifications would not change the conclusions in the adopted MND. The modified project would meet the same objective of providing safe and reliable wastewater service to existing customers within County Service Area No. 17. No new potentially significant impacts would occur, and the modified project would not increase the severity of previously identified potentially significant impacts.

None of the conditions described in Section 15162 of the CEQA Guidelines apply to the project as amended, and the proposed revisions to the project necessitate only minor technical changes or additions to the previously adopted MND. Therefore, preparation of an Addendum to the adopted MND provides an appropriate level of environmental review.

SECTION 5. REFERENCES

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SECTION 6. LIST OF PREPARERS

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Appendix A

ORIGINAL INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

NOTICE OF DETERMINATION

MITIGATION MONITORING AND REPORTING PROGRAM

Appendix B

CalEEMod.2016.3.2 Emissions Report

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum)

Shasta County AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.00		0.21	0.00	0
Other Asphalt Surfaces	0.00		0.36	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	82
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Includes all Phase 2 sewer collection system improvements, including expanded study area.

Construction Phase - .

Grading - Construction details provided by PACE.

Demolition -

Trips and VMT - .

Construction Off-road Equipment Mitigation - Adopted Mitigation Measures.

Area Mitigation -

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum) - Shasta County AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	25
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	100.00	120.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	8/18/2022	9/15/2022
tblConstructionPhase	PhaseEndDate	8/25/2022	10/14/2022
tblConstructionPhase	PhaseStartDate	8/19/2022	9/19/2022
tblGrading	AcresOfGrading	0.50	0.57
tblGrading	MaterialExported	0.00	2,930.00
tblGrading	MaterialImported	0.00	2,140.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	28.00	112.00
tblTripsAndVMT	HaulingTripNumber	501.00	43.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0600	0.5462	0.6002	1.0900e-003	0.0220	0.0276	0.0496	5.6900e-003	0.0255	0.0312	0.0000	96.0917	96.0917	0.0242	0.0000	96.6959
Maximum	**0.0600**	**0.5462**	**0.6002**	**1.0900e-003**	**0.0220**	**0.0276**	**0.0496**	**5.6900e-003**	**0.0255**	**0.0312**	**0.0000**	**96.0917**	**96.0917**	**0.0242**	**0.0000**	**96.6959**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0600	0.5462	0.6002	1.0900e-003	0.0159	0.0276	0.0435	4.2400e-003	0.0255	0.0298	0.0000	96.0916	96.0916	0.0242	0.0000	96.6958
Maximum	**0.0600**	**0.5462**	**0.6002**	**1.0900e-003**	**0.0159**	**0.0276**	**0.0435**	**4.2400e-003**	**0.0255**	**0.0298**	**0.0000**	**96.0916**	**96.0916**	**0.0242**	**0.0000**	**96.6958**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.77**	**0.00**	**12.31**	**25.48**	**0.00**	**4.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum) - Shasta County AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-15-2022	6-14-2022	0.2729	0.2729
2	6-15-2022	9-14-2022	0.2595	0.2595
3	9-15-2022	9-30-2022	0.0316	0.0316
		Highest	0.2729	0.2729

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	3/28/2022	5	10	
2	Site Preparation	Site Preparation	3/29/2022	3/29/2022	5	1	
3	Grading	Grading	3/30/2022	3/31/2022	5	2	
4	Building Construction	Building Construction	4/1/2022	9/15/2022	5	120	
5	Paving	Paving	9/19/2022	10/14/2022	5	20	

Acres of Grading (Site Preparation Phase): 0.57

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	112.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	43.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1300e-003	0.0000	3.1300e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**3.1300e-003**	**1.6900e-003**	**4.8200e-003**	**4.7000e-004**	**1.6100e-003**	**2.0800e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.9000e-004	0.0132	2.0400e-003	4.0000e-005	9.4000e-004	4.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	4.1970	4.1970	2.2000e-004	0.0000	4.2025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.8700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5183	0.5183	1.0000e-005	0.0000	0.5186
Total	**6.4000e-004**	**0.0134**	**3.9100e-003**	**5.0000e-005**	**1.5500e-003**	**4.0000e-005**	**1.5900e-003**	**4.2000e-004**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**4.7152**	**4.7152**	**2.3000e-004**	**0.0000**	**4.7211**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4100e-003	0.0000	1.4100e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**1.4100e-003**	**1.6900e-003**	**3.1000e-003**	**2.1000e-004**	**1.6100e-003**	**1.8200e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.9000e-004	0.0132	2.0400e-003	4.0000e-005	7.6000e-004	4.0000e-005	8.1000e-004	2.2000e-004	4.0000e-005	2.6000e-004	0.0000	4.1970	4.1970	2.2000e-004	0.0000	4.2025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	1.9000e-004	1.8700e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.5183	0.5183	1.0000e-005	0.0000	0.5186
Total	**6.4000e-004**	**0.0134**	**3.9100e-003**	**5.0000e-005**	**1.2400e-003**	**4.0000e-005**	**1.2900e-003**	**3.5000e-004**	**4.0000e-005**	**3.9000e-004**	**0.0000**	**4.7152**	**4.7152**	**2.3000e-004**	**0.0000**	**4.7211**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.0000e-004	0.0000	3.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**3.0000e-004**	**1.3000e-004**	**4.3000e-004**	**3.0000e-005**	**1.2000e-004**	**1.5000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0259	0.0259	0.0000	0.0000	0.0259
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0259**	**0.0259**	**0.0000**	**0.0000**	**0.0259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4000e-004	0.0000	1.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**1.4000e-004**	**1.3000e-004**	**2.7000e-004**	**1.0000e-005**	**1.2000e-004**	**1.3000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0259	0.0259	0.0000	0.0000	0.0259
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0259**	**0.0259**	**0.0000**	**0.0000**	**0.0259**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	**7.1000e-004**	**6.4100e-003**	**7.4700e-003**	**1.0000e-005**	**7.5000e-004**	**3.4000e-004**	**1.0900e-003**	**4.1000e-004**	**3.2000e-004**	**7.3000e-004**	**0.0000**	**1.0414**	**1.0414**	**1.9000e-004**	**0.0000**	**1.0462**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	5.0500e-003	7.8000e-004	2.0000e-005	3.6000e-004	2.0000e-005	3.8000e-004	1.0000e-004	2.0000e-005	1.2000e-004	0.0000	1.6113	1.6113	9.0000e-005	0.0000	1.6135
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1037	0.1037	0.0000	0.0000	0.1037
Total	**2.0000e-004**	**5.0900e-003**	**1.1500e-003**	**2.0000e-005**	**4.8000e-004**	**2.0000e-005**	**5.0000e-004**	**1.3000e-004**	**2.0000e-005**	**1.5000e-004**	**0.0000**	**1.7150**	**1.7150**	**9.0000e-005**	**0.0000**	**1.7172**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	**7.1000e-004**	**6.4100e-003**	**7.4700e-003**	**1.0000e-005**	**3.4000e-004**	**3.4000e-004**	**6.8000e-004**	**1.9000e-004**	**3.2000e-004**	**5.1000e-004**	**0.0000**	**1.0414**	**1.0414**	**1.9000e-004**	**0.0000**	**1.0462**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	5.0500e-003	7.8000e-004	2.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.6113	1.6113	9.0000e-005	0.0000	1.6135
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1037	0.1037	0.0000	0.0000	0.1037
Total	**2.0000e-004**	**5.0900e-003**	**1.1500e-003**	**2.0000e-005**	**3.9000e-004**	**2.0000e-005**	**4.1000e-004**	**1.1000e-004**	**2.0000e-005**	**1.3000e-004**	**0.0000**	**1.7150**	**1.7150**	**9.0000e-005**	**0.0000**	**1.7172**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0412	0.4216	0.4292	6.8000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	60.0886	60.0886	0.0194	0.0000	60.5745
Total	**0.0412**	**0.4216**	**0.4292**	**6.8000e-004**		**0.0223**	**0.0223**		**0.0205**	**0.0205**	**0.0000**	**60.0886**	**60.0886**	**0.0194**	**0.0000**	**60.5745**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.6600e-003	0.0450	1.4000e-004	0.0146	1.0000e-004	0.0147	3.8800e-003	9.0000e-005	3.9700e-003	0.0000	12.4380	12.4380	3.5000e-004	0.0000	12.4467
Total	**5.9500e-003**	**4.6600e-003**	**0.0450**	**1.4000e-004**	**0.0146**	**1.0000e-004**	**0.0147**	**3.8800e-003**	**9.0000e-005**	**3.9700e-003**	**0.0000**	**12.4380**	**12.4380**	**3.5000e-004**	**0.0000**	**12.4467**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0412	0.4216	0.4292	6.8000e-004		0.0223	0.0223		0.0205	0.0205	0.0000	60.0885	60.0885	0.0194	0.0000	60.5744
Total	**0.0412**	**0.4216**	**0.4292**	**6.8000e-004**		**0.0223**	**0.0223**		**0.0205**	**0.0205**	**0.0000**	**60.0885**	**60.0885**	**0.0194**	**0.0000**	**60.5744**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.6600e-003	0.0450	1.4000e-004	0.0114	1.0000e-004	0.0115	3.1100e-003	9.0000e-005	3.2000e-003	0.0000	12.4380	12.4380	3.5000e-004	0.0000	12.4467
Total	**5.9500e-003**	**4.6600e-003**	**0.0450**	**1.4000e-004**	**0.0114**	**1.0000e-004**	**0.0115**	**3.1100e-003**	**9.0000e-005**	**3.2000e-003**	**0.0000**	**12.4380**	**12.4380**	**3.5000e-004**	**0.0000**	**12.4467**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4700e-003	0.0592	0.0704	1.1000e-004		2.9600e-003	2.9600e-003		2.7600e-003	2.7600e-003	0.0000	9.3968	9.3968	2.7400e-003	0.0000	9.4653
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9400e-003**	**0.0592**	**0.0704**	**1.1000e-004**		**2.9600e-003**	**2.9600e-003**		**2.7600e-003**	**2.7600e-003**	**0.0000**	**9.3968**	**9.3968**	**2.7400e-003**	**0.0000**	**9.4653**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.9000e-004	3.7500e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0365	1.0365	3.0000e-005	0.0000	1.0372
Total	**5.0000e-004**	**3.9000e-004**	**3.7500e-003**	**1.0000e-005**	**1.2100e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0365**	**1.0365**	**3.0000e-005**	**0.0000**	**1.0372**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4700e-003	0.0592	0.0704	1.1000e-004		2.9600e-003	2.9600e-003		2.7600e-003	2.7600e-003	0.0000	9.3968	9.3968	2.7400e-003	0.0000	9.4653
Paving	4.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9400e-003**	**0.0592**	**0.0704**	**1.1000e-004**		**2.9600e-003**	**2.9600e-003**		**2.7600e-003**	**2.7600e-003**	**0.0000**	**9.3968**	**9.3968**	**2.7400e-003**	**0.0000**	**9.4653**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.9000e-004	3.7500e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.6000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	1.0365	1.0365	3.0000e-005	0.0000	1.0372
Total	**5.0000e-004**	**3.9000e-004**	**3.7500e-003**	**1.0000e-005**	**9.5000e-004**	**1.0000e-005**	**9.6000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**1.0365**	**1.0365**	**3.0000e-005**	**0.0000**	**1.0372**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.531326	0.031853	0.180854	0.102256	0.028681	0.006074	0.012848	0.095604	0.001329	0.001212	0.005444	0.001276	0.001244
Other Non-Asphalt Surfaces	0.531326	0.031853	0.180854	0.102256	0.028681	0.006074	0.012848	0.095604	0.001329	0.001212	0.005444	0.001276	0.001244

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum) - Shasta County AQMD Air District, Annual

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum)

Shasta County AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.00		0.21	0.00	0
Other Asphalt Surfaces	0.00		0.36	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	82
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Includes all Phase 2 sewer collection system improvements, including expanded study area.

Construction Phase - .

Grading - Construction details provided by PACE.

Demolition -

Trips and VMT - .

Construction Off-road Equipment Mitigation - Adopted Mitigation Measures.

Area Mitigation -

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum) - Shasta County AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	25
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	100.00	120.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	8/18/2022	9/15/2022
tblConstructionPhase	PhaseEndDate	8/25/2022	10/14/2022
tblConstructionPhase	PhaseStartDate	8/19/2022	9/19/2022
tblGrading	AcresOfGrading	0.50	0.57
tblGrading	MaterialExported	0.00	2,930.00
tblGrading	MaterialImported	0.00	2,140.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	28.00	112.00
tblTripsAndVMT	HaulingTripNumber	501.00	43.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.9146	11.3877	8.6691	0.0304	1.2571	0.3736	1.6123	0.5509	0.3437	0.8904	0.0000	3,069.5255	3,069.5255	0.3644	0.0000	3,077.1533
Maximum	**0.9146**	**11.3877**	**8.6691**	**0.0304**	**1.2571**	**0.3736**	**1.6123**	**0.5509**	**0.3437**	**0.8904**	**0.0000**	**3,069.5255**	**3,069.5255**	**0.3644**	**0.0000**	**3,077.1533**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.9146	11.3877	8.6691	0.0304	0.7442	0.3736	1.0995	0.2991	0.3437	0.6386	0.0000	3,069.5255	3,069.5255	0.3644	0.0000	3,077.1533
Maximum	**0.9146**	**11.3877**	**8.6691**	**0.0304**	**0.7442**	**0.3736**	**1.0995**	**0.2991**	**0.3437**	**0.6386**	**0.0000**	**3,069.5255**	**3,069.5255**	**0.3644**	**0.0000**	**3,077.1533**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.80**	**0.00**	**31.81**	**45.71**	**0.00**	**28.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/15/2022	3/28/2022	5	10	
2	Site Preparation	Site Preparation	3/29/2022	3/29/2022	5	1	
3	Grading	Grading	3/30/2022	3/31/2022	5	2	
4	Building Construction	Building Construction	4/1/2022	9/15/2022	5	120	
5	Paving	Paving	9/19/2022	10/14/2022	5	20	

Acres of Grading (Site Preparation Phase): 0.57

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.57

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	112.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	43.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6259	0.0000	0.6259	0.0948	0.0000	0.0948			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.6259**	**0.3375**	**0.9635**	**0.0948**	**0.3225**	**0.4173**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0770	2.5722	0.3850	8.9200e-003	0.1962	8.8200e-003	0.2050	0.0538	8.4300e-003	0.0622		934.5562	934.5562	0.0466		935.7218
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.1344**	**2.6084**	**0.8457**	**0.0102**	**0.3239**	**9.6400e-003**	**0.3335**	**0.0877**	**9.1900e-003**	**0.0969**		**1,062.1651**	**1,062.1651**	**0.0503**		**1,063.4233**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2817	0.0000	0.2817	0.0427	0.0000	0.0427			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.2817**	**0.3375**	**0.6192**	**0.0427**	**0.3225**	**0.3652**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0770	2.5722	0.3850	8.9200e-003	0.1592	8.8200e-003	0.1680	0.0447	8.4300e-003	0.0532		934.5562	934.5562	0.0466		935.7218
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1000	8.2000e-004	0.1008	0.0271	7.6000e-004	0.0278		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.1344**	**2.6084**	**0.8457**	**0.0102**	**0.2591**	**9.6400e-003**	**0.2688**	**0.0718**	**9.1900e-003**	**0.0810**		**1,062.1651**	**1,062.1651**	**0.0503**		**1,063.4233**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6045	0.0000	0.6045	0.0653	0.0000	0.0653			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.6045**	**0.2573**	**0.8618**	**0.0653**	**0.2367**	**0.3020**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0287	0.0181	0.2304	6.4000e-004	0.0639	4.1000e-004	0.0643	0.0169	3.8000e-004	0.0173		63.8045	63.8045	1.8500e-003		63.8507
Total	**0.0287**	**0.0181**	**0.2304**	**6.4000e-004**	**0.0639**	**4.1000e-004**	**0.0643**	**0.0169**	**3.8000e-004**	**0.0173**		**63.8045**	**63.8045**	**1.8500e-003**		**63.8507**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2720	0.0000	0.2720	0.0294	0.0000	0.0294			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2720**	**0.2573**	**0.5294**	**0.0294**	**0.2367**	**0.2661**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0287	0.0181	0.2304	6.4000e-004	0.0500	4.1000e-004	0.0504	0.0135	3.8000e-004	0.0139		63.8045	63.8045	1.8500e-003		63.8507
Total	**0.0287**	**0.0181**	**0.2304**	**6.4000e-004**	**0.0500**	**4.1000e-004**	**0.0504**	**0.0135**	**3.8000e-004**	**0.0139**		**63.8045**	**63.8045**	**1.8500e-003**		**63.8507**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.7528**	**0.3375**	**1.0903**	**0.4138**	**0.3225**	**0.7363**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1478	4.9376	0.7390	0.0171	0.3766	0.0169	0.3935	0.1033	0.0162	0.1195		1,794.0141	1,794.0141	0.0895		1,796.2517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.2052**	**4.9739**	**1.1998**	**0.0184**	**0.5043**	**0.0177**	**0.5221**	**0.1372**	**0.0170**	**0.1541**		**1,921.6230**	**1,921.6230**	**0.0932**		**1,923.9532**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.3387**	**0.3375**	**0.6763**	**0.1862**	**0.3225**	**0.5087**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1478	4.9376	0.7390	0.0171	0.3055	0.0169	0.3225	0.0858	0.0162	0.1020		1,794.0141	1,794.0141	0.0895		1,796.2517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1000	8.2000e-004	0.1008	0.0271	7.6000e-004	0.0278		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.2052**	**4.9739**	**1.1998**	**0.0184**	**0.4055**	**0.0177**	**0.4232**	**0.1129**	**0.0170**	**0.1298**		**1,921.6230**	**1,921.6230**	**0.0932**		**1,923.9532**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1147	0.0724	0.9215	2.5600e-003	0.2555	1.6400e-003	0.2571	0.0678	1.5100e-003	0.0693		255.2178	255.2178	7.4000e-003		255.4029
Total	**0.1147**	**0.0724**	**0.9215**	**2.5600e-003**	**0.2555**	**1.6400e-003**	**0.2571**	**0.0678**	**1.5100e-003**	**0.0693**		**255.2178**	**255.2178**	**7.4000e-003**		**255.4029**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1147	0.0724	0.9215	2.5600e-003	0.1999	1.6400e-003	0.2016	0.0541	1.5100e-003	0.0556		255.2178	255.2178	7.4000e-003		255.4029
Total	**0.1147**	**0.0724**	**0.9215**	**2.5600e-003**	**0.1999**	**1.6400e-003**	**0.2016**	**0.0541**	**1.5100e-003**	**0.0556**		**255.2178**	**255.2178**	**7.4000e-003**		**255.4029**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6941**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.0574**	**0.0362**	**0.4608**	**1.2800e-003**	**0.1277**	**8.2000e-004**	**0.1286**	**0.0339**	**7.6000e-004**	**0.0346**		**127.6089**	**127.6089**	**3.7000e-003**		**127.7015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6941**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0574	0.0362	0.4608	1.2800e-003	0.1000	8.2000e-004	0.1008	0.0271	7.6000e-004	0.0278		127.6089	127.6089	3.7000e-003		127.7015
Total	**0.0574**	**0.0362**	**0.4608**	**1.2800e-003**	**0.1000**	**8.2000e-004**	**0.1008**	**0.0271**	**7.6000e-004**	**0.0278**		**127.6089**	**127.6089**	**3.7000e-003**		**127.7015**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.531326	0.031853	0.180854	0.102256	0.028681	0.006074	0.012848	0.095604	0.001329	0.001212	0.005444	0.001276	0.001244
Other Non-Asphalt Surfaces	0.531326	0.031853	0.180854	0.102256	0.028681	0.006074	0.012848	0.095604	0.001329	0.001212	0.005444	0.001276	0.001244

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

CSA17 - Cottonwood Phase 2 Sewer Improvements (Addendum) - Shasta County AQMD Air District, Summer

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C

BIOLOGICAL RECORD SEARCH RESULTS

USFWS Species List

NMFS Species List

Table 1. CNDDB Report Summary

Table 2. Potential for Special-Status Species to Occur on the Project Site

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: April 11, 2022
Project Code: 2022-0030676
Project Name: CEQA Addendum: CSA 17 Wastewater Collection and Treatment Improvement Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0030676
Event Code: None
Project Name: CEQA Addendum: CSA 17 Wastewater Collection and Treatment Improvement Project
Project Type: Wastewater Pipeline - Maintenance / Modification - Below Ground
Project Description: Sewer system improvements.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.3855427,-122.26724267406502,14z

Counties: Shasta County, California

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: ENPLAN
Name: Kiara Hadsall
Address: 3179 Bechelli Lane
City: Redding
State: CA
Zip: 96002
Email khadsall@enplan.com
Phone: 5302210440

Quad Name **Cottonwood**

Quad Number **40122-D3**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat - **X**

SRWR Chinook Salmon Critical Habitat - **X**

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat - X

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - X

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -

Chinook Salmon EFH - X

Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
PLANTS							
Pink creamsacs	*Castilleja rubicundula* ssp. *rubicundula*	1B.2	Pink creamsacs is an annual herb that occurs on serpentine soils in openings in chaparral or valley and foothill grasslands. The species is reported from sea level to 3,000 feet in elevation. The flowering period is April through June.	No	No	No	No serpentine soils are present in the project site. Pink creamsacs were not observed during the botanical survey and are not expected to be present.
Silky cryptantha	*Cryptantha crinita*	1B.2	Silky cryptantha is an annual herb that occurs along low-gradient seasonal streams with broad floodplains, usually on the valley floor, where it is found on gravelly or cobbly substrates. The species also occurs in vernally moist uplands. Less frequently, it occurs along perennial streams, including the Sacramento River. The species is found between 200 and 4,000 feet in elevation. The flowering period is April and May.	No	No	No	No suitable habitat for silky cryptantha is present in the project site. Silky cryptantha was not observed during the botanical survey and is not expected to be present.
Slender Orcutt grass	*Orcuttia tenuis*	FT, SE, 1B.1	Slender Orcutt grass is an annual herb that occurs in vernal pools and similar habitats, occasionally on reservoir edges or stream floodplains, on clay soils with seasonal inundation in valley grassland to coniferous forest or sagebrush scrub. The species is found between 100 and 5,800 feet in elevation. The flowering period is May through September.	No	No	No	No vernal pools or other potentially suitable habitats for slender Orcutt grass occur in the project site. Slender Orcutt grass was not observed during the botanical survey, and is not expected to be present.
MAMMALS							
Townsend's big-eared bat	*Corynorhinus townsendii pallescens*	SSSC	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	Potentially Present	No	Yes	The lift station buildings could potentially be utilized for roosting by Townsend's big-eared bats. However, given the high level of human disturbance around these structures and because no buildings would be removed, the species has a low potential to be present.

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
Western red bat	*Lasiurus blossevellii*	SSSC	In California, western red bats occur primarily below 200 meters in elevation, although individuals have been detected up to nearly 2500 meters. The bats both forage and roost in riparian habitats and are strongly associated with riparian habitats that are over 50 meters wide. Breeding females are concentrated in the Central Valley. Roosting is expected to occur primarily in the largest riparian trees. Roosting has been observed in orchards, such as walnut orchards flanking the Sacramento River, perhaps due to the loss of gallery riparian forest habitat.	No	No	No	No riparian woodlands are present in the project site. The western red bat would thus not be present.
BIRDS							
Bald eagle	*Haliaeetus leucocephalus*	FD, SE, SFP	Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Adults tend to use the same breeding areas year after year and often use the same nest, though a breeding area may include one or more alternate nests. Bald eagles usually do not begin nesting if human disturbance is evident. In California, the bald eagle nesting season is from February through July.	No	No	No	No suitable nesting habitat for bald eagles is present in the project site, nor were bald eagles or eagle nests observed during the wildlife survey.
Bank swallow	*Riparia riparia*	ST	Bank swallows require vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes, or the ocean for nesting.	No	No	No	No vertical cliffs with fine-textured or sandy soils are present in the project site. The bank swallow would thus not nest in the project site.

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
Least Bell's vireo	*Vireo bellii pusillus*	FE, SE	Least Bell's vireos occur in a variety of riparian habitat types, including cottonwood-willow woodlands, oak woodlands, and mule fat scrub. Early successional riparian habitats are preferred for nesting. Two features essential for nesting site selection: 1) the presence of dense cover within 3 to 6 feet of the ground for nest concealment and 2) a dense, stratified canopy for foraging.	No	No	No	No potentially suitable riparian habitats are present in the project site. The least Bell's vireo would thus not be present.
Tricolored blackbird	*Agelaius tricolor*	ST, SSSC	Tricolored blackbirds are colonial nesters and generally nest near open water. Nesting areas must be large enough to support a minimum colony of about 50 pairs. Tricolored blackbirds generally construct nests in dense cattails or tules, although they can also nest in thickets of willow, blackberry, wild rose and tall herbs.	No	No	No	No suitable nesting habitat for tricolored blackbirds is present in the project site. No tricolored blackbirds or evidence of past nesting by tricolored blackbirds were observed in or adjacent to the project site during the wildlife survey. The tricolored blackbird is thus not expected to nest in or adjacent to the project site.
AMPHIBIANS							
California red-legged frog	*Rana draytonii*	FT, SSSC	Suitable aquatic habitat for the California red-legged frog (CRLF) consists of permanent water bodies of virtually still or slow-moving fresh water, including natural and man-made ponds, backwaters within streams and creeks, marshes, lagoons, and dune ponds. The CRLF is not characteristically found in deep lacustrine habitats (e.g., deep lakes and reservoirs). Dense, shrubby riparian vegetation, e.g., willow (*Salix*) and bulrush (*Scirpus*) species, and bank overhangs are important features of CRLF breeding habitat. The CRLF tends to occur in greater numbers in deeper, cooler pools with dense emergent and shoreline vegetation.	No	No	No	No suitable breeding habitat for the CRLF occurs in the project site. The CRLF would thus not be present.

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
Foothill yellow-legged frog	*Rana boylii*	SE, SSSC	Foothill yellow-legged frogs are typically found in shallow, partly shaded, perennial streams with riffles and rocky substrates. This frog needs at least some cobble-sized substrate for egg laying. Foothill yellow-legged frogs generally prefer low to moderate gradient streams, especially for breeding and egg laying, although they may utilize moderate to steep gradient streams during summer and early fall.	No	No	No	No suitable breeding habitat for the FYLF occurs in the project site. The FYLG would thus not be present.
Western pond turtle	*Emys marmorata*	SSSC	The western pond turtle associates with permanent or nearly permanent quiet-water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying. Nesting and courtship occur during spring. Nests are generally constructed within 500 feet of a waterbody. Pond turtles may leave aquatic sites in the fall and overwinter in nearby uplands, returning to the aquatic sites in spring.	No	No	No	No suitable habitat occurs in the project site for the western pond turtle. The western pond turtle would thus not be present.
Western spadefoot	*Spea hammondi*	SSSC	Western spadefoots breed from January through May in shallow, temporary pools that persist for at least three weeks. Breeding pools are generally absent of bullfrogs, fish, and crayfish. After breeding, adults seek shelter underground either by excavating a subterranean burrow or retreating into a small mammal burrow nearby. Tadpoles transform within three weeks. Following transformation, juveniles leave breeding pools and seek shelter underground. Western spadefoots remain underground until breeding pools form the following spring.	No	No	No	No vernal pools or other potentially suitable breeding habitats for western spadefoots are present in the project site. The western spadefoot would thus not be present.

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
FISH							
Delta smelt	*Hypomesus transpacificus*	FT, SE	Delta smelt primarily inhabit the brackish waters of Sacramento-San Joaquin River Delta. Most spawning occurs in backwater sloughs and channel edgewaters.	No	No	No	The Delta smelt would not be present because the project site is well outside the range of the species.
Green sturgeon – southern DPS	*Acipenser medirostris*	FT	Southern DPS Green Sturgeon are found in the Sacramento and San Joaquin rivers and Delta. The species is anadromous, migrating in March-June from seawater into the freshwater reaches of larger coastal rivers to spawn; the southern DPS primarily spawns in the upper mainstem of the Sacramento River. Spawning habitat is characterized by cool, deep, swift flowing river reaches over gravel and cobble bottoms	No	No	No	The southern DPS green sturgeon would not be present because the project site is well outside the range of the species.
Steelhead - Central Valley DPS	*Oncorhynchus mykiss*	FT	Central Valley steelhead inhabit cold-water tributaries of the Sacramento and San Joaquin rivers. Adults begin their upstream spawning migration between August and March. Spawning occurs between December and April. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing, shallow water.	No	No	No	No suitable habitat for Central Valley steelhead is present in the project site; steelhead would thus not be present.
Sacramento River winter-run Chinook salmon	*Oncorhynchus tshawytscha*	FE, SE	Sacramento River winter-run Chinook salmon spawn almost exclusively in the Sacramento River, and not in tributary streams. Spawning generally occurs in swift, relatively shallow riffles or along the edges of fast runs where there is an abundance of loose gravel. Juveniles may rear in tributaries of the Sacramento River.	No	No	No	No suitable habitat for Sacramento River winter-run Chinook salmon is present in the project site; the winter-run would thus not be present.

TABLE 2

Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
CRUSTACEANS							
Conservancy fairy shrimp	*Branchinecta conservatio*	FE	Conservancy fairy shrimp inhabit large, cool-water vernal pools with moderately turbid water.	No	No	No	No vernal pools or other potentially suitable habitats for Conservancy fairy shrimp are present in the project site. Conservancy fairy shrimp would thus not be present.
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.	No	No	No	No vernal pools or other potentially suitable habitats for vernal pool fairy shrimp are present in the project site. Vernal pool fairy shrimp would thus not be present.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Vernal pool tadpole shrimp occur in vernal pools in California's Central Valley and in the surrounding foothills.	No	No	No	No vernal pools or other potentially suitable habitats for vernal pool tadpole shrimp are present in the project site. Vernal pool tadpole shrimp would thus not be present.
INSECTS							
Monarch – California overwintering population	*Danaus plexippus* pop. 1	FC	The western population of monarch butterflies overwinters on the California Coast, Baja California, and to some extent the central Mexico mountains. The butterflies begin migration in February and March and reach the northern limits of their range in California, Oregon, Washington, Idaho, and Nevada, in early to mid-June. Eggs are laid singly on milkweed plants within their breeding range. Once hatched, larva reach the adult stage in 20 to 35 days; adults generally live 2 to 5 weeks. Several generations are produced within one season, with the last generation beginning migration back to their overwintering sites in August and September.	Pot.	No	Pot.	Although monarchs could feed on nectar produced by flowers in adjacent residential yards, no milkweeds were observed in the study area. Project implementation would not result in the loss of foraging or breeding habitat.

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Potential for Special-Status Species to Occur on the Project Site; April 2022

Common Name	Scientific Name	Status	General Habitat Description	Species Present (Y/N/POT.)	Critical Habitat Present (Y/N)	Habitat Present (Y/N)	Rationale/Comments
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	The valley elderberry longhorn beetle is found only in association with elderberry shrubs (*Sambucus* spp.). The species' elevational range extends from sea level to 3,000 feet. The species is known to occur in the Central Valley and foothills.	Potentially present	No	Yes	Four elderberry shrubs, the host plant of the larval stage of the VELB, occur in the vicinity of the proposed pipeline replacement near UPRR and the Main Lift Station. The shrubs have stems that are greater than one inch in basal diameter and may provide suitable habitat for the VELB. Because the shrubs are located in a former walnut orchard that is reverting back to riparian habitat, it is assumed that VELB are likely to be present.