

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Adopted Final Mitigated Negative Declaration

State Clearinghouse No. 2014101044

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1.0 INTRODUCTION

1.1 PURPOSE AND BASIS FOR THIS ADDENDUM

On July 14, 2015, the Los Angeles County (County) Board of Supervisors (Board), acting as the governing board of the Los Angeles County Flood Control District (LACFCD), adopted the “*Santa Anita Stormwater Flood Management and Seismic Strengthening Project Initial Study/Mitigated Negative Declaration*” (State Clearinghouse Number 2014101044) and approved the project. The adopted Final Mitigated Negative Declaration (MND) consists of the Draft Initial Study (IS)/MND with Technical Appendices, dated October 2014, the Mitigation Monitoring and Reporting Program (MMRP), and Responses to Comments and Errata, dated April 2015 (Public Works 2015). The Board adopted the Final MND, approved the project, and authorized the LACFCD to proceed with the preconstruction activities for specific improvements to the Santa Anita Dam, Santa Anita Debris Dam, Santa Anita Headworks, and Wilderness Park Culvert Crossing, analyzed in the same California Environmental Quality Act (CEQA) document under the title Santa Anita Stormwater Flood Management and Seismic Strengthening Project on July 14, 2015. Having been adopted by the Board, the Final MND is herein referred to as the “Adopted Final MND”. The project activities analyzed in the Adopted Final MND are herein referred to as the “Approved Project”.

Since the plans for the Approved Project were developed and the associated environmental document was adopted, minor modifications have been proposed to the Approved Headworks, Wilderness Park Culvert Crossing, and Debris Dam components of the Approved Project. These changes include the following:

- replacing an existing earthen levee at the Headworks with a concrete overflow stepped spillway instead of reconstructing and raising the existing earthen levee as was included in the Approved Project;
- replacing the Wilderness Park Culvert Crossing with a new, pre-cast concrete bridge instead of a similar-functioning structure as what currently exists as was included in the Approved Project; and
- installing monitoring equipment on the dam embankment, replacing the catwalk to the intake tower, constructing supplemental access roads, and placing additional riprap on the upstream and downstream faces of the embankment

These proposed changes to the Approved Project are hereinafter referred to as the “Modified Project.” CEQA allows for the preparation of an Addendum to an adopted MND (Section 15164 of the State CEQA Guidelines, Addendum to an EIR or Negative Declaration) to document minor technical changes in the project characteristics or environmental conditions under which the project will be developed.

This Addendum to the Adopted Final MND has been prepared in accordance with the provisions of CEQA (*California Public Resources Code*, Sections 21000 et seq.) and the State CEQA Guidelines (Title 14, *California Code of Regulations*, Sections 15000 et seq. Section 15164(b) of the State CEQA Guidelines states that “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 or the preparation of a subsequent EIR or negative declaration have occurred.” Section 21166 (Subsequent or Supplemental Impact Report; Conditions) of CEQA, and Section 15162(a) of

the State CEQA Guidelines address when a subsequent EIR or a negative declaration is required. As stated in Section 15162(a), a subsequent EIR or negative declaration is required when:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Pursuant to Section 15050 of the State CEQA Guidelines, the LACFCD is the lead agency for this Addendum and has the authority for Project approval and approval of the accompanying environmental documentation (i.e., this Addendum). In accordance with Sections 15162 and 15164 of the State CEQA Guidelines, based on the analysis and substantial evidence presented in this Addendum, the LACFCD has determined there are no new significant environmental impacts resulting from the Modified Project. The LACFCD has determined that there are no substantial increases in the severity of any previously identified significant environmental impacts and no new mitigation measures are required for the implementation of the Modified Project; there are no changes in circumstances under which the Modified Project would be undertaken that would result in new or more severe significant environmental impacts; and there is no new information of substantial importance that would result in one or more new or substantially more severe significant impacts. Therefore, an Addendum is the appropriate environmental documentation for the Modified Project and related discretionary approvals.

1.2 PROJECT BACKGROUND

1.2.1 APPROVED PROJECT DESCRIPTION

The purpose of the Approved Project is to modify existing flood management and water conservation facilities along the Santa Anita Canyon Watershed, including the Santa Anita Dam (Dam), Santa Anita Headworks (Headworks), Wilderness Park Culvert Crossing (Culvert Crossing), and the Santa Anita Debris Dam (Debris Dam), as shown in Exhibit 1, Regional Location and Local Vicinity. The Approved Project benefits and the contributing LACFCD facility improvements are as follows:

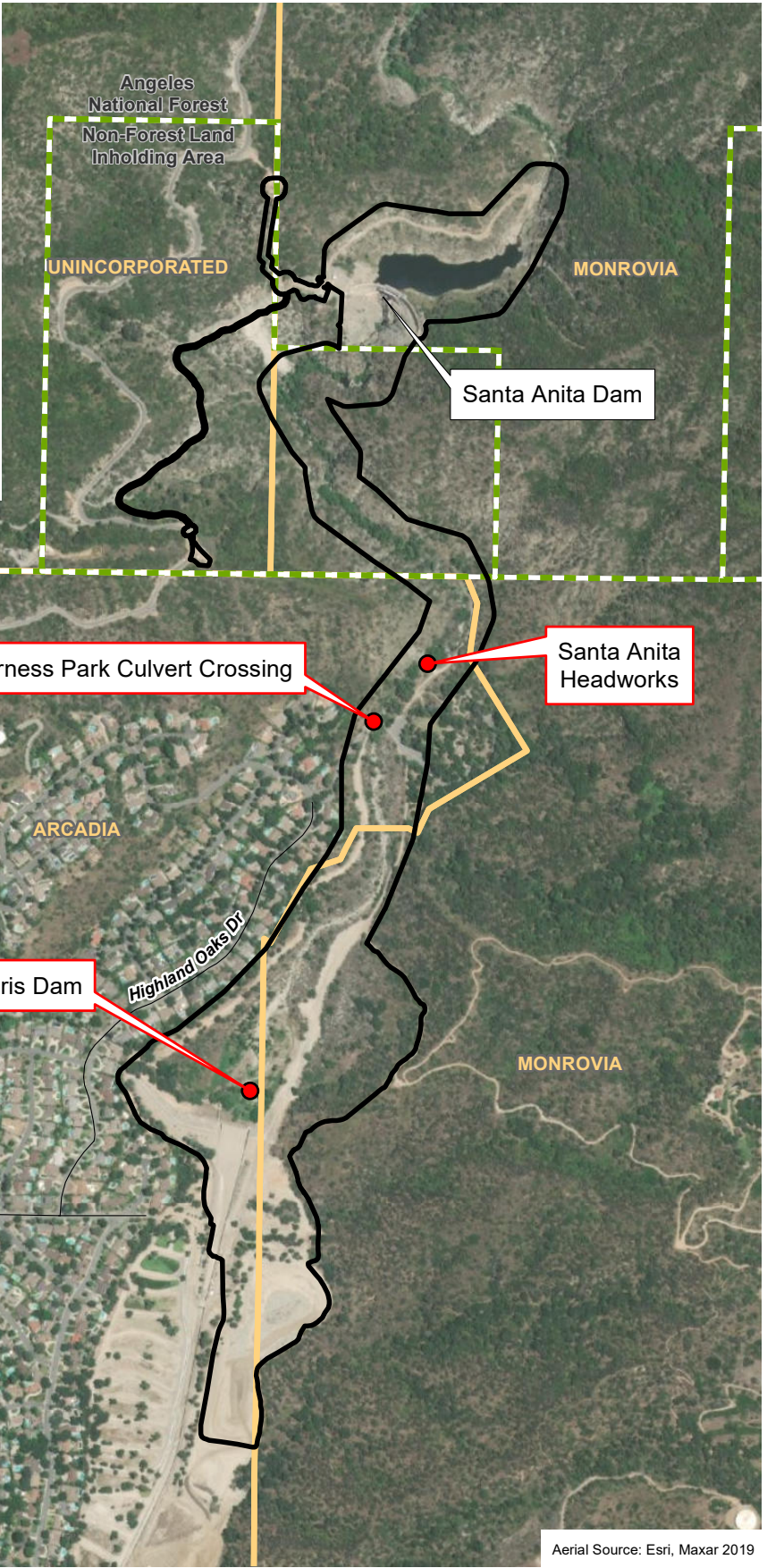
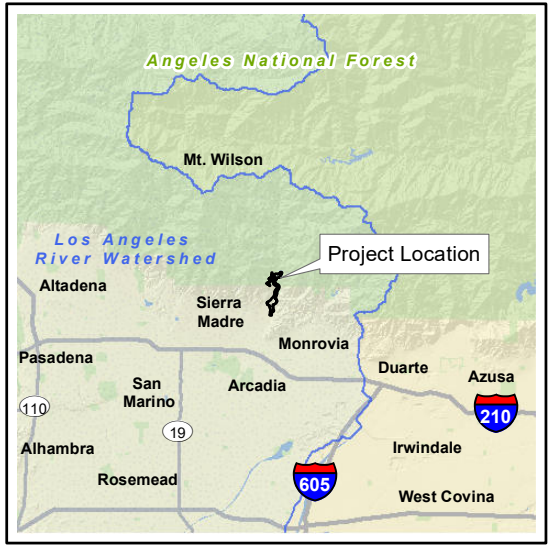
- Reduce flood risk to downstream communities by modifying the Santa Anita Dam spillway to safely pass the Probable Maximum Flood (PMF) and remediating seismic safety issues at the Santa Anita Dam and Debris Dam
- Enhance sustainability of the local water supply and increase recharge to the groundwater basin by over 500 acre-feet per year by: restoring storage capacity at Santa Anita Debris Dam; rehabilitating the Santa Anita Headworks for more reliable diversion of stormwater runoff to the spreading grounds; and modernizing facilities and implementing new monitoring and control systems
- Improve all-weather access to the Wilderness Park by constructing a new culvert crossing

The Adopted Final MND analyzed the construction and operational impacts of the following main components for the Approved Project: the Dam, Headworks, Culvert Crossing, and Debris Dam. The Adopted Final MND found that the Approved Project would have no long-term changes to the operation and maintenance of existing facilities. These components of the Approved Project are described below.

Approved Project—Dam

The Dam is located within the Angeles National Forest (ANF) and within the boundary of the City of Monrovia; however, the United States Forest Service (USFS) has jurisdiction over activities at the Dam. The Adopted Final MND indicated that the Dam would be structurally altered to accommodate a new spillway with sufficient capacity to pass the PMF of 26,100 cubic feet per second (cfs) to reduce the risk of Dam failure from uncontrolled overtopping during major storm events. The approved improvements to the Dam were determined to not result in changes to the maximum water surface elevation restrictions (which were set in place by California Department of Water Resources, Division of Safety of Dams [DSOD]) at a maximum elevation of 1,230 feet above mean sea level (msl). Therefore, the reservoir's operational capacity to retain water would not be altered by implementation of the Approved Project.

The Dam's electrical, mechanical, potable water, and control systems were proposed to be upgraded to improve reliability and to modernize operations, allowing for the integrated control of the facilities to increase water conservation efficiency. The repair to the Dam's structural concrete was analyzed to ensure that the concrete meets acceptable standards consistent with the required seismic performance of the Dam. Other ancillary facilities at the Dam would also be replaced or upgraded, including the secured access gate (including new power poles to supply electricity) and a storage shed/garage. The Dam Operator's residence was proposed to be removed and a helipad to be constructed in its place to provide aerial access to the Dam in the event of an emergency.



- Project Boundary
- Angeles National Forest Boundary
- City Boundaries
- Modified Project Components

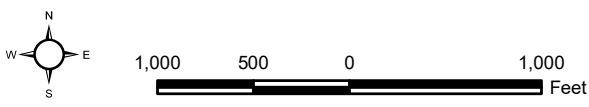
Aerial Source: Esri, Maxar 2019

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Regional Location and Local Vicinity

Exhibit 1

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Certified Final MND



The downstream canyon walls and the toe of the Dam were proposed to be re-armored with additional reinforced “gunite” or equivalent concrete erosion protection to dissipate energy from the overtopping water as the flow cascades through the spillway and the orifice spillway or sluiceway. The flow would be directed onto the downstream armoring before flowing into the channel downstream of the Dam. The re-armoring was proposed to reinforce the armoring that extends approximately 100 feet downstream from the toe of the Dam. The re-armoring would be held in position with tie-back anchors to be drilled and grouted into the bedrock. The tie-ins for the re-armoring were anticipated to include rock excavation, superficial grading, and subsurface pressure grouting. It should be noted that construction of the Dam portion of the Approved Project has been completed as of June 2021.

Approved Project—Headworks Structure

For the Approved Project, redevelopment of the Headworks was anticipated to include reconstruction of the small earthen levee to ensure it can withstand flows produced by the 25-year storm event and replacement of the existing tainter gate (used to divert flows) with a new rubber diversion structure. Most of the existing Headworks structure was proposed to be removed, including the tainter gate, supporting walls, catwalk, and keys. The new facility was proposed to extend beyond the width of the current structure by approximately 20 feet into the existing levee to house the rubber diversion structure. The existing earthen levee was proposed to be reinforced and built up approximately five feet higher to match the height of the new Headworks structure. The top layer of disturbed soil on the levee was to be removed to expose the underlying engineered fill; it would have then been recompacted with additional engineered fill to the proposed height. The access road leading to the Headworks was to be modified to match the height of the reinforced earthen levee. The improvements would have also included a new control house for operating the rubber diversion structure, which would have included remote operation capabilities to increase efficiency of water conservation operations.

Approved Project—Wilderness Park Culvert Crossing

In addition to the improvements at the Headworks, the Approved Project would include the removal and replacement of the Culvert Crossing to the City of Arcadia’s Wilderness Park to ensure that the roadway and crossing could withstand flows generated by a larger storm event. The existing Wilderness Park Culvert Crossing is located approximately 450 feet downstream of the Headworks. The Culvert Crossing includes the concrete slab and corrugated metal culverts, and it was determined that it would be removed and replaced with a similarly functioning Culvert Crossing structure that was designed to withstand larger storm flows. Additionally, approximately 30 feet of the channel upstream and downstream of the existing Culvert Crossing structure would be grubbed and graded to accommodate the replacement structure. The replacement structure was estimated to be 30 feet wide and raised above the existing roadway elevation by approximately 4.5 feet. To accommodate the new Culvert Crossing abutment, three sycamore trees along the eastern shore of the Wash were determined to be removed and replaced within the vicinity of the removed trees.

The channel immediately downstream of the new Culvert Crossing was to be armored with a riprap apron to dissipate water flow energy. The new Culvert Crossing would be approximately ten feet wider than the existing crossing, and it would be built on top of a new abutment with a supporting wing wall. It was designed with a permanent guard rail and flexible pavement driving surface adequate for emergency vehicles. The elevation of the Culvert Crossing structure was to be raised above the existing roadway elevation to accommodate higher flows. Approximately 1,800 square feet

of the roadways leading to and from the Culvert Crossing would be repaved and sloped to join the existing grade.

Approved Project—Debris Dam

The Approved Project involved a major reconfiguration of the existing structures, including the intake tower, spillway, and embankment. The Debris Dam would be enlarged by raising the existing spillway 4 feet, which would create 40 acre-feet of additional storage for a total of 159 acre-feet. This would allow the Debris Dam to increase the inundation in the basin to capture water following rain events, thereby expanding the water retention capacity of the facility and would allow the inundation area to expand 3.10 acres beyond the existing basin.

The Approved Project included measures to strengthen or replace the intake tower within the Debris Dam. The intake tower was designed to be connected to the existing diversion to the spillway channel or spreading grounds. Portions of the Debris Dam embankment that are subject to liquefaction were to be reinforced with structural buttressing. The removal of six non-native deodar cedar trees located at the toe of the downstream side of the embankment would be necessary to ensure the structural integrity of the Debris Dam. A new automated outlet gate and control system was to be constructed to modernize operations and ensure compatibility with other Approved Project components.

Modification of the Debris Dam requires approval under Section 408 (hereafter referred to as Section 408), which requires obtaining a permit from the U.S. Army Corps of Engineers (USACE). Under the terms of Section 408, any proposed modification to a USACE facility requires a determination that the proposed alterations are not injurious to the public interest and will not impair the usefulness of the facility. Consultation with the USACE will be required to determine whether the modifications would be considered a “Minor” (Minor 408) or “Major” (Major 408) Modification.

1.2.2 CONSTRUCTION OF THE APPROVED PROJECT

Table 1, Approved Project Construction Schedule, shows the previously assumed construction start dates and duration for the various Approved Project components as reflected in the MND. As shown in Table 1, construction of the Project was anticipated to commence in the winter of 2015 and end in the fall of 2016. Certain elements of each Approved Project component were determined unlikely to be performed during the wet season (October to April) to ensure flood control and water conservation efforts can proceed satisfactorily. While the schedule was anticipated to be modified due to the date of Project approval and receipt of required permits, this table illustrates the approximate duration of major Approved Project activities. As shown, it was anticipated that work would proceed at multiple facilities simultaneously. Construction of the Dam portion of the Approved Project has been completed as of June 2021.

A Lake and Streambed Alteration Agreement has been obtained for the Debris Dam portion of the Approved Project. As stated within the Adopted Final MND, it was anticipated that the Debris Dam construction would possibly require longer than the 6-month period shown in Table 1. If the construction period of the Debris Dam were to be extended, this would spread out the construction activities over a longer period, resulting in less “intensity” of impacts. All Approved Project-related impacts were determined to be less than significant (some requiring mitigation) and extending the duration of construction activities at the Debris Dam would not increase the level of significance. Therefore, to provide a more conservative impact analysis, the more condensed construction period for the Debris Dam, as shown in Table 1, had been assumed in the Adopted Final MND.

**TABLE 1
APPROVED PROJECT CONSTRUCTION SCHEDULE**

Construction Phase	Estimated Construction Start	Anticipated Duration
Dam	December 2015	5 months
Armor Canyon/Dam	December 2015	2 weeks
Garage, Helipad, Water System	December 2015	6 weeks
Remove/Replace Jib Crane	February 2016	2 weeks
Repair Concrete	February 2016	2 weeks
Hoist	March 2016	4 weeks
Construct New Spillway	April 2016	6 months
Install Valves	April 2016	2 weeks
Electrical	April 2016	4 weeks
Headworks and Wilderness Park Culvert Crossing	March 2016	6 months
Headworks Demolition	March 2016	1 week
Rubber Dam	March 2016	1 week
Construct Levee	March 2016	2 weeks
Culvert Crossing Demolition	April 2016	2 weeks
Site Clear/Grub	April 2016	4 weeks
Grading/ Implement Temporary Access	May 2016	2 weeks
Abutments and Wing Walls	June 2016	4 weeks
Construct Culvert Crossing Deck	July 2016	6 weeks
Paving Culvert Crossing	August 2016	2 weeks
Debris Dam	April 2016	6 months*
Modify Spillway	April 2016	2 months
Construct Buttresses	June 2016	2.5 months
Construct New Subdrain	August 2016	1 month
Remove/Construct Outlet Tower(s)	September 2016	2 weeks
* The Adopted Final MND states that it is possible that the Debris Dam construction would require longer than the 6-month timeframe shown within this table. The document stated that if the construction period of the Debris Dam were extended, this would spread out the construction activities over a longer period, resulting in less "intensity" of impacts.		
Source: LACFCD 2015.		

Project Design Features, Regulatory Requirements, and Mitigation Measures of the Adopted Final MND

The analysis in the Adopted Final MND evaluated the impacts associated with Approved Project implementation. The Project Design Features (PDFs), Regulatory Requirements (RRs), and Mitigation Measures (MMs) associated with the Approved Project are included under each topical section of this Addendum (i.e., Sections 3.1 through 3.21). The Approved Project, along with implementation of the PDFs and compliance with RRs, resulted in no impact or less than significant impacts on Agriculture and Forest Resources, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Traffic/Transportation, and Utilities and Service Systems.

These PDFs and MMs were included in the Contractor Specifications and bid documents of the LACFCD and were included as part of the MMRP for the Adopted Final MND. The RRs will be incorporated into the design and assumptions for the Project.

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2.0 PROJECT DESCRIPTION AND SETTING

2.1 ENVIRONMENTAL SETTING

The Modified Project is located within the jurisdictions of the City of Arcadia, the City of Monrovia, and the USFS. The Project site is in the foothills of the San Gabriel Mountains in Los Angeles County, approximately 15 miles northeast of downtown Los Angeles, as depicted in Exhibit 1, Regional Location and Local Vicinity. Primary access to the Project site is via the Santa Anita Avenue exit from Interstate (I) 210. The Modified Project study area is within the same footprint of the Approved Project.

The Dam is at the north end of the Project site, located in the Angeles National Forest (ANF) and accessed via a private road off Chantry Flats Road, approximately 2.5 miles north of the City of Arcadia. The Headworks structure is located approximately 0.5 mile downstream of the Dam on the border of the ANF and the City of Arcadia and accessed off Highland Oaks Drive. The Debris Dam is located approximately 0.5 mile downstream of the Headworks in the cities of Arcadia and Monrovia and can be accessed via a maintenance road that runs along the Santa Anita Wash.

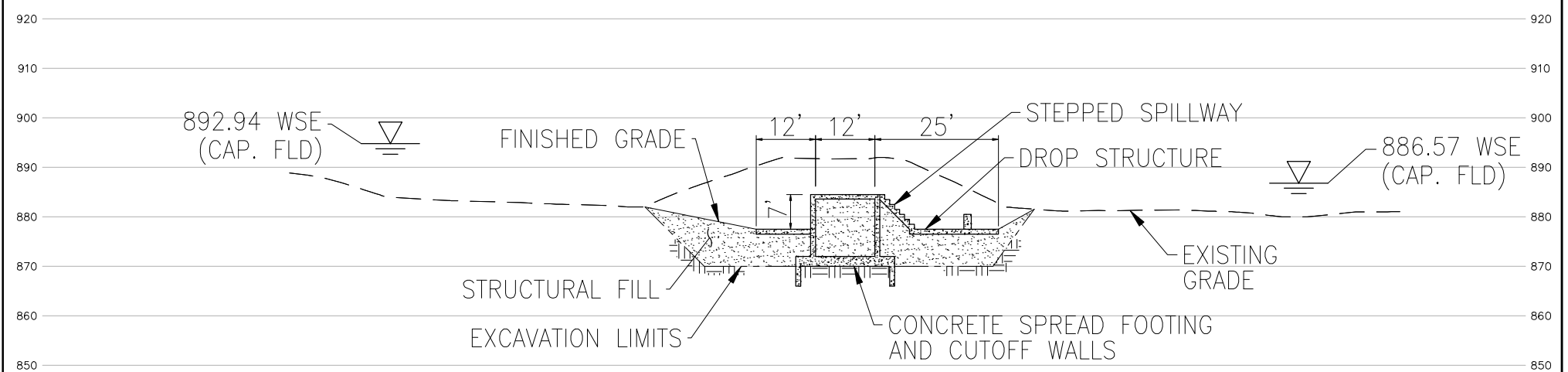
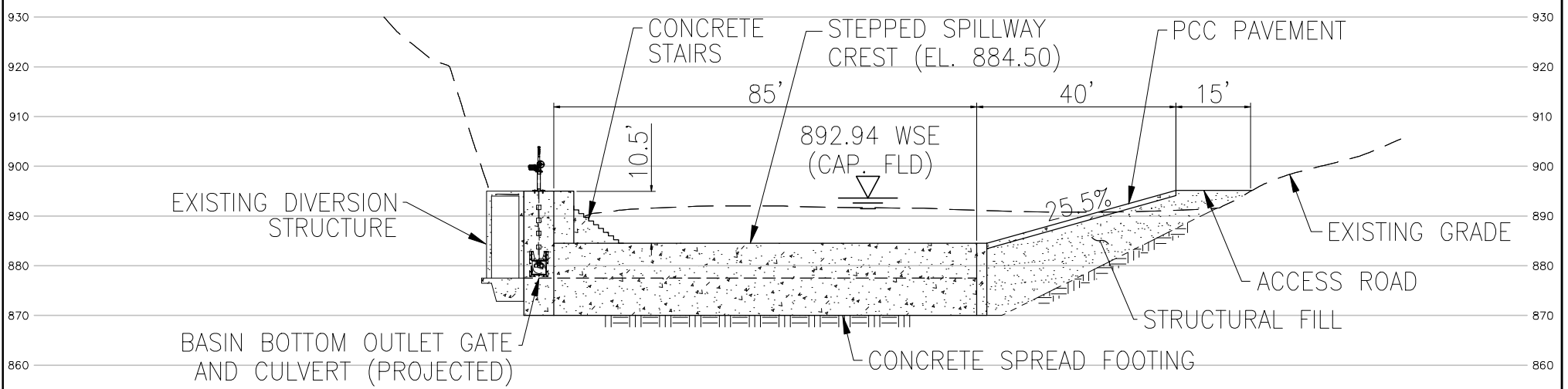
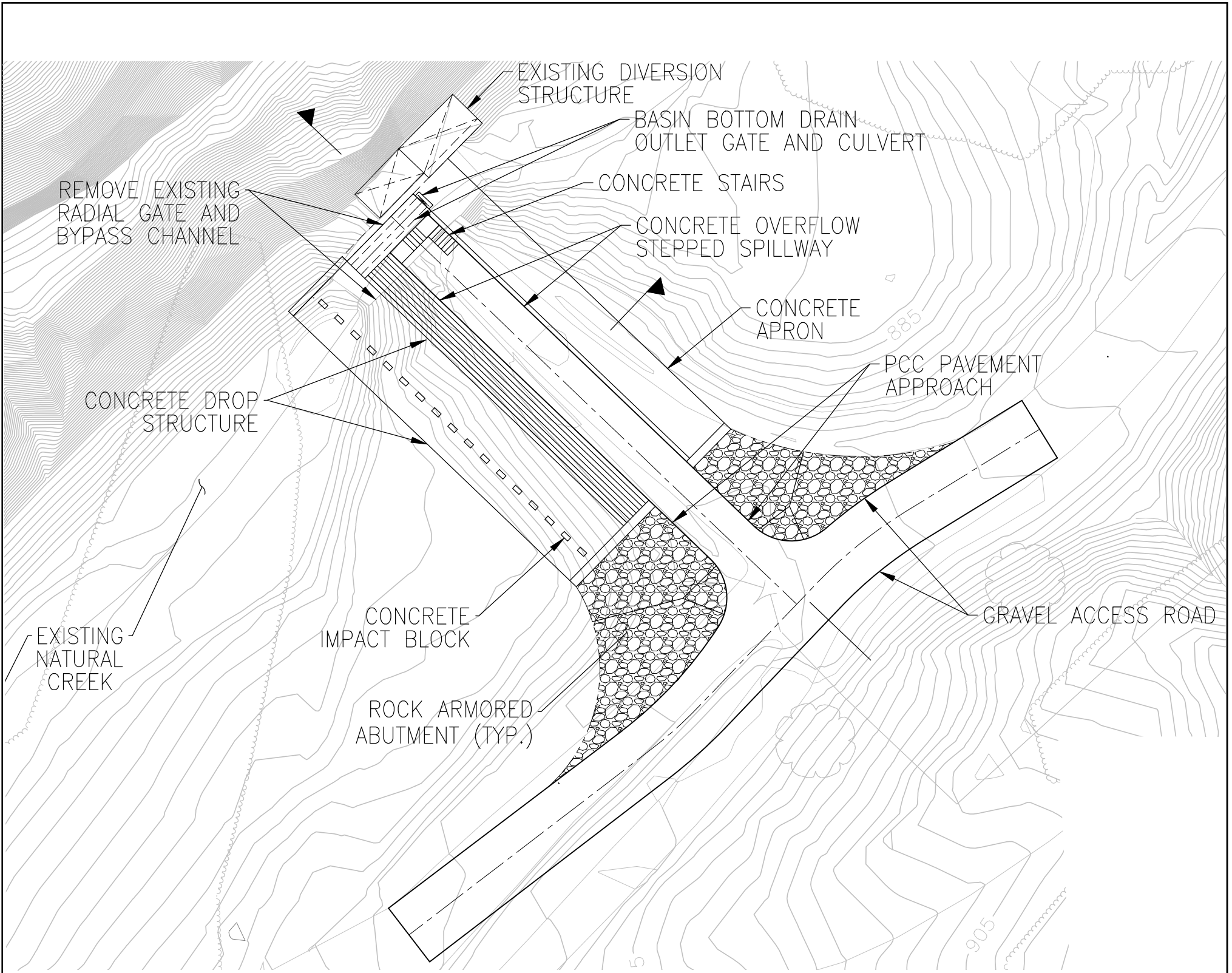
Surface runoff from the Santa Anita Canyon Watershed drains along natural courses towards the Santa Anita Wash, which runs north-south beginning at the Dam. The purpose of the Dam is to decrease peak flood flow by retaining stormwater and discharging it at controlled release rates. The released flows continue downstream to the Headworks facility, which intercepts the creek flows and allows the flows to continue downstream to the Debris Dam, to be diverted to the Sierra Madre Spreading Grounds or into the Santa Anita Spreading Grounds.

2.2 MODIFIED PROJECT DESCRIPTION

No substantial changes to the Approved Project construction or operational activities for the Dam would occur compared to what was analyzed in the Adopted Final MND. The Modified Project consists of minor design deviations from what was included in the Approved Project at the Headworks, the Wilderness Park Culvert Crossing, and the Debris Dam. Therefore, only changes, as they relate to the Headworks, Wilderness Park Culvert Crossing, and Debris Dam components of the Approved Project are described in the Modified Project description below and throughout this Addendum. The Modified and Approved Project boundaries overlap, but minor differences between boundaries exist in certain areas due to changes in the Project's design. As applicable, these differences are discussed within Section 3.0, Environmental Analysis, as pertinent to each CEQA topic.

Modified Project—Santa Anita Headworks

The proposed Santa Anita Headworks structure is depicted in Exhibit 2, Santa Anita Headworks Improvements for the Modified Project. The existing earthen levee at the Headworks structure would be replaced with a concrete overflow stepped spillway, instead of being reinforced, as was previously proposed in the Approved Project. The crest of the concrete overflow spillway would allow LACFCD vehicles to access the existing diversion structure during dry weather and lesser storm events. In the event of a large storm, stormwater may overtop the concrete spillway, making it unsafe for vehicles to cross. The proposed downstream stepped spillway would consist of a series of concrete steps that would help dissipate the energy of the water that could overflow over the concrete spillway. The



Source: AECOM

Santa Anita Headworks Improvements for the Modified Project

Exhibit 2

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Certified Final MND



eastern abutment of the concrete spillway would consist of a concrete pavement section that will connect the lower elevation concrete spillway to the existing higher elevation earthen access road. Consistent with the Approved Project, most of the existing Headworks Structure would be removed, including the tainter gate, support walls, catwalk, and keys. A low-flow outlet consisting of a small culvert and gate would be installed so the basin can be drained for maintenance purposes.

The foundation design for the stepped spillway concept would require that the existing earthen berm be removed and the subsurface over-excavated down to dense alluvium, at an elevation of approximately 870 feet (depth of about 22 feet below the top of the existing berm). A reinforced concrete spread footing would be installed at the top of the dense alluvium to support the walls of the concrete spillway and stepped spillway structure. Concrete cutoff walls would be installed on both the upstream and downstream sides of the footing to prevent scouring and undermining of the footing. The over-excavated foundation would be back filled with compacted structural fill to the proposed finished grade elevation.

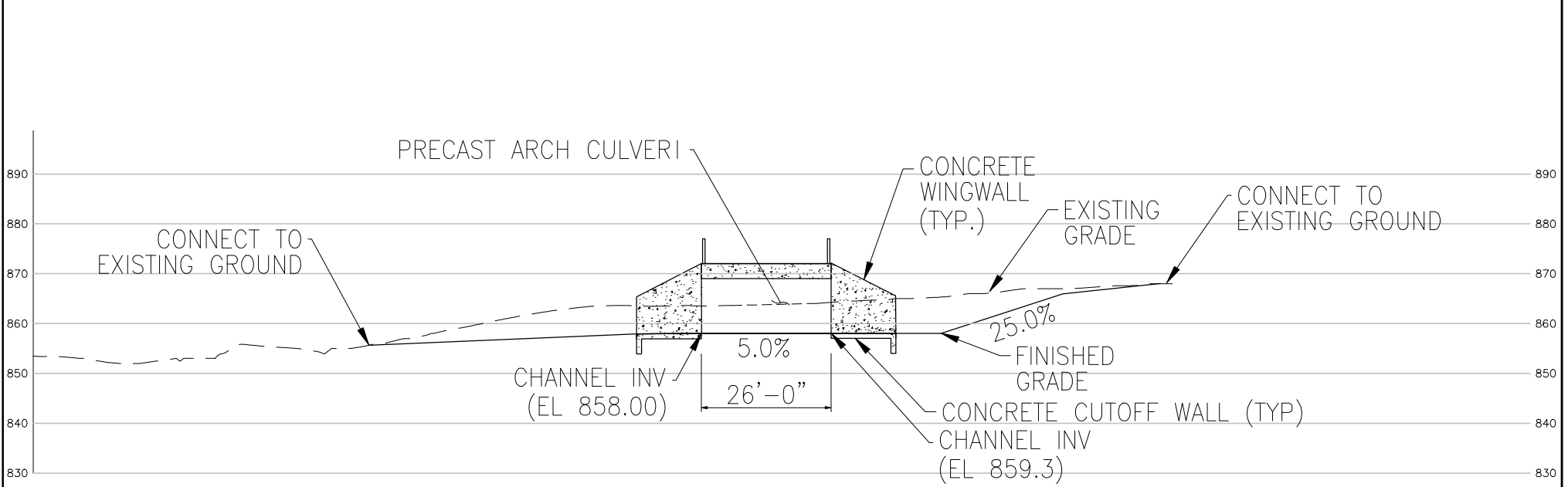
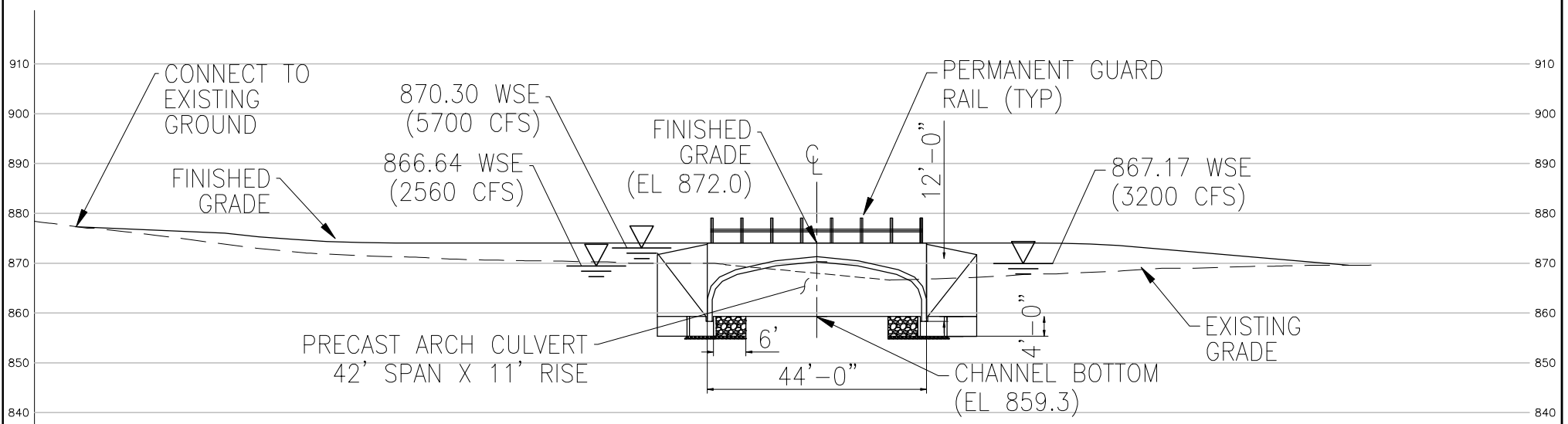
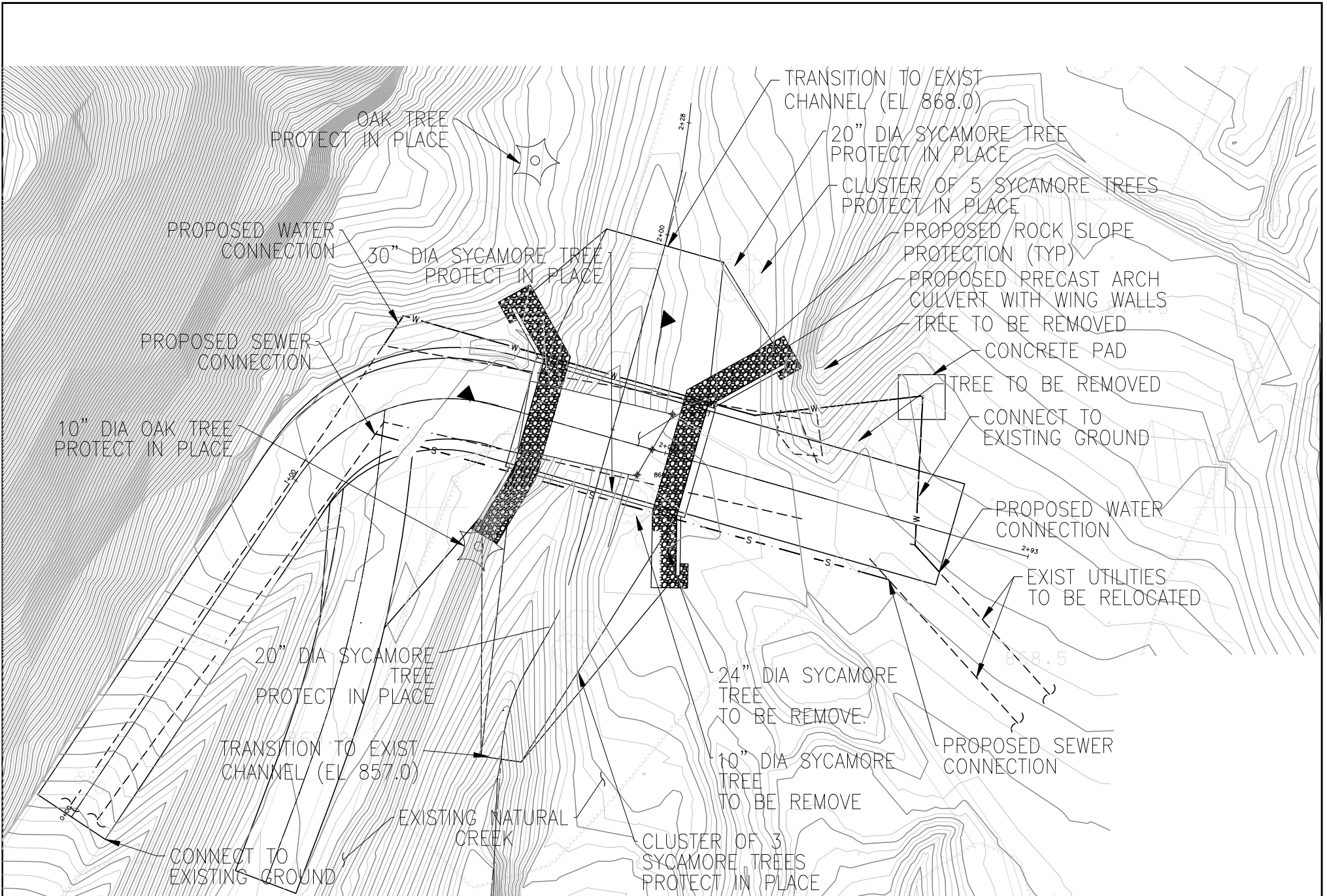
The installation of a rubber dam diversion structure was proposed as part of the Approved Project activities at the Headworks. However, installation of a rubber dam diversion structure would not be included as part of the Modified Project. Overall, construction activities at the Headworks Structure would increase from 4 weeks of construction for the Approved Project to 12 weeks of construction for the Modified Project. More specifics on construction activities for the Modified Project are provided in Section 2.2.1, Construction of Modified Project.

Modified Project—Wilderness Park Culvert Crossing

The proposed culvert crossing improvements at Wilderness Park are depicted in Exhibit 3, Wilderness Park Culvert Crossing for the Modified Project. Under the Modified Project, the existing concrete slab and corrugated metal pipe culverts would be removed and replaced, as previously identified for the Approved Project. However, the Culvert Crossing would be replaced with a new, pre-cast concrete bridge instead of a similar functioning structure as currently exists, which was included in the Approved Project. To pass a design flow of 3,200 cfs with two feet of residual freeboard, the Culvert Crossing would be 12 feet wider and 2.5 feet lower than the existing crossing and what was analyzed under the Approved Project, with a 42-foot span and a profile that would be 2 feet above the existing roadway elevation. To accommodate the new Culvert Crossing abutment, two sycamore trees along the eastern shore of the channel would be removed. Grading and implementation of a temporary access road would no longer be necessary, and construction activities would be reduced from 20 weeks for the Approved Project to 12 weeks for the Modified Project due to the use of a pre-cast concrete bridge.

Modified Project—Debris Dam

The proposed improvements at the Debris Dam are depicted in Exhibits 4a and 4b, Debris Dam Improvements for the Modified Project (Sheets 1 and 2). At the Debris Dam, several additional construction activities would be included as part of the Modified Project, which were not included in the Approved Project. Consistent with the Approved Project, the Modified Project would include buttressing of approximately 700 linear feet of spillway walls and invert with reinforced concrete. To minimize potential liquefaction risks in the embankment dam, upstream and downstream earth-fill buttresses would be used for seismic remediation. The construction of the earth-fill buttresses would require excavation of approximately 7,600 cubic yards (cy) of material from upstream and downstream slopes of the Debris Dam and replacement of the excavated material with compacted soil from the sediment placement site, located southeast of the Debris Dam. Reconstruction of the



Source: AECOM

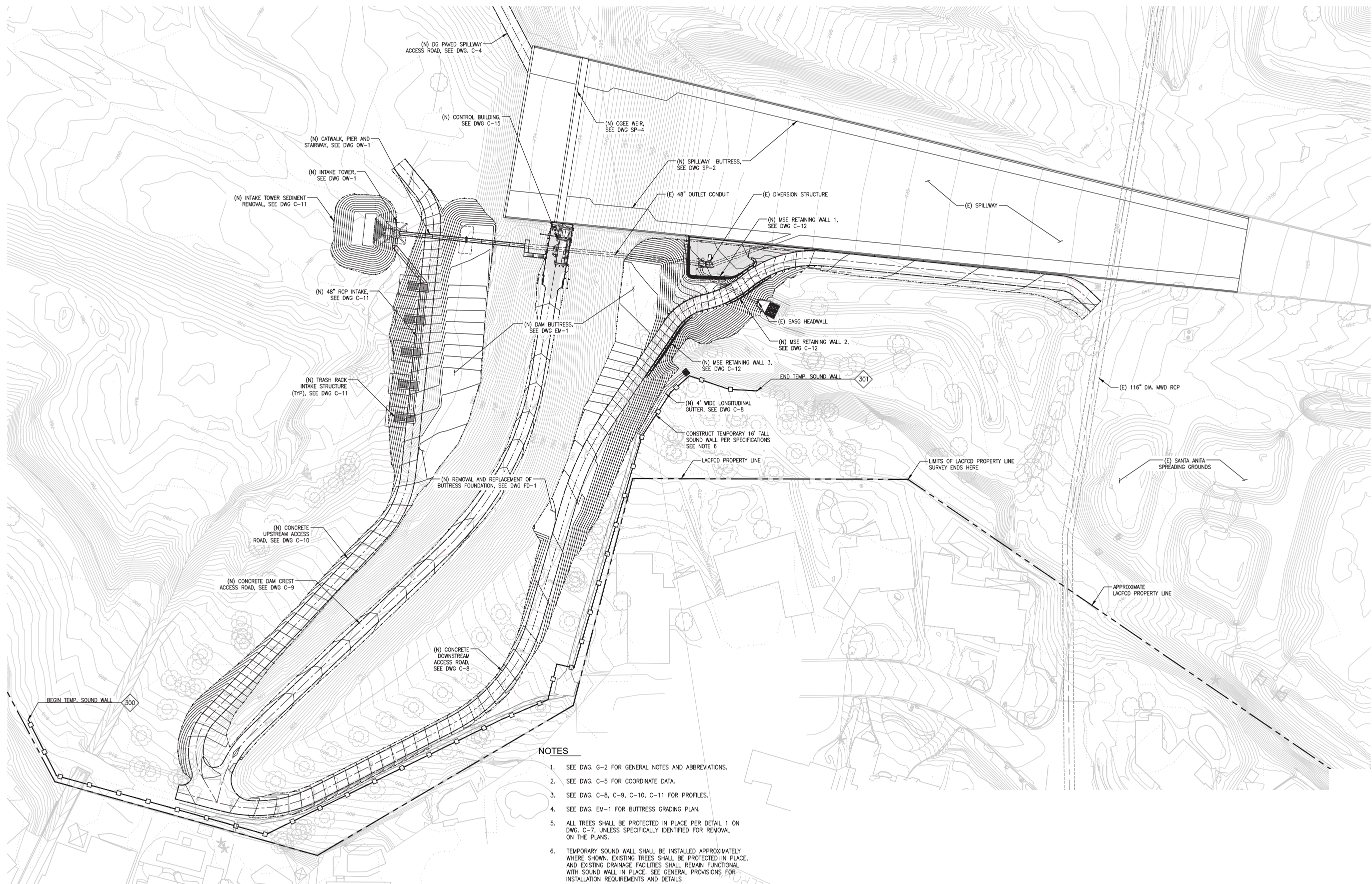
Wilderness Park Culvert Crossing for the Modified Project

Figure 3

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Certified Final MND



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NOTES

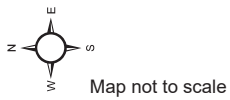
1. SEE DWG. G-2 FOR GENERAL NOTES AND ABBREVIATIONS.
2. SEE DWG. C-5 FOR COORDINATE DATA.
3. SEE DWG. C-8, C-9, C-10, C-11 FOR PROFILES.
4. SEE DWG. EM-1 FOR BUTTRESS GRADING PLAN.
5. ALL TREES SHALL BE PROTECTED IN PLACE PER DETAIL 1 ON DWG. C-7, UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL ON THE PLANS.
6. TEMPORARY SOUND WALL SHALL BE INSTALLED APPROXIMATELY WHERE SHOWN. EXISTING TREES SHALL BE PROTECTED IN PLACE, AND EXISTING DRAINAGE FACILITIES SHALL REMAIN FUNCTIONAL WITH SOUND WALL IN PLACE. SEE GENERAL PROVISIONS FOR INSTALLATION REQUIREMENTS AND DETAILS.

Source: County of Los Angeles Department of Public Works, 2023

Debris Dam Improvements for the Modified Project

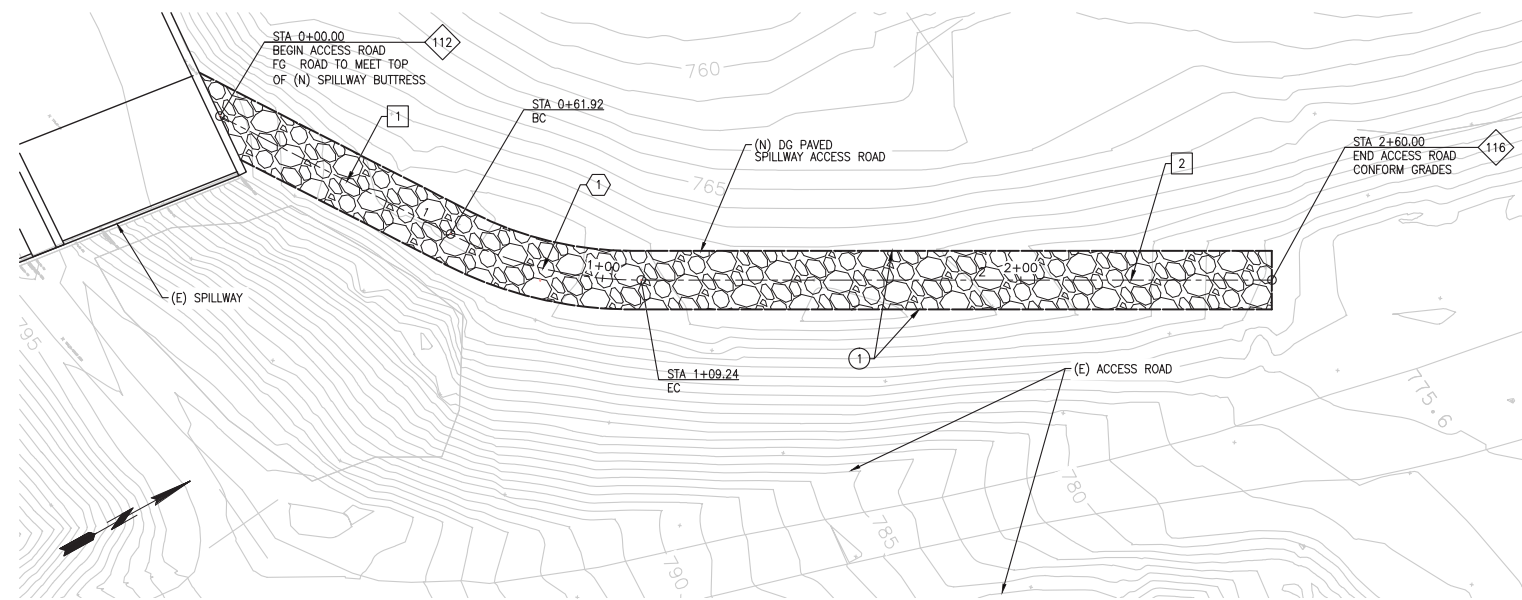
Exhibit 4a – Sheet 1

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Certified Final MND



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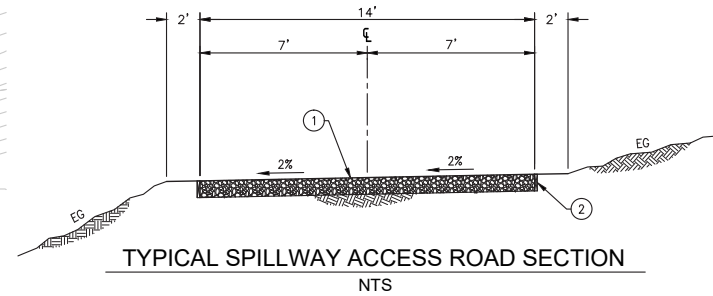
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SPILLWAY ACCESS ROAD PLAN
SCALE: 1" = 20'

GENERAL NOTES:

1. SEE DWG. G-2 FOR GENERAL NOTES AND ABBREVIATIONS.
2. SEE DWG. C-6 FOR BORROW AREA GRADING PLAN & SECTIONS.
3. SEE DWG. C-6 FOR BORROW AREA COORDINATE LOCATION.
4. ALL ROADWAY FILL MATERIAL SHALL BE BUTTRESS FILL MATERIAL COMPACTED TO A MIN. 95% RELATIVE COMPACTION AT A WATER CONTENT OF -1 TO 2% PERCENT OF OPTIMUM. EXCAVATE AND REPLACE FOUNDATION SOIL TO A MIN. 2' DEPTH BELOW EXISTING GRADE AS NOTED IN THE PROJECT SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY THE AGENCY.



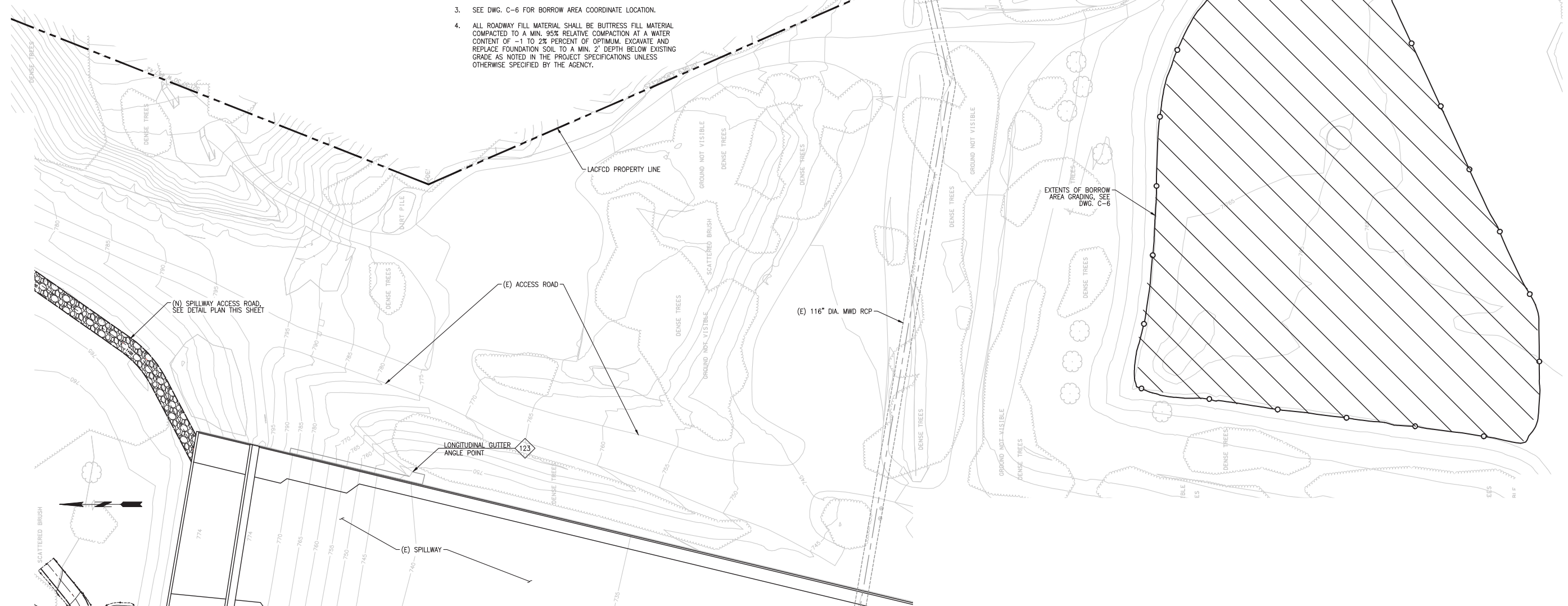
TYPICAL SPILLWAY ACCESS ROAD SECTION
NTS

LINE TABLE		
LINE	BEARING	LENGTH
1	N62° 10' 29"E	61.92'
2	N35° 03' 37"E	150.76'

CURVE TABLE				
CURVE	RADIUS	DELTA	TANGENT	LENGTH
1	100.00'	27° 06' 52"	24.11'	47.32'

CONSTRUCTION NOTES:

1. CONSTRUCT 8" THICK DECOMPOSED GRANITE (DG) OVER COMPACTED SUBGRADE (SEE NOTE 4)
2. INSTALL 2"x12" REDWOOD HEADER ALONG EDGE OF ROADWAY IN DIRT, TYP. BOTH SIDES



Source: County of Los Angeles Department of Public Works, 2023

Debris Dam Improvements for the Modified Project

Addendum to the Santa Anita Stormwater Flood Management and Seismic Strengthening Project Certified Final MND

Exhibit 4a - Sheet 2

Map not to scale

PSOMAS

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intake tower would be completed to meet current seismic standards, consistent with the Approved Project. This work would involve the installation of a new automated outlet gate and control system, and the construction of a new control house, and the relining of an existing 48-inch outlet drain that connects with the intake tower with cure-in-place pipe liner. Consistent with the Approved Project, while most of the work at the Debris Dam would occur during the dry season, dewatering is anticipated to allow for certain Project activities to occur. A small cofferdam would be constructed within the Debris Basin and a temporary plastic bypass pipeline (sized to accommodate a certain flow dependent on the time of year) would carry water around the construction activities to be discharged into the outlet pipe so that it can proceed downstream. No construction activities would occur within the City of Monrovia. However, temporary access/impact areas would be located within the City, including areas that may be subject to traversing vehicles or other mobile equipment, staging of equipment, placing stockpiles of soil, and excavating soil from the adjacent sediment placement site for use in the buttressing backfill for the Debris Dam. No vegetation or tree removal would occur within the City of Monrovia; these activities would be limited to the LACFCD fee-owned right-of-way.

The asphalt concrete access road on the crest and downstream side of the Debris Dam would be replaced with concrete as part of the Modified Project. Additionally, a 645-foot-long concrete access road would be constructed on the upstream side of the Debris Dam to provide access for maintenance activities. The Modified Project would also include installation of additional monitoring equipment and replacement of riprap on the upstream and downstream faces of the Debris Dam embankment. This monitoring equipment would include six piezometers, seven survey monuments, one reservoir level sensor, two strong motion accelerographs, five staff gauge posts, and one weather station. The monitoring equipment would be located within a new, 200 square foot control building, adjacent to the spillway. A catwalk, pier, and stairway would be reconstructed to connect the intake tower with the control building. As required by MM NOI-3, a temporary sound wall would be placed between construction activities at the Debris Dam and adjacent residences. Construction activities at the Debris Dam would occur for 8 months with implementation of the Modified Project, which is two months longer than what was assumed for work at the Debris Dam for the Approved Project.

As detailed in the Adopted Final MND, modification of the Debris Dam requires approval under Section 408, which requires obtaining a permit from the USACE. Under the terms of Section 408, any proposed modification to a USACE facility requires a determination that the proposed alterations are not injurious to the public interest and will not impair the usefulness of the facility. Consultation with the USACE will be required to determine whether the modifications would be considered a “Minor” or “Major” Modification.

2.2.1 CONSTRUCTION OF MODIFIED PROJECT

The proposed changes in construction activities of the Modified Project in comparison to the Approved Project for the Headworks, Culvert Crossing, and Debris Dam components are shown in Table 2, Construction Comparison of the Approved Project and Modified Projects.

**TABLE 2
CONSTRUCTION COMPARISON OF THE APPROVED PROJECT AND MODIFIED PROJECT**

Construction Phase		APPROVED PROJECT				MODIFIED PROJECT			
		Off-road Equipment	Worker Trips	Truck Trips	Duration	Off-road Equipment	Worker Trips	Truck Trips	Duration
			Roundtrips per day	Roundtrips per phase	weeks		Roundtrips per day	Roundtrips per phase	weeks
HEADWORKS	Demolition	1 concrete saw 1 excavator 1 backhoe	5	10	1	No change	No change	No change	4
	Rubber Dam	2 backhoes	3	3	1	None—activity has been removed.			
	Construct Levee	1 backhoe 1 concrete pump	3	19	2	1 concrete pump	No change	150	8
CULVERT CROSSING	Demolition	1 concrete saw 1 excavator 1 backhoe	5	14	2	No change	No change	No change	No change
	Site Clear/Grub	1 backhoe	3	210	4	No change	No change	130	No change
	Grading/Implement Temporary Access	2 backhoes	5	--	2	None—activity has been removed.			
	Abutments and Wing Walls	2 concrete pumps	4	46	4	1 crane 1 excavator	No change	35	2
	Crossing Deck	1 concrete pump	3	18	6	1 crane 1 backhoe	No change	12	2
	Paving	1 roller	3	15	2	No change	No change	No change	No change
DEBRIS DAM	Modify Spillway	1 bore/drill rig 1 concrete/industrial saw 1 pump	10	63	8	1 concrete pump 1 concrete/industrial saw 1 pump	No change	No change	No change
	Construct Buttresses	1 excavator 1 rubber-tired dozer 2 backhoes	10	4,063	10	No change	No change	No change	No change
	Construct New Subdrain	2 backhoes	6	157	4	No change	No change	No change	No change
	Remove Outlet Tower	2 backhoes	10	5	2	No change	No change	No change	No change
	Replace and Construct Access Roads	None—activity not included in Approved Project.				1 roller compactor 1 rubber-tired dozer	10	30	4
	Install Additional Monitoring Equipment	None—activity not included in Approved Project.				1 drill rig	3	15	3
	Replace Riprap on Upstream and Downstream Faces	None—activity not included in Approved Project.				1 long arm excavator	10	30	4
<p>*Note: As the Dam construction activities of the Approved Project have not changed and were completed prior to construction of the Modified Project components, the Dam construction details are not included within this table.</p> <p>Source: LACFCD 2015; LACFCD 2023.</p>									

Overall, the number of off-road construction equipment for the Modified Project would be the same as what was assumed for the Approved Project, although there would be differences in the types of off-road equipment between the Approved and Modified Projects. The maximum roundtrip worker trips per day would be the same for the Approved Project and Modified Project. There would be a net increase of 106 round trips for trucks over the duration of the Modified Project construction activities. Construction of the Modified Project would be completed within 12 months. This would result in an increase of 2 months of construction when compared to the Approved Project; however, the Adopted Final MND stated that it is possible that the Debris Dam construction would require longer than the 6-month timeframe shown in Table 1 of this Addendum. The Adopted Final MND also stated that if the construction period of the Debris Dam were to be extended, this would spread out the construction activities over a longer period, resulting in less “intensity” of impacts for air quality purposes. Therefore, although the Modified Project Debris Dam construction would occur for longer than the 6 months anticipated for the Approved Project, the increase to 8 months of construction for the Debris Dam is consistent with the assumptions of the Adopted Final MND.

The Modified and Approved Project temporary and permanent boundaries overlap in most areas. Permanent impact areas are defined as changes to or removal of an existing vegetation type or “other areas,” including disturbed or developed areas (e.g., paved) that are permanent because of Project implementation. Temporary access/impact areas are defined as areas that may be subject to traversing vehicles or other mobile equipment, staging of equipment, stockpiles of soil, minor soil disturbance where there is no permanent alteration to the existing grade (e.g., no permanent holes, trenches, or berms), and no vegetation or tree removal.

2.2.2 PROJECT APPROVALS AND PERMITS

The Adopted Final IS/MND along with this Addendum are intended to serve as the primary environmental documents pursuant to CEQA for actions associated with the Project, including discretionary approvals requested or required to implement the Project. The Board, acting on behalf of the LACFCD, may adopt the IS/MND if it finds, based on the whole Project record, that there is no substantial evidence the Project would have a significant effect on the environment. Table 3, Agency Approvals and Requirements, lists all agencies with permit or approval authority over the Project.

**TABLE 3
AGENCY APPROVALS AND REQUIREMENTS**

Agency	Approval Required	Applicable Project Component	Purpose
FAA	Heliport Certification	Dam	To authorize helipad at the Dam.
USACE	Section 404 Permit	All Project Components (Received for Dam)	To allow the discharge of dredge and fill material into "waters of the U.S."
USACE	Section 408 Permit	Debris Dam	To authorize alteration/modification to an existing USACE project.
USFS	Approval in accordance with Provision 3 of existing SUP	Dam (Received)	To authorize activities at the Dam within the Angeles National Forest.
CDFW	Section 1600 SAA	All Project Components (Received for Dam and Debris Dam)	To authorize changes to the natural flow or bed, channel, or bank of any river, stream, or lake and associated impacts to biological resources.
Caltrans	Heliport Site Approval Permit	Dam	To authorize helipad at the Dam.
DSOD	Design Approval	Dam and Debris Dam (Received for Dam)	To ensure that the proposed improvements meet DSOD standards.
SWRCB	Construction General Permit	All Project Components (Received for Dam)	For coverage under the Construction General Permit.
RWQCB	Section 401 Water Quality Certification	All Project Components (Received for Dam)	To protect water quality within "waters of the U.S." and "waters of the State".
Los Angeles County Department of Regional Planning – Airport Land Use Commission	Aviation Permit	Dam	To authorize helipad at the Dam.
City of Arcadia	Right of Entry	All Project Components (Received for Dam)	To access public property rather than just public right-of-way.
City of Arcadia	Oversized Load Permit	All Project Components (Received for Dam)	To allow for oversized trucks and equipment to be transported through City streets, if required.
City of Sierra Madre	Oversized Load Permit	All Project Components (Received for Dam)	To allow for oversized trucks and equipment to be transported through City streets, if required.
USACE: U.S. Army Corps of Engineers; USFS: U.S. Forest Service; SUP: Special Use Permit; FAA: Federal Aviation Administration; SWRCB: State Water Resources Control Board; DSOD: California Department of Water Resources, Division of Safety of Dams; RWQCB: Regional Water Quality Control Board; Caltrans: California Department of Transportation; CDFW: California Department of Fish and Wildlife; SAA: Streambed Alteration Agreement.			

3.0 ENVIRONMENTAL ANALYSIS

This section of the Addendum examines each environmental topical issue analyzed in the previous CEQA documentation. The Addendum includes additional areas of analysis, including energy, tribal cultural resources, and wildfire, pursuant to the 2016 and 2018 amendments to the State CEQA Guidelines. The focus of this Addendum to the Adopted Final MND is to evaluate the potential changes in the previously identified impacts because of modifications to the Project’s construction activities.

This evaluation includes a determination as to whether the changes proposed for the Modified Project would result in any new significant impacts or a substantial increase in severity of a previously identified significant impact pursuant to State CEQA Guidelines Section 15162.

The topical environmental areas identified in the CEQA Environmental Checklist (Checklist) were used as guidance for this Addendum. For each topical section, a summary of the Adopted Final MND is provided. This comparative analysis presents the factual basis for determining if any changes in the Project, any changes in circumstances, or any new information since the certification of Final MND require additional environmental review or preparation of a subsequent or supplemental mitigated negative declaration.

The CEQA significance findings for the Modified Project is provided below in Table 4.

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE & FOREST RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5 of the State CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VI. ENERGY -- Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS -- Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan (Los Alamitos Armed Forces Reserve Center or Fullerton Municipal Airport), would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
X. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XI. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XII. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIII. NOISE -- Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan (Los Alamitos Armed Forces Reserve Center or Fullerton Municipal Airport), would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES -- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. RECREATION --				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. TRANSPORTATION -- Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVIII. TRIBAL CULTURAL RESOURCES -- Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section §5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section §5024.1. In applying criterial set forth in subdivision (c) of Public Resources Code Section §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years (including large-scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Information Form)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XX. WILDFIRE -- If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**TABLE 4
SIGNIFICANCE FINDINGS FOR THE MODIFIED PROJECT**

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

3.1 AESTHETICS

Adopted Final MND

As discussed in the Adopted Final MND, potential visual impacts due to removal of trees adjacent to the Culvert Crossing would be mitigated with implementation of MM AES-1. The Project site was not designated as a scenic vista in the General Plans for the City of Arcadia or the County of Los Angeles. Impacts to scenic vistas were determined to be less than significant. The Approved Project proposed improvements to existing stormwater flood control facilities, and therefore views into the Project site from public vantage points were determined to not substantively change because the improvements would occur on existing facilities. The Adopted Final MND determined that the new helipad, three-bay garage, water pipelines, and power poles would not be visible from public vantage points, and operation of the helipad would be very infrequent. Views of construction activity at the Dam, Headworks, Wilderness Park Culvert Crossing, and Debris Dam were determined to be fleeting or partial views by motorists or hikers and would be temporary and like other construction sites and not typically considered adverse. The Approved Project determined that Project-related activities would not introduce new sources of light or glare to the Project site, except for motion-sensor lighting at the new Dam entrance gate. No construction was proposed to occur during the nighttime hours, and no reflective paints or glare-inducing materials were anticipated to be used.

Project Design Features

PDF AES-1 The material used to re-armor the downstream canyon walls and the toe of the Dam will match the color of the existing armoring.

Regulatory Requirements

No RRs pertaining to aesthetics were required for the Approved Project.

Mitigation Measures

MM AES-1 Any removal of sycamore trees located at the Wilderness Park Culvert Crossing shall be replaced at a minimum 1:1 ratio with a minimum box size of 36 inches, within a 100-foot radius of their original location.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?

Except as provided in Public Resource Code Section 21099, impacts to aesthetics would be significant if the Project would:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible

vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have less than significant impacts regarding substantial adverse effects on a scenic vista. As identified in the Adopted Final MND, the Project site is not designated as a scenic vista in the General Plans for the City of Arcadia, City of Monrovia, or the County of Los Angeles.

While the Modified Project would not affect a designated scenic vista, public views of the Project site would be altered for some public viewpoints including from within the Angeles National Forest (ANF), the City of Arcadia’s Wilderness Park, and the City of Monrovia’s wilderness preserve open space areas. Consistent with the Approved Project, the short-term aesthetic impacts during construction due to temporary views of construction equipment and activities would be minimal as the Project site consists of existing flood control facilities. The Modified Project involves improvements to existing stormwater flood control facilities; therefore, views of the Project site from public vantage points would not substantively change from existing conditions, as was assumed for the Approved Project. Improvements would not result in substantially larger, taller, or substantively different flood control facilities that could impact views of the surrounding natural hillsides or vegetation. Therefore, the Modified Project would not create a new significant impact pertaining to scenic vistas, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that impacts to scenic resources would be potentially significant prior to mitigation. As discussed in the Adopted Final MND, potential visual impacts due to removal of trees adjacent to the Culvert Crossing would be mitigated with implementation of MM AES-1, which requires that any sycamore trees that need to be removed as part of the Project at the Wilderness Park Culvert Crossing be replaced at a minimum 1:1 ratio with a minimum box size of 36 inches, within a 100-foot radius of their original location.

The Adopted Final MND required implementation of PDF AES-1, which requires that the material used to re-armour the downstream canyon walls and toe of the Dam match the existing concrete to retain the existing visual character of the Dam.

The nearest designated State scenic highway to the Project site is SR-2. The Project site is not visible from SR-2 due to distance and the presence of intervening trees and mountainsides. Therefore, the Modified Project would not substantially damage scenic resource visible from a state scenic highway.

Portions of the Project site containing vegetation and Santa Anita Wash would be classified as scenic resources pursuant to this threshold, as well as trees that occur within the Project site.

The Modified Project's proposed improvements at the Headworks would not be visible from any public viewsheds, except a portion of the parking lot associated with the Wilderness Park, which does have views of the Headworks. The Modified Project would have a similar footprint to the Approved Project's footprint at the Headworks; therefore, views of construction activities would be similar to what was assumed for the Approved Project.

Installation of a rubber dam diversion structure that was included in the Approved Project would not be included as a part of the Modified Project, which would reduce visual effects from the Approved Project. Furthermore, no additional visually intrusive facilities would be constructed, and impacts to the scenic nature of the surrounding creek and vegetated areas would be comparable or less than what was analyzed in the Approved Project. Therefore, the Modified Project would have similar effects related to scenic resources as would the Approved Project at the Headworks.

The construction activities associated with the replacement of the Culvert Crossing would not be visible to visitors at the Wilderness Park because the park would be temporarily closed during construction, consistent with what was analyzed for the Approved Project. Therefore, there would be no public views of this construction activity from the Wilderness Park or other public viewpoints. However, the replacement Wilderness Park Culvert Crossing would be viewed and used by visitors to the Wilderness Park once it is built and the park is re-opened. The structure that would be built as part of the Modified Project would be similar visually to what was included in the Approved Project. As was anticipated for the Approved Project, two existing sycamore trees located to the south and to the north of the Culvert Crossing on the eastern bank of the wash would need to be removed to accommodate the new bridge for the Culvert Crossing. Therefore, consistent with the approach used for the Approved Project, MM AES-1 would be implemented to reduce impacts to scenic resources related to the loss of sycamore trees at the Culvert Crossing to a less than significant level.

At the Debris Dam, the Modified Project would require removal of seven non-native deodar cedar trees which are located at the downstream toe of the embankment. These tree removals are mandated by DSOD to ensure the structural integrity of the Debris Dam. As part of the Approved Project, six non-native deodar cedar trees were anticipated to be removed; therefore, the Modified Project would require the removal of one additional cedar tree than was assumed for the Approved Project at this location. The additional removal of a non-native tree would not substantially damage scenic resources, as there are many trees within this area.

The Modified Project would result in an increase in permanent access roads adjacent to the embankment and within the Debris Dam area when compared to the Approved Project. These changes to the Debris Dam would be visible from the backyards of the homes along the western edge of the Debris Dam; however, these improvements are merely alterations of the existing structure. Further, these improvements would maintain the same function and aesthetic character as the existing facility. As anticipated for the Approved Project, reconstruction of the intake structure as part of the Modified Project would involve the replacement of an existing structure in the same location. Although one additional cedar tree would be removed and new access roads would be installed, the Modified Project would be substantially like the improvements that were included in the Approved Project, and which exist on the Project site today. Therefore, the Modified Project's

improvements at the Debris Dam would not create a new significant impact pertaining to scenic resources.

No substantial damage to rock outcroppings or historic buildings would occur with implementation of the Modified Project, as was the case for the Approved Project.

Consistent with the findings of the Adopted Final MND, the overall visual character of the Project site would remain like the existing condition with the Modified Project. Therefore, the Modified Project would not create a new significant impact pertaining to scenic resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that impacts to the existing visual character or quality of the site and its surroundings would be less than significant for the Approved Project and no mitigation was required. Consistent with the Approved Project and as noted above, public views of the Project site are available from portions of the ANF, the City of Arcadia's Wilderness Park, and the City of Monrovia's wilderness preserve open space areas. The Modified Project would result in short-term aesthetic impacts during construction due to temporary views of construction equipment and activities, which is similar to the activities that were originally proposed for the Approved Project.

Consistent with the Approved Project, the Modified Project's proposed improvements at the Headworks would not be visible from public viewsheds, except for a portion of the parking lot associated with the Wilderness Park which does have views of the Headworks. A rubber dam diversion structure that was proposed for the Approved Project at the Headworks would not be included as a part of the Modified Project, which would result in reduced aesthetic impacts from this aspect of the Project. The Modified Project would include no other additional visually intrusive facilities as part of the Headworks; therefore, impacts to the scenic nature of the surrounding creek and vegetated areas within the Project site would be comparable or less than what was analyzed in the Approved Project for the Headworks.

The Modified Project includes the removal of the existing concrete slab and corrugated metal pipe culverts, as was anticipated in the Approved Project. However, the Modified Project would instead replace the existing facilities with a new, pre-cast concrete bridge at the Culvert Crossing near Wilderness Park. The Approved Project anticipated replacing the existing slab and culverts with a similar structure that would have required the grubbing and grading of 30 feet of the channel upstream and downstream of the structure. For the Modified Project which includes the pre-cast bridge, the grubbing and grading of 30-feet would not be required. The construction of the Culvert Crossing component would occur for 8 weeks less than what was previously assumed for the Approved Project.

Overall, the changes of views to the Headworks, Culvert Crossing, and Debris Dam are comparable to what was proposed for the Approved Project. Therefore, views into the Project site from public vantage points would not substantively change from existing conditions or from what was analyzed for the Approved Project. Improvements would not result in substantially larger, taller, or different flood control facilities than were proposed for the Approved Project. Therefore, the Modified Project

would not create a new significant impact pertaining to effects to existing visual character, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that impacts related to light and glare would be less than significant for the Approved Project. Consistent with the findings of the Adopted Final MND, the Modified Project would not introduce any substantial new sources of light or glare to the Project site or the surrounding area. The only lighting proposed is motion-sensor lighting at the new Dam entrance gate, which would be installed in accordance with local regulations. No construction activities are proposed during the nighttime hours. No reflective paints or glare-inducing materials would be used. The Modified Project would not create a new significant impact pertaining to light and glare, and no new mitigation measures are required.

Conclusion

The aesthetic impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the aesthetics analysis provided in the Adopted Final MND are required.

3.2 AGRICULTURAL AND FORESTRY RESOURCES

Adopted Final MND

As discussed in the Adopted Final MND no mitigation was required for either short-term or long-term impacts due to Approved Project implementation. Implementation of the Approved Project was determined to not have an impact on the conversion of agricultural land to non-agricultural uses because (1) there are no active agricultural activities on the Project site; (2) the Project site does not contain Farmland Mapping and Monitoring Program (FMMP)-designated Farmland; and (3) the Project site is not under a Williamson Act contract. Conversion of Other Land or Grazing Land to non-agricultural uses is not considered a significant impact under CEQA.

Project Design Features

No PDFs pertaining to agricultural and forestry resources were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to agricultural and forestry resources were required for the Approved Project.

Mitigation Measures

No MMs pertaining to agricultural and forestry resources were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?		
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?		
d) Result in the loss of forest land or conversion of forest land to non-forest use?		
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there would be no impact related to conversion of farmland with implementation of the Approved Project. Consistent with the findings of the Adopted Final MND, there are no designated Farmlands within or near the Project site. Therefore, no farmland conversion or impacts to agricultural uses would occur with implementation of the Modified Project. The Modified Project would not create a new significant impact on agricultural resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there would be no impact related to conflicts with existing zoning for agricultural use or a Williamson Act contract with implementation of the Approved Project. Consistent with the findings of the Adopted Final MND, there are no agricultural activities within or near the Project site. No impacts to agricultural uses would occur with implementation of the Modified Project as there continue to be no agricultural uses within the Project site. Also, the Project site is not zoned for agricultural use and there are no Williamson Act Contracts applicable to any of the parcels within the Project site. The Modified Project would not create a new significant impact on agricultural resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, no rezoning of any parcels that are designated as forest land or timberland is proposed for the Modified Project. The Adopted Final MND determined that there would be no impact regarding conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production. The Modified Project would comply with the conditions of the existing Special Use Permit (SUP) issued by the USFS for the continued use of these LACFCD facilities, some of which occur within the ANF. The Modified Project would not create a new significant impact on forest land, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND stated that there would be no impact regarding loss of forest land or conversion of forest land to non-forest use. Consistent with the Approved Project, the Modified Project would not change the use of the existing flood control facilities within the Project site and would not conflict with the natural character of this zone. No conversion of forest land to non-forest use is proposed by the Modified Project. Consistent with the Adopted Final MND, there would be no impact. The Modified Project would comply with the

conditions of the existing SUP issued by the USFS for the continued use of these LACFCD facilities. Thus, no impacts on forest resources would occur.

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, no conversion of farmland to a non-agriculture use or conversion of forest land to a non-forest use is proposed with the Modified Project. The Adopted Final MND determined that there would be no impact regarding changes in the existing environment which could result in conversion of farmland to a non-agricultural use. The Modified Project would comply with the conditions of the existing SUP issued by the USFS for the continued use of these LACFCD facilities, some of which occur within the ANF. The Modified Project would not create a new significant impact on forest land, and no new mitigation measures are required.

Conclusion

The agricultural and forestry resources impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the agricultural and forestry resources analysis provided in the Adopted Final MND are required.

3.3 AIR QUALITY

Adopted Final MND

The Project site is located within the Los Angeles County portion of the South Coast Air Basin (SoCAB) and, for air quality regulation and permitting, is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources and has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The regional plan applicable to the Approved Project is the SCAQMD's AQMP. When the Final MND was adopted, SCAQMD's 2012 AQMP was the applicable air quality plan. For a project to be consistent with the AQMP, the pollutants emitted from the project should not (1) exceed the SCAQMD CEQA air quality significance thresholds or (2) conflict with or exceed the assumptions in the AQMP. Pollutant emissions from the Approved Project were determined to be less than the SCAQMD's mass emissions significance thresholds and would not result in a significant impact. Further, the Approved Project, which proposed structural improvements to existing facilities without changes in operations, would not have resulted in development that may not have been anticipated in the AQMP. The Adopted Final MND determined that no conflict with the 2012 AQMP would occur with implementation of the Approved Project. Because construction emissions of the Approved Project were below the SCAQMD's daily significance thresholds, the Approved Project was determined to not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment. The Approved Project was determined to not result in any substantial toxic air contaminant (TAC) impacts, and the localized construction emissions would not exceed the localized significance thresholds (LSTs). Additionally, because the Approved Project would not change existing operations, the Approved Project would not increase congestion at major signalized intersections nor create a carbon monoxide (CO) hotspot. For these reasons, the Adopted Final MND determined that the Approved Project would not expose sensitive receptors to substantial pollutant concentrations. Regarding odors, the Adopted Final MND stated that short-term Approved Project construction activities would generate odors, but the odors would be temporary and would dissipate rapidly from the source, and therefore, there would be less than significant impacts regarding objectionable odors affecting a substantial number of people.

Project Design Features

No PDFs pertaining to air quality were required for the Approved Project.

Regulatory Requirements

- RR AQ-1** All construction activities shall be conducted in compliance with South Coast Air Quality Management District Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance. Compliance with this rule will reduce short-term particulate pollutant emissions. Contractor compliance with Rule 403 requirements shall be mandated in the contractor's specifications.
- RR AQ-2** All construction activities shall be conducted in compliance with South Coast Air Quality Management District Rule 402, Nuisance, which states that a Project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or

safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property”.

Mitigation Measures

No MMs pertaining to air quality were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Conflict with or obstruct implementation of the applicable air quality plan?		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		
c) Expose sensitive receptors to substantial pollutant concentrations?		
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. As with the Approved Project, the Modified Project is also located within the Los Angeles County region of the South Coast Air Basin (SoCAB), where the South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control. As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments, and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary. The South Coast Air Quality Management District (SCAQMD) has established quantitative thresholds for short-term (construction) emissions and long-term (operational) emissions for the following criteria pollutants: ozone, carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter 10 and 2.5.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point) and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The regional plan applicable to the Project is the SCAQMD’s AQMP.

Since certification of the Adopted Final MND, the SCAQMD has adopted the 2022 AQMP. The 2022 AQMP is a regional and multi-agency effort among the SCAQMD, California Air Resources Board (CARB), SCAG, and the United States Environmental Protection Agency (USEPA). The 2022 AQMP includes an analysis of emissions, meteorology, atmospheric chemistry, regional growth projects, and the impact of existing control measures. The purpose of the 2022 AQMP is to set forth a comprehensive program that would promote reductions in criteria pollutants, greenhouse gases, and toxic risk and efficiencies in energy use, transportation, and the goods movement (SCAQMD 2022). The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); updated emission inventory methods for various source categories; and SCAG’s latest growth forecasts. The 2022 AQMP includes strategies and measures necessary to bring the SCAQMD into compliance with the federal and State ambient air quality standards. For a project to be consistent with the AQMP, the pollutants emitted from the project should not (1) exceed the SCAQMD CEQA air quality significance thresholds or (2) conflict with or exceed the assumptions in the AQMP. The Modified Project’s consistency with the two criteria are discussed below.

The SCAQMD establishes significance thresholds to assess the regional impact of project-related air pollutant emissions in the SCAQMD. The first criteria for consistency with the AQMP requires that the Project not exceed the SCAQMD CEQA air quality significance thresholds. Table 5, SCAQMD Regional Emissions Significance Thresholds (lbs/day), summarizes the SCAQMD’s mass emissions thresholds for both short-term construction and long-term operational emissions. These thresholds were used in the air quality analysis for the Adopted Final MND. A project with emissions below these thresholds is considered to have a less than significant effect on air quality. These regional emission thresholds cannot be used to correlate whether a specific health impact would occur to an individual receptor. Instead, these significance thresholds were developed to assist Lead Agencies by providing a consistent threshold that could be used to determine whether a project’s emissions could significantly contribute to the total emissions occurring within an air basin. The totality of the air basin’s emissions would determine whether it would be in attainment of the CAAQS and NAAQS.

**TABLE 5
SCAQMD REGIONAL EMISSIONS
SIGNIFICANCE THRESHOLDS (LBS/DAY)**

Criteria Pollutant	Construction	Operation
Volatile Organic Compounds (VOC)	75	55
Oxides of Nitrogen (NO _x)	100	55
Carbon Monoxide (CO)	550	550
Oxides of Sulfur (SO _x)	150	150
Particulate Matter (PM ₁₀)	150	150
Particulate Matter (PM _{2.5})	55	55
lbs/day: pounds per day		
Source: SCAQMD 2019.		

Project Impacts – Regional Air Quality

The SCAQMD has established methods to quantify air emissions associated with construction activities such as air pollutant emissions generated by operation of on-site construction equipment; fugitive dust emissions related to trenching and earthwork activities; and mobile (tailpipe) emissions from construction worker vehicle and haul/delivery truck trips.

A construction-period regional emissions inventory was compiled based on an estimate of construction equipment as well as scheduling and Project phasing assumptions. Specifically, the regional emissions analysis considers the following:

- Exhaust emissions from operating mobile construction equipment;
- Fugitive dust emissions from site preparation and grading phases; and
- Mobile-source exhaust emissions and fugitive dust from worker commute and truck travel.

The modeling assumes that the Modified Project’s construction activities at the Dam would finish prior to construction beginning on the Headworks, Culvert Crossing, and Debris Dam. The modeling assumed overlapping phases of the Headworks, Culvert Crossing, and Debris Dam components. Details on the construction schedule assumptions can be found in Appendix A, Air Quality and Greenhouse Gas Emissions Data.

Emissions were calculated using the California Emissions Estimator Model (CalEEMod version 2016.3.2). CalEEMod is a computer program accepted by the SCAQMD to estimate anticipated emissions associated with land development projects in California. The CalEEMod modeling assumes dust control by watering, consistent with the requirements of SCAQMD Rule 403 (RR AQ-1) of the Adopted Final MND. The CalEEMod output data may be found in Appendix A of this Addendum.

The SCAQMD regional emissions thresholds (see Table 5) are based on the rate of emissions (i.e., pounds of pollutants emitted per day). Therefore, the quantity, duration, and the intensity of construction activities are important in assuring analysis of worst case (i.e., maximum daily and total emissions) scenarios. Table 6, Estimated Maximum Daily Emissions (lbs/day), summarizes the worst-case daily regional emissions for the Modified Project (including Dam construction activities of the Approved Project). As shown, all pollutants would be below the regional emissions thresholds. This is consistent with the findings for the Approved Project in the Adopted Final MND.

**TABLE 6
ESTIMATED MAXIMUM DAILY EMISSIONS
(LBS/DAY)**

	VOC	NO _x	CO	SO _x	PM10	PM2.5
2019	2	22	14	<1	2	1
2020	2	19	15	<1	1	1
2021	3	47	24	<1	10	4
Maximum	3	47	24	<1	10	4
SCAQMD Daily Construction Thresholds	75	100	550	150	150	55
Exceeds SCAQMD Thresholds?	No	No	No	No	No	No
lbs/day: pounds per day; VOC: volatile organic compound(s); NO _x : nitrogen oxides; CO: carbon monoxide; SO _x : sulfur oxides; PM10: inhalable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; SCAQMD: South Coast Air Quality Management District. Note: The higher of Winter or Summer data was used for this analysis. Source (thresholds): SCAQMD 2019. CalEEMod output data is in Appendix A.						

Localized Construction Impacts

The air pollutant emissions generated by the Modified Project were evaluated at sensitive receptor locations local to the Project site according to the SCAQMD’s localized significance threshold (LST)

methodology. The LST evaluates whether the projects would potentially cause health effects to land uses proximate to the project site. LSTs are applicable to the following criteria pollutants: NO₂, CO, PM₁₀, and PM_{2.5}.² LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. For PM₁₀ and PM_{2.5}, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust (RR AQ-1). The mass rate look-up tables were developed for each source receptor area and can be used to determine whether a project may generate significant adverse localized air quality impacts. The SCAQMD provides LST mass rate look-up tables for projects that are less than or equal to five acres. For projects that exceed five acres, the five-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a five-acre area and would over predict potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors).

The LST method was developed to provide a conservative estimate of the level of project-generated air pollutants that have the potential to exceed the NAAQS or CAAQS, which could consequently result in adverse health impacts. Exceedance of the LST does not describe the prevalence or magnitude of health effects, but rather assesses the potential for a project-related health effect to occur. The LST method cannot provide an estimate of health effects related to ozone. Reactive organic gases (ROGs) and NO_x are pollutants that contribute to the formation of ozone, otherwise known as ozone precursors. It would be too speculative to determine how an individual project could affect the formation of ozone, and how it could affect the health for a specific receptor: ozone does not fully form within the proximity of a project site, and the formation of ozone is affected by solar irradiance, meteorological conditions, presence of ozone precursors from other sources, and other factors. As such, modeling of ozone concentrations is conducted on the “macro” scale of an air basin for all pollutant sources within the basin, and not for an individual project. Consequently, the LST analysis focuses on a project-level analysis of the four criteria pollutants of greatest concern (CO, NO_x, PM₁₀, and PM_{2.5}).

When quantifying mass emissions for localized analysis, only emissions that occur onsite are considered. Consistent with the SCAQMD’s LST methodology guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. Consistent with the Adopted Final MND, localized impacts are not analyzed for the Dam because it is in a remote location with no off-site receptors in the vicinity. Additionally, localized impacts are not evaluated for the Headworks since the nearest residences are approximately 550 feet southwest of the Headworks and emissions would substantially disperse over that distance. Localized impacts are analyzed separately for the Culvert Crossing and the Debris Dam because they are geographically separate and because pollutants would not impact the same receptors.

Maximum local emissions would occur during the peak on-site activity. The LST analysis is focused on those activities with the most potential to exceed the LST and that occurring closest to the Project site. At the Culvert Crossing, the peak on-site activity would occur during the removal of the existing crossing. At the Debris Dam, the peak on-site activity would occur during construction of the embankment buttressing for NO_x, PM₁₀, and PM_{2.5}, and during the construction of the ogee weir for CO. The LSTs for a 1-acre site with receptors at a distance of 25 meters were used; these are the most conservative thresholds. The results of the LST analysis are in Table 7, Maximum Localized Construction Pollutant Emissions. As shown in Table 7, localized emissions for all criteria pollutants

² NO₂ impacts are addressed by evaluating nitrogen oxide (NO_x) emissions.

would be less than their respective SCAQMD LSTs for all pollutants. This is consistent with the impact finding for localized emissions for the Adopted Final MND.

**TABLE 7
MAXIMUM LOCALIZED CONSTRUCTION POLLUTANT EMISSIONS
(LBS/DAY)**

	NO_x	CO	PM10	PM2.5
Wilderness Park Culvert Crossing	6	8	1	<1
Debris Dam	13	11	2	2
SCAQMD LSTs	89	623	5	3
Exceeds SCAQMD Thresholds?	No	No	No	No
lbs/day: pounds per day; NO _x : nitrogen oxides; CO: carbon monoxide; PM10: respirable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less.				
Thresholds for Source Receptor Area 9, East San Gabriel Valley, 1-acre site, 25-meter receptor distance was used.				
Source: SCAQMD 2009.				

Toxic Air Contaminants Impacts

The greatest potential for toxic air contaminant (TAC) emissions during construction would be related to diesel particulate emissions associated with heavy equipment operations during grading activities. The SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the Modified Project would be short term. The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be well below the 30-year exposure period and would generally occur far from sensitive receptors, construction of the Modified Project is not anticipated to result in an elevated cancer risk to exposed persons. As such, consistent with the Adopted Final MND, Modified Project-related toxic emission impacts during construction would be less than significant and no mitigation is required.

Regional and Local Operational Impacts

Once the Modified Project is complete, there would be no long-term changes to the regular inspection and maintenance operations for the flood control facilities within the Project site. Therefore, any Project-generated changes in emissions during operation of the Modified Project would be nominal.

The Adopted Final MND determined that there would be no impact regarding conflict with or obstruction of the applicable air quality plan. The first criteria for consistency with the AQMP requires that the Project not exceed the SCAQMD CEQA air quality significance thresholds. As shown in Tables 6 and 7, the construction emissions for the Modified Project would be below the SCAQMD’s thresholds. Therefore, the Modified Project would be consistent with the first criteria for consistency with the AQMP, which is consistent with the findings of the Adopted Final MND. Further, the Modified Project, being improvements to existing facilities without changes in operations, would not result in development that was not have been anticipated in the 2022 AQMP. The Modified Project would not result in population growth or a substantial increase in air pollutant emissions. No conflict with the 2022 AQMP would occur with implementation of the Modified Project. Therefore, the Modified Project would not create a new significant impact pertaining to consistency with achieving the goals of the applicable AQMP, and no new mitigation measures are required.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that cumulatively considerable net increase of criteria pollutants would be less than significant for the Approved Project. The SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. The Modified Project would be consistent with the AQMP, which is intended to bring the SoCAB into attainment for all criteria pollutants.³ In addition, the mass regional emissions calculated for the Project (Table 6) would be lower than the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable CAAQS and NAAQS. Therefore, the Modified Project would not create a new significant impact pertaining to cumulatively considerable criteria pollutant emissions and no new mitigation measures are required.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Substantial Change from Previous Analysis. The Adopted Final MND concluded that there would be less than significant impacts regarding exposure of sensitive receptors to substantial pollutant concentrations. As described in response to Threshold (a) above, the Modified Project would not result in substantial TAC air pollution impacts, and construction criteria pollutant emissions would be less than the LST, as shown in Table 7. Therefore, construction-related activities associated with the Modified Project would not expose any nearby sensitive receptors to substantial pollutant concentrations. As such, consistent with the findings for the Adopted Final MND, the Modified Project would have a less than significant impact to receptors located proximate to the Project site and no mitigation is required.

The potential for impacts related to Modified Project traffic along local roadways was also evaluated. A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at level of service (LOS) E or F or causes an intersection that operates at LOS D or better without the project to operate at LOS E or F with the project, there is a potential for a CO hotspot. These CO standards represent the lowest concentration that the federal and State governments consider necessary to protect the health of the public. Exceedance of these standards does not convey information on the severity of the health effect. Consistent with the Approved Project, the Modified Project is not expected to generate new traffic during construction or operations that would exceed LOS E or F along the primary haul routes. Therefore, the Modified Project would not increase congestion at major signalized intersections. There would be no impact and no exposure of sensitive receptors to Project-generated local CO. Therefore, the Modified Project would not create a new significant impact pertaining to sensitive receptors and no new mitigation measures are required.

³ Section 15064(h)(3) of the State CEQA Guidelines states "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency".

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there would be no impact regarding the Project's potential to create objectionable odors affecting a substantial number of people. According to the SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The Modified Project does not include any uses identified by the SCAQMD as being associated with odors and therefore would not produce objectionable long-term operational odors.

Consistent with the Approved Project, the Modified Project would involve the temporary use of construction equipment and materials that would generate odors. Potential construction odors would include diesel exhaust emissions and paving activities. There may be situations where construction activity odors would be noticeable by persons working at or visiting nearby facilities, but these odors would not occur to the level of being a public nuisance since any such odors would be temporary and would dissipate rapidly from the source with an increase in distance. These odor effects for the Modified Project would be the same as for the Approved Project.

Furthermore, construction activities are regulated from nuisance odors or other objectionable emissions by SCAQMD Rule 402, as described in RR AQ-2. Rule 402 prohibits the discharge from any source of air contaminants or other material, which would cause injury, detriment, nuisance, or annoyance to people or the public. Therefore, the Modified Project would not create a new significant impact pertaining to other emissions and no new mitigation measures are required.

Conclusion

The air quality impacts of the Modified Project would be consistent with the impacts identified for the Approved Project analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, the Modified Project (1) would not propose substantial changes; (2) would not have circumstantial changes when the Modified Project is undertaken; and (3) would bring about no new information of substantial importance that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the air quality analysis provided in the Adopted Final MND are required.

3.4 BIOLOGICAL RESOURCES

Adopted Final MND

As discussed in the Adopted Final MND, the Headworks, Culvert Crossing, and Debris Dam of the Approved Project would result in impacts on native upland and riparian vegetation; habitat for special status wildlife species; active bird and raptor nests protected under the Migratory Bird Treaty Act (MBTA); roosting bats; and jurisdictional resources. These impacts would be mitigated to less than significant levels through implementation of MMs BIO-1 through BIO-5.

Project Design Features

PDF BIO-1 A Biological Monitor will be on site during vegetation clearing in Project Work Areas (e.g., limits of disturbance). The Biological Monitor will confirm that the limits of Project Work Areas and any Environmentally Sensitive Areas (e.g., nesting birds) are clearly marked. The Biological Monitor shall provide environmental awareness training to the Contractor; the training will include a discussion of native habitat types, special status species that may occur in the Project Work Areas, direction for what to do if a special status species is observed, and an overview of applicable permit conditions. Prior to construction, the Biological Monitor will conduct a pre-clearing sweep of the Project Work Area and will flush or move wildlife outside the Project Work Area to the extent practicable. The Biological Monitor shall send weekly monitoring reports to the LACFCD during vegetation clearing and shall notify LACFCD immediately if construction damages any active nests and/or if any Best Management Practices (BMPs) to protect biological resources require repair.

Regulatory Requirements

No RRs pertaining to biological resources were required for the Approved Project.

Mitigation Measures

MM BIO-1 **A.** Replacement shall occur for the western sycamores (Tree Numbers 220-222) that are removed by construction of the Wilderness Park Culvert Crossing. At a minimum, impacted sycamore trees at the Culvert Crossing shall be replaced at no less than a 1:1 ratio, and the minimum box size of replacement trees shall be 24 inches. The replacement trees shall be incorporated into the Riparian Habitat Mitigation and Monitoring Plan (HMMP), as set forth in MM BIO-5, or a separate Tree HMMP shall be prepared and shall contain the same required components.

B. The oak tree adjacent to the Wilderness Park Culvert Crossing (Tree Number 219) shall not be removed. This tree shall be protected as described in subsection "C" below. However, the protective fencing for this tree shall be placed at the edge of the canopy to allow for construction to occur immediately outside its canopy. When initial vegetation removal/ground disturbance is occurring within 1.5 times the dripline/root protection zone, the work shall be monitored by a Certified Arborist who shall oversee any removal/cutting of roots necessary and shall determine if trimming of the canopy is necessary to protect the health of the tree. The Certified Arborist shall monitor the health of this tree a minimum of once per month during construction of the Wilderness Park Culvert Crossing and once per month for a period

of six-months following completion of construction. Photographs shall be taken monthly to compare the overall vigor of the tree over time. The tree shall be considered “impacted” if its health rating declines. If this occurs, in coordination with CDFW and the City of Arcadia, the tree shall be mitigated at no less than a 1:1 ratio, and the minimum box size of replacement trees shall be 24 inches. If Tree Number 220 is also preserved, protection shall follow the same requirements that are specified herein for Tree Number 219.

C. To protect native trees adjacent to Project Work Areas, the following shall be implemented within each Project Work Area:

- Brightly-colored construction fencing shall be placed around all native trees to be preserved that are located within 50 feet of Project Work Areas. The fencing shall be placed at 1.5 times the dripline/root protection zone (defined as the outer canopy edge, at least 15 feet from the trunk). These areas shall be labeled as “Tree Protection Areas” and shall be regarded as Environmentally Sensitive Areas on construction plans. If an existing access road is within the Tree Protection Area, the Tree Protection Area may be adjusted to allow for access along the existing roadway.
- Stockpiling of materials or vehicle operation shall be prohibited within the Tree Protection Areas. If a Tree Protection Area has been adjusted to allow for an existing access road, no stockpiles or materials shall be allowed within 1.5 times the dripline/root protection zone of the native tree.
- Limbs of native trees can be pruned if necessary to allow construction equipment access. Small branches (less than three inches diameter) can be trimmed without the supervision of a Certified Arborist if less than ten percent of the total canopy is removed. If larger branches need to be removed or if more than ten percent of the total canopy would be affected, these activities shall be supervised by a Certified Arborist.
- Changes to the grade or drainage patterns in the areas surrounding a Tree Protection Area shall be avoided so that excess water does not drain to native trees, unless otherwise approved by a Certified Arborist.
- Any activities (e.g., vehicle operation) occurring within a Tree Protection Area shall be coordinated with a Certified Arborist to ensure that activities would not affect the health of the tree(s). If construction would damage or remove any trees, the Certified Arborist shall contact the appropriate jurisdiction(s) to determine mitigation and permitting requirements before the tree is impacted.
- An on-site pre-construction field meeting shall be held to inform all construction personnel of tree restrictions prior the initiation of work.

D. A subset of 20 of the native trees located within the increased inundation area shall be monitored for health over the course of 5 years following completion of the Debris Dam construction. A Certified Arborist shall monitor these trees annually each spring following the rainy season for a period of 5 years for signs of any potential negative health effects from flooding (e.g., yellowing leaves, lack of new growth, trunk decay, etc.) using the same health rating scale described to evaluate baseline conditions. Monitoring will distinguish if any changes in health may be from other outside factors. Each monitoring event shall measure and track the dbh of the trees to determine

growth patterns, and other trees outside of the future inundation areas shall also be measured to compare growth rates. Photographs shall be taken annually to compare the overall vigor of each tree's crown over time. Monitoring events shall assess whether a tree has been "affected" by determining if a tree's health rating declines two or more rating levels. Any affected trees shall be monitored for a two year period, which may be in addition to the original 5 year monitoring period, to determine if their health condition subsequently improves. If an affected tree shows improvement in the health rating during this two year period, it shall be considered a "recovered" tree and would not require mitigation. If an affected tree's health condition does not improve during this 2-year period, then the tree would be considered "impacted" and would require mitigation. If this occurs, in coordination with CDFW, the tree shall be mitigated at no less than a 1:1 ratio. The replacement trees shall be incorporated into the Riparian HMMP, as set forth in MM BIO-5, or a separate Tree HMMP shall be prepared and shall contain the same required components.

MM BIO-2 At least 7 days prior to the initiation of the lowering of the water surface at the Dam and Headworks (and Debris Dam if ponded water is present at the time of construction), a five-day/four-night pre-construction trapping for the Pacific pond turtle shall be conducted by a qualified Biologist. Concurrently with the trapping effort, the Biologist shall also visually search for and capture two-striped garter snakes and any other special status species in the Project Work Areas. If any Pacific pond turtles, two-striped garter snakes, or other special status species are captured, they shall be relocated to a suitable site along Santa Anita Wash outside of the construction area. Prior to relocating any of these species, the USFS and the CDFW shall approve the potential relocation site(s) and methods for transferring the turtles/snakes to the relocation sites. Any non-native animal species encountered during pre-construction surveys shall be permanently removed from the reservoir. Additionally, a qualified Biologist shall be present during the latter stages of dewatering of the reservoir to ensure that no Pacific pond turtles, two-striped garter snakes, or other special status species are stranded. If any of these species are observed during monitoring, they shall be captured by a qualified Biologist (i.e., one with the necessary approvals to handle these species) and released at the approved relocation site. Any non-native animal species encountered during dewatering of the reservoir shall be permanently removed from the reservoir. A Letter Report shall be prepared to document the results of the pre-construction surveys and monitoring; the Report shall be provided to the USFS and the CDFW within 30 days of conclusion of the survey effort.

MM BIO-3 The Project shall be conducted in compliance with the conditions set forth in the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code with methods approved by USFWS and CDFW to protect active bird/raptor nests. The nature of the Project requires that work would be initiated during the breeding season for nesting birds and raptors (February 1 to August 31). The LACFCD, in consultation with a qualified Biologist, may employ bird exclusionary measures (e.g., mylar flagging) prior to the start of bird breeding season to minimize opportunities for birds to nest within established boundaries of the Project. In order to avoid direct impacts on active nests, a pre-construction survey for nesting birds and raptors shall be conducted by a qualified Biologist (i.e., one with experience conducting nesting bird surveys) within 3 days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds, within 300 feet for nesting special status birds, and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed. A letter report shall be prepared and submitted to LACFCD to document the survey findings and recommended protective measures.

If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone (at a minimum of 25 feet for common birds, 300 feet for special status birds, and 500 feet for nesting raptors) around the nest depending on the sensitivity of the species and the nature of the construction activity. If the Biologist determines that a narrower buffer area is warranted, he/she shall submit a written explanation as to why (e.g., species-specific information, ambient conditions and birds' habituation to them, and the terrain, vegetation, and birds' line of sight between the Project and the nest/foraging areas) to the LACFCD Project Manager, and upon request to CDFW. Based on the submitted information, the LACFCD Project Manager shall determine whether to allow a narrower buffer. A letter report or memorandum shall be prepared by the Biologist to document the protective measures and to document compliance with applicable federal and State laws pertaining to the protection of nesting birds.

Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 feet for nesting birds, and 300 feet for special status birds, and 500 feet for nesting raptors), unless otherwise determined by a qualified Biologist and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Flagging, stakes, and/or construction fencing shall be used to demarcate the buffer around the nest and construction personnel shall be instructed as to the sensitivity of the area. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.

MM BIO-4 Water shall be lowered or re-routed around Project Work Areas at least one month prior to construction to deter bats from roosting in the vicinity of the Work Areas.

A pre-construction roosting bat survey (including both day and evening efforts) shall be conducted by a qualified Biologist prior to installation of exclusionary measures to ensure that no active day-roosts would be impacted. The day survey will involve inspecting the structures for sign of bat roosting. The evening survey will involve monitoring each potential roost site for evening emergence, conducting exit counts, and acoustic monitoring (from a half an hour before sunset to at least three hours after sunset) near potential roosts locations. If active bat day-roosts, maternity-roosts, or hibernating-roosts occur within the Project Work Area, bat exclusion devices shall be installed under the supervision of a qualified biologist between October 1 and November 30 (when the chance of impacting juveniles and individuals in hibernation is the lowest) within the 12-month period prior to the start of construction. Exclusion shall be done selectively, and only to the extent necessary to prevent bat injury and mortality.

If active bat roosts occur within structures proposed for removal/repair (including gunite repair on hill slopes), or within an area that would be indirectly impacted by Project activities, then exclusionary measures, such as barriers with one-way doors or other exclusion (e.g., caulking or wire mesh), shall be installed under the supervision of a qualified Biologist. Bat exclusion devices shall be inspected weekly by a qualified bat Biologist from March 1 through May 31 and monthly thereafter; any deficiencies shall be corrected or devices shall be modified to function appropriately. The Biologist shall prepare monthly reports to summarize the inspections and to report on the effectiveness of the exclusionary measures; the reports shall be submitted to LACFCD's Project Manager. If roosting bats are noted within any of the Project Work Areas during the breeding season, LACFCD shall contact CDFW to determine whether construction should proceed in that area. Temporary exclusionary measures shall be removed at the completion of construction.

If active bat day-roosts occur within trees proposed for removal, then either tree removal shall be conducted between October 1 and November 30 (to avoid the bat maternity and the bat hibernation season), or the tree removal will occur under the supervision of a qualified Biologist and will utilize phased tree trimming. If avoidance of bat hibernation and bat maternity season is not feasible, then exclusionary measures, such as netting or phased tree trimming, shall be implemented after the evening roost emergence under the supervision of a qualified Biologist. Once bats have been excluded from the trees to be removed, then tree removal can proceed.

MM BIO-5 Prior to initiation of Project activities, the Los Angeles County Flood Control District (LACFCD) shall obtain all necessary permits for impacts to U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW jurisdictional areas. Mitigation for the loss of jurisdictional resources shall be negotiated with the resource agencies during the regulatory permitting process. Potential mitigation options shall include one or more of the following: (1) payment to a mitigation bank or regional riparian enhancement program (e.g., invasive plant or wildlife species removal) and/or (2) restoration of riparian habitat either on site or off site at a ratio of no less than 1:1, determined through consultation with the above-listed resource agencies. If in-lieu mitigation fees are required, prior to the initiation of any construction-related activities, the LACFCD shall pay the in-lieu

mitigation fee to a mitigation bank/enhancement program for the in-kind (equivalent vegetation type and acreage) replacement of impacted jurisdictional resources. If a Restoration Program is required, prior to the initiation of any construction-related activities, the LACFCD shall prepare and submit a Riparian Habitat Mitigation and Monitoring Program (HMMP) for USACE and CDFW approval. If a Riparian HMMP is required, it shall contain the following items:

- A. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the Landowner, Specialists, and Maintenance Personnel that would supervise and implement the plan shall be specified.
- B. Site selection. The mitigation site shall be determined in coordination with the USACE, CDFW, and RWQCB. The site shall either be located in a dedicated open space area on County land, USFS land, or off-site land shall be purchased.
- C. Seed source. Seeds (or plantings) used shall be from local sources (within ten miles of the Project area) to ensure genetic integrity.
- D. Site preparation and planting implementation. Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) native species salvage and reuse (i.e., duff); (4) soil treatments (i.e., imprinting, decompacting); (5) temporary irrigation installation; (6) erosion-control measures (i.e., rice or willow wattles); (7) seed mix application; and (8) container species planting.
- E. Schedule. A schedule shall be developed which includes planting in late fall and early winter, between October 1 and January 30.
- F. Maintenance Plan/Guidelines. The Maintenance Plan shall include (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- G. Monitoring plan. The Monitoring Plan shall include (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) performance criteria, as approved by the above-listed resource agencies; (4) monthly reports for the first year and reports quarterly thereafter; and (5) annual reports for five years, which shall be submitted to the resource agencies on an annual basis. The site shall be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas.
- H. Long-term preservation. Long-term preservation of the site shall also be outlined in the conceptual Mitigation Plan to ensure the mitigation site is not impacted by future development.

Any areas of native riparian vegetation that would be temporarily disturbed by the Project's construction activities shall be maintained free of non-native vegetation for a period of five years or until native riparian species have become reestablished in the impact area. Removal of non-native vegetation shall occur at least one time per year over the five-year period in order to facilitate the establishment of native species.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have potentially significant impacts to oak trees, Pacific pond turtles, nesting birds, and roosting bats. However, with implementation of MM BIO-1, paragraph b (MM BIO-1[b]) for oak tree mitigation, MM BIO-2 (special status species relocation), MM BIO-3 (pre-construction nesting bird surveys), and MM BIO-4 (pre-construction bat surveys), would reduce impacts to less than significant.

As shown in Table 8, Comparison of Vegetation Types Impacted by the Approved Project and Modified Project—Headworks and Culvert Crossing, the Modified Project would impact the same habitat types as anticipated in the Adopted Final MND related to the Headworks and Culvert Crossing improvements. Although the Headworks and Culvert Crossing aspects of the Modified Project would impact 0.09 acre more in upland native vegetation (i.e., mixed coastal sage scrub, southern mixed

chaparral/mixed coastal sage scrub, and disturbed southern mixed chaparral/mixed coastal sage scrub), the additional impact would be considered less than significant due to the small amount of habitat being impacted compared to the amount available in the Project vicinity. Therefore, the Headworks and Culvert Crossing component of the Modified Project would not create a new significant impact pertaining to habitat modifications for vegetation, and no new mitigation measures are required.

**TABLE 8
COMPARISON OF VEGETATION TYPES IMPACTED BY THE APPROVED PROJECT
AND MODIFIED PROJECT—HEADWORKS AND CULVERT CROSSING**

Vegetation Types and Other Areas	Existing Vegetation (Study Area)	Headworks and Wildness Park Culvert Crossing Approved Project			Headworks and Wildness Park Culvert Crossing Modified Project			Difference in Total
		Permanent (Headworks)	Temporary (Construction Access)	Total (Acres)	Permanent (Headworks)	Temporary (Construction Access)	Total (Acres)	
Mixed Coastal Sage Scrub	14.09	0.01	0.02	0.03	0.01	0.04	0.05	+0.02
Disturbed Mixed Coastal Sage Scrub	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Mixed Chaparral	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Mixed Chaparral/ Mixed Coastal Sage Scrub	12.72	0.00	0.02	0.02	0.00	0.07	0.07	+0.05
Disturbed Southern Mixed Chaparral/Mixed Coastal Sage Scrub	0.50	0.00	0.01	0.01	0.00	0.03	0.03	+0.02
Southern Mixed Chaparral/Rock Outcroppings	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Cottonwood Willow Riparian Forest	6.36	0.06	0.14	0.20	0.03	0.16	0.19	-0.01
Sycamore Alluvial Woodland/Southern Riparian Forest	1.80	0.10	0.03	0.13	0.02	0.12	0.14	+0.01
Southern Sycamore Alder Riparian Woodland	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mule Fat Scrub	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coast Live Oak Woodland	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mixed Woodland	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oak Woodland/Southern Mixed Chaparral	6.03	0.00	0.01	0.01	0.00	0.01	0.01	0.00
Ornamental	3.86	0.01	0.03	0.04	0.00	0.03	0.03	-0.01
Ornamental/ Coast Live Oak Woodland	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ruderal	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disturbed	23.87	0.03	0.13	0.16	0.09	0.12	0.21	+0.05
Developed	8.90	0.04	0.49	0.53	0.11	0.29	0.40	-0.13
Open Water	4.99	0.04*	0.09*	0.13	0.02	0.07	0.09	-0.04
Rock Outcroppings	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Work Area Acreages	115.50	0.29	0.97	1.26	0.28	0.94	1.22	-0.04

As shown in Table 9 Comparison of Vegetation Types Impacted by the Approved Project and Modified Project—Debris Dam, the Modified Project would impact the same habitat types as anticipated in the Adopted Final MND related to the Debris Dam improvements. Specifically, regarding Section 15162 of the State CEQA Guidelines, no substantial change is proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects. Instead, impacts would be further reduced. Additionally, no substantial changes in circumstances have occurred that would result in new significant effect. No new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND.

Overall, the Debris Dam component of the Modified Project would permanently impact 0.61 acres more total area than was considered for the Approved Project. The Modified Project's impacts would be fully mitigated by implementation of MM BIO-1(a) through MM BIO-1(c), as well as MM BIO-5, which requires that the LACFCD shall obtain all necessary permits for impacts to USACE, RWQCB, and CDFW jurisdictional areas, which requires mitigation for the loss of jurisdictional resources. The Modified Project would impact an additional 0.10 acre of coast live oak woodland. As discussed in the Adopted Final MND, the oak trees that compose this coast live oak woodland are along the edge of the Project site and the oak trees are expected to be protected in place. There is a potential that these oak trees may require trimming. Potential impacts to oak trees and coast live oak woodland would be mitigated to a less than significant level through implementation of MM BIO-1(a) through MM BIO-1(c) and MM BIO-5. Therefore, changes to the Debris Dam activities because of the Modified Project would not create a new significant impact pertaining to habitat modification for vegetation and no new mitigation measures are required.

**TABLE 9
COMPARISON OF VEGETATION TYPES IMPACTED BY THE APPROVED PROJECT
AND MODIFIED PROJECT—DEBRIS DAM**

Vegetation Types and Other Areas	Existing Vegetation (Study Area)	Debris Dam Approved Project				Debris Dam Modified Project				Difference in Total
		Permanent (Structure)	Temporary (Construction Access)	Additional Inundation Area (Acres)	Total (Acres)	Permanent (Headworks)	Temporary (Construction Access)	Additional Inundation Area (Acres)	Total (Acres)	
Mixed Coastal Sage Scrub	14.09	0.00	0.00	0.58	0.58	0.00	0.00	0.58	0.58	0.00
Disturbed Mixed Coastal Sage Scrub	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Southern Mixed Chaparral	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Southern Mixed Chaparral/ Mixed Coastal Sage Scrub	12.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Disturbed Southern Mixed Chaparral/ Mixed Coastal Sage Scrub	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Southern Mixed Chaparral/ Rock Outcroppings	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Southern Cottonwood Willow Riparian Forest	6.36	0.00	0.20	0.08	0.28	0.11	0.17	0.08	0.36	-0.08
Sycamore Alluvial Woodland/ Southern Riparian Forest	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Southern Sycamore Alder Riparian Woodland	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Mule Fat Scrub	5.99	0.00	0.00	1.78	1.78	0.00	0.00	1.78	1.78	0.00
Coast Live Oak Woodland	2.61	0.04	0.03	0.05	0.12	0.09	0.08	0.05	0.22	-0.10
Mixed Woodland	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Oak Woodland/ Southern Mixed Chaparral	6.03	0.00	0.00	0.12	0.12	0.00	0.00	0.12	0.12	0.00
Ornamental	3.86	0.31	0.38	0.00	0.69	0.29	0.40	0.00	0.69	0.00

**TABLE 9
COMPARISON OF VEGETATION TYPES IMPACTED BY THE APPROVED PROJECT
AND MODIFIED PROJECT—DEBRIS DAM**

Vegetation Types and Other Areas	Existing Vegetation (Study Area)	Debris Dam Approved Project				Debris Dam Modified Project				Difference in Total
		Permanent (Structure)	Temporary (Construction Access)	Additional Inundation Area (Acres)	Total (Acres)	Permanent (Headworks)	Temporary (Construction Access)	Additional Inundation Area (Acres)	Total (Acres)	
Ornamental/Coast Live Oak Woodland	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Ruderal	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Disturbed	23.87	0.81	8.70	0.49	10.00	1.45	6.59	0.49	8.53	1.47
Developed	8.90	0.73	2.23	0.00	2.96	1.48	2.16	0.00	3.64	-0.68
Open Water	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Rock Outcroppings	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00
Total Work Area Acreages	115.50	1.89	11.54	3.10	16.53	3.42	9.40	3.10	15.92	0.61

Overall, the Modified Project would impact 0.57 acres more of total area than was anticipated for the Approved Project.

Consistent with the Approved Project, if the area upstream of the Headworks and Debris Dam are ponded at the time of Modified Project construction, dewatering may be required which would affect the western [Pacific] pond turtle (*Emys marmorata*) and the impact would be considered potentially significant, because this species meets the criteria to be considered under Section 15380 of the State CEQA Guidelines.⁴ However, implementation of MM BIO-2, which requires pre-construction trapping and relocation of any western [Pacific] pond turtles as authorized by the USFS and CDFW, would reduce this impact to a less than significant level. This measure would also allow for relocation of two-striped garter snakes (*Thamnophis hammondi*) if any are observed during the turtle trapping. The impact and mitigation for the Modified Project are the same as previously discussed in the Adopted Final MND. Therefore, the Modified Project would not create a new significant impact pertaining to western [Pacific] pond turtles, and no new mitigation measures are required. If ponding occurs and dewatering is required, the potential impact to western pond turtle would be less than significant with implementation of MM BIO-2.

Special status bird and raptor species may nest in vegetation in the Project site. Active nests of these and other bird species are protected by the MBTA. The Modified Project would impact a similar amount of nesting habitat as described in the Adopted Final MND. Implementation of MM BIO-3 would be applicable to the Modified Project, which would reduce impacts related to migratory birds to a less than significant level. Therefore, the Modified Project would not create a new significant impact pertaining to special status bird and raptor species, and no new mitigation measures are required.

Several special status bat species have potential to occur in the Project site. As described in the Adopted Final MND, construction activities would occur during daylight hours; therefore, bat foraging areas would not be substantially affected during construction. Many bat species prefer to forage over water. During construction of each facility for the Modified Project, water would be routed around the construction area, consistent with the Approved Project. Although the Project site's quality of foraging habitat would be diminished during construction, it is expected that water would be available upstream and/or downstream of the Project site during construction, which could be utilized by these bat species. Additionally, large areas of open space surrounding the Project site would continue to provide suitable foraging habitat for bats throughout construction. Following completion of each portion of the Modified Project, open water would again be ponded within each facility. Therefore, impacts of the Modified Project on special status bat species would be comparable to impacts described in the Adopted Final MND. The Modified Project would not create a new significant impact pertaining to the occurrence of special status bat species, and new mitigation measures are required.

Consistent with the findings of the Adopted Final MND, special status bat species have potential to roost in or adjacent to the Project site based on the presence of suitable habitat. Bats may roost in the rocky outcroppings along Santa Anita Canyon, in crevices of structures (e.g., gunite, Headworks' facility building, Debris Dam tower), or in large oak or sycamore trees in the study area (e.g., those at the Culvert Crossing and Debris Dam). No special status bats were recorded at the Headworks or

⁴ Section 15380 of the State CEQA Guidelines indicates that a lead agency can consider a non-listed species (e.g., CDFW Species of Special Concern) to be Endangered, Rare, or Threatened for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered in determining if a non-listed species met the definitions for "Rare" and "Endangered" according to Section 15380 of the State CEQA Guidelines.

Debris Dam Work Areas during the acoustical surveys conducted for the Adopted Final MND; however, suitable habitat is present, and they may occur for roosting in the future. The Modified Project would impact the same amount of riparian forest (i.e., southern cottonwood willow riparian forest and sycamore alluvial woodland/southern riparian forest) as described in the Adopted Final MND. Implementation of MM BIO-4 of the Adopted Final MND would still be applicable for the Modified Project and would ensure that impacts would be less than significant. The Modified Project would not create a new significant impact pertaining to potential roosting of special status bat species, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the loss of 0.53 acre of jurisdictional waters under the jurisdiction of USACE, CDFW, and Regional Water Quality Control Board (RWQCB) would result in potentially significant impacts. With implementation of MM BIO-5, which requires permitting for impacts to jurisdictional resources, impacts to these resources would be reduced to less than significant. The Modified Project would impact the same habitat types as described in the Adopted Final MND. Therefore, the impact for the Modified Project would be consistent with what was assumed for the Adopted Final MND for the Modified Project components; no new mitigation measures are required.

A total of 0.33 acre of sycamore alluvial woodland/southern riparian forest and southern cottonwood willow riparian forest, including the sycamore trees located adjacent to the Culvert Crossing, would be impacted by the Headworks and Culvert Crossing component of the Modified Project. This is the same amount as was anticipated for the Culvert Crossing component of the Adopted Final MND. A total of 0.28 acre of southern cottonwood willow riparian forest would be impacted by the Debris Dam component of the Modified Project, which is the same amount as anticipated in the Adopted Final MND, although it should be noted that there would be an additional 0.11 acre of permanent impacts for the Modified Project. Southern cottonwood willow riparian forest and sycamore alluvial woodland/southern riparian woodland are special status vegetation types that occur within the Project site. These areas are also within the jurisdiction of the USACE, CDFW, and RWQCB. As described in the Adopted Final MND, their loss would be considered potentially significant. However, consistent with the approach described in the Adopted Final MND, implementation of MM BIO-1(a) through MM BIO-1(c) and MM BIO-5 would reduce impacts to sycamore trees and riparian habitat to a less than significant level through permitting and compensatory mitigation. The Approved Project anticipated impacts to 1.86 acres of riparian vegetation (i.e., 0.8 acre of southern cottonwood willow riparian habitat and 1.78 acres of mule fat scrub) from the inundation area near the Debris Dam, including impacts to southern cottonwood willow riparian forest and mule fat scrub. Therefore, the Modified Project would not create a new significant impact pertaining to special status vegetation types, and no new mitigation measures are required.

As shown in Table 10, a total of 0.09 acre of open water would be impacted by the Headworks and Culver Crossing Modified Project; this is 0.04 acre less than anticipated for the Approved Project for the Headworks and Culvert Crossing components. Consistent with the Approved Project, open water would be dewatered from the Headworks Work Area during Modified Project construction; open water would be allowed to refill following Modified Project construction. Neither the Debris Dam Approved Project nor Modified Project would impact open water. Therefore, consistent with the Adopted Final MND, the Modified Project would not create a new significant impact pertaining to any riparian habitats or other sensitive natural community, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Approved Project's impacts on jurisdictional resources would be significant prior to mitigation and would require permitting with the applicable resource agencies. Implementation of MM BIO-5 would be implemented, which requires that permits be obtained for impacts to jurisdictional resources, which would reduce this impact to a less than significant level for the Approved Project.

As shown in Table 10, Comparison of Jurisdictional Areas Impacted by the Approved Project and Modified Project—Headworks and Culvert Crossing, the Modified Project would impact 0.044 acre less USACE/RWQCB jurisdiction and 0.581 acre less CDFW jurisdiction. As shown in Table 11, the Modified Project would impact 0.217 acre more USACE/RWQCB jurisdiction and 0.253 acre more CDFW jurisdiction. The impact of the Modified Project would be comparable to the type of impact anticipated for the Approved Project. However, combined, the Modified Project would impact 0.173 acre more USACE/RWQCB jurisdiction and 0.328 acre less CDFW jurisdiction than described in the Adopted Final MND.

The Headworks and Culvert Crossing portions of the Modified Project would impact a total of 0.169 acre of "Waters of the U.S." under the jurisdiction of the USACE and the RWQCB, including 0.058 acre of open water and 0.111 acre of non-wetland Waters of the U.S. This would be 0.044 acre less than was anticipated for the Approved Project for the Headworks and Culvert Crossing area. For the Headworks and Culvert Crossing, the Modified Project would include a total of 0.277 acre under the jurisdiction of the CDFW, which is 0.581 acre less than included in the Adopted Final MND. The Debris Dam component of the Modified Project would impact a total of 2.438 acres of "Waters of the U.S." under the jurisdiction of the USACE and the RWQCB (all non-wetland Waters of the U.S; no open water). This would be 0.217 acre more than was anticipated for the Approved Project for the Debris Dam area. The Modified Project would include a total of 2.526 acres under the jurisdiction of the CDFW; 0.253 acre more than described in the Adopted Final MND. Jurisdictional resources are protected by Sections 401 and 404 of the Clean Water Act (CWA) and by the *California Fish and Game Code* (Sections 1600 through 1616). As described in the Adopted Final MND, implementation of MM BIO-5 would ensure that impacts on jurisdictional resources are mitigated to obtain equivalent or superior biological functions and values as those impacted by the Modified Project. Therefore, the Modified Project would not create a new significant impact pertaining to State or federally protected wetlands, and no new mitigation measures are required.

**TABLE 10
COMPARISON OF JURISDICTIONAL AREAS IMPACTED BY THE APPROVED PROJECT
AND MODIFIED PROJECT—HEADWORKS AND CULVERT CROSSING**

Jurisdictional Resources	Existing (acres)	Headworks and Wildness Park Culvert Crossing Approved Project			Headworks and Wildness Park Culvert Crossing Modified Project			Difference (acres)
		Permanent Structure (acres)	Temporary Access (acres)	Total (acres)	Permanent Structure (acres)	Temporary Access (acres)	Total (Acres)	
Total USACE Jurisdiction	19.421	0.100	0.113	0.213	0.037	0.132	0.169	-0.044
Open Water	3.003	0.011	0.083	0.094	0.007	0.051	0.058	-0.036
Other Non-wetland "Waters of the U.S."	16.418	0.089	0.030	0.119	0.030	0.081	0.111	-0.008
Total RWQCB Jurisdiction	19.421	0.100	0.113	0.213	0.037	0.132	0.169	-0.044
Total CDFW Jurisdiction	26.985	0.172	0.138	0.858	0.067	0.210	0.277	-0.581

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.
Source: LACFCD 2015.

**TABLE 11
COMPARISON OF JURISDICTIONAL AREAS IMPACTED BY THE APPROVED PROJECT
AND MODIFIED PROJECT—DEBRIS DAM**

Jurisdictional Resources	Existing (acres)	Debris Dam Approved Project			Debris Dam Modified Project			Difference (acres)
		Permanent Structure (acres)	Temporary Access (acres)	Total (acres)	Permanent Structure (acres)	Temporary Access (acres)	Total (Acres)	
Total USACE Jurisdiction	19.421	0.324	1.897	2.221	0.846	1.592	2.438	+0.217
Open Water	3.003	0.000	0.000	0.000	0.000	0.00	0.000	0.000
Other Non-wetland "Waters of the U.S."	16.418	0.324	1.897	2.221	0.846	1.592	2.438	+0.217
Total RWQCB Jurisdiction	19.421	0.324	1.897	2.221	0.846	1.592	2.438	+0.217
Total CDFW Jurisdiction	26.985	0.353	1.920	2.273	0.894	1.632	2.526	+0.253

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.
Source: LACFCD 2015.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that although construction impacts on local wildlife movement would be considered adverse, there would be less than significant, and no mitigation was required for implementation of the Approved Project.

The areas that would be impacted for the Modified Project consist of existing LACFCD flood control facilities surrounded by open space, which is the same as was assumed for the Approved Project. Construction of the Modified Project would replace existing structures and would modify the existing access road. For example, at the Headworks facility, although the Modified Project would change the method for reinforcing the slope, it would not reconfigure the road/facility substantially. Therefore, the Modified Project would not change wildlife movement patterns at the Headworks facility or the Debris Dam. The Modified Project would replace the existing structure and culverts, resulting in a Culvert Crossing of the creek. Riprap would be placed along the bottom of the creek, both upstream and downstream of the Culvert Crossing structure. The Santa Anita Wash typically contains flowing water; therefore, the species moving through the culverts are expected to be small aquatic species (e.g., fish, and amphibians), which would continue to use the streambed beneath the proposed Culvert Crossing with implementation of the Modified Project. Medium- and large-sized mammals would be expected to continue to cross either over or under the Culvert Crossing/access road. Since the Modified Project would not affect the number of visitors to the Wilderness Park or the traffic volumes that cross the existing Culvert Crossing, no change to wildlife movement is expected at the Culvert Crossing, consistent with assumptions of the Approved Project. The Modified Project would not require a temporary bypass crossing as described in the Adopted Final MND. Wildlife would be expected to be able to move through or around the structure during construction of the Modified Project, consistent with the assumptions described within the Adopted Final MND.

As described in the Adopted Final MND, construction activities would create dust and noise within and adjacent to the work areas. During active construction, wildlife movement may be deterred by noise and human activity; however, most wildlife movement would occur at night while construction activities occur during the day. In addition, construction activities would also be temporary in nature. Construction impacts on local wildlife movement from the Modified Project would be comparable to the Approved Project impacts. Therefore, the Modified Project would not create a new significant impact pertaining to interference with movement of any native resident or migratory fish or wildlife species, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project's impacts to nesting birds would be potentially significant prior to mitigation. With implementation of MM BIO-3, which requires a pre-construction nesting bird/raptor survey prior to vegetation clearing, impacts were determined to be less than significant. The MBTA protects the nests of all native bird species, including common species. Nesting birds and raptors have potential to occur in vegetation throughout the Project Work Areas. Sections 3503 and 3503.5 of the California Fish and Game Code protect nesting migratory birds and raptors. Consistent with the Adopted Final MND, implementation of MM BIO-3 from the Adopted Final MND would ensure compliance with the MBTA for the Modified Project.

Although the impact footprint of the Modified Project is slightly different from what was analyzed for the Approved Project, the Modified Project would impact the same four trees described in the Adopted Final MND for the Wilderness Park Culvert Crossing. These include three western sycamores (*Platanus racemosa*) (Tree Numbers 220-222) and one coast live oak (*Quercus agrifolia*) (Tree Number 219) trees. All are located within CDFW jurisdiction

Consistent with the Approved Project, one sycamore tree (Tree Numbers 220), located downstream of the Culvert Crossing would be removed to construct the Modified Project. Two sycamore trees, (Tree Numbers 221 and 222), located within the temporary impact area and outside the permanent impact area would also be removed. The Adopted Final MND similarly anticipated that these three trees would be removed, and impacts were determined to be potentially significant for the Approved Project prior to mitigation. MM BIO-1(a) through MM BIO-1(d) reduced impacts to less than significant for the Approved Project. MM BIO-1(a), from the Adopted Final MND sets forth the mitigation requirements for these sycamore trees. The oak tree (Tree Number 219) is located within the temporary impact boundary, at the edge of the permanent impact boundary. However, this tree would be protected in place by the Modified Project, which is the same assumption as described in the Adopted Final MND for the Approved Project. As discussed in the Adopted Final MND, construction activities occurring directly adjacent to this oak tree, as well as Tree Numbers 221 and 222, if preserved, could harm the trees' root systems, and may affect the health of the trees. Grading for the Culvert Crossing would remain outside of the edge of the oak tree's canopy to the extent possible. MM BIO-1(b), also applicable to the Modified Project, sets forth requirements for protecting the oak tree. Additionally, as described in the Adopted Final MND, oaks and other native trees are located near all the Project Work Areas and could be inadvertently affected by construction activities (e.g., stockpiling soil or other construction materials). MM BIO-1(c), from the Adopted Final MND would be required to avoid construction impacts on native trees adjacent to Project Work Areas. Therefore, the Modified Project would not create a new significant impact pertaining to local policies or ordinances protecting biological resources, and no new mitigation measures are required.

The Adopted Final MND did not identify any oak or native trees that would be removed at the Debris Dam but identified that six non-native deodar cedar trees would be removed, as mandated by DSOD. With implementation of the Modified Project, an additional non-native deodar cedar tree would be removed in addition to the previously anticipated trees, for a total of seven non-native trees to be removed at the Debris Dam. The Adopted Final MND stated that oaks and other native trees are located near all the Project Work Areas and could be inadvertently affected by construction activities (e.g., stockpiling soil or other construction materials). The Debris Dam component of the Modified Project would affect the following trees that are located within the temporary impact area: coast live oak Tree Numbers 127, 198, 203, and 204; Goodding's black willow Tree Number 155 and 157; and western sycamore Tree Number 205. Per Project plans, because these trees are along the outside edge of the impact area, they would be trimmed but not entirely removed by Project construction activities. Implementation of MM BIO-1(c), would ensure that construction impacts on native trees adjacent to Project Work Areas are avoided, minimized, or compensated during the Modified Project. MM BIO-1(c) also includes a mechanism for additional tree removal if needed during construction. This includes tree protection requirements such as fencing placed at 1.5 times the dripline/root protection zone, labeling "tree protection areas" on construction plans, guidelines for stockpile materials and tree pruning, and coordination with certified arborists, as necessary.

The Modified Project would still include raising of the spillway walls vertically by 12 inches and 12-inch parapet walls would be constructed at the upstream side of the crest of the Debris Dam. This would allow water that is below the spillway elevation to flow from the Debris Dam to the Santa Anita Spreading Grounds or into the Santa Anita Wash below the Debris Dam.

Regarding Section 15162 of the State CEQA Guidelines, no substantial change is proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects. Instead, impacts would be further reduced. Additionally, no substantial changes in circumstances have occurred that would result in new significant effect. No new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. Therefore, the Modified Project would not result in a new significant impact regarding conflict with any local policies or ordinances protecting biological resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND concluded that there would be no impact regarding conflict with the provisions of adopted habitat conservation plans. During preparation of the Adopted Final MND, the Project site was not located within a Los Angeles County adopted Significant Ecological Area (SEA). Chapter 22.102, Significant Ecological Areas, of Title 22, Planning and Zoning, of the Los Angeles County Code, regulates development within SEAs in the County. Since adoption of the Final MND, updates to the Los Angeles County's SEA have been drafted and approved, which included changes to the boundaries of the SEA. The updated SEA boundaries now include the Project site within the San Gabriel Canyon SEA (LACDRP 2020). However, the County's SEA ordinance is inapplicable to both the Approved and Modified Projects pursuant to California Government Code Section 53091(e) because the Projects involve the construction of facilities for the production, generation, storage, treatment, or transmission of water. Additionally, the Modified Project would be exempt from the SEA ordinance pursuant to the terms of the ordinance itself. Per Section 22.102.040 (c), Exemptions, of the Los Angeles County Code, as an existing infrastructure facility, the Modified Project would be exempt because it would be considered "Maintenance, minor additions, or changes to existing legally established development." Furthermore, per Chapter 10 of Los Angeles County Department Regional Planning (LACDRP) SEA Ordinance Implementation Guide, Public Works is specifically exempt from SEA assessment and notification for the following reasons: Modified Project activities include development within manmade areas that are already disturbed, and the proposed activities for the maintenance and operation of existing facilities would not constitute expanded environmental impacts to the natural portions of the SEA (LACDRP 2020).

As described in responses to Thresholds 3.4(a) through 3.4(e) of this Section, the habitat within the study area has not substantially changed since adoption of the Final MND such that new significant impacts would occur with implementation of the Modified Project. Specifically, the Modified Project would not increase the severity of previously identified significant effects regarding biological resources. For example, although the Headworks and Culvert Crossing Modified Project would impact 0.09 acre more in upland native vegetation, the additional impact would be considered less than significant due to the small amount of habitat being impacted compared to the amount available in the Project site vicinity. Additionally, the Modified Project would impact the same habitat types as anticipated in the Adopted Final MND at the Debris Dam. Implementation of MM BIO-1(a) through MM BIO-1(d) and MM BIO-5 would ensure that changes to the Debris Dam activities because of the Modified Project would not create a new significant impact pertaining to habitat modification for vegetation, and no new mitigation measures are required. As such, the Modified Project would continue not to conflict with the County's adopted SEA program. Additionally, the Modified Project

would not conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan. Thus, the Modified Project would not result in a new significant impact regarding adopted habitat conservation plans, and no new mitigation measures are required.

Conclusion

The biological resources impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the biological resources analysis provided in the Adopted Final MND are required.

3.5 CULTURAL RESOURCES

Adopted Final MND

As discussed in the Adopted Final MND, the Approved Project's potential impacts related to unknown archaeological resources, paleontological resources, and human remains would be avoided and minimized through compliance with RRs CUL-1 and CUL-2. One recorded resource was identified in the Adopted Final MND as being located within the Project site (the Santa Anita Dam Complex), but it was determined not to be significant under any California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP) significance criteria. The Adopted Final MND identified several structures as potential historic resources, including: the Dam and sediment transport tunnel, the Headworks and Wilderness Park Culvert Crossing, and the Debris Dam and Spillway. However, it was determined that none of these properties were eligible for listing in the CRHR or NRHP. Also, the Adopted Final MND provided information on the Native American Heritage Commission's (NAHC's) Search of Sacred Lands File, which did not identify the presence of Native American cultural resources at the Project site. Informational letters were mailed, and two responses were received from the Native American groups and individuals contacted.

The Adopted Final MND stated that the proposed improvements to the Dam facilities were limited to existing engineered structures and gunite surfaces and were not expected to disturb any native sediments. However, the analysis identified that construction activities at the Headworks and the Wilderness Park Culvert Crossing would require excavations within the native soils of the creekbed. Construction at the Debris Dam would require disturbance of accumulated sediment and possibly native soils within the water retention area to install the new/replacement intake tower and the Debris Dam embankment. The Adopted Final MND stated that although the likelihood of encountering archaeological resources in the Area of Potential Effects (APE) was considered low, compliance with RR CUL-1 would reduce potential impacts for archaeological resources to a less than significant level.

The records search and field survey indicated no evidence of human remains on or near the Dam, Headworks/Wilderness Park Culvert Crossing, or Debris Dam. Recently deposited sediment, debris, and vegetation that flowed with stormwaters into the Debris Dam were not expected to contain any human remains, including those interred outside formal cemeteries, but that if an unanticipated encounter with human remains occurred, compliance with RR CUL-2 would ensure that impacts would be less than significant.

Project Design Features

No PDFs pertaining to cultural resources were required for the Approved Project.

Regulatory Requirements

RR CUL-1 Should archaeological resources be found during ground-disturbing activities for the Project, an Archaeologist shall be hired to first determine whether it is a "unique archaeological resource" pursuant to Section 21083.2(g) of the *California Public Resources Code* (PRC) or a "historical resource" pursuant to Section 15064.5(a) of the State CEQA Guidelines. If the archaeological resource is determined to be a "unique archaeological resource" or a "historical resource", the Archaeologist shall formulate a mitigation plan in consultation with the LACFCD that satisfies the requirements of the above-referenced sections. If the Archaeologist determines that the

archaeological resource is not a “unique archaeological resource” or “historical resource”, s/he may record the site and submit the recordation form to the California Historic Resources Information System at the South Central Coastal Information Center at California State University, Fullerton.

RR CUL-2 If human remains are encountered during excavation activities, all work shall halt in the immediate vicinity of the discovery and the County Coroner shall be notified (*California Public Resources Code* §5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of the Archaeologist approved by the LACFCD, determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code*. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The MLD’s recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD’s recommendations, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

Mitigation Measures

No MMs pertaining to cultural resources were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		
c) Disturb any human remains, including those interred outside of formal cemeteries?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, the existing facilities within the Project site do not qualify as significant historic resources, individually or collectively, under NRHP and/or CRHR criterion. Impacts pertaining to substantial adverse changes in the significance of a historical resource were determined to be less than significant for the Approved Project.

The Modified Project would not affect any additional historical resources within the Project site pursuant to NRHP and the CRHR. The Modified Project involves impacts to the same structures that were analyzed for the Approved Project. These structures and features were not deemed historical resources for the Approved Project. As the Modified Project would impact the same structures and features as the Approved Project, these structure would not replace, reconstruct, or impact any historical resources pursuant to Section 15064.5. The Modified Project would not create a new significant impact on historical resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that although the likelihood of encountering archaeological resources in the APE is considered low, the California Health and Safety Code and the California Public Resources Code describes procedures for monitoring and protocols to be followed if archaeological resources are discovered during construction activities that would minimize potential Project effects, as described in RR CUL-1. Impacts for the Approved Project related to archaeological resources were determined to less than significant with implementation of RR CUL-1.

Consistent with the findings of the Adopted Final MND, construction activities at the Headworks and the Wilderness Park Culvert Crossing would require excavations within native soils. Additionally, as was assumed in the Adopted Final MND, construction at the Debris Dam for the Modified Project would require disturbance of accumulated sediment and possibly native soils within the water retention area to install the new/replacement intake tower and the Debris Dam embankment.

Given that the proposed construction activities have the potential to disturb native soils, it is possible that archaeological materials would be uncovered during construction activities at the Headworks, Culvert Crossing, and/or Debris Dam. Although the likelihood of encountering archaeological resources in the APE is considered low, the California Health and Safety Code and the California Public Resources Code describes procedures for monitoring and protocols to be followed if archaeological resources are discovered during construction activities, as described in RR CUL-1. Compliance with RR CUL-1 from the Adopted Final MND would ensure that impacts would be minimized related to archaeological resources to a less than significant level. The Modified Project would not create a new significant impact related to archaeological resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there would be less than significant impacts regarding the Project's potential to disturb any human remains.

Consistent with the findings of the Adopted Final MND, there is no indication that human remains are present within the Project site for the Modified Project. Recently deposited sediment, debris, and vegetation that flow with stormwaters into the Debris Dam are not expected to contain any human

remains, including those interred outside formal cemeteries because there is no indication that human remains are present within the Project site. In the unlikely event of an unanticipated encounter with human remains at the Project site, the *California Health and Safety Code* and the *California Public Resources Code* requires that Project activities near a potential find be temporarily halted and the Los Angeles County Coroner be notified, as described in RR CUL-2. Compliance with RR CUL-2 would ensure that impacts for the Modified Project would be reduced to a less than significant level. The Modified Project would not create a new significant impact related to the disruption of human remains, and no new mitigation measures are required.

Conclusion

The cultural resources impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the cultural resources analysis provided in the Adopted Final MND are required.

3.6 ENERGY

Adopted Final MND

The Adopted Final MND did not directly address energy impacts, because energy analysis was not a part of the required CEQA Checklist analysis at the time that the Final MND was adopted. Effective December 28, 2018, the State adopted amendments to the State CEQA Guidelines requiring the analysis of and mitigation for energy in draft CEQA documents.

The Adopted Final MND determined that the Approved Project would not result in a substantial change in long-term operations of the existing facilities within the Project site, nor would the Approved Project result in new households or habitable structures that could generate long-term demands for utilities. Therefore, the Approved Project was not anticipated to increase operational energy use. The existing conditions at the Project site included several overhead power lines throughout the Project site, to supply electricity to the various flood control facilities. No gas transmission pipelines, or hazardous liquid pipelines were located near or on the Project site at the time of preparation of the Adopted Final MND. The Approved Project included upgrades to the Dam's outdated electrical, mechanical, potable water, and control systems to ensure reliability and to modernize operations, allowing for the integrated control of the facilities to increase water conservation efficiency. Other ancillary facilities at the Dam were also anticipated to be replaced or upgraded by the Approved Project, including the secured access gate (including new power poles to supply electricity) and a storage shed/garage. The Adopted Final MND stated that the existing Dam Operator's house would be removed, and a helipad would be constructed in its place to provide aerial access to the Dam in the event of an emergency. However, the helipad was anticipated to only be used once or twice per year. The addition of a helipad was anticipated to allow for improved emergency access to the Dam, as well as the other facilities downstream, especially if access roads were to become obstructed. All increases in operational energy use were proposed to increase functionality and safety of the Approved Project uses.

Energy use for the Approved Project was primarily based on the construction activities. Construction activities for the Approved Project required use of off-road equipment for demolition, site preparation, grading, and paving activities. All off-road construction equipment was determined to use diesel and gasoline. Construction of the Approved Project included energy use by construction workers and vendors traveling to and from the Project site. Fuel energy consumed during construction would be temporary in nature and would not occur after completion of construction activities. No significant impacts were identified related to energy and no mitigation was required.

Project Design Features

No PDFs pertaining to energy were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to energy were required for the Approved Project.

Mitigation Measures

No MMs pertaining to energy were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?		
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. Construction of the Modified Project would require the use of construction equipment for demolition, site preparation, grading, and paving activities, which is consistent with what was assumed for the Approved Project. The number of off-road construction equipment would be the same from the Approved Project to the Modified Project, although there would be differences in the types of off-road equipment between the Approved and Modified Projects. The maximum worker trips per day would be the same for the Approved Project and Modified Project. There would be a net increase of 106 round trips for trucks over the duration of the Modified Project construction activities. This net increase in truck trips is due to differences in construction methods for the Headworks, Culvert Crossing, and Debris Dam from implementation of the Modified Project, and due to an increased construction duration of 2 months when compared to the Approved Project construction schedule.

Construction would also continue to include trips for construction workers and vendors traveling to and from the Project site, consistent with the Approved Project. Fuel energy consumed during construction would be temporary in nature. Furthermore, there are no unusual characteristics of the Modified Project that would necessitate the use of less energy-efficient construction equipment compared to the Approved Project.

Consistent with the findings in the Adopted Final MND, the Modified Project would not substantially change operations of the Approved Project and would therefore not create a new significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during operations. The primary purpose of the Approved and Modified Projects are to improve public safety by addressing seismic safety and other structural issues at the Dam, Headworks, Culvert Crossing, and Debris Dam and to bring them into compliance with LACFCD and Division of Safety of Dams (DSOD) design requirements and seismic safety standards. Therefore, the Modified Project would not create a new

significant impact pertaining to energy consumption that could be wasteful, inefficient, or unnecessary consumption of energy resources, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Modified Project would only result in energy use during the construction phase, consistent with the Approved Project. Operation of the Modified Project would not result in increased energy consumption beyond what was previously assumed in the Approved Project. Therefore, the Modified Project would not create a significant impact pertaining to a conflict with or obstruction of a state or local plan for renewable energy or energy efficiency, and no new mitigation measures are required.

Conclusion

The Adopted Final MND did not directly address energy impacts, because energy analysis was not a part of the required CEQA Checklist analysis at the time that the Final MND was adopted. Effective December 28, 2018, the State adopted amendments to the State CEQA Guidelines requiring the analysis of and mitigation for energy in draft CEQA documents.

The energy impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND.

3.7 GEOLOGY AND SOILS

Adopted Final MND

As concluded in the Adopted Final MND, potential impacts related to seismic-related hazards, such as liquefaction and landslides, would be mitigated to a less than significant level with implementation of MM HAZ-1, which requires a Site Health and Safety Officer, an Access and Evacuation Plan, identification of site hazards, and response protocols in the event of an earthquake or landslide. The Adopted Final MND stated that development at the Project site would not alter geologic events or soil features/characteristics (such as ground shaking, seismic intensity, or soil expansion) at other locations.

As detailed in the Adopted Final MND, the Sierra Madre Fault Zone runs through the Project site. Although the Project site is not located within an Alquist-Priolo Earthquake Fault Zone, the Raymond Fault is a designated Alquist-Priolo Earthquake Fault Zone that is located two miles to the south of the Project site. Additionally, several potentially active fault zones are within the vicinity of the Project site, including the San Gabriel and San Andreas Fault Zones.

The potential for surface rupture on the Sierra Madre Fault Zone, as well as the potential for strong ground shaking, were existing seismic hazards that were determined to affect the Project site. The primary purpose of the Approved Project was to improve public safety by addressing seismic safety and other structural issues for facilities in the Project site. With implementation of PDFs GEO-1 and GEO-2, the Approved Project would not result in a significant adverse impact by exposing people or structures to major seismic hazards beyond what is considered normal for the Southern California region.

According to the Adopted Final MND, the Project site is located within an area identified by the California Division of Mines and Geology (CDMG) as having the potential for earthquake-induced landslides. In addition, the Project site was identified as susceptible to liquefaction hazards, with the lands to the north and south of the site identified as susceptible to landslide hazards.

The Adopted Final MND determined that since the Project site was greater than one acre, the construction contractor would be required prepare and comply with a Stormwater Pollution Prevention Plan (SWPPP), which would include erosion-control measures. Compliance with RR HYD-1 regarding the implementation of non-stormwater management and materials pollution control Best Management Practices (BMPs), as outlined in the SWPPP for the Approved Project, would reduce pollutants in the runoff. Compliance with the State Water Resources Control Board's (SWRCB's) Order No. 2003-0017-DWQ (RR HYD-2) regarding discharges from the Approved Project would further reduce pollutants from being discharged into the downstream portion of the creek-bed. The Adopted Final MND determined that impacts related to potential soil erosion or loss of topsoil would be less than significant, and no mitigation was required.

The Approved Project did not include any construction activities that would remove subsurface support or draw down groundwater levels. The Adopted Final MND determined with implementation of PDFs GEO-1 and GEO-2 impacts related to potential subsidence would be less than significant, and no mitigation was required.

Project Design Features

PDF GEO-1 The Project shall be designed and constructed in compliance with the *Standard Specifications For Public Works Construction* (Greenbook), Construction Specifications Institute, and DSOD guidelines for seismic stability to ensure the structural integrity of proposed site improvements against seismic shaking. In case of conflict between two specifications, the stricter specification shall apply.

PDF GEO-2 A detailed geotechnical investigation shall be conducted to assess potential geotechnical issues at the Debris Dam. This investigation shall conform with all applicable County requirements and other pertinent criteria, including DSOD and Greenbook standards. Specific issues to be evaluated in the Project geotechnical investigation shall include seismic-related ground rupture, ground acceleration, and liquefaction, as well as expansive/corrosive soils; other types of soil/geologic instability (including subsidence, oversized materials and excavations); and any other issues deemed appropriate by the LACFCD and/or the Geotechnical Engineer. The geotechnical investigation shall be submitted to the LACFCD for review and approval prior to commencement of construction. All applicable requirements and recommendations identified in the approved geotechnical investigation shall be incorporated into the Project design and/or construction specifications as appropriate.

Regulatory Requirements

No RRs pertaining to geology and soils were required for the Approved Project.

Mitigation Measures

Refer to MM HAZ-1 in Section 3.9, Hazards and Hazardous Materials, of this Addendum.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?

Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
 - ii) Strong seismic groundshaking?
 - iii) Seismic-related ground failure, including liquefaction?
 - iv) Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, the potential for surface rupture on the Sierra Madre Fault Zone is an existing seismic hazard that affects the Project site. Implementation of the Modified Project would not exacerbate these existing seismic hazards. The Adopted Final MND determined that impacts from rupture of a known earthquake fault would be less than significant. The primary purpose of the Approved Project is to improve public safety by addressing seismic safety and other structural issues at existing facilities within the Project site. Therefore, the Modified Project would not result in a significant adverse impact by exposing people or structures to rupture of a known earthquake fault. However, PDFs GEO-1 and GEO-2 from the Adopted Final MND would ensure that the Project would be designed and

constructed in accordance with the applicable standards. The Modified Project would not create a new significant impact on seismic hazards, and no new mitigation measures are required.

ii) Strong seismic groundshaking?

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, the potential for strong ground shaking is an existing seismic hazard that affects the Project site. Implementation of the Modified Project would not exacerbate these existing seismic hazards. The Adopted Final MND determined that impacts from strong seismic groundshaking would be less than significant. The primary purpose of the Approved Project is to improve public safety by addressing seismic safety and other structural issues at existing facilities within the Project site. Therefore, the Modified Project would not result in a significant adverse impact by exposing people or structures to major seismic hazards beyond what is considered normal for the Southern California region, and there are no significant impacts related to seismic ground shaking. However, PDFs GEO-1 and GEO-2 from the Adopted Final MND would ensure that the Project would be designed and constructed in accordance with the applicable standards. The Modified Project would not create a new significant impact related to strong seismic groundshaking, and no new mitigation measures are required.

iii) Seismic-related ground failure, including liquefaction?

No Substantial Change from Previous Analysis. As described in the Adopted Final MND, the potential for liquefaction on the Sierra Madre Fault Zone, is an existing seismic hazard that affects the Project site. Implementation of the Modified Project would not exacerbate these seismic hazards. Impacts related to seismic-related ground failure were determined to be less than significant for the Approved Project. Additionally, as part of the Modified Project, reinforcement of the Debris Dam would address liquefaction concerns with settlement/separation between the spillway and the embankment and would remove potential for failure caused by bending of the spillway walls. The primary purpose of the Modified Project is to improve public safety by addressing seismic safety and other structural issues at Headworks Structure, Culvert Crossing, and Debris Dam and bring them in compliance with County and DSOD design requirements and seismic safety standards, as required by PDFs GEO-1 and GEO-2. As such, the Modified Project would not create a new significant impact pertaining to seismic-related ground failure, and no new mitigation measures are required.

iv) Landslides?

No Substantial Change from Previous Analysis. As described in the Adopted Final MND, the potential for landslides is an existing seismic hazard that affects the Project site. Implementation of the Modified Project would not exacerbate these seismic hazards. The lands north and south of the Project site were identified in the Adopted Final MND as susceptible to landslide hazards. However, consistent with the Approved Project, the Modified Project would result in temporary hazards for workers who would be on the site during construction related to exposure to landslides. The greatest risk to the on-site crew would be the potential for landslides and falling debris, particularly in the Headworks area, which are adjacent to steep canyon walls. The Adopted Final MND determined that impacts would be less than significant with implementation of MM HAZ-1. MM HAZ-1 would apply to the Modified Project and identifies the need for the contractor to prepare a Site-Specific Health and Safety Plan that includes a designated Site Health and Safety Officer; an Access and Evacuation Plan; and identification of site hazards. The Modified Project would not create a new significant impact pertaining to landslides, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND stated that the Approved Project would result in less than significant impacts regarding soil erosion and the loss of topsoil.

The Modified Project's construction activities would not differ substantially from what was analyzed for the Approved Project. To begin, the construction footprint of the Modified Project would generally overlap with the Approved Project's construction footprint. Also, consistent with the Approved Project, construction of the Project would result in ground disturbance during excavation and grading activities that could create the potential for erosion to occur and result in the loss of topsoil. Additionally, excavation and grubbing activities within the creekbed could lead to sedimentation downstream, as was anticipated for the Approved Project. Since the Project site is greater than one acre, the construction contractor would be required to prepare and comply with a Stormwater Pollution Prevention Plan (SWPPP) as specified in RR HYD-1, which would include erosion-control measures. Also, the Modified Project would be implemented consistent with the State Water Resources Control Board's (SWRCB's) Order No. 2003-0017-DWQ as specified in RR HYD-2, which would further reduce pollutants from being discharged into the creekbed. Therefore, the Modified Project would not create a new significant impact related to potential soil erosion or loss of topsoil beyond what was analyzed for the Approved Project, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. As described in the Adopted Final MND, the Project site and surrounding area are identified as unstable and susceptible to liquefaction and landslide hazards. Impacts for the Approved Project were determined to be less than significant given the Modified Project includes structural improvements to existing stormwater facilities. The potential for landslides, liquefaction, and liquefaction-related lateral spreading are existing seismic hazards that affect the Project site; as such, implementation of the Modified Project would not exacerbate these seismic hazards, nor would it result in a new hazard.

The Modified Project would not include any construction activities that would remove subsurface support or draw down groundwater levels that would result in geotechnical hazards. As required by PDF GEO-1, the Project would be designed and constructed in compliance with Greenbook, Construction Specifications Institute, and DSOD standards. Additionally, the Modified Project would incorporate the recommendations of the geotechnical investigation report as described in PDF GEO-2. Therefore, no new significant impact related to this threshold would result, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Consistent with the Adopted Final MND, the Modified Project would replace structures within area Project site that is already developed. The Adopted Final MND determined that the Approved Project would have no impact related to expansive soils, which would continue to be the case for the Modified Project. Further, all applicable aspects of the Modified Project would be required to comply with County and DSOD design requirements and seismic safety standards, as required by PDFs GEO-1 and GEO-2. Therefore, the Modified Project would not create a new significant impact pertaining to substantial direct or indirect risk to life or property, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, the Modified Project does not include the construction of any septic systems. The Adopted Final MND determined that there would be no impact associated with the use of a septic system or other alternative wastewater disposal system. The construction crew for the Modified Project would be served by portable toilets that would be brought to the site during construction activities; regularly cleaned; and removed at the end of construction activities, consistent with the Approved Project. Therefore, the Modified Project would not create a new significant impact associated with the use of a septic system or other alternative wastewater disposal system, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in less than significant impacts on paleontological resources and geological features with implementation of the Approved Project. Consistent with the findings of the Adopted Final MND, the Modified Project would involve localized excavations, shallow grading, and fill materials, but would not excavate into paleontologically sensitive rock units. The Modified Project would not create a new significant impact on paleontological resources and geological features, and no new mitigation measures are required.

Conclusion

The geology and soils impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the geology and soils analysis provided in the Adopted Final MND are required.

3.8 GREENHOUSE GAS EMISSIONS

Adopted Final MND

The Adopted Final MND analyzed greenhouse gas (GHG) emissions from construction of the Approved Project. Construction GHG emissions were quantified, and the results were output in metric tons per carbon dioxide equivalent per year (MTCO_{2e}/yr) for each year of construction. On December 5, 2008, the SCAQMD Governing Board adopted an interim screening threshold for industrial projects where SCAQMD is the lead agency of 10,000 metric tons of carbon dioxide equivalent per year (MTCO_{2e}/year). In September 2010, the working group proposed to expand this 10,000 MTCO_{2e}/year threshold to other lead agency industrial projects. Although the SCAQMD Governing Board has yet to consider this proposal, because the Project is not a residential or commercial land use development project, the SCAQMD threshold for industrial projects was used for the analysis of the Approved Project. The estimated construction GHG emissions for the Project were 648 MTCO_{2e}/yr. The 30-year amortized construction emissions of the Approved Project were 22 MTCO_{2e}/yr. Because operations of the Approved Project were not anticipated to change from the existing operations, the operational GHG emissions were deemed to be nominal. The 22 MTCO_{2e}/yr emissions were less than significant because the emissions are less than the proposed SCAQMD screening threshold of 10,000 MTCO_{2e}/yr threshold for industrial projects.

The Adopted Final MND stated that statewide plans and regulations, such as GHG emissions standards for vehicles and the Low Carbon Fuel Standard, are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed. Because the Approved Project would result in minimal amounts of GHG emissions and safeguard water infrastructure, the Approved Project was determined to not conflict with these plans and regulations. The Approved Project would contribute to regional efforts to reduce dependence on imported water supplies by providing increased opportunities to recharge stormflows emanating from the Santa Anita Canyon Watershed. Overall, the Approved Project was determined to have less than significant impacts for GHG emissions.

Project Design Features

No PDFs pertaining to GHG emissions were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to GHG emissions were required for the Approved Project.

Mitigation Measures

No MMs pertaining to GHG emissions were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in less than significant impacts regarding the generation of GHG emissions. Neither the County nor the LACFCD has adopted or established any quantitative GHG emissions significance criteria for GHG emissions. In April 2008, the SCAQMD convened a Greenhouse Gas Significance Threshold Working Group to provide guidance to local lead agencies on determining the significance for GHG emissions in their CEQA documents. The Working Group adopted a philosophy like recommendations made by other agencies in California to identify Significance Screening Levels, or thresholds, for GHG emissions. Projects with GHG emissions less than these levels or thresholds would be determined to have less than significant impacts. Consequently, consistent with the approach used for the Adopted Final MND, GHG emissions from the Modified Project are quantified based on the methodologies proposed by SCAQMD's GHG CEQA Significance Threshold Working Group.

Construction

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. Construction GHG emissions were calculated for the Modified Project by using CalEEMod as described in Section 3.3, Air Quality of this Addendum. The results are output in MTCO₂e for each year of construction. The estimated construction GHG emissions for the Modified Project are shown in Table 12.

Unlike the numerous opportunities available to reduce a project's long-term GHG emissions through design features, operational restrictions, use of green-building materials, and other methods, GHG emissions reduction measures for construction equipment are relatively limited. Therefore, SCAQMD staff recommended that construction emissions be amortized over a 30-year project lifetime, so that

GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. Emissions quantified for the Modified Project in Table 12, Estimated GHG Emissions from Construction, include construction activities for the Approved Project pertaining to the Santa Anita Dam, and Modified Project construction activities for the Headworks, Culvert Crossing, and Debris Dam components. As shown in Table 12, the total construction emissions would be 507 MTCO_{2e} and the 30-year amortized construction emissions would be 17 MTCO_{2e}/yr. As shown, Modified Project construction emissions would be lower than the Approved Project construction emissions, which resulted in 648 MTCO_{2e} overall and 22 MTCO_{2e}/yr when amortized over 30 years.

**TABLE 12
ESTIMATED GHG EMISSIONS FROM CONSTRUCTION**

Year	Emissions (MTCO _{2e})
2019	30
2020	144
2021	333
Total Modified Project Emissions	507
Annual Emissions from Modified Project*	17
Total Approved Project Emissions	648
Annual Emissions from Approved Project*	22
MTCO _{2e} : metric tons of carbon dioxide equivalent	
Total does not add due to rounding.	
* Combined total amortized over 30 years	

Operations

Consistent with the Approved Project, once the Modified Project is complete, there would be no long-term changes to the regular inspection and maintenance operations at the Dam, Headworks, Culvert Crossing, or Debris Dam. Helipad operations would result in one or two helicopter trips per year. Therefore, the Modified Project would result in a nominal increase in GHG emissions from what was analyzed for the Approved Project.

As shown in Table 12, the estimated increase in annual GHG emissions, including amortized construction emissions, would be 17 MTCO_{2e}/yr. This value may be compared with and is less than the proposed SCAQMD screening threshold of 10,000 MTCO_{2e}/yr for industrial projects, as used for the Approved Project, and is less than the Approved Project amortized emissions of 22 MTCO_{2e}/yr. Because the Modified Project’s GHG emissions would be less than 10,000 MTCO_{2e}/yr and comparable to the Approved Project’s GHG emissions, the Modified Project would not create a new significant impact pertaining to GHG emissions, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in less than significant impacts regarding conflicts with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions. As described in the

Adopted Final MND, the principal State plan and policy adopted for the purpose of reducing GHG emissions is AB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. Statewide plans and regulations, such as GHG emissions standards for vehicles and the Low Carbon Fuel Standard, are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed. Therefore, the Project does not conflict with these plans and regulations.

Since certification of the Final MND, the *Los Angeles County 2035 General Plan* has been adopted, which includes the *Final Unincorporated Los Angeles County Community Climate Action Plan* (CCAP). The Los Angeles County 2035 General Plan was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The Los Angeles County 2035 General Plan accommodates new housing and jobs within the unincorporated areas in anticipation of population growth in the County and the region (LACDRP 2015a). The Air Quality Element summarizes air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce the GHG emissions (LACDRP 2015a). The CCAP provides policy guidance for reducing GHG emissions generated within the unincorporated areas. The CCAP ensures that the County will be able to reduce its emissions to 1990 levels by 2020 (LACDRP 2015b). There are 26 local actions included in the CCAP, and the local actions are grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting.

Additionally, since certification of the Final MND, the *Los Angeles Countywide Sustainability Plan*, also known as *OurCounty*, was adopted on August 9, 2019. *OurCounty* aims to uphold the Paris Climate Agreement by creating a fossil-fuel free Los Angeles County within the next three decades, with 160 health-focused strategies centered on communities that have been disproportionately affected by environmental pollution. *OurCounty* is organized around 12 goals and includes, but is not limited to, the following goals and milestones: powering unincorporated areas and County facilities with 100 percent renewable energy by 2025; increasing urban tree canopy coverage by 15 percent by 2035; diversity over 95 percent of waste from landfills; developing land-use tools to limit new development in high climate-hazard areas; and ensuring that all residents have safe and clean drinking water, and that rivers, lakes and the ocean meet federal water quality standards. Goal-5, which focuses on “thriving ecosystems, habitats, and biodiversity” is relevant to this Project. Specifically, Action 37 of Goal 2 aims to “support efforts to maximize sustainable yield from local groundwater basins” (Chief Sustainability Office 2019). The Approved and Modified Projects were designed to improve the LACFCD’s facilities to better manage stormwater runoff from the Santa Anita Canyon Watershed, including 518 acre-feet of additional water conservation capacity; improve public safety by addressing seismic safety and other structural issues at the Dam, Headworks, and Debris Dam; and prevent flood damage to downstream communities. In addition to improving infrastructure for flood protection, the Modified Project would contribute to regional efforts to reduce dependence on imported water supplies by providing increased opportunities to infiltrate storm flows emanating from the Santa Anita Canyon Watershed into the groundwater basin. Additionally, the Modified Project would be consistent with Action 41, which aims to “Advocate for a collaborative approach to partnering with the region’s various groundwater managers to sustainably manage regional groundwater basins”. The Approved Project had been identified in the Greater Los Angeles County Integrated Regional Water Management Plan (IRWMP) as one of the regional-level projects that could help to increase recharge of the local groundwater basin and thereby increase local water supplies (IWRMP 2017). Since the Modified Project would improve the reliability and function related to increasing local water supplies, the Project would therefore be consistent with the Actions above. As such, the Modified Project does not conflict with the State policies regarding GHG emissions reduction, the CCAP, *OurCounty*, or any applicable plan or policy adopted by the Board of Supervisors

for the reduction of GHG emissions. Therefore, the Modified Project would not create a new significant impact pertaining to conflict with GHG emissions reduction plans, and no new mitigation measures are required.

Conclusion

The GHG emissions impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the GHG emissions analysis provided in the Adopted Final MND are required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Adopted Final MND

As discussed in the Adopted Final MND, the Approved Project's potential impacts related to hazardous material spills during construction would be potentially significant prior to mitigation. Potential impacts related to increased site hazards risks and wildfire risks would be mitigated to less than significant through implementation of MM HAZ-1 and MM HAZ-2.

While no hazardous materials were known to be present at the Headworks/Wilderness Park Culvert Crossing and Debris Dam, the Adopted Final MND determined that there were hazardous materials (e.g., propane, diesel gasoline, oils, paints) used for the operation and maintenance activities at the Dam.

The Approved Project would involve the use of common hazardous materials. Construction of the Approved Project would not require extensive or on-going use of acutely hazardous materials or substances. Construction activities would be short-term and would involve the limited transport, storage, use, and/or disposal of common construction-related hazardous materials.

To prevent environmental hazards, the Adopted Final MND required that the handling of hazardous materials used in equipment would have to be conducted in accordance with existing regulations as required by RR HAZ-1. Additionally, under RR HYD-1, the Approved Project would implement a Stormwater Pollution Prevention Plan (SWPPP), which would include hazardous waste management Best Management Practices (BMPs) and a sampling and analysis plan for the Contractor to report and mitigate for any hazardous material discharges that may contaminate waters. The Adopted Final MND determined that compliance with RR HAZ-1 and RR HYD-1 would ensure that impacts related to hazards would be reduced to a less than significant level.

The Adopted Final MND noted that there were no schools within ¼-mile of Project site that could be affected by hazardous emissions or materials. The nearest school or day care facility was Highland Oaks Elementary School, located approximately 0.5 mile southwest of the site. However, it was anticipated that construction-related trucks would pass by the school, as it is located along the primary haul route. PDF TRA-1 required that heavy-duty diesel truck trips be scheduled to avoid peak hours and holidays. Therefore, the Adopted Final MND determined that impacts would be less than significant.

The California Department of Toxic Substance Control (DTSC) maintains the EnviroStor Database, which compiles hazardous material sites and generators that have been identified for clean up or that are permitted to handle hazardous materials by various regulatory agencies. The Adopted Final MND determined that there were no hazardous material sites or generators at or near the Project site, as listed in the EnviroStor Database. The Project site was also not listed in the Hazardous Waste and Substances Sites (Cortese) List developed in compliance with Section 65962.5 of the California Government Code.

According to the Adopted Final MND, there were no facilities that posed hazards related to hazardous materials use at or near the Project site. The nearest facility identified in the Adopted Final MND was a facility called "Sierra Madre Mad Scientist" in Sierra Madre, approximately 1.7 miles west of the Project site.

The Adopted Final MND determined that there were no airports within two miles of the Project site. However, the Approved Project would include construction of a helipad to provide aerial access to the Dam in the event of an emergency, which would introduce aircraft to the Project site and vicinity. It was anticipated that the helipad would only be used one or two times per year. The Adopted Final MND required that the Approved Project comply with RR TRA-3, which includes requirements for the approval and/or issuance of permits from several agencies, including the Federal Aviation Administration (FAA), Caltrans, and Airport Land Use Commission. These approval processes would ensure potential hazards are minimized related to the helipad. Furthermore, the introduction of a helipad at this location would help improve emergency response to the Project site and surrounding area. Therefore, the Adopted Final MND determined that impacts related to air traffic hazards would be less than significant.

The Adopted Final MND indicated that the Project site is located within a Very High Fire Hazard Severity Zone (VHFHSZ). The potential for wildland fire was noted as high due to the proximity of the open space and the ANF. To reduce wildfire risks and to protect workers during Approved Project activities, MM HAZ-2 required preparation of a Fire Protection Plan. Implementation of MM HAZ-2 would ensure that short-term wildfire hazards associated with Approved Project activities would be less than significant.

Project Design Features

Refer to PDF TRA-1 in Section 3.17, Transportation, of this Addendum.

Regulatory Requirements

RR HAZ-1 Activities at the Project site shall comply with existing federal, State, and local regulations regarding hazardous material use, storage, disposal, and transport to prevent Project-related risks to public health and safety. All on-site generated waste that meets hazardous waste criteria shall be stored, manifested, transported, and disposed of in accordance with the *California Code of Regulations* (Title 22) and in a manner to the satisfaction of the local Adopted Unified Program Agency (CUPA) and the U.S. Forest Service, as applicable.

Refer to RR HYD-1 in Section 3.10, Hydrology and Water Quality, and RR TRA-1 in Section 3.17, Transportation, of this Addendum.

Mitigation Measures

MM HAZ-1 Prior to commencement of any construction activities, the LACFCD shall require that the Contractor prepare a Site-Specific Health and Safety Plan for review and approval. The Plan shall be implemented throughout the construction activities. The Site-Specific health and safety plan shall be prepared in accordance with the Occupational Safety and Health Administration's (OSHA's) Safety and Health Regulations for Construction (*29 Code of Federal Regulations* 1926) and shall include a Site Health and Safety Officer; an Access and Evacuation Plan; identification of site hazards; and response protocols in the event of an earthquake or landslide.

MM HAZ-2 Prior to commencement of any construction activities, a Fire Protection Plan shall be prepared that includes emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris;

maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. The Fire Protection Plan shall be distributed to involved parties at least two weeks prior to commencement of any construction activities.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?		
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have less than significant impacts regarding hazards to the public or environment through the routine transport, use, or disposal of hazardous materials. Consistent with the findings of the Adopted Final MND, the Modified Project would involve the use of common hazardous materials, including oil and grease, solvents, diesel fuel, and other chemicals in vehicles, trucks, and heavy equipment. Construction of the Modified Project would not require extensive or on-going use of acutely hazardous materials or substances.

To prevent environmental hazards, the handling of hazardous materials would be conducted in accordance with existing regulations as required by RR HAZ-1. In addition, under RR HYD-1, the Modified Project would implement a SWPPP, to mitigate for any hazardous material discharges that may contaminate waters. Compliance with RR HAZ-1 and RR HYD-1 would ensure that impacts related to hazards would be reduced to a less than significant level. The Modified Project would not create a new significant impact regarding the routine transport, use, or disposal of hazardous materials, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have less than significant impacts regarding hazards to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Consistent with the findings of the Adopted Final MND, the Modified Project would involve the use of common hazardous materials, including oil and grease, solvents, diesel fuel, and other chemicals in vehicles, trucks, and heavy equipment. Construction of the Modified Project would not require extensive or on-going use of acutely hazardous materials or substances.

As with the Approved Project, the use of hazardous materials at the Project site could pose risks to construction workers or lead to soil and water contamination, if not properly stored, used, or disposed of. Due to the presence of water bodies, there is potential for water contamination by accidental release of contaminated soils into water, creating a public health and safety hazard. To prevent environmental hazards, the handling of hazardous materials would be conducted in accordance with existing regulations as required by RR HAZ-1. In addition, under RR HYD-1, the Modified Project would implement a SWPPP, to mitigate for any hazardous material discharges that may contaminate waters. Compliance with RR HAZ-1 and RR HYD-1 would ensure that impacts related to hazards would be reduced to a less than significant level.. The Modified Project would not create a new significant impact on hazardous materials, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Impacts to hazardous emissions or handling of hazardous substances were determined to be less than significant for the Approved Project. The Adopted Final MND determined that there are no schools within ¼-mile of Project site that could be affected by hazardous emissions or materials from the Modified Project. However, it is anticipated that construction-related trucks would pass by the school, as it is located along the primary haul route. Compliance with RR HAZ-1 would ensure that the transport of hazardous materials would be conducted in accordance with existing regulations. Further, PDF TRA-1 from the Adopted Final MND requires that heavy-duty diesel truck trips be scheduled to avoid peak hours at the school and during holidays. The Modified Project would not create any new significant impact pertaining to handling of hazardous materials or waste within ¼-mile of a school, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND concluded that the Project site is not on a list of hazardous materials sites identified on the Cortese list. The Adopted Final MND determined that there would be no impact regarding hazardous materials sites, compiled pursuant to Government Code Section 65962.5. The Modified Project would similarly not occur on a hazardous materials site. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there were no airports within two miles of the Project site and that the Approved Project would have no impacts regarding this threshold. Therefore, the Modified Project would not result in a safety hazard or in excessive noise for people working in the Project site or its vicinity. The Modified Project would not create a new significant impact related to this topic, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, construction activities would not interfere with any emergency response plans or emergency evacuation plans. The Approved Project impacts were determined to be less than significant with mitigation related to this topic. Implementation of a temporary access road would no longer be necessary as part of the Culvert Crossing component of the Modified Project, which would reduce potential temporary effects related to emergency access. Implementation of MM HAZ-1 and RR TRA-1 would ensure that impacts related to emergency evacuation plans would remain less than significant under the Modified Project. Therefore, the Modified Project would not create a new significant impact related to an adopted emergency response plan or emergency evacuation plan, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Approved Project impacts were determined to be less than significant with implementation of mitigation regarding this threshold. As concluded in the Adopted Final MND, the Project site is located within a VHFHSZ. The Modified Project activities would not involve construction or operation of habitable structures in wildland areas or promote new development in wildland areas. To reduce wildfire risks and to protect workers during construction of the Modified Project, MM HAZ-2 would be implemented which requires preparation of a Fire Protection Plan. Implementation of MM HAZ-2 would ensure that short-term wildfire hazards associated with Modified Project activities would be less than significant. The Modified Project would not create a new significant impact on wildfire hazards, and no new mitigation measures are required.

Conclusion

The hazards and hazardous materials impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the hazards and hazardous materials analysis provided in the Adopted Final MND are required.

3.10 HYDROLOGY AND WATER QUALITY

Adopted Final MND

The Adopted Final MND stated that the Approved Project could result in short-term construction impacts to surface water quality from grading and other construction-related activities. Compliance with RR HYD-1 was determined to reduce pollutants in the runoff. Compliance with the State Water Resources Control Board's (SWRCB's) Order No. 2003-0017-DWQ (RR HYD-2), regarding discharges during construction, would further reduce pollutants from being discharged into the downstream portion of the creek. Operations associated with the Approved Project were determined to not violate any water quality standards or waste discharge requirements, as the Project would not generate any new land use or introduce any new sources of wastewater discharge or effluent that could adversely impact wastewater. The Approved Project was not anticipated to generate wastewater that would require conveyance or treatment in on-site septic systems or at wastewater plants in the region.

As noted in the Adopted Final MND, the Approved Project activities would require the use of limited municipal water supplies during construction activities for fugitive dust. Under the Approved Project, stormwater runoff from the Project site would be drained into the existing flood control facilities in the Santa Anita Wash. Implementation of the Approved Project would not result in the redirection of flows or alteration of drainage patterns when compared to the existing condition. Waters released from the Dam would continue to travel through Santa Anita Wash, through the improved Headworks and into the Debris Dam. However, it was anticipated that during construction, the Approved Project uses, including the Santa Anita Reservoir, Headworks, and Debris Dam, would be dewatered and flows would be temporarily diverted to accommodate Approved Project work.

Regarding erosion or siltation, the Adopted Final MND stated that the long-term operation of the Approved Project would not result in exposed soils that could be eroded or generate additional siltation within the watershed. Regarding an increased rate or amount of surface runoff that could result in flooding, the Approved Project would not develop any new impervious surfaces that could alter the amount of on-site stormwater infiltration. Additionally, the Approved Project would improve the system's overall ability to capture sediment-laden stormwater runoff and flows, thereby resulting in a beneficial impact.

The Adopted Final MND stated that the Approved Project would increase opportunities to capture and infiltrate storm flows emanating from the Santa Anita Canyon Watershed into the groundwater basin. The Approved Project would not create new impervious surfaces that could increase the rate or amount of stormwater runoff. The Approved Project involved reconstruction of existing flood control facilities that are located within the Santa Anita Wash; however, these structures would not alter the current drainage patterns or impede/redirect flows when compared to the existing condition. The Approved Project would reduce flood hazards to persons and structures downstream of the Dam by reclaiming the original capacity of the Debris Basin and bringing the Debris Dam up to current seismic standards.

Due to the distance of the Project site to the Pacific Ocean and the numerous intervening structures, the Adopted Final MND determined that there was virtually no risk of on-site hazard due to tsunamis. According to the Adopted Final MND, the Santa Anita Reservoir does have the potential to experience a seiche; however, it stated that implementation of the Approved Project would not change or eliminate the existing seiche hazard or compromise the Dam's or the Debris Dam's ability to hold water as designed.

Project Design Features

No PDFs pertaining to hydrology and water quality were required for the Approved Project.

Regulatory Requirements

RR HYD-1 Prior to the start of construction activities, the LACFCD shall file a Permit Registration Document (PRD) with the State Water Resources Control Board (SWRCB) in order to obtain coverage under that National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with the Construction and Land Disturbance Activities (Order No. 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for construction activities (including demolition, clearing, grading, and excavation) and other land disturbance activities that result in the disturbance of one acre or more of total land area. The PRD consists of a Notice of Intent (NOI); Risk Assessment; Site Map; Storm Water Pollution Prevention Program (SWPPP); annual fee; and a signed certification statement. Pursuant to permit requirements, the Contractor shall develop and incorporate Best Management Practices (BMPs) for reducing or eliminating construction-related pollutants in site runoff.

In addition, during construction, the LACFCD shall comply with the appropriate requirements listed in the adopted Municipal Separate Storm Sewer System (MS4) Permit (Order No. R4-2012-0175, NPDES No. CAS004001), which regulates municipal discharges of stormwater and non-stormwater.

RR HYD-2 Discharges during construction are regulated under SWRCB Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification", which requires compliance with all conditions of the Water Quality Certification issued by the Regional Water Quality Control Board (RWQCB). Compliance with the Water Quality Certification issued by the RWQCB would ensure that any discharge from the Project does not conflict with the applicable provisions of Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, or any other applicable requirements of State law.

Mitigation Measures

No MMs pertaining to hydrology and water quality were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		
c) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		
i) result in substantial erosion or siltation on- or off-site;		
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;		
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or		
iv) impede or redirect flood flows?		
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?		
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. Impacts pertaining to violation of any water quality standards or waste discharge requirements were determined to be less than significant for the Approved Project. Consistent with the findings of the Adopted Final MND, the Modified Project would also result in short-term construction impacts to surface water quality from grading and other construction-related activities. However, it should be noted that grading would no longer be necessary as part of the Culvert Crossing under the Modified Project which would reduce potential water quality effects related to this aspect of the work. Compliance with RR HYD-1 regarding the implementation of non-stormwater management and pollution-control BMPs, as outlined in the SWPPP, would reduce pollutants in the runoff. Compliance with the SWRCB's Order No. 2003-0017-DWQ (RR HYD-2) regarding discharges during construction would further reduce pollutants from being discharged into the downstream portion of the creek. During construction, the Modified Project would not create a new significant impact pertaining to water quality standards and water quality control plans, and no new mitigation measures are required.

Consistent with the Approved Project, operation of the Modified Project would not violate any water quality standards or waste discharge requirements, as the Modified Project would also not generate any new land use or introduce any new sources of wastewater discharge or effluent that could adversely impact wastewater or create a new significant impact pertaining to water quality standards or water discharge requirements. The components of the Modified Project would not generate wastewater that would require conveyance or treatment in on-site septic systems or at wastewater plants in the region, consistent with the Approved Project. The Modified Project would not create a new significant impact pertaining to water quality standards or waste discharge requirements and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Modified Project would require the use of municipal water supplies during construction activities; however, the amount of water to be used for dust control would be limited. Implementation of the Modified Project would help improve recharge of the local groundwater basin; therefore, the Modified Project would have negligible demands for groundwater supplies because of Project implementation.. By constructing the 4-foot ogee weir, the outlet works would allow water that is below the spillway elevation to be sent from the Debris Dam to the Santa Anita Spreading Grounds or into the Santa Anita Wash below the Debris Dam. The Debris Dam provides flood protection by capturing sediment-laden stormwater runoff, allowing sediment to settle out in the Debris Dam, and discharging clear stormwater runoff to the channel downstream or into the Santa Anita Spreading Grounds. If the Debris Dam were to sustain damage or to fail because of seismic activity, debris would be released and deposited in the downstream channel, reducing its ability to safely convey subsequent storm flows in the channel; this could result in flood damage to downstream communities. In addition, a Debris Dam failure would wash out the Santa Anita Spreading Grounds and render them incapable of recharging stormwater runoff into the underlying groundwater basin. Therefore, implementation of the Modified Project would support the overall purpose of recharging stormwater runoff into the groundwater basin. The Modified Project would not create a new significant impact on groundwater supplies, and no new mitigation measures are required.

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

i) result in substantial erosion or siltation on- or off-site?

No Substantial Change from Previous Analysis. The Approved Project impacts pertaining to substantial -alteration of existing drainage patterns of the site in a manner which would result in substantial erosion or siltation on-or off-site was determined to be less than significant in the Adopted Final MND. Regarding erosion or siltation, the long-term operation of the Modified Project would not result in exposed soils that could be eroded or generate additional siltation within the watershed, consistent with the Approved Project. Construction activities would be subject to compliance with RR HYD-1 and RR HYD-2 to minimize sediment releases into downstream areas. Given that the Modified Project is substantially similar to the Approved Project, the Modified Project would not create a new significant impact resulting in substantial erosion or siltation on-or off-site, and no new mitigation measures are required.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

No Substantial Change from Previous Analysis. Impacts to substantial increase of the rate or amount of surface runoff in a manner which would result in flooding on- or offsite were determined to be less than significant for the Approved Project. The Modified Project would replace the existing Headworks with a concrete overflow stepped spillway, which would help to slow down the water that could potentially overflow onto the concrete embankment. Therefore, this component of the Modified Project would reduce risk of flooding within the Project site when compared to the Approved Project. Also, overall the Modified Project would not impede the capture and infiltration of storm flows emanating from the Santa Anita Canyon Watershed into the groundwater basin. Surface runoff from the Santa Anita Canyon Watershed drains along natural courses towards the Santa Anita Wash, which runs north-south beginning at the Dam. The purpose of the Dam is to decrease peak flood flow by retaining stormwater and discharging it at controlled release rates. The released flows continue downstream to the Headworks facility, which intercepts the creek flows and allows the flows to continue downstream to the Debris Dam, to be diverted to the Sierra Madre Spreading Grounds, or to be diverted into the Santa Anita Spreading Grounds. The Modified Project would reduce flood hazards by bringing the Debris Dam up to current seismic standards. The flood control facilities would be fully functional during the rainy season, and there would be no hazards associated with the Dam's, Headworks', or Debris Dam's ability to retain storm flows. The Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impacts related to the creation or contribution of runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Similarly, the Modified Project would replace the existing Headworks structure with a concrete overflow stepped spillway, which would help to slow down the water that could potentially overflow onto the concrete embankment. Therefore, it would reduce risk of flooding and runoff within the Project site. Overall, the Modified Project components would not interfere with the capture and infiltration of storm flows emanating from the Santa Anita Canyon Watershed into the groundwater basin. Surface runoff from the Santa Anita Canyon Watershed drains along natural courses towards the Santa Anita Wash, which runs north-south beginning at the Dam. The purpose of the Dam is to decrease peak flood flow by retaining stormwater and discharging it at controlled release rates. The released flows continue downstream to the Headworks facility, which intercepts the creek flows and allows the flows to continue downstream to the Debris Dam, to be diverted to the Sierra Madre Spreading Grounds, or to be diverted into the Santa Anita Spreading Grounds. The Modified Project would reduce flood hazards by bringing the Debris Dam up to current seismic standards. The flood control facilities would be fully functional during the rainy season, and there would be no hazards associated with the Dam's, Headworks', or Debris Dam's ability to retain storm flows. The Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

iv) impede or redirect flood flows?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impact regarding the impeding or redirecting of flood flows.

Similarly, the Modified Project would not involve the construction of any housing or other temporary or permanent habitable structures that could potentially flood. The Modified Project would replace the existing Headworks with a concrete overflow stepped spillway, which would help to slow down the water that could potentially overflow onto the concrete embankment. Therefore, it would reduce risk of flooding. The Modified Project involves the reconstruction of existing flood control facilities; however, these structures would not alter the current drainage patterns or impede/redirect flows which would substantially alter the existing drainage pattern of the Project site. Therefore, the Modified Project would not create a new significant impact regarding this threshold, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Modified Project would reduce flood hazards by bringing the Debris Dam up to current seismic standards. The flood control facilities would be fully functional during the rainy season, and there would be no hazards associated with the Dam's, Headworks', or Debris Dam's ability to retain storm flows. Consistent with the findings of the Adopted Final MND, there is fundamentally no risk of on-site hazard due to tsunamis (seismically induced waves) due to the distance of the Project site to the Pacific Ocean (30 miles west of the Project site). The Santa Anita Reservoir has the potential to experience a seiche; however, implementation of the Modified Project would not change or eliminate the existing seiche, as it would not change or eliminate the existing seiche hazard or compromise the Dam's or Debris Dam's ability to hold water as designed. The Modified Project would not create a new significant impact related to risk of release of pollutants flood hazard, tsunami, seiche zones, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Project site is located within the jurisdiction of the Los Angeles (Region 4) RWQCB. The RWQCB has developed a Water Quality Control Plan entitled Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura County (Basin Plan) to protect the water quality of surface and ground waters of the region. The Basin Plan designates beneficial uses; sets narrative and numerical objectives to protect beneficial uses of water resources; and describes implementation programs. Beneficial uses are processes, habitats, organisms, or features that require water and are considered worthy of protection. These water quality standards are implemented through various regulatory permits pursuant to Clean Water Act Section 401 for Water Quality Certifications and Section 402 for Report of Waste Discharge permits. During construction, the Project would be required to implement a SWPPP which would ensure that water quality objectives and standards are maintained.

Also, the Modified Project would not conflict with a sustainable groundwater management plan. The Modified Project would result in a minor increase in impervious surface, which would have a negligible effect on groundwater recharge when compared to the basin as a whole.

Therefore, the Modified Project would not create a new significant impact pertaining to water quality control plans, and no new mitigation measures are required.

Conclusion

The hydrology and water quality impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the hydrology and water quality analysis provided in the Adopted Final MND are required.

3.11 LAND USE AND PLANNING

Adopted Final MND

As discussed in the Adopted Final MND, the flood control facilities in Santa Anita Canyon that are within the Project site are existing public facilities operated and maintained by the LACFCD. The Dam is located within the ANF and is zoned as “Back Country Motorized Use Restricted” by the USFS Land Management Plan (Forest Plan). The actual Dam and the facilities immediately adjacent to the Dam (including the Dam Operator’s house and storage shed) are on land owned by the USFS, whereas the area immediately to the west (including most of the access road, upper and lower water tanks) are in an inholding area. The Forest Plan for the ANF includes the vision, strategy, and design criteria for USFS’ management activities and practices to ensure the protection of forest resources. The portions of the Project site that are located within the City of Arcadia, including the Headworks and the Debris Dam, are designated by the Arcadia General Plan as Public Facilities and Grounds (P). Current zoning for the site is Residential Mountainous (R-M), as defined by the City of Arcadia Zoning Code.

The eastern edge of the Debris Dam that is in the City of Monrovia is designated Hillside Wilderness Area in the General Plan and zoned as Hillside Wilderness Preserve. As stated within the Adopted Final MND, no construction activities were to occur within the City of Monrovia. However, temporary access/impact areas were located within the City of Monrovia, including areas that were possibly subject to traversing vehicles or other mobile equipment, staging of equipment, placing stockpiles of soil, and excavating soil from the adjacent sediment placement site for use in the buttressing backfill for the Debris Dam. No vegetation or tree removal was to occur within the City of Monrovia. All these activities would be limited to the LACFCD fee-owned right-of-way.

As discussed in the Adopted Final MND, no mitigation was required for either short-term or long-term impacts due to Approved Project implementation. The Approved Project would not change existing land uses at the Project site. The proposed improvements to the existing flood control facilities in the Santa Anita Wash did not conflict with the land use and zoning designations in the City of Arcadia General Plan and Zoning Code. RR USE-1 required the submittal of plans to the USFS for construction of the Dam in accordance with the USFS Special Use Permit (SUP). The proposed improvements at Dam also would not conflict with the “Back Country, Motorized” zone of the USFS Forest Plan. Implementation of the Approved Project would not divide an established community; and there is no HCP or NCCP applicable to the Project site, nor is the Project site located within the County’s Significant Ecological Area program.

Project Design Features

No PDFs pertaining to land use and planning were required for the Approved Project.

Regulatory Requirements

RR USE-1 Prior to commencement of any construction activities at the Dam, the LACFCD shall submit plans to the USFS to obtain written approval for the construction at the Dam in accordance with the existing USFS SUP (Provision Number 3). The application and all supporting technical information shall be completed to the satisfaction of the USFS, which is subject to review in compliance with the National Environmental Policy Act (NEPA).

Mitigation Measures

No MMs pertaining to land use and planning were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Physically divide an established community?		
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

- b) **Physically divide an established community?**

No Substantial Change from Previous Analysis. As with the Approved Project, the Modified Project would not involve the displacement of any existing land uses or the construction of barriers across the Project site. The Adopted Final MND determined that the Approved Project would result in no impact regarding this threshold. There are no residential uses or established communities on the Project site that would be physically divided by the Modified Project. Therefore, the Modified Project would not create a new significant impact related to physically divide of an established community, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in a less than significant impact regarding conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project. The Modified Project would not change existing land uses at the Project site. The Modified Project’s proposed uses and structures do not conflict with the land use and zoning designations in the City of Arcadia (General Plan and Zoning Code). Additionally, the proposed improvements would not conflict with the “Back Country, Motorized” zone of the USFS Forest Plan.

Further, the Modified Project would not conflict with the strategic goals in the Forest Plan, as they relate to community protection, forest health, invasive species, outdoor recreation, energy resources, watershed conditions, and the mission of the United States Department of Agriculture. Therefore, the

Modified Project would not create a new significant impact on land use plans, policies, or regulations, and no new mitigation measures are required.

Conclusion

The land use and planning impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the land use and planning analysis provided in the Adopted Final MND are required.

3.12 MINERAL RESOURCES

Adopted Final MND

The California Geological Survey (CGS) has identified deposits of regionally significant aggregate resources in the State. These clusters or belts of mineral deposits are designated as Mineral Resources Zone 2 (MRZ-2), which are areas that require special management due to the presence of mineral resources important to the State (DOC 1987). The Adopted Final MND noted that the Project site was located within an MRZ-2 zone; however, there were no active mining activities proposed as part of the Approved Project. According to the Adopted Final MND, review of maps, prepared by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) showed that there were no gas, geothermal fields, or active wells in or near the Project site. Additionally, there were no ongoing mining or extraction activities at or near Santa Anita Canyon.

Project Design Features

No PDFs pertaining to mineral resources were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to mineral resources were required for the Approved Project.

Mitigation Measures

No MMs pertaining to mineral resources were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?		
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in no impact regarding this threshold. The Project site is located within MRZ-2, which means that the Project site as an area classified by CGS as containing significant mineral resources. However, the various facilities managed by the LACFCD within the Project site are required for flood control purposes and are therefore not available for mineral extraction. The Modified Project would not require mineral resources, nor would it change the availability of resources on or near the Project site. Additionally, the Modified Project would replace existing facilities; no new structures or facilities would be constructed that could restrict future mineral resource recovery activities. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in no impact regarding this threshold. The Project site is located within MRZ-2, which means that the Project site as an area classified by CGS as containing significant mineral resources. However, the various facilities managed by the LACFCD within the Project site are required for flood control purposes and are therefore not available for mineral extraction. The Modified Project would not require mineral resources, nor would it change the availability of resources on or near the Project site. Additionally, the Modified Project would replace existing facilities; no new structures or facilities would be constructed that could restrict future mineral resource recovery activities. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

Conclusion

The mineral resources impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the mineral resources analysis provided in the Adopted Final MND are required.

3.13 NOISE

Adopted Final MND

As discussed in the Adopted Final MND, the Project site and its surroundings are a relatively quiet, suburban area. Existing noise sources include vehicles coming to and from the local residences and Wilderness Park; maintenance and inspection activities at the Approved Project facilities; and typical residential neighborhood sounds such as landscape maintenance machinery, barking dogs, and trash collection. Temporary noise impacts associated with the Approved Project were anticipated to be limited to the construction phases.

As stated in the Adopted Final MND, there are no noise-sensitive receptors near the Dam or slope improvement area north of the Dam. Although construction activity for the Approved Project was anticipated to result in substantial temporary noise increases in the area near the Dam, the Adopted Final MND concluded that there would be no impacts because there are no nearby sensitive receptors. Construction noise was anticipated to result in temporary noise increases in the area around the Headworks. However, the Adopted Final MND determined that neither the magnitude nor the duration of the construction noise would be substantial, and the impact would be less than significant. The Adopted Final MND stated that construction noise would result in temporary noise increases in the area immediately adjacent to the Wilderness Park Culvert Crossing. The noisiest piece of equipment to be used at this site was anticipated to be a concrete saw, which would be used intermittently in the demolition of the existing concrete slab and Culvert Crossing. The nearest homes are approximately 250 feet from the Culvert Crossing. The Adopted Final MND determined that although some construction noise would be audible and may occasionally be disturbing to persons in the backyards of the homes, the maximum noise levels would be less than the County Noise Ordinance of 75 dBA limit for construction noise from mobile equipment to single-family residential land uses. Therefore, the impact would be less than significant, and no mitigation is required. However, to minimize noise impacts to residences in the vicinity of the Wilderness Park Culvert Crossing, MM NOI-1 was to be implemented, which specifies construction practices to minimize noise effects upon sensitive receptors. The Approved Project would also implement MM NOI-2, which would provide a process for identifying and correcting excessive construction noise levels.

Project Design Features

No PDFs pertaining to noise were required for the Approved Project.

Regulatory Requirements

RR NOI-1 In compliance with the County Code and consistent with the more restrictive City of Arcadia Municipal Code, Project construction activities at the Headworks, Wilderness Park Culvert Crossing, and Debris Dam that generate substantial noise, such as the operation of construction equipment and mechanical equipment, shall be limited to the hours of 7:00 AM to 6:00 PM Monday through Friday, and 8:00 AM to 5:00 PM on Saturday. Construction at the Dam shall be in compliance with the County Code, which prohibits construction noise between the hours of 7:00 PM and 7:00 AM on weekdays (including Saturday).

Mitigation Measures

MM NOI-1 Even though measures set forth in this mitigation are not required to reduce noise to less than significant levels at either the Culvert Crossing or the Debris Dam, these measures will be implemented at these construction sites to further reduce noise impacts.

- The construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.
- The construction contractors shall place all stationary construction equipment so that the equipment is as far as feasible from the noise-sensitive receptors and so that emitted noise is directed away from the noise-sensitive receptors.
- The construction contractors shall locate equipment staging in areas that will create the greatest distance between staging area noise sources and noise-sensitive receptors during all Project construction.
- The construction contractors shall limit haul truck deliveries to the same hours specified for operation of construction equipment.

MM NOI-2 Even though measures set forth in this mitigation are not required to reduce noise to less than significant levels at either the Culvert Crossing or the Debris Dam, these measures will be implemented at these construction sites to further reduce noise impacts.

At least two weeks before, but not more than one month prior to the start of noise-generating construction activities, notification shall be mailed to owners and occupants of all developed land uses within 300 feet of the Culvert Crossing and Debris Dam providing a schedule for major construction activities that will occur through the duration of the construction period. The notification shall include the identification and contact number for a designated construction manager that would be available on site to monitor construction activities. Contact information for the Construction Manager shall also be located at the Arcadia City Hall and the Arcadia Police Department.

Complaints may be made during construction hours and a response shall be made within one workday. The Construction Manager shall document all complaints and resolutions and shall provide copies to the LACFCD within three working days of the complaint.

The Construction Manager, upon observation of excessive noise occurring near adjacent homes or upon receipt of a complaint about excessive noise shall do the following:

- Ensure that construction equipment is properly muffled according to industry standards, and
- Modify operations to reduce the number of pieces of equipment operating near noise sensitive receptors or operating concurrently, unless the modification would prevent completion of the task, or

- Implement corrective or additional noise-attenuation measures considered appropriate to address the complaint, which may include, but are not limited to, noise barriers or noise blankets.

MM NOI-3 Prior to the start of grading or similar heavy equipment operation on the downstream side of the Debris Dam, the County shall erect a temporary noise barrier between the structural buttressing work area and the residences to the southwest. The barrier shall be located along the southwest edge of the site access road, but the horizontal location may be adjusted as necessitated by geographical or topographical constraints or to avoid trees. The barrier shall be 16 feet high and solid from the ground to the top. The barrier shall be plywood of at least 0.75-inch thickness or other material with a noise transmission loss of 22 dBA or more.

When equipment is working on the downstream site of the Debris Dam within 50 feet of residences, only one piece of equipment shall be at full power at any time; other equipment shall be shut down or at low idle.

MM NOI-4 Large bulldozers and large loaded trucks shall not be operated on the Project site within 140 feet of an occupied residence. Consistent with the County Code, this restriction does not apply to trucks on a public right-of-way.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project result in:		
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		
b) Generation of excessive groundborne vibration or groundborne noise levels?		
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project result in:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that although construction noise impacts would be less than significant and no mitigation was required for the Approved Project, MM NOI-1 shall be implemented, which specifies construction practices to minimize noise effects upon sensitive receptors. The Approved Project would also implement MM NOI-2, which would provide a process for identifying and correcting excessive construction noise levels. Neither MM NOI-1 nor MM NOI-2 was required to ensure that impacts at the Wilderness Park Culvert Crossing would be less than significant for the Approved Project. However, construction noise at the Debris Dam was determined to be potentially significant prior to mitigation at the Debris Dam for the Approved Project. For the Debris Dam, MM NOI-3 was required to reduce impacts from construction noise to less than significant. With implementation of MM NOI-3, impacts were reduced to less than significant for the Approved Project. Consistent with the findings of the Adopted Final MND, temporary noise impacts associated with the Modified Project would be limited to the construction phase. No pile driving or blasting activities are anticipated for the Modified Project; jackhammering may be used for some demolition work. This is consistent with the Approved Project assumptions. Most of the equipment types used for construction of the Modified Project would be the same as was assumed in the Approved Project, as detailed in Table 2, Construction Comparison of the Approved and Modified Project, of Section 2.2.1.

Typical duty cycles and noise levels generated by representative pieces of equipment are listed in Table 13, Typical Maximum Construction Equipment Noise Levels.

**TABLE 13
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS**

Equipment	Noise Level (dBA) at 50 ft	Typical Duty Cycle
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Generator (25 KVA or less)	70	50%
Generator (more than 25 KVA)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
In situ Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pile Driver, Impact (diesel or pneumatic)	95	20%
Pile Driver, Vibratory	101	20%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%
dBA: A-weighted decibels; ft: feet; KVA: kilovolt amps		
Source: LACFCD 2015.		

Typical heavy construction equipment would include bulldozers, excavators, dump trucks, front-end loaders, graders, cranes, and industrial/concrete saws. Construction of the Modified Project would include demolition, which may result in impact noise. As previously mentioned, construction activities associated with the Modified Project would not include blasting or pile driving.

Because of the effects of noise attenuation, the distance from the noise source to a receptor is a primary consideration in determining the noise level experienced at the receptor. Because different

construction stages involve different pieces of equipment and may involve only localized portions of a site, each construction stage can result in different noise levels depending on the distance to sensitive receptors. As described in RR NOI-1, all construction activities must be limited to the hours of 7:00 AM to 6:00 PM Monday through Friday, and 8:00 AM to 5:00 PM on Saturday. However, to reduce construction-related impacts to nearby residences, the Modified Project would only be under construction during the weekdays (Monday through Friday) and work would not occur on Saturdays.

Construction at the Headworks would occur for approximately 12 weeks with the Modified Project, which is an increase of 8 weeks compared to the duration of construction at the Headworks for the Approved Project. Construction noise would result in substantial temporary noise increases in the area around the Headworks. Although the nearest homes are more than 500 feet from the Headworks and there are topographic and vegetation barriers that would attenuate noise between the Headworks and the homes, some construction noise would be audible. However, neither the magnitude nor the duration of the construction noise would be substantial due to the separation distance between construction activities and the nearest residential uses. There would be no substantial change when compared to the previous analysis.

Modified Project construction activities at the Culvert Crossing would occur for approximately 4 weeks, which is a reduction of 16 weeks when compared to the construction duration for the Culvert Crossing for the Approved Project. Because the Modified Project does not entail substantial additions to construction vehicles or place equipment closer to noise sensitive uses, the magnitude of construction noise for the Modified Project would be comparable to the noise levels disclosed under the Approved Project. Noise associated with construction activities under the Modified Project would comply with the hours allowed under the City of Arcadia's Municipal Code and would therefore not require new mitigation. Consistent with the approach used for the Adopted Final MND, to minimize noise impacts to residences in the vicinity of the Culvert Crossing, MM NOI-1 would be implemented, which specifies construction practices to minimize noise effects upon sensitive receptors. The Modified Project would also implement MM NOI-2, which would provide a process for identifying and correcting excessive construction noise levels. Neither MM NOI-1 nor MM NOI-2 is required to ensure that impacts at the Culvert Crossing would be less than significant due to the nearest homes being approximately 250 feet from the Culvert Crossing and compliance relegating construction activities to the least noise sensitive hours of the day.

Construction activities at the Debris Dam would occur for 8 months with implementation of the Modified Project. The Modified Project would include an additional concrete pump, roller compactor, rubber-tired dozer and longarm excavator when compared to the Approved Project activities at the Debris Dam. The Modified Project work activities are generally within the same footprint assumed for the Approved Project. Project. The Modified Project paving activities for the Debris Dam would be located approximately 25 feet from the nearest residential property boundary. Although not required to reduced impacts to less than significant in the Adopted Final MND, two mitigation measures were included to further minimize noise impacts at the Debris Dam specifically. MM NOI-1 requires noise-reduction measures for construction activities at the Culvert Crossing and Debris Dam and MM NOI-2 requires notification to neighbors and minimization of noise annoyances. In the event of complaints, best management practices would be implemented to address these complaints. Additionally, with implementation of MM NOI-3, prior to the start of grading or heavy equipment operation on the downstream side of the Debris Dam, the County shall erect a temporary noise barrier between residences and work activities. This temporary noise barrier shall be 16 feet high and solid throughout, to result in a noise transmission loss of 22 dBA or more. An approximately 900-foot-long temporary sound wall would be placed between the residences and the northwestern side of the Debris Dam. Therefore, the sound wall between the Modified Project activities and the

residences would result in a noise transmission loss of 22 dBA or more. Lastly, implementation of MM NOI-4 ensures that large bulldozers and large loaded trucks shall not be operated within 140 feet of an occupied residence. Implementation of these mitigation measures would ensure that Modified Project activities would not create a new significant impact regarding construction activity at the Debris Dam.

The Modified Project would generate traffic on N. Santa Anita Avenue, Highland Oaks Drive, and Elkins Avenue. During the construction period, traffic noise would be related to movement of construction equipment, trucks, and construction worker trips. Once construction equipment is transported to the various flood control facilities, it is anticipated that the equipment would remain on site until the end of each phase and all Project-related traffic noise would be related to workers entering and leaving the Project site during the workdays. The anticipated number of worker trips from the Modified Project are detailed in Table 2 of Section 2.2.1. The number of worker trips would not change with implementation of the Modified Project and would therefore not create a new significant impact regarding on-road construction traffic and no new mitigation measures are required.

As stated in the Adopted Final MND, peak trucking periods, including concrete trucks and dump trucks for hauling fill material, were anticipated to occur at two distinct construction phases: during construction of the Dam for a two-week period during the beginning of Approved Project construction, and during construction of the Debris Dam Buttresses towards the end of Approved Project construction. The Modified Project would not change the truck trip assumptions of the Dam. However, the Modified Project would cause a net increase of 106 round trips for trucks. The 106 round trips would be aggregated to different components of the Modified Project construction phases and would be spread out over an 8-month duration. This would not be a notable increase in truck trips and would not noticeably increase on-road construction traffic. The Modified Project would not create a new significant impact pertaining to on-road construction traffic and no new mitigation measures are required.

When the Modified Project construction activities are complete, there would be no long-term changes to the regular inspection and maintenance operations at the Dam, Headworks, Culvert Crossing, or Debris Dam, nor would there be any associated noise generation. Noise impacts associated with the Approved and Modified Project would be solely related to construction activities with the following exception. Helicopter flights to and from the new helipad at the Dam would occur only in emergencies and would not be anticipated to occur more than once or twice per year, as anticipated in the Adopted Final MND. These very infrequent noise events would not affect average daily ambient noise levels. Therefore, there would be no Modified Project-generated change in long-term ambient noise levels in the Project vicinity. The Modified Project would not create a new significant impact pertaining to substantial temporary or permanent increase in ambient noise levels and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. Vibration impacts from construction of the Approved Project were determined to be potentially significant prior to mitigation. The Adopted Final MND required implementation of MM NOI-4 to reduce groundborne vibration impacts from large equipment to less than significant. Consistent with the findings of the Adopted Final MND, the Project has the potential to generate vibration at the nearest homes to the Project site. However, the Modified Project would not introduce any new vibratory activities that were not previously analyzed such as pile-driving and blasting, nor would the Modified Project include any construction equipment that would have more vibratory impacts than was previously assumed. Additionally, the Modified

Project boundary for construction would not be located any nearer to the existing vibration-sensitive users than was previously assumed, except for paving activities at the Debris Dam. This distance would be approximately 50 feet from the nearest residential structure. At that distance, vibration-induced building damage and annoyance would not occur. There are no new vibration-sensitive uses that have been developed closer to the Project site since preparation of the Adopted Final MND. Like the Approved Project, the Modified Project construction activities would replace the Headworks, Culvert Crossing, and Debris Dam structures with similar structures as previously analyzed. Additionally, MM NOI-4 requires that large bulldozers and large loaded trucks shall not be operated within 140 feet of an occupied residence, unless the truck is located on a public right-of-way. Implementation of MM NOI-4 would still be applicable to the Modified Project and would reduce impacts to groundborne vibration to less than significant levels. Therefore, the Modified Project would not create a new significant impact pertaining to groundborne vibration or groundborne noise levels and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impacts pertaining to this threshold. Consistent with the Approved Project, the Modified Project would not expose people residing or working in the Project site or vicinity to excessive noise levels. The Modified Project would not develop land uses that would locate persons in an area subject to noise from public airports. There is no public airport within two miles of the site. The closest airport to the Project site is the El Monte Airport, approximately five miles to south. The Modified Project would not develop land uses that would locate persons in an area subject to noise from private airports or airstrips. Therefore, the Modified Project would not create a new significant impact pertaining to aircraft noise exposure and no new mitigation measures are required.

Conclusion

The noise impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the noise analysis provided in the Adopted Final MND are required.

3.14 POPULATION AND HOUSING

Adopted Final MND

As discussed in the Adopted Final MND no mitigation was required for either short-term or long-term impacts due to Approved Project implementation. The analysis indicated that the Project site did not include residential homes or land uses, except for the Dam Operator who was a LACFCD employee who resided on site. All other staff traveled to the various flood control facilities to perform maintenance activities and leave when the work was completed. The Debris Dam is located immediately adjacent to a residential neighborhood in the City of Arcadia.

Project Design Features

No PDFs pertaining to population and housing were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to population and housing were required for the Approved Project.

Mitigation Measures

No MMs pertaining to population and housing were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in no impacts regarding this threshold. As with the Approved Project, the Modified Project would not include the construction of any habitable structures, or any new land uses that could induce population growth directly. The Modified Project does not involve the extension of new infrastructure that could serve future populations, inducing growth indirectly. Therefore, the Modified Project would not create a new significant impact on population and housing, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impact regarding displacement of substantial numbers of existing people or housing. Similarly, implementation of the Modified Project would also not result in displacement of substantial numbers of existing people or housing. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

Conclusion

The population and housing impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the population and housing analysis provided in the Adopted Final MND are required.

3.15 PUBLIC SERVICES

Adopted Final MND

As detailed in the Adopted Final MND, fire protection for the Project site is provided by the City of Arcadia Fire Department and the USFS. The USFS provides law enforcement of federal laws (within the ANF). The Arcadia Fire Station to respond to calls around the Project site is Station 107, which is located at 79 West Orange Grove Avenue. Police protection for the Project site is provided by the Arcadia Police Department, which is located at 250 West Huntington Drive. The Adopted Final MND determined that the LACFCD's flood control facilities did not generate a demand for schools, parks, or libraries.

The Adopted Final MND did note that the Project site is in a Very High Fire Hazard Severity Zone (VHFHSZ)-designated area. Implementation of MM HAZ-2 would ensure reduction of wildfire risks and protect workers during Approved Project construction activities. MM HAZ-2 requires that the LACFCD prepare a Fire Protection Plan that includes emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. It was determined that the Approved Project would not generate increase demand for fire protection services.

The Adopted Final MND stated that temporary Project-related activities, such as the presence of construction equipment on the Project site, may provide increased opportunities for theft. The construction areas would be fenced and the LACFCD's Contractor would be required to secure building materials and construction equipment to prevent theft and vandalism from occurring at the Project site during construction. Additionally, there would be no unusually valuable or out of the ordinary equipment or materials associated with Approved Project implementation that would generate an unusual attraction for theft. The Adopted Final MND determined that any increase in demand for sheriff protection services due to the Approved Project would be less than significant, and there would be no new demands for sheriff protection services that could result in new or physically altered sheriff facilities.

Project Design Features

No PDFs pertaining to public services were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to public services were required for the Approved Project.

Mitigation Measures

No MMs pertaining to public services were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project: a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i) Fire protection? ii) Police protection? iii) Schools? iv) Parks? v) Other public facilities?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

i) Fire protection?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in less than significant impacts related to adverse physical impacts associated with fire protection. Consistent with the findings of the Adopted Final MND, the Modified Project would not involve construction of any new land uses, structures, or other improvement or operational activities that could increase demand for long-term fire protection services. The uses developed for the Modified Project would replace the existing and Approved Project uses. Therefore, the Modified Project would not create a new significant impact pertaining to fire protection services, and no new mitigation measures are required.

ii) Police protection?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in less than significant impacts related to adverse physical impacts associated with police protection. Consistent with the findings of the Adopted Final MND, the Modified Project would not involve construction or operation of structures or infrastructure improvements that could increase demand for long-term police protection (i.e., law enforcement) services, including USFS services. Also, consistent with the Approved Project the Modified Project

would result in the presence of construction equipment on the Project site, which may provide increased opportunities for theft. The construction areas would be fenced and the LACFCD's Contractor would be required to secure building materials and construction equipment to prevent theft and vandalism from occurring at the Project site during construction. Additionally, there would be no unusually valuable equipment or materials associated with Modified Project implementation that would generate an unusual attraction for theft. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

iii) Schools?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impact related to schools. Consistent with the findings of the Adopted Final MND, the Modified Project would also not generate demand for schools as the Modified Project does not involve development of new land uses such that would generate population and associated demand for public services. Therefore, the Modified Project would not create a new significant impact on schools, and no new mitigation measures are required.

iv) Parks?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have no impact related to parks. Consistent with the findings of the Adopted Final MND, the Modified Project would also not generate demand parks as the Modified Project does not involve development of new land uses such that would generate population and associated demand for public services. Therefore, the Modified Project would not in new significant impacts related to this threshold, and no new mitigation measures are required.

v) Other public facilities?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would result in no impacts related to other public facilities, such as libraries. Consistent with the findings of the Adopted Final MND, the Modified Project would also not generate demand for other public facilities as the Modified Project does not involve development of new land uses such that would generate population and associated demand for public services. Therefore, the Modified Project would not create a new significant impact related to other public facilities, and no new mitigation measures are required.

Conclusion

The public services impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the public services analysis provided in the Adopted Final MND are required.

3.16 RECREATION

Adopted Final MND

As discussed in the Adopted Final MND, the existing Dam does not provide any recreational facilities, although the surrounding area within the ANF offers opportunities for various recreational activities. While the Dam and Reservoir are located within the ANF, public access within these areas is prohibited. The access road to the Dam is gated for public safety and to prevent trespassing. Also, the steep slopes surrounding the reservoir and downstream canyon prevent easy access to the Dam and Reservoir.

The Approved Project included replacement of the Culvert Crossing that provides sole public access to the Wilderness Park and associated parking lot. Existing amenities at the Wilderness Park include a Nature Center, picnic areas, a multi-purpose field, nature trails, a barbeque, a fire circle, and restrooms. As stated in the Adopted Final MND, the Wilderness Park is used for various programs and classes throughout the year, including overnight Boy Scout campouts. The roads and trails of the ANF were anticipated to remain operational during construction activities and after completion of the Approved Project.

Project Design Features

No PDFs pertaining to recreation were required for the Approved Project.

Regulatory Requirements

No RRs pertaining to recreation were required for the Approved Project.

Mitigation Measures

No MMs pertaining to recreation were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?		
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project’s impacts from potential increased use of existing neighborhood and regional parks or other recreational facilities would be less than significant. As with the Approved Project, the Modified Project would not induce population growth directly or indirectly that would generate a need for or increase the use of neighborhood and regional parks, trails, or other recreational facilities. The Modified Project consists of improvements to existing facilities and would not increase the use of existing park or recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The roads and trails of the Angeles National Forest would remain operational during construction activities and after the Modified Project is complete.

Consistent with the Adopted Final MND, if Wilderness Park users are bothered by construction noise near the parking areas associated with the Culvert Crossing replacement, or are inconvenienced by temporary access closures, there are existing recreational facilities with similar amenities located within an approximate five-mile radius that could be used by these individuals. This includes Monrovia Canyon Park in the City of Monrovia, which is located approximately 2.0 miles to east of the Wilderness Park and has a Nature Center, picnic areas, and nature trails; the USFS Chantry Flat Recreation Area is located approximately 1.8 miles to the north and has a Ranger Station, Adams’ Pack Station and General Store, picnic areas, restrooms, camping, and trailheads for hiking trails within the National Forest; and there are 4 additional parks in the City of Arcadia within approximately 1.0 mile of the Project site—Highland Oaks, Eisenhower Memorial, Newcastle, and Forest Avenue Parks—which provide both active and passive recreational facilities. Although some individuals that use Wilderness Park may use these other parks during the temporary closure, the Modified Project would not increase the use of existing neighborhood and regional parks or other recreational facilities to an extent that substantial physical deterioration would occur. Furthermore,

the Modified Project would expedite construction of the culvert at Wilderness Park, which would help to reduce the amount of time the parking lot is closed. Therefore, the Modified Project would not create a new significant impact to increased use of existing neighborhood and regional parks or other recreational facilities, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined the Approved Project would result in less than significant impacts related to the inclusion of recreational facilities or requirement of construction or expansion of recreational facilities. As with the Approved Project, the Modified Project activities would not include recreational facilities require the construction or expansion of recreational facilities which may have an adverse physical effect on the environment. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

Conclusion

The recreation impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the recreation analysis provided in the Adopted Final MND are required.

3.17 TRANSPORTATION

Adopted Final MND

As discussed in the Adopted Final MND no mitigation was required for either short-term or long-term impacts due to Approved Project implementation. The Approved Project was anticipated to generate traffic from Interstate 210 (I-210) to N. Santa Anita Avenue, where trucks/workers going to the Dam would continue up Chantry Flats Road. Trucks/workers going to the Headworks and Culvert Crossing would continue from N. Santa Anita Avenue to Elkins Avenue, to Highland Oaks Drive and into Wilderness Park. Trucks/workers going to the Debris Dam would continue from N. Santa Anita Avenue to Elkins Avenue, where the trucks would enter a gated driveway just north of the spreading basins. During the approximate 10-month construction period, the traffic impacts were anticipated to occur within public streets, related to movement of construction equipment and construction worker trips. Once construction equipment is transported to the various flood control facilities, it was anticipated that the equipment would remain within the Project site until the end of each phase and all Project-related traffic impacts would be related to workers entering and leaving the Project site during the workdays. Additionally, vendor trips and haul trips were assumed in the analysis. To minimize the export of waste, the Adopted Final MND anticipated that most of the excavated material and demolished concrete would be reused/recycled on site as backfill at the Debris Dam. Peak trucking periods, including concrete trucks and dump trucks for hauling fill material, were determined to occur at two distinct construction phases: (1) a two-week period in December 2015, when construction at the Dam (reinforcement of the armoring on the downstream canyon wall and construction of the helipad) was to occur, when concrete pours and other material deliveries would require approximately 50 daily round trips; and (2) over approximately 5 weeks starting in August 2016, when construction of the Debris Dam buttresses would require approximately 74 round trips for soil import per day. As such, the Adopted Final MND deemed that the Approved Project would have a less than significant impact regarding an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

The Adopted Final MND included RR TRA-1, which required compliance with the Los Angeles County Code (Title 16, Highway). RR TRA-1 also required scheduling travel outside peak hours and holidays. Due to minimal impacts to peak hour traffic, the current minimal traffic along the trucking route, and the temporary nature of the construction activities, Approved Project implementation would not have a measurable impact on traffic on N. Santa Anita Avenue or the other local streets, including Elkins Avenue and Highland Oaks Drive. The Adopted Final MND referenced RR TRA-2, which would ensure that construction traffic would be managed in compliance with Greenbook standards and applicable requirements to limit roadway obstruction and the need for temporary detours. PDF TRA-1 would ensure that heavy-duty diesel truck trips would be scheduled to avoid peak hours and holidays, thereby minimizing roadway hazards, congestion, and queuing on local roads. The Adopted Final MND determined that compliance with RRs TRA-1 and TRA-2 and incorporation of PDF TRA-1 would ensure that Approved Project-related traffic impacts remain less than significant.

The Adopted Approved MND also determined that there would be no impact to the use of mass transit systems, non-motorized travel, or pedestrian and bicycle paths with Approved Project implementation because the site is not near any alternative transportation systems and is likely too far to allow for bicycle or pedestrian access to the site by workers. The nearest bus stop is located at Santa Anita Avenue and Sierra Madre Boulevard, located approximately 1.2 miles south of the Project site.

Implementation of the Approved Project would generate additional vehicle trips from short-term demolition and construction activities; however, it would not generate any long-term increases in traffic that would conflict with the County's CMP. The Approved Project would not add more than 50 trips at any CMP arterial monitoring station during the AM or PM peak hour, nor would it add 150 or more trips to the freeway system. Therefore, conflicts with an applicable congestion management program would be less than significant. The Approved Project would have less than significant impacts regarding a change in air traffic patterns with implementation of RR TRA-3 for Santa Anita Dam activities (included below). The topic of VMT was discussed within the energy and greenhouse gas emissions sections of the Adopted Final MND.

Project Design Features

PDF TRA-1 Heavy-duty diesel truck vehicle (with a Gross Vehicle Weight Rating of 10,000 lbs. or heavier) trips shall be scheduled to avoid school crosswalks at Highland Oaks Elementary School during peak drop-off hours between 8:00 AM to 9:00 AM and pick-up hours between 2:00 PM to 3:00 PM. Heavy-duty diesel truck vehicle trips will be scheduled to avoid peak hours and holidays. As required by State Commercial Vehicle Idling Regulations, trucks shall be prohibited from idling for more than 5 minutes if queuing within 100 feet from any residential area.

Regulatory Requirements

RR TRA-1 The movement of large equipment on public roadways shall be made in compliance with the Los Angeles County Code (Title 16, Highway). Oversized transport vehicles on State highways, if required, would need to obtain a transportation permit from the California Department of Transportation (Caltrans). Oversized transport vehicles on local roadways, if required, would need to obtain a transportation permit from the Cities of Arcadia and Sierra Madre.

RR TRA-2 The County's general construction requirements require the implementation of temporary traffic control in accordance with the *Standard Specifications for Public Works Construction* (Greenbook), which contains standards for traffic and access (i.e., maintenance of access, traffic control, and notification of emergency personnel). The Contractor shall provide temporary traffic control in accordance with the Greenbook during construction activities.

RR TRA-3 Design, construction, and operation of the helipad at the Santa Anita Dam shall comply with the requirements of all regulatory and oversight agencies including, but not limited to, the FAA, Caltrans, and Los Angeles County Department of Regional Planning Airport Land Use Commission.

Mitigation Measures

No MMs pertaining to transportation were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?		
b) Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?		
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?		
d) Result in inadequate emergency access?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have a less than significant impact regarding potential conflicts with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system. As with the Approved Project, trucks/workers going to the Project site would access the Project site through N. Santa Anita Avenue, to Elkins Avenue, to Highland Oaks Drive, and into the Wilderness Park for the Modified Project. The changes to construction of the Modified Project compared to the Approved Project for the Headworks and Culvert Crossing components are shown in Table 2, Construction Comparison for Headworks and Culvert Crossing. For transportation purposes, most elements of the Approved Project would remain the same or would be reduced, except for a net increase of 106 round trips for trucks to occur over an 8-month duration. The maximum worker trips per day would remain the same as previously analyzed. The addition of 106 round trips for trucks over 8 months is minimal and would not add a noticeable increase in traffic. The Modified Project would not add any trips to the peak trucking periods assumed in the Approved Project, which were anticipated to occur during a two-week period.

Additionally, consistent with the Approved Project, implementation of the Modified Project would not create a demand for alternative transportation systems and would not affect public transit services. No demand for public transit, bicycle, or pedestrian facilities would be created by the Modified Project since there would be no change to land uses in the Project site. The increase in truck traffic on Santa Anita Avenue would have no impact on alternative transportation systems. Therefore, the Modified Project would not create a new significant Project-related traffic impact, and no new mitigation measures are required.

b) Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?

No Substantial Change from Previous Analysis. Since adoption of the Final MND, transportation analyses for CEQA requires an analysis of transportation impacts using vehicle miles traveled (VMT) metrics instead of level of service (LOS), which was previously the metric used for CEQA transportation analyses. As such, the Adopted Final MND did not include a VMT Analysis pursuant to Section 15064.3(b). Section 15064.3(b)(1) of the State CEQA Guidelines refers to evaluating transportation impacts using VMT for land use projects. It should be noted that the Project is not a land use project; instead, the Project consists of a short-term, construction-based activity that would not generate any long-term change in traffic conditions.

State CEQA Guidelines Section 15064.3(b)(3) states that, for many projects, a qualitative analysis of construction traffic may be appropriate. The VMT generated by the Project would occur on a short-term basis during construction activities at the Modified Project components and during routine maintenance activities, consistent with the Approved Project. VMT refers to the amount and distance of automobile travel attributable to a project. The term “automobile” refers to on-road passenger vehicles, specifically cars and light trucks. Agencies are not required to include heavy-duty freight vehicles in their CEQA analyses under Senate Bill 743, which is the basis of this analysis. Furthermore, it needs to be recognized that the VMT analysis of on-road passenger vehicles and light trucks is not required if total trips per day do not exceed 110 one-way daily trips. If trips exceed the threshold of 110 trips per day, only then a quantitative VMT analysis would be required. The Modified Project would result in a maximum of approximately 28 personal/work vehicles (on-road, passenger vehicles) traveling each day to and from the Project sites, which is below the threshold of 110 daily trips. These maximum trips would occur during construction of the Dam. This consists of an overlap of constructing the new spillway (16 one-way trips), electrical work (6 one-way trips), and installation of valves (6 one-way trips) at the Dam. This number of trips is consistent with the number of trips for the Approved Project. Therefore, preparation of a VMT analysis is not required. As such, the Project would not conflict or be inconsistent with Section 15064.3(b) of the State CEQA Guidelines. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Modified Project’s impacts related to this threshold would be less than significant. As with the Approved Project, the Modified Project would not require changes to any road configurations that could create sharp curves or dangerous intersections. As part of the Debris Dam construction, new concrete access roads upstream and downstream would be constructed at the Debris Dam crest, to be used by the County and its contractors; however, these roads would be designed in accordance with all applicable access, safety, and engineering requirements. Therefore, the Modified Project would not create a new significant impact pertaining to substantial increase of hazards due to a geometric design feature or incompatible uses, and new mitigation measures are required.

d) Result in inadequate emergency access?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project’s impacts regarding inadequate emergency access would be less than significant. As with the Approved Project, construction activities for the Modified Project would largely be staged on site and would not obstruct emergency access. It should be noted that implementation of a temporary access road would no longer be necessary as part of the Culvert Crossing under the

Modified Project, thereby further reducing potential for issues related to inadequate emergency access from implementation of temporary roads. Although there are no significant impacts related to this threshold, compliance with RR TRA-1 would ensure that construction traffic would be managed in compliance with Greenbook standards. In addition, RR TRA-2 would require that the movement of large equipment on public roadways comply with Title 16 of the Los Angeles County Code. Highland Oaks Elementary School is located approximately 0.5 miles southwest of the Project site. PDF TRA-1 would ensure that truck trips would be scheduled to avoid peak times and holidays. Therefore, the Modified Project would not create a new significant impact pertaining to incompatible uses or emergency access, and no new mitigation measures are required.

Conclusion

The transportation impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the transportation analysis provided in the Adopted Final MND are required.

3.18 TRIBAL CULTURAL RESOURCES

Adopted Final MND

The Adopted Final MND did not directly address tribal cultural resources impacts, because the topic of tribal cultural resources was not a part of the required CEQA Checklist analysis at the time that the Final MND was adopted. This environmental area, as a separate area from Cultural Resources, was added to the checklist in September 2016 and reflects the requirements of Assembly Bill (AB) 52, requiring consultation with tribal governments on projects that were initiated on or after July 1, 2015 as described in more detail in Public Resources Code §5097.94. The Approved Project was not subject to the requirements of AB 52, which is applicable only to a project that has a Notice of Preparation, a Negative Declaration, or MND filed on or after July 1, 2015. The LACFCD prepared a Draft IS/MND for the Project (i.e., Santa Anita Stormwater Flood Management and Seismic Strengthening Project), which was circulated for public review from October 20, 2014, to December 4, 2014, pursuant to State CEQA Guidelines Section 15073, for a 45-day public review period. As such, there is no requirement to apply the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, and no mitigation is required. However, as discussed in the Adopted Final MND, multiple cultural resources evaluations have been conducted on the site.

As stated in the Adopted Final MND, the Native American Heritage Commission's (NAHC) Search of the Sacred Lands File on December 21, 2012, did not identify the presence of Native American cultural resources on the Project site. The NAHC provided a list of Native American groups and individuals that might have knowledge of the religious and/or cultural significance of resources that may be in and near the Project site. As shown in Table 4-12 of the MND, each of these groups and individuals were mailed an informational letter on January 2, 2013, describing the Approved Project and requesting any information regarding resources that may exist on or near the Project site. Two responses were received. Concerns raised by the two Native American groups that participated in consultation will be addressed through RR CUL-1 and RR CUL-2.

Project Design Features

No PDFs pertaining to tribal cultural resources were required for the Approved Project.

Regulatory Requirements

See RR CUL-1 and RR CUL-2 in Section 3.5, Cultural Resources, of this Addendum.

Mitigation Measures

No MMs pertaining to tribal cultural resources were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
<p>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?</p> <p>b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?**

No Substantial Change from Previous Analysis. Consistent with the findings of the Adopted Final MND, the existing facilities within the Project site do not qualify as significant historic resources, individually or collectively, under NRHP and/or CRHR criterion. Impacts pertaining to substantial adverse changes in the significance of a historical resource were determined to be less than significant for the Approved Project.

The Modified Project would not affect any additional historical resources within the Project site pursuant to NRHP and the CRHR. The Modified Project involves impacts to the same structures that were analyzed for the Approved Project. These structures and features were not deemed historical resources for the Approved Project. As the Modified Project would impact the same structures and features as the Approved Project, these structure would not replace, reconstruct, or impact any historical resources pursuant to Section 15064.5. The Modified Project would not create a new significant impact on historical resources, and no new mitigation measures are required.

- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

No Substantial Change from Previous Analysis. The Modified Project is not subject to the requirements of AB 52, which is applicable only to a project that has a Notice of Preparation, a Negative Declaration, or Mitigated Negative Declaration filed on or after July 1, 2015. The LACFCD prepared a Draft IS/MND for the Project (i.e., Santa Anita Stormwater Flood Management and Seismic Strengthening Project), which was circulated for public review from October 20, 2014, to December 4, 2014, pursuant to State CEQA Guidelines Section 15073, for a 45-day public review period. As such, there is no requirement to apply the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Construction activities at the Headworks and Culvert Crossing would require excavations within the native soils of the creekbed. This is consistent with the approach in the Adopted Final MND. The Modified Project would not increase the potential for impacts to tribal cultural resources from what was proposed in the Adopted Final MND. As with the Approved Project, given that the proposed construction activities have the potential to disturb native soils, it is possible that archaeological materials could be uncovered during construction activities. Although the likelihood of encountering archaeological resources in the APE is considered low, the *California Health and Safety Code* and the *California Public Resources Code* describes procedures for monitoring and protocols to be followed if archaeological resources are inadvertently discovered during construction activities, as described in RR CUL-1. Compliance with RR CUL-1 would ensure that the Modified Project would not create a new significant impact pertaining to tribal cultural resources, and no new mitigation measures are required.

Consistent with the findings of the Adopted Final MND, there is no indication that human remains are present within the Project site. The records search and field survey indicated no evidence of human remains on or near the Dam, Headworks/Wilderness Park Culvert Crossing, or Debris Dam. Recently deposited sediment, debris, and vegetation that flowed with stormwaters into the Debris Dam did not contain any human remains, including those interred outside formal cemeteries, but if an unanticipated encounter with human remains occurred, compliance with RR CUL-2 would ensure that impacts would be less than significant.

In the unlikely event of an unanticipated encounter with human remains at the Project site, the *California Health and Safety Code* and the *California Public Resources Code* requires that any activity in the vicinity of a potential find be halted, and the Los Angeles County Coroner be notified, as described in RR CUL-2. As such, the Modified Project would not create a new significant impact pertaining to tribal cultural resources, and no new mitigation measures are required.

Conclusion

The Adopted Final MND did not directly address tribal cultural resource impacts, because the topic of tribal cultural resources was not a part of the required CEQA Appendix G Environmental Checklist analysis at the time that the Final MND was adopted. This issue was added to the checklist in September 2016 and reflects the requirements of Assembly Bill (AB) 52, requiring consultation with tribal governments on projects that were initiated on or after July 1, 2015. Therefore, a comparative conclusion with the Adopted Final MND, like other topical sections in this Addendum, is not applicable.

3.19 UTILITIES AND SERVICE SYSTEMS

Adopted Final MND

As discussed in the Adopted Final MND, the Approved Project would not generate wastewater that would require conveyance or treatment in on-site septic systems or at wastewater plants in the region. Portable toilets would be provided for construction workers at the construction areas, and these portable toilets would be regularly cleaned, and their contents disposed of offsite by an outside company. Wastewater from these portable toilets would not exceed the treatment requirements of the RWQCB, and the Approved Project would not need new or expanded treatment facilities. Therefore, the capacity at existing wastewater treatment plants would not be exceeded by increased demand from construction of the Approved Project.

The Approved Project was deemed to increase groundwater recharge and therefore would have no impact on the downstream stormwater drainage system capacity. The Approved Project was anticipated to require water for the control of fugitive dust on access roads and at the construction sites, which would be provided by a water truck on an as-needed basis.

The Approved Project upgraded the Dam's electrical, mechanical, potable water, and control systems to improve reliability and to modernize operations, allowing for the integrated control of the facilities to increase water conservation efficiency. Other ancillary facilities at the Dam were also anticipated to be replaced or upgraded for the Approved Project, including the secured access gate (including new power poles to supply electricity) and a storage shed/garage.

The Adopted Final MND concluded that there was adequate capacity available in local landfills that could serve the Approved Project to dispose of the approximately 1,187 cubic yards (cy) of inert construction waste that was anticipated to result from the Approved Project. All waste generated during construction of the Approved Project was anticipated to be handled and disposed of in compliance with all applicable federal, State, and local statutes and regulations related to solid waste. RR UTL-1 requires that at least 50 percent of all construction and demolition debris to be recycled or reused, and RR HAZ-1 required that hazardous materials encountered on site be handled and disposed of in accordance with applicable laws. Additionally, all operational waste would be comparable to the existing conditions and would not require impact landfill capacity.

Project Design Features

No PDFs pertaining to utilities or service systems were required for the Approved Project.

Regulatory Requirements

RR UTL-1 Construction activities on the Project site shall be conducted in compliance with Chapter 20.87 (Construction and Demolition Debris Recycling and Reuse) of the Los Angeles County Code, which requires at least 50 percent of all Collection and Demolition (C&D) debris, soil, rock, and gravel removed from the Project site to be recycled or reused unless a lower percentage is approved by the Los Angeles County Director of Public Works. A Recycling and Reuse Plan (RRP) must be submitted by the Contractor to the Los Angeles County Department of Public Works, Environmental Programs Division. The RRP must contain a Project description and the estimated total weight of the project C&D debris, with separate estimates for (1) soil, rock, and gravel; (2) other inert materials; and (3) all other project C&D

debris. The ordinance also requires that annual progress reports be submitted to the LACFCD for review.

Mitigation Measures

No MMs pertaining to utilities and service systems were required for the Approved Project.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?		
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple years?		
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?		
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Would the project:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

No Substantial Change from Previous Analysis. The Modified Project does not propose new land uses. Also, as with the Approved Project, the Modified Project would continue operation of the Project site as a storm control facility. The purposes of the Approved and Modified Projects are to reduce flood risk, enhance sustainability of the local water supply, and increase recharge to the groundwater basin. The Modified Project would reconstruct the Headworks to provide more reliable diversion of stormwater runoff to the spreading grounds, and the replacement of the Culvert Crossing would improve all-weather access to the Wilderness Park. The Debris Dam construction activities would provide seismic strengthening benefits to these existing facilities. Therefore, the rehabilitation and

modernization of the existing uses would ensure that water and stormwater drainage would adequately function and that no significant impact would occur related to this threshold.

Similarly, due to the nature of the Modified Project, use of dry utilities (i.e., electric power, natural gas, or telecommunication) would not be such that would result in relocation or construction of new or expanded facilities. The Modified Project would not create a new significant impact to utilities and service system uses, including water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunication facilities, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have less than significant impacts regarding sufficient water supplies available to serve the Approved Project. As with the Approved Project, the Modified Project would require water for the control of fugitive dust on access roads and at the construction sites, which would be provided by a water truck on an as-needed basis. Water for dust control would be obtained from municipal water supplies and would be trucked to the Project site; however, the amount of water would be limited. The Modified Project would not generate long-term potable water demand. Therefore, the Modified Project would not create a new significant impact pertaining to this threshold, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. As with the Approved Project, the Modified Project would only involve short-term construction. The overall purpose of these uses would not change from the existing land uses within the Project site. Consistent with the Adopted Final MND, portable toilets would be provided for the construction workers at the construction areas, and these portable toilets would be regularly cleaned, and their contents disposed of offsite by an outside company. Wastewater from these portable toilets would not exceed the treatment requirements of the RWQCB, and the Modified Project would not need new or expanded treatment facilities. Capacity at existing wastewater treatment plants would not be exceeded. Therefore, the Modified Project would not create a new significant impact to wastewater facilities, and no new mitigation measures are required.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Substantial Change from Previous Analysis. As with the Approved Project, construction of the Modified Project would generate solid waste. According to the *County of Los Angeles Countywide Integrated Waste Management Plan 2020 Annual Report* published in October 2021 by the Los Angeles County Public Works (Public Works), the Savage Canyon Landfill has a maximum permitted daily capacity of 350 tons per day (438 cy) and an anticipated closure date of 2055 (Public Works 2021). Most of the demolished and graded material would be reused on-site or placed within the adjacent sediment placement site, as detailed in the Adopted Final MND. Construction of the Modified Project would require 106 more round trips for trucks over an 8-month construction period. The landfill has available capacity to accommodate the Modified Project construction waste stream, to be exported over the duration of the 8-month construction period.

Additionally, all waste generated during construction of the Modified Project would be handled and disposed of in compliance with all applicable federal, State, and local statutes and regulations related to solid waste, including RR UTL-1, which requires at least 50 percent of all Collection and Demolition (C&D) debris to be recycled or reused. Solid wastes generated by construction workers and other on-site activities during long-term operations (i.e., maintenance visits and repair) would be like the existing condition and minimal. The long-term solid waste stream would not be large enough to require any measurable landfill capacity. Therefore, the Modified Project would not create a new significant impact to landfill capacity, and no new mitigation measures are required.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project's impacts regarding federal, state, and local statutes and regulations related to solid waste would be less than significant. Consistent with the findings of the Adopted Final MND, construction of the Modified Project would also generate solid waste. All waste generated during construction of the Modified Project would be handled and disposed of in compliance with applicable federal, State, and local statutes and regulations related to solid waste. These include RR UTL-1, which requires that at least 50 percent of all C&D debris be recycled or reused, and RR HAZ-1, which requires that hazardous materials encountered be handled and disposed of in accordance with applicable laws. Solid wastes generated by construction workers and other activities during long-term operations (i.e., maintenance visits and repair) would be like the existing condition and the Approved Project and would be minimal. The long-term solid waste stream would not be large enough to require any measurable landfill capacity. Therefore, the Modified Project would not create a new significant impact related to this threshold, and no new mitigation measures are required.

Conclusion

The utilities and service systems impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the utilities and service systems analysis provided in the Adopted Final MND are required.

3.20 WILDFIRE

Adopted Final MND

Effective December 28, 2018, the State adopted amendments to the State CEQA Guidelines requiring the analysis and mitigation of wildfire as a separate topic in draft CEQA documents. The Adopted Final MND was adopted prior to the 2018 State CEQA Guidelines amendments, and as such, responses to wildfire as a separate topic was not addressed. However, information on wildfire was presented in the Adopted Final MND in other topical sections. As stated in the Adopted Final MND, the Project site is located within a Very High Fire Hazard Severity Zone (VHFHSZ). The potential for wildland fire was deemed high due to the proximity of the open space and the ANF, which includes chaparral, brush, and trees that could be highly flammable during fire season. Approved Project activities would not involve construction or operation of habitable structures in wildland areas or promote new development in wildland areas. However, Project activities were anticipated to potentially increase risks associated with wildfires due to potential leaks from heavy construction equipment; the use of flammable liquids; and presence of combustion engines. To reduce wildfire risks and to protect workers during Approved Project activities, MM HAZ-2 required preparation of a Fire Protection Plan to include emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for “hot work” operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. The Fire Protection Plan would be prepared and distributed to the involved parties prior to commencement of any construction activities. Additionally, the Approved Project included construction of a helipad to provide aerial access to the Dam in the event of an emergency, including wildfires. The introduction of a helipad at this location would help improve emergency response to the Project site and surrounding area. As stated in the Adopted Final MND, implementation of MM HAZ-2 would ensure that short-term wildfire hazards associated with Project activities would be less than significant. Impacts related to wildland fires would be less than significant after mitigation.

Project Design Features

No PDFs pertaining to wildfire were required for the Approved Project.

Regulatory Requirements

See RR TRA-1 in Section 3.17, Transportation, of this Addendum.

Mitigation Measures

See MM HAZ-1 and MM HAZ-2, in Section 3.9, Hazards and Hazardous Materials, of this Addendum.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?		
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?		
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?		
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Substantial Change from Previous Analysis: The Project site does not contain any emergency facilities, nor does it serve as emergency evacuation routes. Goals and objectives for fire prevention, fire suppression, and emergency evacuation are included in the USFS Forest Plan, and fire management strategies/programs have been developed by the USFS for fire prevention and suppression. Specifically, the USFS has a Fire Management and Administration Group that is responsible for wildland fire suppression; fire prevention through public education; fuel breaks; fire retardants and hazardous fuel reduction; and implementation of State fire laws regarding hazard abatement around structures. As required by MM HAZ-2, a Fire Protection Plan would be prepared for the Modified Project that would include: emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on the Project site; procedures for “hot work” operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. The Fire Protection Plan would be prepared and distributed to involve parties prior to the commencement of construction activities. With implementation of MM HAZ-2, the Modified Project would not result in changes to the Approved Project that could result in additional wildfire impacts.

Construction activities would be staged on the Project site and would not interfere with any emergency response plans or emergency evacuation plans for local, State, or federal agencies. Consistent with the Approved Project, the Modified Project may temporarily impact adjacent roadways during construction, (specifically at the Culvert Crossing), which would intermittently

have no access or limited access. However, there are alternative roadways that could provide emergency access to the Project site, including Lower Clamshell Truck Trail through the City of Monrovia. Also, the Modified Project would reduce the construction period for the Culvert Crossing, which would reduce impacts related to this threshold. Additionally, RR TRA-1 would ensure that construction traffic would be managed in compliance with Greenbook standards. RR TRA-1 would ensure that roadways providing access to the Project site and the surrounding areas would not be impacted during Modified Project construction in such a way that would physically impair or impede emergency response or evacuation. Therefore, the Modified Project would result in a less than significant impact related to this threshold, and no new mitigation measures are required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Substantial Change from Previous Analysis. Consistent with the Approved Project, the Modified Project is an existing use and would not result in a substantive change in slope, prevailing wind, or other factors that may exacerbate wildfire risk. The proposed activities would continue to not involve construction or operation of habitable structures or promote development in a VHFHSZ. Thus, the Modified Project would not permanently expose people to the potential for wildfires within the Project site. There are no residential land uses in the vicinity of the Project site, except for the Dam Operator's residence, which was analyzed to be removed as part of the Approved Project and replaced with a helipad to provide aerial access to the Dam in the event of an emergency. Therefore, the Modified Project would not create a new significant impact pertaining to exacerbation of fire risks, and no new mitigation measures are required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Substantial Change from Previous Analysis. The Modified Project would replace the existing Culvert Crossing with a pre-cast bridge, which would not exacerbate fire risk, because it would be a replacement of an existing use. The pre-cast bridge that is proposed with the Modified Project would not increase the risk of wildfire. Although the Culvert Crossing would be temporarily out of service during construction, there would be alternate access roads to the Wilderness Park. Also, the Modified Project would reduce the construction period for the Culvert Crossing, which would reduce impacts related to this threshold.

The Modified Project does not involve the development of any new permanent structures or operational activities that could exacerbate wildfire risks when compared to what was analyzed for the Approved Project. Consistent with the Approved Project, the Modified Project would result in temporarily increased wildfire risk due to the use of equipment, electricity, fuels, and other fire sources that may ignite flammable and combustible materials. As with the Approved Project, the Modified Project would result in the operation of heavy construction equipment and combustion engines and use of flammable liquids that would increase fire risks. MM HAZ-2 would be implemented as part of the Modified Project, which requires preparation of a Fire Protection Plan that would include: emergency reporting procedures; emergency notification, evacuation, and/or relocation of all persons on site; procedures for "hot work" operations; management of hazardous materials and removal of combustible debris; maintenance of emergency access roads; identification of exit routes and assembly areas; and identification of fire apparatus. Implementation of this measure would reduce the potential fire impacts from construction activities. The Modified Project

would not create a new significant impact pertaining to installation or maintenance of associated infrastructure that may exacerbate fire risk, and no new mitigation measures are required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Substantial Change from Previous Analysis. Although there are no substantial flooding or landslide risks to the Project site, MM HAZ-1 would be implemented which requires that the contractor prepare a Site-Specific Health and Safety Plan that includes: a designated Site Health and Safety Officer; an Access and Evacuation Plan; and identification of site hazards, including response protocols for landslides. This would result in minimized impacts related to this threshold during construction.

The purpose of the Dam is to decrease peak flood flow by retaining stormwater and discharging it at controlled release rates. The Modified Project would also rehabilitate the Headworks structure. Therefore, through implementation of the Modified Project there would be more reliable diversion of stormwater runoff to the spreading grounds that would reduce potential for downstream and downslope flooding. The existing flood control facilities are designed to handle stormwater and minimize flooding, and the Modified Project would improve these existing facilities. Regarding exposure of people or structures to flooding because of runoff, post-fire slope instability, or drainage changes, the Modified Project would replace the existing Headworks with a concrete overflow stepped spillway, which would help to slow down the water or runoff that could potentially overflow onto the concrete embankment. Therefore, the Modified Project would reduce exposure of people or structures to significant risks related to this component of the Project. As reasoned above, the Modified Project would not create a new significant impact pertaining to exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, because of runoff, post-fire slope instability, or drainage changes, and no new mitigation measures are required.

Conclusion

The Adopted Final MND did not directly address wildfire impacts because the topic of wildfire was not a stand-alone environmental topic on Appendix G (Environmental Checklist) of the State CEQA Guidelines when the MND was adopted. However, the Adopted Final MND did address wildfire in the Hazards and Hazardous Materials section of the document. Therefore, a comparative conclusion with the Adopted Final MND, like other topical sections in this Addendum, is not possible. The Modified Project does not propose any activities that would substantially increase fire risks from what was originally assumed for the Approved Project. Similarly, the Project's circumstances and the conditions in which the Project occur have similarly not substantially changed since approval of the Adopted Final MND. As such, the Approved Project and the Modified Project would have similar effects to this topic and no substantial change in the previous analysis is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Adopted Final MND

As detailed in Section 4.18, Mandatory Findings of Significance, of the Adopted Final MND, the Approved Project would not have significant impacts regarding mandatory findings of significance for the Adopted Final MND, as summarized below.

Regarding the Approved Project's potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, the Adopted Final MND states that there are no Rare or Endangered plant or animal species found on the Project site. Additionally, mitigation measures from Section 4.4, Biological Resources, of the Final MND, would ensure that the Approved Project would not degrade the quality of the environment; substantially reduce the habitat of fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of a Rare or Endangered plant or animal. As discussed in the Adopted Final MND, there would be less than significant impacts to known historic, archaeological, and/or paleontological resources. Potential impacts to unknown archaeological resources and potential impacts to human remains from implementation of the Project would comply with RRs CUL-1 and CUL-2 (as included in Section 3.5 Cultural Resources, of this Addendum and Section 4.5 of the Adopted Final MND). Therefore, the Project does not have the potential to eliminate important examples of the major periods of California history or prehistory. The Adopted Final MND found that these impacts to be less than significant.

The Adopted Final MND detailed Approved Project impacts that would be individually limited, but cumulatively considerable. For this threshold, the analyses in Sections 4.1 through 4.17 of the Adopted Final MND confirms that construction-related impacts—identified for aesthetics, biological resources, geology and soils, hazards, and noise—would be mitigated to a less than significant level. As determined within these sections, there would be no long-term operational impacts because the Approved Project consists of improvements to existing flood control facilities, which would continue operating in a similar manner to existing conditions. The long-term operation of the helipad would result in a new facility in the Project study area; however, there would be no long-term environmental impacts requiring mitigation. The Adopted Final MND detailed potential future non-residential projects that would occur near the Project site during the general timeframe of Approved Project activities. Because the Approved Project would result in only construction-period impacts, a cumulatively considerable impact could only occur if construction of a development project in the Project vicinity was constructed at the same time as the Project, which would be implemented in phases over an approximately 10-month period. The Adopted Final MND determined that the Approved Project would have less than significant impacts related to individually limited but cumulatively-considerable impacts.

The Adopted Final MND determined that the Approved Project would have environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly, as they relate to Geology and Soils (landslide hazards during construction), Hazards and Hazardous Materials (emergency response and wildfire risk), and Noise. Mitigation measures were provided to reduce these impacts to less than significant levels, including MMs HAZ-1, HAZ-2, and NOI-1 through NOI-4. Thus, the potentially significant adverse effects on human beings was determined to be less than significant after mitigation.

Project Design Features

No PDFs pertaining to mandatory findings of significance were required for the Approved Project.

Regulatory Requirements

See RR CUL-1 and RR CUL-2, in Section 3.5, Cultural Resources, of this Addendum.

Mitigation Measures

See MM HAZ-1 and MM HAZ-2, in Section 3.9, Hazards and Hazardous Materials, and MM NOI-1 through MM NOI-4, in Section 3.13, Noise, of this Addendum.

Impact Analysis

Does the Modified Project require Subsequent or Supplemental CEQA Documentation with respect to the following CEQA Appendix G threshold questions?		
Would the project:		
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		
Section 15162 of the State CEQA Guidelines	Yes	No
New Significant Environmental Effect Caused by a Change in the Project or Circumstances		X
Substantial Increase in the Severity of a Previously Identified Significant Effect Caused by a Change in the Project or Circumstances		X
New or Substantially More Severe Significant Impacts Shown by New Information		X
Ability to Substantially Reduce a Significant Effect Shown by New Information but Declined by Proponent		X

Does the project:

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that there would be less than significant impacts regarding the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plant or animal, or eliminate important

examples of the major periods of California history or prehistory. The Modified Project would not substantively increase disturbance of existing plant, aquatic, and/or animal habitats on and near the Project site, when compared to Approved Project activities. The Modified Project would also be required to comply with applicable mitigation measures to reduce potential environmental impacts on biological resources to less than significant levels, as was required for the Adopted Final MND. Implementation of the adopted mitigation measures would also ensure that the Modified Project does not degrade the quality of the environment; substantially reduce the habitat of fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of a Rare or Endangered plant or animal.

As required for the Adopted Final MND, potential impacts to unknown archaeological resources and potential impacts to human remains from implementation of the Modified Project would comply with RRs CUL-1 and CUL-2. Therefore, the Modified Project would not increase impacts related to elimination of important examples of the major periods of California history or prehistory. No additional mitigation has been identified and there would be no new or greater impacts than those identified in the certified Adopted Final MND with respect to these issue areas. As such, the Modified Project would not create a new significant impact pertaining to potential to degrade the quality of the environment, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND did not identify impacts that would be individually limited, but cumulatively considerable, and these impacts were determined to be less than significant. All impacts associated with the Modified Project would not exceed those analyzed in the Adopted Final MND and would therefore not result in individually limited impacts that could be cumulatively considerable. As such, the Modified Project would not create a new significant impact pertaining to individually limited but cumulatively considerable impacts, and no new mitigation measures are required.

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

No Substantial Change from Previous Analysis. The Adopted Final MND determined that the Approved Project would have environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly, as they relate to landslide hazards during construction, emergency response and wildfire risk, and noise. Mitigation measures were provided to reduce these impacts to less than significant levels, including MMs HAZ-1, HAZ-2, and NOI-1 through NOI-4. The Modified Project would not require additional mitigation or result in new or greater impacts than those identified in the Adopted Final MND. Therefore, the Modified Project would not create a new significant impact pertaining to environmental effects which will cause substantial adverse effects on human beings, and no new mitigation measures are required.

Conclusion

The mandatory findings of significance impacts of the Modified Project would be consistent with the impacts identified for the Approved Project, analyzed in the Adopted Final MND. The Modified Project

would not create a new significant impact or a substantial increase in the severity of previously identified effects. In regard to Section 15162 of the State CEQA Guidelines, (1) no substantial changes are proposed as part of the Modified Project that would result in new significant effects or an increase in severity of previous effects; (2) no substantial changes in circumstances have occurred that would result in new significant effects; and (3) no new information has become known that was not previously known that would (a) create new significant impacts, (b) increase the severity of previously examined effects, or (c) determine that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) introduce mitigation measures that are considerably different from those analyzed in the Adopted Final MND. For these reasons, no substantial changes to the mandatory findings of significance analysis provided in the Adopted Final MND are required.

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4.0 CONCLUSIONS

In regard to Section 15162 of the State CEQA Guidelines, based on the analysis provided in this Addendum, there is substantial evidence to determine that (1) the Modified Project does not represent a substantial change from the previously approved project evaluated in the Adopted Final MND; (2) no substantial changes have occurred with respect to the circumstances under which the Modified Project is undertaken; and (3) no new information of substantial importance that was not previously known shows any of the following: (a) the Modified Project would create new significant impacts, (b) the Modified Project would increase the severity of previously examined effects, (c) that mitigation measures or alternatives previously found not to be feasible would, in fact, be feasible; or (4) no mitigation measures that are considerably different from those analyzed in the Adopted Final MND would substantially reduce one or more significant effects of the Modified Project. The Modified Project would not have any new or substantially more severe impacts than what was evaluated in the Adopted Final MND. No new mitigation measures are necessary or recommended in addition to those adopted at the time the Final MND was adopted that would further reduce Project impacts. The Adopted Final MND, when considered in conjunction with this Addendum, provides adequate documentation, pursuant to CEQA for the Santa Anita Stormwater Flood Management and Seismic Strengthening Project.

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Appendix A

Air Quality and Greenhouse Gas Emissions Data

Santa Anita Addendum - Los Angeles-South Coast County, Winter

Santa Anita Addendum
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2021
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - .

Construction Phase - .

Off-road Equipment - 1 pump

Off-road Equipment - 1 concrete saw, 1 crane, 1 pump, 2 tractor loader backhoes

Off-road Equipment - 1 crane

Off-road Equipment - 1 pump, 1 tractor/loader/backhoe

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 rubber-tired dozer, 1 roller
 Off-road Equipment - 1 rubber tired dozer, 1 excavator, 2 tractors
 Off-road Equipment - 1 saw, 1 pump, 1 drill rig
 Off-road Equipment - 2 tractors
 Off-road Equipment - 1 concrete pump (pump), 1 concrete saw, 1 pump
 Off-road Equipment - 1 drill rig
 Off-road Equipment - 2 tractor/loader/backhoes
 Off-road Equipment - 2 excavators
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 concrete saw, 1 excavator, 1 tractor
 Off-road Equipment - 1 crane, 1 excavator
 Off-road Equipment - 1 tractor
 Off-road Equipment - 1 crane, 1 tractor
 Off-road Equipment - 1 concrete saw, 1 tractor, 1 excavator
 Off-road Equipment - 1 roller

Trips and VMT - Based on previous CalEEMod run for Certified MND and County emails from 2/13/20, emails/files from 6/8/20 and 7/9/20

Demolition - .

Grading - based on Final MND and County data from 2/13/20 email, and County data from 6/8/20 and 7/9/20 emails

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	0.00	40.00
tblConstructionPhase	NumDays	0.00	10.00

tblConstructionPhase	NumDays	0.00	10.00
tblConstructionPhase	NumDays	0.00	30.00
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tblConstructionPhase	NumDays	0.00	22.00
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tblGrading	MaterialExported	0.00	80.00
tblGrading	MaterialExported	0.00	480.00
tblGrading	MaterialExported	0.00	894.00
tblGrading	MaterialExported	0.00	480.00
tblGrading	MaterialExported	0.00	4,160.00
tblGrading	MaterialImported	0.00	32,500.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	10.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
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tblTripsAndVMT	HaulingTripLength	20.00	24.00
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tblTripsAndVMT	HaulingTripLength	20.00	24.00
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tblTripsAndVMT	HaulingTripLength	20.00	0.50
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tblTripsAndVMT	HaulingTripLength	20.00	0.50

tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	24.00
tblTripsAndVMT	HaulingTripLength	20.00	0.50
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tblTripsAndVMT	VendorTripNumber	0.00	27.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
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tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00

tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	6.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	4.00

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					
2019	1.7128	22.1221	14.0932	0.0446	0.8446	0.7114	1.5560	0.2391	0.6954	0.9345	0.0000	4,557.6339	4,557.6339	0.3851	0.0000	4,567.2614
2020	1.9951	18.6699	15.2927	0.0305	0.3446	0.9430	1.2876	0.0918	0.9001	0.9918	0.0000	2,953.5768	2,953.5768	0.5111	0.0000	2,966.3535
2021	2.8377	46.9459	23.8651	0.0970	11.4299	1.0521	12.4818	4.1908	0.9843	5.1750	0.0000	10,170.6974	10,170.6974	1.3039	0.0000	10,203.2945
Maximum	2.8377	46.9459	23.8651	0.0970	11.4299	1.0521	12.4818	4.1908	0.9843	5.1750	0.0000	10,170.6974	10,170.6974	1.3039	0.0000	10,203.2945

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					
2019	1.7128	22.1221	14.0932	0.0446	0.8446	0.7114	1.5560	0.2391	0.6954	0.9345	0.0000	4,557.6339	4,557.6339	0.3851	0.0000	4,567.2614
2020	1.9951	18.6699	15.2927	0.0305	0.3441	0.9430	1.2872	0.0917	0.9001	0.9918	0.0000	2,953.5768	2,953.5768	0.5111	0.0000	2,966.3535
2021	2.8377	46.9459	23.8651	0.0970	8.4612	1.0521	9.5131	2.6441	0.9843	3.6283	0.0000	10,170.6974	10,170.6974	1.3039	0.0000	10,203.2945
Maximum	2.8377	46.9459	23.8651	0.0970	8.4612	1.0521	9.5131	2.6441	0.9843	3.6283	0.0000	10,170.6974	10,170.6974	1.3039	0.0000	10,203.2945

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	23.53	0.00	19.37	34.21	0.00	21.78	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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/15/2019	11/28/2019	5	10	SAD Armor Canyon/Dam
2	SAD Helipad and Water System	Building Construction	11/15/2019	12/25/2019	5	30	
3	SAD Repair Leaks	Building Construction	1/1/2020	1/12/2020	5	10	
4	SAD Remove/Replace JibCrane	Building Construction	1/13/2020	1/26/2020	5	10	
5	SAD Hoist	Building Construction	2/1/2020	2/28/2020	5	20	
6	SAD Construct New Spillway	Grading	3/1/2020	8/30/2020	5	131	
7	SAD Electrical	Building Construction	3/2/2020	3/29/2020	5	20	
8	SAD Install Valves	Building Construction	3/2/2020	3/15/2020	5	10	
9	SADD Construct Parapet Walls	Grading	4/1/2021	4/30/2021	5	20	
10	SAHW Demolition	Demolition	4/7/2021	5/1/2021	5	20	

11	SADD Construct Downstream Butress	Grading	5/1/2021	7/15/2021	5	54
12	SAHW Construct Levee	Building Construction	5/2/2021	6/27/2021	5	40
13	WPB Demo	Demolition	6/28/2021	7/10/2021	5	10
14	WPB Clear/Grub	Site Preparation	7/11/2021	8/8/2021	5	20
15	SADD Construct New Subdrain	Grading	7/16/2021	8/15/2021	5	23
16	WPB Abutments and Wing Walls	Building Construction	8/9/2021	8/22/2021	5	10
17	SADD Remove/Construct Outlet Tower(s)	Grading	8/17/2021	8/30/2021	5	11
18	WPB Construct Deck	Building Construction	8/23/2021	9/5/2021	5	10
19	SADD Construct and Replace Access Roads	Demolition	9/1/2021	9/30/2021	5	22
20	WPB Pave Bridge	Paving	9/6/2021	9/19/2021	5	10
21	SADD Install Additional Monitor Equip	Trenching	10/1/2021	10/21/2021	5	15
22	SADD Replace Riprap	Grading	10/22/2021	11/22/2021	5	22

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Helipad and Water System	Cranes	0	4.00	231	0.29
SAD Helipad and Water System	Forklifts	0	6.00	89	0.20
SAD Helipad and Water System	Pumps	1	8.00	84	0.74
SAD Helipad and Water System	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SAD Repair Leaks	Cranes	0	4.00	231	0.29
SAD Repair Leaks	Forklifts	0	6.00	89	0.20

SAD Repair Leaks	Pumps	1	8.00	84	0.74
SAD Repair Leaks	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Remove/Replace JibCrane	Cranes	1	4.00	231	0.29
SAD Remove/Replace JibCrane	Forklifts	0	6.00	89	0.20
SAD Remove/Replace JibCrane	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Hoist	Cranes	1	4.00	231	0.29
SAD Hoist	Forklifts	0	6.00	89	0.20
SAD Hoist	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Construct New Spillway	Concrete/Industrial Saws	1	8.00	81	0.73
SAD Construct New Spillway	Cranes	1	4.00	231	0.29
SAD Construct New Spillway	Pumps	1	8.00	84	0.74
SAD Construct New Spillway	Rubber Tired Dozers	0	1.00	247	0.40
SAD Construct New Spillway	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SAD Electrical	Cranes	1	4.00	231	0.29
SAD Electrical	Forklifts	0	6.00	89	0.20
SAD Electrical	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Install Valves	Cranes	1	4.00	231	0.29
SAD Install Valves	Forklifts	0	6.00	89	0.20
SAD Install Valves	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct Parapet Walls	Concrete/Industrial Saws	1	8.00	81	0.73
SADD Construct Parapet Walls	Pumps	2	8.00	84	0.74
SADD Construct Parapet Walls	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct Parapet Walls	Tractors/Loaders/Backhoes	0	6.00	97	0.37
SAHW Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
SAHW Demolition	Excavators	1	6.00	158	0.38
SAHW Demolition	Rubber Tired Dozers	0	1.00	247	0.40
SAHW Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
SADD Construct Downstream Butress	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct Downstream Butress	Cranes	0	4.00	231	0.29
SADD Construct Downstream Butress	Excavators	1	6.00	158	0.38

SADD Construct Downstream Butress	Forklifts	0	6.00	89	0.20
SADD Construct Downstream Butress	Rubber Tired Dozers	1	6.00	247	0.40
SADD Construct Downstream Butress	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SAHW Construct Levee	Cranes	0	4.00	231	0.29
SAHW Construct Levee	Forklifts	0	6.00	89	0.20
SAHW Construct Levee	Pumps	1	8.00	84	0.74
SAHW Construct Levee	Tractors/Loaders/Backhoes	0	8.00	97	0.37
WPB Demo	Concrete/Industrial Saws	1	8.00	81	0.73
WPB Demo	Excavators	1	6.00	158	0.38
WPB Demo	Rubber Tired Dozers	0	1.00	247	0.40
WPB Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
WPB Clear/Grub	Graders	0	8.00	187	0.41
WPB Clear/Grub	Tractors/Loaders/Backhoes	1	8.00	97	0.37
WPB Clear/Grub	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct New Subdrain	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct New Subdrain	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Abutments and Wing Walls	Cranes	1	4.00	231	0.29
WPB Abutments and Wing Walls	Excavators	1	6.00	158	0.38
WPB Abutments and Wing Walls	Forklifts	0	6.00	89	0.20
WPB Abutments and Wing Walls	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Remove/Construct Outlet Tower(s)	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Remove/Construct Outlet Tower(s)	Rubber Tired Dozers	0	1.00	247	0.40
SADD Remove/Construct Outlet Tower(s)	Tractors/Loaders/Backhoes	2	6.00	97	0.37
WPB Construct Deck	Cranes	1	4.00	231	0.29
WPB Construct Deck	Forklifts	0	6.00	89	0.20
WPB Construct Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SADD Construct and Replace Access Roads	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct and Replace Access Roads	Rollers	1	8.00	80	0.38

SADD Construct and Replace Access Roads	Rubber Tired Dozers	1	1.00	247	0.40
SADD Construct and Replace Access Roads	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Pave Bridge	Cement and Mortar Mixers	0	6.00	9	0.56
WPB Pave Bridge	Pavers	0	7.00	130	0.42
WPB Pave Bridge	Rollers	1	7.00	80	0.38
WPB Pave Bridge	Tractors/Loaders/Backhoes	0	7.00	97	0.37
SADD Install Additional Monitor Equip	Bore/Drill Rigs	1	8.00	221	0.50
SADD Replace Riprap	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Replace Riprap	Excavators	2	8.00	158	0.38
SADD Replace Riprap	Rubber Tired Dozers	0	1.00	247	0.40
SADD Replace Riprap	Tractors/Loaders/Backhoes	0	6.00	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
Building Construction	1	6.00	103.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Helipad and Water System	2	10.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Repair Leaks	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Remove/Replace lib Crane	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Hoist	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Construct New Spillway	5	16.00	0.00	112.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAD Electrical	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Install Valves	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Parapet Walls	3	4.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAHW Demolition	3	10.00	0.00	20.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Downstream Buttress	4	10.00	0.00	8,125.00	14.70	6.90	10.50	LD_Mix	HDT_Mix	HHDT
SAHW Construct Levee	1	6.00	8.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Demo	3	10.00	0.00	28.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Clear/Grub	1	6.00	0.00	260.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct New Subdrain	2	6.00	27.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT

WPB Abutments and Wing Walls	2	8.00	7.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Remove/Construct	2	5.00	0.00	10.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Construct Deck	2	6.00	2.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct and Replace Access	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Pave Bridge	1	6.00	3.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Install	1	3.00	1.00	30.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
Additional Monitor SADD Replace Riprap	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2019

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	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379		623.0346	623.0346	0.0417		624.0761
Total	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379		623.0346	623.0346	0.0417		624.0761

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4464	11.9361	3.4863	0.0262	0.6594	0.0772	0.7366	0.1899	0.0739	0.2637		2,794.1542	2,794.1542	0.1963		2,799.0614
Worker	0.0332	0.0244	0.2655	6.9000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		68.5279	68.5279	2.3600e-003		68.5868
Total	0.4796	11.9605	3.7518	0.0269	0.7265	0.0778	0.8043	0.2076	0.0744	0.2821		2,862.6821	2,862.6821	0.1987		2,867.6482

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	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379	0.0000	623.0346	623.0346	0.0417		624.0761
Total	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379	0.0000	623.0346	623.0346	0.0417		624.0761

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	0.4464	11.9361	3.4863	0.0262	0.6594	0.0772	0.7366	0.1899	0.0739	0.2637		2,794.1542	2,794.1542	0.1963		2,799.0614
Worker	0.0332	0.0244	0.2655	6.9000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		68.5279	68.5279	2.3600e-003		68.5868
Total	0.4796	11.9605	3.7518	0.0269	0.7265	0.0778	0.8043	0.2076	0.0744	0.2821		2,862.6821	2,862.6821	0.1987		2,867.6482

3.3 SAD Helipad and Water System - 2019

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	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815		930.5764	930.5764	0.1390		934.0505
Total	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815		930.5764	930.5764	0.1390		934.0505

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	4.3300e-003	0.1159	0.0339	2.5000e-004	6.4000e-003	7.5000e-004	7.1500e-003	1.8400e-003	7.2000e-004	2.5600e-003		27.1277	27.1277	1.9100e-003		27.1754
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	0.0597	0.1565	0.4763	1.4000e-003	0.1182	1.7100e-003	0.1199	0.0315	1.6100e-003	0.0331		141.3408	141.3408	5.8400e-003		141.4867

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	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815	0.0000	930.5764	930.5764	0.1390		934.0505
Total	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815	0.0000	930.5764	930.5764	0.1390		934.0505

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	4.3300e-003	0.1159	0.0339	2.5000e-004	6.4000e-003	7.5000e-004	7.1500e-003	1.8400e-003	7.2000e-004	2.5600e-003		27.1277	27.1277	1.9100e-003		27.1754
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	0.0597	0.1565	0.4763	1.4000e-003	0.1182	1.7100e-003	0.1199	0.0315	1.6100e-003	0.0331		141.3408	141.3408	5.8400e-003		141.4867

3.4 SAD Repair Leaks - 2020

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	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072		623.0346	623.0346	0.0373		623.9664

Total	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072		623.0346	623.0346	0.0373		623.9664
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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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

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	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072	0.0000	623.0346	623.0346	0.0373		623.9664
Total	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072	0.0000	623.0346	623.0346	0.0373		623.9664

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

3.5 SAD Remove/Replace JibCrane - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003	26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003	66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003	93.4875

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

3.6 SAD Hoist - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

3.7 SAD Construct New Spillway - 2020

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					7.7000e-004	0.0000	7.7000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000

Off-Road	1.3823	12.6811	11.9263	0.0204		0.7162	0.7162		0.6913	0.6913		1,946.2468	1,946.2468	0.3111		1,954.0241
Total	1.3823	12.6811	11.9263	0.0204	7.7000e-004	0.7162	0.7169	1.2000e-004	0.6913	0.6914		1,946.2468	1,946.2468	0.3111		1,954.0241

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	8.8500e-003	0.2830	0.0667	7.8000e-004	0.0180	9.5000e-004	0.0190	4.9400e-003	9.1000e-004	5.8500e-003			84.5729	84.5729	5.8800e-003		84.7198
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	0.0818	0.0580	0.6416	1.7800e-003	0.1788	1.4900e-003	0.1803	0.0474	1.3800e-003	0.0488			177.1873	177.1873	5.5800e-003		177.3269
Total	0.0906	0.3410	0.7083	2.5600e-003	0.1969	2.4400e-003	0.1993	0.0524	2.2900e-003	0.0547			261.7601	261.7601	0.0115		262.0467

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					3.0000e-004	0.0000	3.0000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000	
Off-Road	1.3823	12.6811	11.9263	0.0204		0.7162	0.7162		0.6913	0.6913	0.0000		1,946.2468	1,946.2468	0.3111		1,954.0241
Total	1.3823	12.6811	11.9263	0.0204	3.0000e-004	0.7162	0.7165	5.0000e-005	0.6913	0.6914	0.0000		1,946.2468	1,946.2468	0.3111		1,954.0241

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	8.8500e-003	0.2830	0.0667	7.8000e-004	0.0180	9.5000e-004	0.0190	4.9400e-003	9.1000e-004	5.8500e-003		84.5729	84.5729	5.8800e-003		84.7198
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	0.0818	0.0580	0.6416	1.7800e-003	0.1788	1.4900e-003	0.1803	0.0474	1.3800e-003	0.0488		177.1873	177.1873	5.5800e-003		177.3269
Total	0.0906	0.3410	0.7083	2.5600e-003	0.1969	2.4400e-003	0.1993	0.0524	2.2900e-003	0.0547		261.7601	261.7601	0.0115		262.0467

3.8 SAD Electrical - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003	26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003	66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003	93.4875

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

3.9 SAD Install Valves - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.7200e-003	0.1064	0.0307	2.5000e-004	6.4000e-003	5.1000e-004	6.9100e-003	1.8400e-003	4.9000e-004	2.3300e-003		26.9449	26.9449	1.8000e-003		26.9900
Worker	0.0307	0.0218	0.2406	6.7000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		66.4452	66.4452	2.0900e-003		66.4976
Total	0.0344	0.1281	0.2714	9.2000e-004	0.0735	1.0700e-003	0.0745	0.0196	1.0100e-003	0.0206		93.3901	93.3901	3.8900e-003		93.4875

3.10 SADD Construct Parapet Walls - 2021

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					2.7100e-003	0.0000	2.7100e-003	4.1000e-004	0.0000	4.1000e-004			0.0000			0.0000

Off-Road	1.1457	9.4579	11.1553	0.0194		0.5283	0.5283		0.5283	0.5283		1,838.7360	1,838.7360	0.1024		1,841.2956
Total	1.1457	9.4579	11.1553	0.0194	2.7100e-003	0.5283	0.5310	4.1000e-004	0.5283	0.5287		1,838.7360	1,838.7360	0.1024		1,841.2956

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	0.0297	0.9237	0.2307	2.7000e-003	0.0586	2.9800e-003	0.0616	0.0162	2.8500e-003	0.0190		293.4627	293.4627	0.0204		293.9715
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	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
Total	0.0487	0.9368	0.3780	3.1300e-003	0.1033	3.3400e-003	0.1067	0.0281	3.1800e-003	0.0312		336.3528	336.3528	0.0216		336.8931

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					1.0600e-003	0.0000	1.0600e-003	1.6000e-004	0.0000	1.6000e-004			0.0000			0.0000
Off-Road	1.1457	9.4579	11.1553	0.0194		0.5283	0.5283		0.5283	0.5283	0.0000	1,838.7360	1,838.7360	0.1024		1,841.2956
Total	1.1457	9.4579	11.1553	0.0194	1.0600e-003	0.5283	0.5294	1.6000e-004	0.5283	0.5285	0.0000	1,838.7360	1,838.7360	0.1024		1,841.2956

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	0.0297	0.9237	0.2307	2.7000e-003	0.0586	2.9800e-003	0.0616	0.0162	2.8500e-003	0.0190		293.4627	293.4627	0.0204		293.9715
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	0.0191	0.0131	0.1473	4.3000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		42.8900	42.8900	1.2600e-003		42.9216
Total	0.0487	0.9368	0.3780	3.1300e-003	0.1033	3.3400e-003	0.1067	0.0281	3.1800e-003	0.0312		336.3528	336.3528	0.0216		336.8931

3.11 SAHW Demolition - 2021

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					0.2140	0.0000	0.2140	0.0324	0.0000	0.0324			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223		1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.2140	0.3353	0.5493	0.0324	0.3223	0.3547		1,193.4837	1,193.4837	0.2287		1,199.2020

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	1.9600e-003	0.0942	0.0169	1.1000e-004	1.9600e-003	7.0000e-005	2.0300e-003	5.0000e-004	7.0000e-005	5.6000e-004		11.7956	11.7956	1.8700e-003		11.8423
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	0.0477	0.0326	0.3683	1.0800e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0496	0.1268	0.3852	1.1900e-003	0.5024	9.7000e-004	0.5034	0.1256	9.0000e-004	0.1264		119.0207	119.0207	5.0300e-003		119.1463

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					0.0835	0.0000	0.0835	0.0126	0.0000	0.0126			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.0835	0.3353	0.4187	0.0126	0.3223	0.3349	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020

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	1.9600e-003	0.0942	0.0169	1.1000e-004	1.9600e-003	7.0000e-005	2.0300e-003	5.0000e-004	7.0000e-005	5.6000e-004		11.7956	11.7956	1.8700e-003		11.8423
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	0.0477	0.0326	0.3683	1.0800e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0496	0.1268	0.3852	1.1900e-003	0.5024	9.7000e-004	0.5034	0.1256	9.0000e-004	0.1264		119.0207	119.0207	5.0300e-003		119.1463

3.12 SADD Construct Downstream Butress - 2021

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					4.6527	0.0000	4.6527	2.5033	0.0000	2.5033			0.0000			0.0000
Off-Road	1.2376	12.6872	8.8725	0.0149		0.6453	0.6453		0.5937	0.5937		1,447.0082	1,447.0082	0.4680		1,458.7080
Total	1.2376	12.6872	8.8725	0.0149	4.6527	0.6453	5.2980	2.5033	0.5937	3.0970		1,447.0082	1,447.0082	0.4680		1,458.7080

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	0.8022	27.8550	6.3856	0.0672	5.5603	0.0695	5.6297	1.4046	0.0665	1.4710		7,282.7276	7,282.7276	0.5956		7,297.6182
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	0.0477	0.0326	0.3683	1.0800e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		107.2251	107.2251	3.1600e-003		107.3040
Total	0.8499	27.8876	6.7539	0.0682	6.0607	0.0704	6.1311	1.5296	0.0673	1.5969		7,389.9527	7,389.9527	0.5988		7,404.9222

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					1.8146	0.0000	1.8146	0.9763	0.0000	0.9763			0.0000				0.0000
Off-Road	1.2376	12.6872	8.8725	0.0149		0.6453	0.6453		0.5937	0.5937	0.0000	1,447.0082	1,447.0082	0.4680			1,458.7080
Total	1.2376	12.6872	8.8725	0.0149	1.8146	0.6453	2.4599	0.9763	0.5937	1.5700	0.0000	1,447.0082	1,447.0082	0.4680			1,458.7080

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	0.8022	27.8550	6.3856	0.0672	5.5603	0.0695	5.6297	1.4046	0.0665	1.4710		7,282.7276	7,282.7276	0.5956			7,297.6182
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	0.0477	0.0326	0.3683	1.0800e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		107.2251	107.2251	3.1600e-003			107.3040
Total	0.8499	27.8876	6.7539	0.0682	6.0607	0.0704	6.1311	1.5296	0.0673	1.5969		7,389.9527	7,389.9527	0.5988			7,404.9222

3.13 SAHW Construct Levee - 2021

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	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776		623.0357	623.0357	0.0340			623.8853

Total	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776		623.0357	623.0357	0.0340		623.8853
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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	0.0255	0.7751	0.2246	2.0000e-003	0.0512	1.6400e-003	0.0529	0.0148	1.5700e-003	0.0163		213.8764	213.8764	0.0138		214.2216
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0541	0.7947	0.4456	2.6500e-003	0.1183	2.1800e-003	0.1205	0.0325	2.0700e-003	0.0346		278.2115	278.2115	0.0157		278.6040

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	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776	0.0000	623.0357	623.0357	0.0340		623.8853
Total	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776	0.0000	623.0357	623.0357	0.0340		623.8853

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	0.0255	0.7751	0.2246	2.0000e-003	0.0512	1.6400e-003	0.0529	0.0148	1.5700e-003	0.0163		213.8764	213.8764	0.0138		214.2216
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0541	0.7947	0.4456	2.6500e-003	0.1183	2.1800e-003	0.1205	0.0325	2.0700e-003	0.0346		278.2115	278.2115	0.0157		278.6040

3.14 WPB Demo - 2021

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					0.5992	0.0000	0.5992	0.0907	0.0000	0.0907			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223		1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.5992	0.3353	0.9345	0.0907	0.3223	0.4130		1,193.4837	1,193.4837	0.2287		1,199.2020

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	5.4700e-003	0.2637	0.0474	3.1000e-004	1.2800e-003	1.9000e-004	1.4700e-003	3.6000e-004	1.8000e-004	5.4000e-004		33.0277	33.0277	5.2200e-003		33.1583
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0532	0.2963	0.4156	1.3900e-003	0.1131	1.0900e-003	0.1142	0.0300	1.0100e-003	0.0310		140.2529	140.2529	8.3800e-003		140.4623

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					0.2337	0.0000	0.2337	0.0354	0.0000	0.0354			0.0000				0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223	0.0000	1,193.4837	1,193.4837	0.2287			1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.2337	0.3353	0.5690	0.0354	0.3223	0.3577	0.0000	1,193.4837	1,193.4837	0.2287			1,199.2020

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	5.4700e-003	0.2637	0.0474	3.1000e-004	1.2800e-003	1.9000e-004	1.4700e-003	3.6000e-004	1.8000e-004	5.4000e-004		33.0277	33.0277	5.2200e-003		33.1583
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0532	0.2963	0.4156	1.3900e-003	0.1131	1.0900e-003	0.1142	0.0300	1.0100e-003	0.0310		140.2529	140.2529	8.3800e-003		140.4623

3.15 WPB Clear/Grub - 2021

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					0.0235	0.0000	0.0235	3.5600e-003	0.0000	3.5600e-003			0.0000			0.0000
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003	0.0235	0.1118	0.1353	3.5600e-003	0.1028	0.1064		300.9001	300.9001	0.0973		303.3330

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	0.0254	1.2243	0.2198	1.4200e-003	0.0146	8.8000e-004	0.0154	3.7600e-003	8.5000e-004	4.6100e-003		153.3431	153.3431	0.0243		153.9494
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	0.0286	0.0196	0.2210	6.5000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0540	1.2439	0.4408	2.0700e-003	0.1982	1.4200e-003	0.1997	0.0502	1.3500e-003	0.0515		217.6781	217.6781	0.0262		218.3318

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					9.1700e-003	0.0000	9.1700e-003	1.3900e-003	0.0000	1.3900e-003			0.0000			0.0000
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003	9.1700e-003	0.1118	0.1209	1.3900e-003	0.1028	0.1042	0.0000	300.9001	300.9001	0.0973		303.3330

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	0.0254	1.2243	0.2198	1.4200e-003	0.0146	8.8000e-004	0.0154	3.7600e-003	8.5000e-004	4.6100e-003		153.3431	153.3431	0.0243		153.9494
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	0.0286	0.0196	0.2210	6.5000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0540	1.2439	0.4408	2.0700e-003	0.1982	1.4200e-003	0.1997	0.0502	1.3500e-003	0.0515		217.6781	217.6781	0.0262		218.3318

3.16 SADD Construct New Subdrain - 2021

Unmitigated Construction On-Site

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

Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543		451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	0.0000	0.1677	0.1677	0.0000	0.1543	0.1543		451.3501	451.3501	0.1460		454.9995

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	0.0862	2.6160	0.7581	6.7600e-003	0.4192	5.5300e-003	0.4247	0.1102	5.2900e-003	0.1155		721.8329	721.8329	0.0466		722.9979
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		64.3351	64.3351	1.8900e-003		64.3824
Total	0.1148	2.6356	0.9790	7.4100e-003	0.6029	6.0700e-003	0.6089	0.1566	5.7900e-003	0.1624		786.1680	786.1680	0.0485		787.3803

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	0.0000	0.1677	0.1677	0.0000	0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995

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	0.0862	2.6160	0.7581	6.7600e-003	0.4192	5.5300e-003	0.4247	0.1102	5.2900e-003	0.1155		721.8329	721.8329	0.0466		722.9979
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		64.3351	64.3351	1.8900e-003		64.3824
Total	0.1148	2.6356	0.9790	7.4100e-003	0.6029	6.0700e-003	0.6089	0.1566	5.7900e-003	0.1624		786.1680	786.1680	0.0485		787.3803

3.17 WPB Abutments and Wing Walls - 2021

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	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626		654.5134	654.5134	0.2117		659.8054
Total	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626		654.5134	654.5134	0.2117		659.8054

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0223	0.6782	0.1965	1.7500e-003	0.0448	1.4300e-003	0.0463	0.0129	1.3700e-003	0.0143		187.1419	187.1419	0.0121		187.4439
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	0.0605	0.7043	0.4911	2.6100e-003	0.1342	2.1500e-003	0.1364	0.0366	2.0400e-003	0.0387		272.9220	272.9220	0.0146		273.2871

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	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626	0.0000	654.5134	654.5134	0.2117		659.8054
Total	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626	0.0000	654.5134	654.5134	0.2117		659.8054

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	0.0223	0.6782	0.1965	1.7500e-003	0.0448	1.4300e-003	0.0463	0.0129	1.3700e-003	0.0143		187.1419	187.1419	0.0121		187.4439
Worker	0.0382	0.0261	0.2946	8.6000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		85.7801	85.7801	2.5200e-003		85.8432
Total	0.0605	0.7043	0.4911	2.6100e-003	0.1342	2.1500e-003	0.1364	0.0366	2.0400e-003	0.0387		272.9220	272.9220	0.0146		273.2871

3.18 SADD Remove/Construct Outlet Tower(s) - 2021

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					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543		451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	8.2000e-004	0.1677	0.1685	1.2000e-004	0.1543	0.1544		451.3501	451.3501	0.1460		454.9995

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	8.9900e-003	0.2799	0.0699	8.2000e-004	0.0522	9.0000e-004	0.0532	0.0134	8.6000e-004	0.0142		88.9281	88.9281	6.1700e-003		89.0823
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	0.0238	0.0163	0.1841	5.4000e-004	0.1531	4.5000e-004	0.1535	0.0387	4.2000e-004	0.0391		53.6126	53.6126	1.5800e-003		53.6520
Total	0.0328	0.2962	0.2540	1.3600e-003	0.2053	1.3500e-003	0.2067	0.0520	1.2800e-003	0.0533		142.5407	142.5407	7.7500e-003		142.7343

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	3.2000e-004	0.1677	0.1680	5.0000e-005	0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995

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	8.9900e-003	0.2799	0.0699	8.2000e-004	0.0522	9.0000e-004	0.0532	0.0134	8.6000e-004	0.0142		88.9281	88.9281	6.1700e-003		89.0823
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	0.0238	0.0163	0.1841	5.4000e-004	0.1531	4.5000e-004	0.1535	0.0387	4.2000e-004	0.0391		53.6126	53.6126	1.5800e-003		53.6520
Total	0.0328	0.2962	0.2540	1.3600e-003	0.2053	1.3500e-003	0.2067	0.0520	1.2800e-003	0.0533		142.5407	142.5407	7.7500e-003		142.7343

3.19 WPB Construct Deck - 2021

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	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934		580.2695	580.2695	0.1877		584.9612

Total	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934		580.2695	580.2695	0.1877		584.9612
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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	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0493	4.1000e-004	0.0497	0.0126	3.9000e-004	0.0130		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.3003	5.4000e-004	0.3008	0.0750	5.0000e-004	0.0755		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0350	0.2134	0.2771	1.1500e-003	0.3496	9.5000e-004	0.3505	0.0877	8.9000e-004	0.0886		117.8042	117.8042	5.3400e-003		117.9378

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	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934	0.0000	580.2695	580.2695	0.1877		584.9612
Total	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934	0.0000	580.2695	580.2695	0.1877		584.9612

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	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0493	4.1000e-004	0.0497	0.0126	3.9000e-004	0.0130		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.3003	5.4000e-004	0.3008	0.0750	5.0000e-004	0.0755		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0350	0.2134	0.2771	1.1500e-003	0.3496	9.5000e-004	0.3505	0.0877	8.9000e-004	0.0886		117.8042	117.8042	5.3400e-003		117.9378

3.20 SADD Construct and Replace Access Roads - 2021

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					0.5836	0.0000	0.5836	0.0884	0.0000	0.0884			0.0000			0.0000
Off-Road	0.3203	3.2957	2.3852	3.6900e-003		0.1842	0.1842		0.1695	0.1695		357.5079	357.5079	0.1156		360.3985
Total	0.3203	3.2957	2.3852	3.6900e-003	0.5836	0.1842	0.7678	0.0884	0.1695	0.2578		357.5079	357.5079	0.1156		360.3985

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	0.0270	0.8398	0.2097	2.4600e-003	0.0572	2.7100e-003	0.0599	0.0157	2.5900e-003	0.0183		266.7843	266.7843	0.0185		267.2469
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0747	0.8724	0.5780	3.5400e-003	0.1690	3.6100e-003	0.1726	0.0453	3.4200e-003	0.0488		374.0094	374.0094	0.0217		374.5508

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					0.2276	0.0000	0.2276	0.0345	0.0000	0.0345			0.0000			0.0000
Off-Road	0.3203	3.2957	2.3852	3.6900e-003		0.1842	0.1842		0.1695	0.1695	0.0000	357.5079	357.5079	0.1156		360.3985
Total	0.3203	3.2957	2.3852	3.6900e-003	0.2276	0.1842	0.4118	0.0345	0.1695	0.2039	0.0000	357.5079	357.5079	0.1156		360.3985

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	0.0270	0.8398	0.2097	2.4600e-003	0.0572	2.7100e-003	0.0599	0.0157	2.5900e-003	0.0183		266.7843	266.7843	0.0185		267.2469
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0747	0.8724	0.5780	3.5400e-003	0.1690	3.6100e-003	0.1726	0.0453	3.4200e-003	0.0488		374.0094	374.0094	0.0217		374.5508

3.21 WPB Pave Bridge - 2021
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	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947		222.3278	222.3278	0.0719		224.1254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947		222.3278	222.3278	0.0719		224.1254

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	9.5700e-003	0.2907	0.0842	7.5000e-004	0.0192	6.1000e-004	0.0198	5.5300e-003	5.9000e-004	6.1200e-003		80.2037	80.2037	5.1800e-003		80.3331
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0382	0.3102	0.3052	1.4000e-003	0.0863	1.1500e-003	0.0874	0.0233	1.0900e-003	0.0244		144.5387	144.5387	7.0700e-003		144.7155

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	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947	0.0000	222.3278	222.3278	0.0719		224.1254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947	0.0000	222.3278	222.3278	0.0719		224.1254

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	9.5700e-003	0.2907	0.0842	7.5000e-004	0.0192	6.1000e-004	0.0198	5.5300e-003	5.9000e-004	6.1200e-003		80.2037	80.2037	5.1800e-003		80.3331
Worker	0.0286	0.0196	0.2210	6.5000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		64.3351	64.3351	1.8900e-003		64.3824
Total	0.0382	0.3102	0.3052	1.4000e-003	0.0863	1.1500e-003	0.0874	0.0233	1.0900e-003	0.0244		144.5387	144.5387	7.0700e-003		144.7155

3.22 SADD Install Additional Monitor Equip - 2021

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	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843		912.0624	912.0624	0.2950		919.4369

Total	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843		912.0624	912.0624	0.2950		919.4369
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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	0.0198	0.6158	0.1538	1.8000e-003	0.0420	1.9900e-003	0.0439	0.0115	1.9000e-003	0.0134		195.6418	195.6418	0.0136		195.9810
Vendor	3.1900e-003	0.0969	0.0281	2.5000e-004	6.4000e-003	2.0000e-004	6.6100e-003	1.8400e-003	2.0000e-004	2.0400e-003		26.7346	26.7346	1.7300e-003		26.7777
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	0.0373	0.7225	0.2924	2.3700e-003	0.0819	2.4600e-003	0.0844	0.0222	2.3500e-003	0.0246		254.5439	254.5439	0.0163		254.9499

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	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843	0.0000	912.0624	912.0624	0.2950		919.4369
Total	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843	0.0000	912.0624	912.0624	0.2950		919.4369

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	0.0198	0.6158	0.1538	1.8000e-003	0.0420	1.9900e-003	0.0439	0.0115	1.9000e-003	0.0134		195.6418	195.6418	0.0136		195.9810
Vendor	3.1900e-003	0.0969	0.0281	2.5000e-004	6.4000e-003	2.0000e-004	6.6100e-003	1.8400e-003	2.0000e-004	2.0400e-003		26.7346	26.7346	1.7300e-003		26.7777
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	0.0373	0.7225	0.2924	2.3700e-003	0.0819	2.4600e-003	0.0844	0.0222	2.3500e-003	0.0246		254.5439	254.5439	0.0163		254.9499

3.23 SADD Replace Riprap - 2021

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					2.4700e-003	0.0000	2.4700e-003	3.7000e-004	0.0000	3.7000e-004			0.0000			0.0000
Off-Road	0.4584	4.3068	6.5436	0.0103		0.2089	0.2089		0.1922	0.1922		1,000.3839	1,000.3839	0.3235		1,008.4726
Total	0.4584	4.3068	6.5436	0.0103	2.4700e-003	0.2089	0.2114	3.7000e-004	0.1922	0.1925		1,000.3839	1,000.3839	0.3235		1,008.4726

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	0.0270	0.8398	0.2097	2.4600e-003	0.0572	2.7100e-003	0.0599	0.0157	2.5900e-003	0.0183		266.7843	266.7843	0.0185		267.2469
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0747	0.8724	0.5780	3.5400e-003	0.1690	3.6100e-003	0.1726	0.0453	3.4200e-003	0.0488		374.0094	374.0094	0.0217		374.5508

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					9.6000e-004	0.0000	9.6000e-004	1.5000e-004	0.0000	1.5000e-004			0.0000			0.0000
Off-Road	0.4584	4.3068	6.5436	0.0103		0.2089	0.2089		0.1922	0.1922	0.0000	1,000.3839	1,000.3839	0.3235		1,008.4726
Total	0.4584	4.3068	6.5436	0.0103	9.6000e-004	0.2089	0.2098	1.5000e-004	0.1922	0.1923	0.0000	1,000.3839	1,000.3839	0.3235		1,008.4726

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	0.0270	0.8398	0.2097	2.4600e-003	0.0572	2.7100e-003	0.0599	0.0157	2.5900e-003	0.0183		266.7843	266.7843	0.0185		267.2469
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	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	0.0747	0.8724	0.5780	3.5400e-003	0.1690	3.6100e-003	0.1726	0.0453	3.4200e-003	0.0488		374.0094	374.0094	0.0217		374.5508

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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					
User Defined Recreational	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

	Natural Gas 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					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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
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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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000			0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000			0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Santa Anita Addendum - Los Angeles-South Coast County, Summer

Santa Anita Addendum
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2021
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - .

Construction Phase - .

Off-road Equipment - 1 pump

Off-road Equipment - 1 concrete saw, 1 crane, 1 pump, 2 tractor loader backhoes

Off-road Equipment - 1 crane

Off-road Equipment - 1 pump, 1 tractor/loader/backhoe

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 rubber-tired dozer, 1 roller
 Off-road Equipment - 1 rubber tired dozer, 1 excavator, 2 tractors
 Off-road Equipment - 1 saw, 1 pump, 1 drill rig
 Off-road Equipment - 2 tractors
 Off-road Equipment - 1 concrete pump (pump), 1 concrete saw, 1 pump
 Off-road Equipment - 1 drill rig
 Off-road Equipment - 2 tractor/loader/backhoes
 Off-road Equipment - 2 excavators
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 concrete saw, 1 excavator, 1 tractor
 Off-road Equipment - 1 crane, 1 excavator
 Off-road Equipment - 1 tractor
 Off-road Equipment - 1 crane, 1 tractor
 Off-road Equipment - 1 concrete saw, 1 tractor, 1 excavator
 Off-road Equipment - 1 roller

Trips and VMT - Based on previous CalEEMod run for Certified MND and County emails from 2/13/20, emails/files from 6/8/20 and 7/9/20

Demolition - .

Grading - based on Final MND and County data from 2/13/20 email, and County data from 6/8/20 and 7/9/20 emails

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
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tblTripsAndVMT	WorkerTripNumber	0.00	6.00
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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					
2019	1.6856	22.0996	13.8301	0.0454	0.8446	0.7101	1.5548	0.2391	0.6942	0.9333	0.0000	4,647.3555	4,647.3555	0.3731	0.0000	4,656.6832
2020	1.9804	18.6556	15.3867	0.0308	0.3446	0.9430	1.2876	0.0918	0.9001	0.9918	0.0000	2,975.5859	2,975.5859	0.5113	0.0000	2,988.3677
2021	2.7971	46.9441	23.3249	0.0992	11.4299	1.0502	12.4799	4.1908	0.9825	5.1732	0.0000	10,408.7333	10,408.7333	1.2731	0.0000	10,440.5605
Maximum	2.7971	46.9441	23.3249	0.0992	11.4299	1.0502	12.4799	4.1908	0.9825	5.1732	0.0000	10,408.7333	10,408.7333	1.2731	0.0000	10,440.5605

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					
2019	1.6856	22.0996	13.8301	0.0454	0.8446	0.7101	1.5548	0.2391	0.6942	0.9333	0.0000	4,647.3555	4,647.3555	0.3731	0.0000	4,656.6832
2020	1.9804	18.6556	15.3867	0.0308	0.3441	0.9430	1.2871	0.0917	0.9001	0.9917	0.0000	2,975.5859	2,975.5859	0.5113	0.0000	2,988.3677
2021	2.7971	46.9441	23.3249	0.0992	8.4612	1.0502	9.5113	2.6441	0.9825	3.6265	0.0000	10,408.7333	10,408.7333	1.2731	0.0000	10,440.5605
Maximum	2.7971	46.9441	23.3249	0.0992	8.4612	1.0502	9.5113	2.6441	0.9825	3.6265	0.0000	10,408.7333	10,408.7333	1.2731	0.0000	10,440.5605

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	23.53	0.00	19.38	34.21	0.00	21.79	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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/15/2019	11/28/2019	5	10	SAD Armor Canyon/Dam
2	SAD Helipad and Water System	Building Construction	11/15/2019	12/25/2019	5	30	
3	SAD Repair Leaks	Building Construction	1/1/2020	1/12/2020	5	10	
4	SAD Remove/Replace JibCrane	Building Construction	1/13/2020	1/26/2020	5	10	
5	SAD Hoist	Building Construction	2/1/2020	2/28/2020	5	20	
6	SAD Construct New Spillway	Grading	3/1/2020	3/30/2020	5	131	
7	SAD Electrical	Building Construction	3/2/2020	3/29/2020	5	20	
8	SAD Install Valves	Building Construction	3/2/2020	3/15/2020	5	10	
9	SADD Construct Parapet Walls	Grading	4/1/2021	4/30/2021	5	20	
10	SAHW Demolition	Demolition	4/7/2021	5/1/2021	5	20	
11	SADD Construct Downstream Retress	Grading	5/1/2021	7/15/2021	5	54	
12	SAHW Construct Levee	Building Construction	5/2/2021	6/27/2021	5	40	
13	WPB Demo	Demolition	6/28/2021	7/10/2021	5	10	

14	WPB Clear/Grub	Site Preparation	7/11/2021	8/8/2021	5	20
15	SADD Construct New Subdrain	Grading	7/16/2021	8/15/2021	5	23
16	WPB Abutments and Wing Walls	Building Construction	8/9/2021	8/22/2021	5	10
17	SADD Remove/Construct Outlet Tower(s)	Grading	8/17/2021	8/30/2021	5	11
18	WPB Construct Deck	Building Construction	8/23/2021	9/5/2021	5	10
19	SADD Construct and Replace Access Roads	Demolition	9/1/2021	9/30/2021	5	22
20	WPB Pave Bridge	Paving	9/6/2021	9/19/2021	5	10
21	SADD Install Additional Monitor	Trenching	10/1/2021	10/21/2021	5	15
22	SADD Replace Riprap	Grading	10/22/2021	11/22/2021	5	22

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Helipad and Water System	Cranes	0	4.00	231	0.29
SAD Helipad and Water System	Forklifts	0	6.00	89	0.20
SAD Helipad and Water System	Pumps	1	8.00	84	0.74
SAD Helipad and Water System	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SAD Repair Leaks	Cranes	0	4.00	231	0.29
SAD Repair Leaks	Forklifts	0	6.00	89	0.20
SAD Repair Leaks	Pumps	1	8.00	84	0.74
SAD Repair Leaks	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Remove/Replace JibCrane	Cranes	1	4.00	231	0.29

SAD Remove/Replace JibCrane	Forklifts	0	6.00	89	0.20
SAD Remove/Replace JibCrane	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Hoist	Cranes	1	4.00	231	0.29
SAD Hoist	Forklifts	0	6.00	89	0.20
SAD Hoist	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Construct New Spillway	Concrete/Industrial Saws	1	8.00	81	0.73
SAD Construct New Spillway	Cranes	1	4.00	231	0.29
SAD Construct New Spillway	Pumps	1	8.00	84	0.74
SAD Construct New Spillway	Rubber Tired Dozers	0	1.00	247	0.40
SAD Construct New Spillway	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SAD Electrical	Cranes	1	4.00	231	0.29
SAD Electrical	Forklifts	0	6.00	89	0.20
SAD Electrical	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Install Valves	Cranes	1	4.00	231	0.29
SAD Install Valves	Forklifts	0	6.00	89	0.20
SAD Install Valves	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct Parapet Walls	Concrete/Industrial Saws	1	8.00	81	0.73
SADD Construct Parapet Walls	Pumps	2	8.00	84	0.74
SADD Construct Parapet Walls	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct Parapet Walls	Tractors/Loaders/Backhoes	0	6.00	97	0.37
SAHW Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
SAHW Demolition	Excavators	1	6.00	158	0.38
SAHW Demolition	Rubber Tired Dozers	0	1.00	247	0.40
SAHW Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
SADD Construct Downstream Butress	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct Downstream Butress	Cranes	0	4.00	231	0.29
SADD Construct Downstream Butress	Excavators	1	6.00	158	0.38
SADD Construct Downstream Butress	Forklifts	0	6.00	89	0.20
SADD Construct Downstream Butress	Rubber Tired Dozers	1	6.00	247	0.40
SADD Construct Downstream Butress	Tractors/Loaders/Backhoes	2	6.00	97	0.37

SAHW Construct Levee	Cranes	0	4.00	231	0.29
SAHW Construct Levee	Forklifts	0	6.00	89	0.20
SAHW Construct Levee	Pumps	1	8.00	84	0.74
SAHW Construct Levee	Tractors/Loaders/Backhoes	0	8.00	97	0.37
WPB Demo	Concrete/Industrial Saws	1	8.00	81	0.73
WPB Demo	Excavators	1	6.00	158	0.38
WPB Demo	Rubber Tired Dozers	0	1.00	247	0.40
WPB Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
WPB Clear/Grub	Graders	0	8.00	187	0.41
WPB Clear/Grub	Tractors/Loaders/Backhoes	1	8.00	97	0.37
WPB Clear/Grub	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct New Subdrain	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct New Subdrain	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Abutments and Wing Walls	Cranes	1	4.00	231	0.29
WPB Abutments and Wing Walls	Excavators	1	6.00	158	0.38
WPB Abutments and Wing Walls	Forklifts	0	6.00	89	0.20
WPB Abutments and Wing Walls	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Remove/Construct Outlet Tower(s)	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Remove/Construct Outlet Tower(s)	Rubber Tired Dozers	0	1.00	247	0.40
SADD Remove/Construct Outlet Tower(s)	Tractors/Loaders/Backhoes	2	6.00	97	0.37
WPB Construct Deck	Cranes	1	4.00	231	0.29
WPB Construct Deck	Forklifts	0	6.00	89	0.20
WPB Construct Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SADD Construct and Replace Access Roads	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct and Replace Access Roads	Rollers	1	8.00	80	0.38
SADD Construct and Replace Access Roads	Rubber Tired Dozers	1	1.00	247	0.40
SADD Construct and Replace Access Roads	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Pave Bridge	Cement and Mortar Mixers	0	6.00	9	0.56

WPB Pave Bridge	Pavers	0	7.00	130	0.42
WPB Pave Bridge	Rollers	1	7.00	80	0.38
WPB Pave Bridge	Tractors/Loaders/Backhoes	0	7.00	97	0.37
SADD Install Additional Monitor Equip	Bore/Drill Rigs	1	8.00	221	0.50
SADD Replace Riprap	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Replace Riprap	Excavators	2	8.00	158	0.38
SADD Replace Riprap	Rubber Tired Dozers	0	1.00	247	0.40
SADD Replace Riprap	Tractors/Loaders/Backhoes	0	6.00	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
Building Construction	1	6.00	103.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Helipad and Water System	2	10.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Repair Leaks	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Remove/Replace Lih Crane	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Hoist	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Construct New Spillway	5	16.00	0.00	112.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAD Electrical	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Install Valves	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Parapet Walls	3	4.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAHW Demolition	3	10.00	0.00	20.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Downstream Buttress	4	10.00	0.00	8,125.00	14.70	6.90	10.50	LD_Mix	HDT_Mix	HHDT
SAHW Construct Levee	1	6.00	8.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Demo	3	10.00	0.00	28.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Clear/Grub	1	6.00	0.00	260.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct New Subdrain	2	6.00	27.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Abutments and Wing Walls	2	8.00	7.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Remove/Construct	2	5.00	0.00	10.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Construct Deck	2	6.00	2.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT

SADD Construct and Replace Access	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Pave Bridge	1	6.00	3.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Install Additional Monitor	1	3.00	1.00	30.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SADD Replace Riprap	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2019

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	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379		623.0346	623.0346	0.0417		624.0761
Total	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379		623.0346	623.0346	0.0417		624.0761

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	0.4280	11.9202	3.1629	0.0269	0.6594	0.0760	0.7354	0.1899	0.0727	0.2626		2,871.7906	2,871.7906	0.1840		2,876.3914

Worker	0.0300	0.0220	0.2893	7.3000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		72.7772	72.7772	2.5000e-003		72.8397
Total	0.4580	11.9422	3.4522	0.0277	0.7265	0.0766	0.8030	0.2076	0.0732	0.2809		2,944.5677	2,944.5677	0.1865		2,949.2311

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	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379	0.0000	623.0346	623.0346	0.0417		624.0761
Total	0.4703	3.8338	3.7812	6.5800e-003		0.2379	0.2379		0.2379	0.2379	0.0000	623.0346	623.0346	0.0417		624.0761

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	0.4280	11.9202	3.1629	0.0269	0.6594	0.0760	0.7354	0.1899	0.0727	0.2626		2,871.7906	2,871.7906	0.1840		2,876.3914
Worker	0.0300	0.0220	0.2893	7.3000e-004	0.0671	5.8000e-004	0.0676	0.0178	5.3000e-004	0.0183		72.7772	72.7772	2.5000e-003		72.8397
Total	0.4580	11.9422	3.4522	0.0277	0.7265	0.0766	0.8030	0.2076	0.0732	0.2809		2,944.5677	2,944.5677	0.1865		2,949.2311

3.3 SAD Helipad and Water System - 2019

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	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815		930.5764	930.5764	0.1390		934.0505
Total	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815		930.5764	930.5764	0.1390		934.0505

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	4.1600e-003	0.1157	0.0307	2.6000e-004	6.4000e-003	7.4000e-004	7.1400e-003	1.8400e-003	7.1000e-004	2.5500e-003		27.8815	27.8815	1.7900e-003		27.9261
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	0.0541	0.1525	0.5129	1.4800e-003	0.1182	1.7000e-003	0.1199	0.0315	1.6000e-003	0.0331		149.1768	149.1768	5.9600e-003		149.3256

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	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815	0.0000	930.5764	930.5764	0.1390		934.0505
Total	0.7031	6.1712	6.0839	9.6800e-003		0.3939	0.3939		0.3815	0.3815	0.0000	930.5764	930.5764	0.1390		934.0505

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	4.1600e-003	0.1157	0.0307	2.6000e-004	6.4000e-003	7.4000e-004	7.1400e-003	1.8400e-003	7.1000e-004	2.5500e-003		27.8815	27.8815	1.7900e-003		27.9261
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	0.0541	0.1525	0.5129	1.4800e-003	0.1182	1.7000e-003	0.1199	0.0315	1.6000e-003	0.0331		149.1768	149.1768	5.9600e-003		149.3256

3.4 SAD Repair Leaks - 2020

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	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072		623.0346	623.0346	0.0373		623.9664
Total	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072		623.0346	623.0346	0.0373		623.9664

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

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	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072	0.0000	623.0346	623.0346	0.0373		623.9664
Total	0.4232	3.5290	3.7626	6.5800e-003		0.2072	0.2072		0.2072	0.2072	0.0000	623.0346	623.0346	0.0373		623.9664

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
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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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003	27.7025	27.7025	1.6900e-003	27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183	70.5668	70.5668	2.2200e-003	70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206	98.2692	98.2692	3.9100e-003	98.3671

3.5 SAD Remove/Replace JibCrane - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003	27.7025	27.7025	1.6900e-003			27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183	70.5668	70.5668	2.2200e-003			70.6224

Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671
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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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

3.6 SAD Hoist - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

3.7 SAD Construct New Spillway - 2020

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					7.7000e-004	0.0000	7.7000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000
Off-Road	1.3823	12.6811	11.9263	0.0204		0.7162	0.7162		0.6913	0.6913		1,946.2468	1,946.2468	0.3111		1,954.0241
Total	1.3823	12.6811	11.9263	0.0204	7.7000e-004	0.7162	0.7169	1.2000e-004	0.6913	0.6914		1,946.2468	1,946.2468	0.3111		1,954.0241

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	8.6700e-003	0.2786	0.0633	7.9000e-004	0.0180	9.3000e-004	0.0190	4.9400e-003	8.9000e-004	5.8400e-003		85.8329	85.8329	5.7000e-003		85.9753
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	0.0736	0.0524	0.7006	1.8900e-003	0.1788	1.4900e-003	0.1803	0.0474	1.3800e-003	0.0488		188.1781	188.1781	5.9300e-003		188.3264
Total	0.0823	0.3309	0.7639	2.6800e-003	0.1969	2.4200e-003	0.1993	0.0524	2.2700e-003	0.0547		274.0109	274.0109	0.0116		274.3017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0000e-004	0.0000	3.0000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000
Off-Road	1.3823	12.6811	11.9263	0.0204		0.7162	0.7162		0.6913	0.6913	0.0000	1,946.2468	1,946.2468	0.3111		1,954.0241
Total	1.3823	12.6811	11.9263	0.0204	3.0000e-004	0.7162	0.7165	5.0000e-005	0.6913	0.6914	0.0000	1,946.2468	1,946.2468	0.3111		1,954.0241

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
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Category	lb/day										lb/day				
Hauling	8.6700e-003	0.2786	0.0633	7.9000e-004	0.0180	9.3000e-004	0.0190	4.9400e-003	8.9000e-004	5.8400e-003		85.8329	85.8329	5.7000e-003	85.9753
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	0.0736	0.0524	0.7006	1.8900e-003	0.1788	1.4900e-003	0.1803	0.0474	1.3800e-003	0.0488		188.1781	188.1781	5.9300e-003	188.3264
Total	0.0823	0.3309	0.7639	2.6800e-003	0.1969	2.4200e-003	0.1993	0.0524	2.2700e-003	0.0547		274.0109	274.0109	0.0116	274.3017

3.8 SAD Electrical - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224

Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671
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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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

3.9 SAD Install Valves - 2020

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022		279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

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	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539
Total	0.2267	2.6958	1.0577	2.8800e-003		0.1111	0.1111		0.1022	0.1022	0.0000	279.3948	279.3948	0.0904		281.6539

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	3.5600e-003	0.1064	0.0279	2.6000e-004	6.4000e-003	5.0000e-004	6.9000e-003	1.8400e-003	4.8000e-004	2.3200e-003		27.7025	27.7025	1.6900e-003		27.7447
Worker	0.0276	0.0196	0.2627	7.1000e-004	0.0671	5.6000e-004	0.0676	0.0178	5.2000e-004	0.0183		70.5668	70.5668	2.2200e-003		70.6224
Total	0.0312	0.1260	0.2906	9.7000e-004	0.0735	1.0600e-003	0.0745	0.0196	1.0000e-003	0.0206		98.2692	98.2692	3.9100e-003		98.3671

3.10 SADD Construct Parapet Walls - 2021

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					2.7100e-003	0.0000	2.7100e-003	4.1000e-004	0.0000	4.1000e-004			0.0000			0.0000
Off-Road	1.1457	9.4579	11.1553	0.0194		0.5283	0.5283		0.5283	0.5283		1,838.7360	1,838.7360	0.1024		1,841.2956
Total	1.1457	9.4579	11.1553	0.0194	2.7100e-003	0.5283	0.5310	4.1000e-004	0.5283	0.5287		1,838.7360	1,838.7360	0.1024		1,841.2956

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	0.0291	0.9098	0.2195	2.7500e-003	0.0586	2.9400e-003	0.0616	0.0162	2.8200e-003	0.0190		297.8617	297.8617	0.0198		298.3553
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	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
Total	0.0462	0.9216	0.3807	3.2100e-003	0.1033	3.3000e-003	0.1066	0.0281	3.1500e-003	0.0312		343.4125	343.4125	0.0211		343.9397

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					1.0600e-003	0.0000	1.0600e-003	1.6000e-004	0.0000	1.6000e-004			0.0000			0.0000
Off-Road	1.1457	9.4579	11.1553	0.0194		0.5283	0.5283		0.5283	0.5283	0.0000	1,838.7360	1,838.7360	0.1024		1,841.2956
Total	1.1457	9.4579	11.1553	0.0194	1.0600e-003	0.5283	0.5294	1.6000e-004	0.5283	0.5285	0.0000	1,838.7360	1,838.7360	0.1024		1,841.2956

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
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Category	lb/day										lb/day					
Hauling	0.0291	0.9098	0.2195	2.7500e-003	0.0586	2.9400e-003	0.0616	0.0162	2.8200e-003	0.0190		297.8617	297.8617	0.0198		298.3553
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	0.0172	0.0118	0.1611	4.6000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.5508	45.5508	1.3400e-003		45.5844
Total	0.0462	0.9216	0.3807	3.2100e-003	0.1033	3.3000e-003	0.1066	0.0281	3.1500e-003	0.0312		343.4125	343.4125	0.0211		343.9397

3.11 SAHW Demolition - 2021

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					0.2140	0.0000	0.2140	0.0324	0.0000	0.0324			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223		1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.2140	0.3353	0.5493	0.0324	0.3223	0.3547		1,193.4837	1,193.4837	0.2287		1,199.2020

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	1.7500e-003	0.0976	0.0128	1.2000e-004	1.9600e-003	6.0000e-005	2.0200e-003	5.0000e-004	5.0000e-005	5.5000e-004		13.2619	13.2619	1.6600e-003		13.3035
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	0.0429	0.0295	0.4028	1.1400e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		113.8770	113.8770	3.3600e-003		113.9609

Total	0.0446	0.1270	0.4155	1.2600e-003	0.5024	9.6000e-004	0.5034	0.1256	8.8000e-004	0.1264		127.1389	127.1389	5.0200e-003		127.2643
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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					0.0835	0.0000	0.0835	0.0126	0.0000	0.0126			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.0835	0.3353	0.4187	0.0126	0.3223	0.3349	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020

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	1.7500e-003	0.0976	0.0128	1.2000e-004	1.9600e-003	6.0000e-005	2.0200e-003	5.0000e-004	5.0000e-005	5.5000e-004		13.2619	13.2619	1.6600e-003		13.3035
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	0.0429	0.0295	0.4028	1.1400e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		113.8770	113.8770	3.3600e-003		113.9609
Total	0.0446	0.1270	0.4155	1.2600e-003	0.5024	9.6000e-004	0.5034	0.1256	8.8000e-004	0.1264		127.1389	127.1389	5.0200e-003		127.2643

3.12 SADD Construct Downstream Butress - 2021

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					4.6527	0.0000	4.6527	2.5033	0.0000	2.5033			0.0000			0.0000
Off-Road	1.2376	12.6872	8.8725	0.0149		0.6453	0.6453		0.5937	0.5937		1,447.0082	1,447.0082	0.4680		1,458.7080
Total	1.2376	12.6872	8.8725	0.0149	4.6527	0.6453	5.2980	2.5033	0.5937	3.0970		1,447.0082	1,447.0082	0.4680		1,458.7080

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	0.7718	27.8499	5.7880	0.0692	5.5603	0.0676	5.6279	1.4046	0.0647	1.4692		7,503.3540	7,503.3540	0.5650		7,517.4791
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	0.0429	0.0295	0.4028	1.1400e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		113.8770	113.8770	3.3600e-003		113.9609
Total	0.8146	27.8794	6.1908	0.0703	6.0607	0.0685	6.1292	1.5296	0.0655	1.5951		7,617.2310	7,617.2310	0.5684		7,631.4400

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					1.8146	0.0000	1.8146	0.9763	0.0000	0.9763			0.0000			0.0000
Off-Road	1.2376	12.6872	8.8725	0.0149		0.6453	0.6453		0.5937	0.5937	0.0000	1,447.0082	1,447.0082	0.4680		1,458.7080
Total	1.2376	12.6872	8.8725	0.0149	1.8146	0.6453	2.4599	0.9763	0.5937	1.5700	0.0000	1,447.0082	1,447.0082	0.4680		1,458.7080

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	0.7718	27.8499	5.7880	0.0692	5.5603	0.0676	5.6279	1.4046	0.0647	1.4692		7,503.3540	7,503.3540	0.5650		7,517.4791
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	0.0429	0.0295	0.4028	1.1400e-003	0.5005	9.0000e-004	0.5014	0.1251	8.3000e-004	0.1259		113.8770	113.8770	3.3600e-003		113.9609
Total	0.8146	27.8794	6.1908	0.0703	6.0607	0.0685	6.1292	1.5296	0.0655	1.5951		7,617.2310	7,617.2310	0.5684		7,631.4400

3.13 SAHW Construct Levee - 2021

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	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776		623.0357	623.0357	0.0340		623.8853
Total	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776		623.0357	623.0357	0.0340		623.8853

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	0.0243	0.7767	0.2031	2.0600e-003	0.0512	1.5900e-003	0.0528	0.0148	1.5200e-003	0.0163		219.9045	219.9045	0.0130		220.2284
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0500	0.7944	0.4447	2.7500e-003	0.1183	2.1300e-003	0.1204	0.0325	2.0200e-003	0.0346		288.2307	288.2307	0.0150		288.6049

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	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776	0.0000	623.0357	623.0357	0.0340		623.8853
Total	0.3804	3.2100	3.7406	6.5800e-003		0.1776	0.1776		0.1776	0.1776	0.0000	623.0357	623.0357	0.0340		623.8853

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
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.7767	0.2031	2.0600e-003	0.0512	1.5900e-003	0.0528	0.0148	1.5200e-003	0.0163	219.9045	219.9045	0.0130		220.2284
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183	68.3262	68.3262	2.0100e-003		68.3765
Total	0.0500	0.7944	0.4447	2.7500e-003	0.1183	2.1300e-003	0.1204	0.0325	2.0200e-003	0.0346		288.2307	288.2307	0.0150	288.6049

3.14 WPB Demo - 2021

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					0.5992	0.0000	0.5992	0.0907	0.0000	0.0907			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223		1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.5992	0.3353	0.9345	0.0907	0.3223	0.4130		1,193.4837	1,193.4837	0.2287		1,199.2020

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	4.9000e-003	0.2732	0.0357	3.4000e-004	1.2800e-003	1.6000e-004	1.4400e-003	3.6000e-004	1.5000e-004	5.1000e-004		37.1334	37.1334	4.6500e-003		37.2497
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609

Total	0.0478	0.3027	0.4385	1.4800e-003	0.1131	1.0600e-003	0.1141	0.0300	9.8000e-004	0.0310		151.0104	151.0104	8.0100e-003		151.2106
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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					0.2337	0.0000	0.2337	0.0354	0.0000	0.0354			0.0000			0.0000
Off-Road	0.6972	6.0748	7.8231	0.0125		0.3353	0.3353		0.3223	0.3223	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020
Total	0.6972	6.0748	7.8231	0.0125	0.2337	0.3353	0.5690	0.0354	0.3223	0.3577	0.0000	1,193.4837	1,193.4837	0.2287		1,199.2020

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	4.9000e-003	0.2732	0.0357	3.4000e-004	1.2800e-003	1.6000e-004	1.4400e-003	3.6000e-004	1.5000e-004	5.1000e-004		37.1334	37.1334	4.6500e-003		37.2497
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609
Total	0.0478	0.3027	0.4385	1.4800e-003	0.1131	1.0600e-003	0.1141	0.0300	9.8000e-004	0.0310		151.0104	151.0104	8.0100e-003		151.2106

3.15 WPB Clear/Grub - 2021

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					0.0235	0.0000	0.0235	3.5600e-003	0.0000	3.5600e-003			0.0000			0.0000
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003	0.0235	0.1118	0.1353	3.5600e-003	0.1028	0.1064		300.9001	300.9001	0.0973		303.3330

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	0.0228	1.2684	0.1658	1.5900e-003	0.0146	7.2000e-004	0.0153	3.7600e-003	6.9000e-004	4.4600e-003		172.4052	172.4052	0.0216		172.9451
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	0.0257	0.0177	0.2417	6.9000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0485	1.2861	0.4075	2.2800e-003	0.1982	1.2600e-003	0.1995	0.0502	1.1900e-003	0.0514		240.7314	240.7314	0.0236		241.3216

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					9.1700e-003	0.0000	9.1700e-003	1.3900e-003	0.0000	1.3900e-003			0.0000			0.0000
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330
Total	0.1873	1.8958	2.2602	3.1100e-003	9.1700e-003	0.1118	0.1209	1.3900e-003	0.1028	0.1042	0.0000	300.9001	300.9001	0.0973		303.3330

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	0.0228	1.2684	0.1658	1.5900e-003	0.0146	7.2000e-004	0.0153	3.7600e-003	6.9000e-004	4.4600e-003		172.4052	172.4052	0.0216		172.9451
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	0.0257	0.0177	0.2417	6.9000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0485	1.2861	0.4075	2.2800e-003	0.1982	1.2600e-003	0.1995	0.0502	1.1900e-003	0.0514		240.7314	240.7314	0.0236		241.3216

3.16 SADD Construct New Subdrain - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543		451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	0.0000	0.1677	0.1677	0.0000	0.1543	0.1543		451.3501	451.3501	0.1460		454.9995

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	0.0821	2.6214	0.6853	6.9400e-003	0.4192	5.3600e-003	0.4245	0.1102	5.1300e-003	0.1154		742.1777	742.1777	0.0437		743.2708
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469		68.3262	68.3262	2.0100e-003		68.3765
Total	0.1078	2.6391	0.9270	7.6300e-003	0.6029	5.9000e-003	0.6088	0.1566	5.6300e-003	0.1623		810.5039	810.5039	0.0457		811.6473

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	0.0000	0.1677	0.1677	0.0000	0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995

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
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0821	2.6214	0.6853	6.9400e-003	0.4192	5.3600e-003	0.4245	0.1102	5.1300e-003	0.1154	742.1777	742.1777	0.0437		743.2708
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.1837	5.4000e-004	0.1842	0.0464	5.0000e-004	0.0469	68.3262	68.3262	2.0100e-003		68.3765
Total	0.1078	2.6391	0.9270	7.6300e-003	0.6029	5.9000e-003	0.6088	0.1566	5.6300e-003	0.1623	810.5039	810.5039	0.0457		811.6473

3.17 WPB Abutments and Wing Walls - 2021

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	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626			654.5134	654.5134	0.2117		659.8054
Total	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626			654.5134	654.5134	0.2117		659.8054

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	0.0213	0.6796	0.1777	1.8000e-003	0.0448	1.3900e-003	0.0462	0.0129	1.3300e-003	0.0142		192.4164	192.4164	0.0113		192.6998
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687

Total	0.0556	0.7032	0.4999	2.7100e-003	0.1342	2.1100e-003	0.1363	0.0366	2.0000e-003	0.0386		283.5180	283.5180	0.0140		283.8685
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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	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626	0.0000	654.5134	654.5134	0.2117		659.8054
Total	0.3783	4.0397	3.4453	6.7600e-003		0.1768	0.1768		0.1626	0.1626	0.0000	654.5134	654.5134	0.2117		659.8054

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	0.0213	0.6796	0.1777	1.8000e-003	0.0448	1.3900e-003	0.0462	0.0129	1.3300e-003	0.0142		192.4164	192.4164	0.0113		192.6998
Worker	0.0343	0.0236	0.3222	9.1000e-004	0.0894	7.2000e-004	0.0901	0.0237	6.7000e-004	0.0244		91.1016	91.1016	2.6800e-003		91.1687
Total	0.0556	0.7032	0.4999	2.7100e-003	0.1342	2.1100e-003	0.1363	0.0366	2.0000e-003	0.0386		283.5180	283.5180	0.0140		283.8685

3.18 SADD Remove/Construct Outlet Tower(s) - 2021

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					8.2000e-004	0.0000	8.2000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543		451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	8.2000e-004	0.1677	0.1685	1.2000e-004	0.1543	0.1544		451.3501	451.3501	0.1460		454.9995

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	8.8100e-003	0.2757	0.0665	8.3000e-004	0.0522	8.9000e-004	0.0531	0.0134	8.5000e-004	0.0142		90.2611	90.2611	5.9800e-003		90.4107
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	0.0214	0.0147	0.2014	5.7000e-004	0.1531	4.5000e-004	0.1535	0.0387	4.2000e-004	0.0391		56.9385	56.9385	1.6800e-003		56.9804
Total	0.0302	0.2904	0.2679	1.4000e-003	0.2053	1.3400e-003	0.2067	0.0520	1.2700e-003	0.0533		147.1996	147.1996	7.6600e-003		147.3911

Mitigated Construction On-Site

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

Fugitive Dust					3.2000e-004	0.0000	3.2000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000
Off-Road	0.2809	2.8437	3.3904	4.6600e-003		0.1677	0.1677		0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995
Total	0.2809	2.8437	3.3904	4.6600e-003	3.2000e-004	0.1677	0.1680	5.0000e-005	0.1543	0.1543	0.0000	451.3501	451.3501	0.1460		454.9995

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	8.8100e-003	0.2757	0.0665	8.3000e-004	0.0522	8.9000e-004	0.0531	0.0134	8.5000e-004	0.0142		90.2611	90.2611	5.9800e-003		90.4107
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	0.0214	0.0147	0.2014	5.7000e-004	0.1531	4.5000e-004	0.1535	0.0387	4.2000e-004	0.0391		56.9385	56.9385	1.6800e-003		56.9804
Total	0.0302	0.2904	0.2679	1.4000e-003	0.2053	1.3400e-003	0.2067	0.0520	1.2700e-003	0.0533		147.1996	147.1996	7.6600e-003		147.3911

3.19 WPB Construct Deck - 2021

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	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934		580.2695	580.2695	0.1877		584.9612
Total	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934		580.2695	580.2695	0.1877		584.9612

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	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0493	4.0000e-004	0.0497	0.0126	3.8000e-004	0.0130		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.3003	5.4000e-004	0.3008	0.0750	5.0000e-004	0.0755		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0318	0.2119	0.2924	1.2000e-003	0.3496	9.4000e-004	0.3505	0.0877	8.8000e-004	0.0886		123.3023	123.3023	5.2500e-003		123.4336

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	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934	0.0000	580.2695	580.2695	0.1877		584.9612
Total	0.3937	4.3205	3.2517	5.9900e-003		0.2102	0.2102		0.1934	0.1934	0.0000	580.2695	580.2695	0.1877		584.9612

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
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Category	lb/day										lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0493	4.0000e-004	0.0497	0.0126	3.8000e-004	0.0130	54.9761	54.9761	3.2400e-003	55.0571	
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.3003	5.4000e-004	0.3008	0.0750	5.0000e-004	0.0755	68.3262	68.3262	2.0100e-003	68.3765	
Total	0.0318	0.2119	0.2924	1.2000e-003	0.3496	9.4000e-004	0.3505	0.0877	8.8000e-004	0.0886	123.3023	123.3023	5.2500e-003	123.4336	

3.20 SADD Construct and Replace Access Roads - 2021

Unmitigated Construction On-Site

Category	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					0.5836	0.0000	0.5836	0.0884	0.0000	0.0884			0.0000			0.0000
Off-Road	0.3203	3.2957	2.3852	3.6900e-003		0.1842	0.1842		0.1695	0.1695		357.5079	357.5079	0.1156		360.3985
Total	0.3203	3.2957	2.3852	3.6900e-003	0.5836	0.1842	0.7678	0.0884	0.1695	0.2578		357.5079	357.5079	0.1156		360.3985

Unmitigated Construction Off-Site

Category	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	0.0264	0.8271	0.1996	2.5000e-003	0.0572	2.6800e-003	0.0599	0.0157	2.5600e-003	0.0182		270.7834	270.7834	0.0180		271.2321
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609

Total	0.0693	0.8565	0.6024	3.6400e-003	0.1690	3.5800e-003	0.1726	0.0453	3.3900e-003	0.0487		384.6603	384.6603	0.0213		385.1930
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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					0.2276	0.0000	0.2276	0.0345	0.0000	0.0345			0.0000			0.0000
Off-Road	0.3203	3.2957	2.3852	3.6900e-003		0.1842	0.1842		0.1695	0.1695	0.0000	357.5079	357.5079	0.1156		360.3985
Total	0.3203	3.2957	2.3852	3.6900e-003	0.2276	0.1842	0.4118	0.0345	0.1695	0.2039	0.0000	357.5079	357.5079	0.1156		360.3985

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	0.0264	0.8271	0.1996	2.5000e-003	0.0572	2.6800e-003	0.0599	0.0157	2.5600e-003	0.0182		270.7834	270.7834	0.0180		271.2321
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609
Total	0.0693	0.8565	0.6024	3.6400e-003	0.1690	3.5800e-003	0.1726	0.0453	3.3900e-003	0.0487		384.6603	384.6603	0.0213		385.1930

3.21 WPB Pave Bridge - 2021

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	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947		222.3278	222.3278	0.0719		224.1254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947		222.3278	222.3278	0.0719		224.1254

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	9.1200e-003	0.2913	0.0762	7.7000e-004	0.0192	6.0000e-004	0.0198	5.5300e-003	5.7000e-004	6.1000e-003		82.4642	82.4642	4.8600e-003		82.5856
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0348	0.3090	0.3178	1.4600e-003	0.0863	1.1400e-003	0.0874	0.0233	1.0700e-003	0.0244		150.7904	150.7904	6.8700e-003		150.9622

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	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947	0.0000	222.3278	222.3278	0.0719		224.1254
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.1658	1.6837	1.6454	2.3000e-003		0.1029	0.1029		0.0947	0.0947	0.0000	222.3278	222.3278	0.0719		224.1254

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	9.1200e-003	0.2913	0.0762	7.7000e-004	0.0192	6.0000e-004	0.0198	5.5300e-003	5.7000e-004	6.1000e-003		82.4642	82.4642	4.8600e-003		82.5856
Worker	0.0257	0.0177	0.2417	6.9000e-004	0.0671	5.4000e-004	0.0676	0.0178	5.0000e-004	0.0183		68.3262	68.3262	2.0100e-003		68.3765
Total	0.0348	0.3090	0.3178	1.4600e-003	0.0863	1.1400e-003	0.0874	0.0233	1.0700e-003	0.0244		150.7904	150.7904	6.8700e-003		150.9622

3.22 SADD Install Additional Monitor Equip - 2021

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	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843		912.0624	912.0624	0.2950		919.4369
Total	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843		912.0624	912.0624	0.2950		919.4369

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	0.0194	0.6065	0.1464	1.8300e-003	0.0420	1.9600e-003	0.0439	0.0115	1.8800e-003	0.0134		198.5745	198.5745	0.0132		198.9036
Vendor	3.0400e-003	0.0971	0.0254	2.6000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003		27.4881	27.4881	1.6200e-003		27.5286
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	0.0353	0.7124	0.2926	2.4300e-003	0.0819	2.4300e-003	0.0843	0.0222	2.3200e-003	0.0246		260.2256	260.2256	0.0158		260.6204

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	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843	0.0000	912.0624	912.0624	0.2950		919.4369
Total	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843	0.0000	912.0624	912.0624	0.2950		919.4369

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
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Category	lb/day										lb/day			
Hauling	0.0194	0.6065	0.1464	1.8300e-003	0.0420	1.9600e-003	0.0439	0.0115	1.8800e-003	0.0134	198.5745	198.5745	0.0132	198.9036
Vendor	3.0400e-003	0.0971	0.0254	2.6000e-004	6.4000e-003	2.0000e-004	6.6000e-003	1.8400e-003	1.9000e-004	2.0300e-003	27.4881	27.4881	1.6200e-003	27.5286
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003	34.1631	34.1631	1.0100e-003	34.1883
Total	0.0353	0.7124	0.2926	2.4300e-003	0.0819	2.4300e-003	0.0843	0.0222	2.3200e-003	0.0246	260.2256	260.2256	0.0158	260.6204

3.23 SADD Replace Riprap - 2021

Unmitigated Construction On-Site

Category	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
	lb/day										lb/day					
Fugitive Dust					2.4700e-003	0.0000	2.4700e-003	3.7000e-004	0.0000	3.7000e-004			0.0000			0.0000
Off-Road	0.4584	4.3068	6.5436	0.0103		0.2089	0.2089		0.1922	0.1922		1,000.3839	1,000.3839	0.3235		1,008.4726
Total	0.4584	4.3068	6.5436	0.0103	2.4700e-003	0.2089	0.2114	3.7000e-004	0.1922	0.1925		1,000.3839	1,000.3839	0.3235		1,008.4726

Unmitigated Construction Off-Site

Category	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
	lb/day										lb/day					
Hauling	0.0264	0.8271	0.1996	2.5000e-003	0.0572	2.6800e-003	0.0599	0.0157	2.5600e-003	0.0182		270.7834	270.7834	0.0180		271.2321
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609

Total	0.0693	0.8565	0.6024	3.6400e-003	0.1690	3.5800e-003	0.1726	0.0453	3.3900e-003	0.0487		384.6603	384.6603	0.0213		385.1930
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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					9.6000e-004	0.0000	9.6000e-004	1.5000e-004	0.0000	1.5000e-004			0.0000			0.0000
Off-Road	0.4584	4.3068	6.5436	0.0103		0.2089	0.2089		0.1922	0.1922	0.0000	1,000.3839	1,000.3839	0.3235		1,008.4726
Total	0.4584	4.3068	6.5436	0.0103	9.6000e-004	0.2089	0.2098	1.5000e-004	0.1922	0.1923	0.0000	1,000.3839	1,000.3839	0.3235		1,008.4726

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	0.0264	0.8271	0.1996	2.5000e-003	0.0572	2.6800e-003	0.0599	0.0157	2.5600e-003	0.0182		270.7834	270.7834	0.0180		271.2321
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	0.0429	0.0295	0.4028	1.1400e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		113.8770	113.8770	3.3600e-003		113.9609
Total	0.0693	0.8565	0.6024	3.6400e-003	0.1690	3.5800e-003	0.1726	0.0453	3.3900e-003	0.0487		384.6603	384.6603	0.0213		385.1930

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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					
User Defined Recreational	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
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Land Use	kBTU/yr	lb/day										lb/day				
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Santa Anita Consistency Evaluation - Los Angeles-South Coast County, Annual

Santa Anita Consistency Evaluation
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2021
Utility Company	User Defined				
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - .

Construction Phase - .

Off-road Equipment - 1 pump

Off-road Equipment - 1 concrete saw, 1 crane, 1 pump, 2 tractor loader backhoes

Off-road Equipment - 1 crane

Off-road Equipment - 1 pump, 1 tractor/loader/backhoe

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane

Off-road Equipment - 1 crane
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 rubber-tired dozer, 1 roller
 Off-road Equipment - 1 rubber tired dozer, 1 excavator, 2 tractors
 Off-road Equipment - 1 saw, 1 pump, 1 drill rig
 Off-road Equipment - 2 tractors
 Off-road Equipment - 1 concrete pump (pump), 1 concrete saw, 1 pump
 Off-road Equipment - 1 drill rig
 Off-road Equipment - 2 tractor/loader/backhoes
 Off-road Equipment - 2 excavators
 Off-road Equipment - 1 pump
 Off-road Equipment - 1 concrete saw, 1 excavator, 1 tractor
 Off-road Equipment - 1 crane, 1 excavator
 Off-road Equipment - 1 tractor
 Off-road Equipment - 1 crane, 1 tractor
 Off-road Equipment - 1 concrete saw, 1 tractor, 1 excavator
 Off-road Equipment - 1 roller

Trips and VMT - Based on previous CalEEMod run for Certified MND and County emails from 2/13/20, emails/files from 6/8/20 and 7/9/20

Demolition - .

Grading - based on Final MND and County data from 2/13/20 email, and County data from 6/8/20 and 7/9/20 emails

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation -

Fleet Mix -

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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					
2019	0.0157	0.1719	0.1322	3.3000e-004	5.2500e-003	7.3100e-003	0.0126	1.4700e-003	7.1100e-003	8.5800e-003	0.0000	30.1513	30.1513	2.9600e-003	0.0000	30.2254
2020	0.1048	0.9463	0.8784	1.6400e-003	0.0151	0.0509	0.0660	4.0100e-003	0.0490	0.0530	0.0000	143.2094	143.2094	0.0217	0.0000	143.7527
2021	0.1135	1.6869	1.0054	3.5400e-003	0.3220	0.0448	0.3668	0.1162	0.0423	0.1585	0.0000	332.1655	332.1655	0.0436	0.0000	333.2566
Maximum	0.1135	1.6869	1.0054	3.5400e-003	0.3220	0.0509	0.3668	0.1162	0.0490	0.1585	0.0000	332.1655	332.1655	0.0436	0.0000	333.2566

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					
2019	0.0157	0.1719	0.1322	3.3000e-004	5.2500e-003	7.3100e-003	0.0126	1.4700e-003	7.1100e-003	8.5800e-003	0.0000	30.1513	30.1513	2.9600e-003	0.0000	30.2254
2020	0.1048	0.9463	0.8784	1.6400e-003	0.0150	0.0509	0.0659	4.0000e-003	0.0490	0.0530	0.0000	143.2093	143.2093	0.0217	0.0000	143.7526
2021	0.1135	1.6869	1.0054	3.5400e-003	0.2383	0.0448	0.2831	0.0739	0.0423	0.1162	0.0000	332.1654	332.1654	0.0436	0.0000	333.2564
Maximum	0.1135	1.6869	1.0054	3.5400e-003	0.2383	0.0509	0.2831	0.0739	0.0490	0.1162	0.0000	332.1654	332.1654	0.0436	0.0000	333.2564

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	24.47	0.00	18.81	34.77	0.00	19.23	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-15-2019	2-14-2020	0.2360	0.2360
2	2-15-2020	5-14-2020	0.4497	0.4497
3	5-15-2020	8-14-2020	0.4757	0.4757
4	8-15-2020	11-14-2020	0.0827	0.0827
6	2-15-2021	5-14-2021	0.4197	0.4197
7	5-15-2021	8-14-2021	1.1559	1.1559
8	8-15-2021	9-30-2021	0.1185	0.1185
		Highest	1.1559	1.1559

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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/15/2019	11/28/2019	5	10	SAD Armor Canyon/Dam
2	SAD Helipad and Water System	Building Construction	11/15/2019	12/25/2019	5	30	
3	SAD Repair Leaks	Building Construction	1/1/2020	1/12/2020	5	10	
4	SAD Remove/Replace JibCrane	Building Construction	1/13/2020	1/26/2020	5	10	
5	SAD Hoist	Building Construction	2/1/2020	2/28/2020	5	20	
6	SAD Construct New Spillway	Grading	3/1/2020	6/30/2020	5	131	
7	SAD Electrical	Building Construction	3/2/2020	3/29/2020	5	20	
8	SAD Install Valves	Building Construction	3/2/2020	3/15/2020	5	10	
9	SADD Construct Parapet Walls	Grading	4/1/2021	4/30/2021	5	20	
10	SAHW Demolition	Demolition	4/7/2021	5/1/2021	5	20	
11	SADD Construct Downstream	Grading	5/1/2021	7/15/2021	5	54	
12	SAHW Construct Levee	Building Construction	5/2/2021	6/27/2021	5	40	
13	WPB Demo	Demolition	6/28/2021	7/10/2021	5	10	
14	WPB Clear/Grub	Site Preparation	7/11/2021	8/8/2021	5	20	
15	SADD Construct New Subdrain	Grading	7/16/2021	8/15/2021	5	23	
16	WPB Abutments and Wing Walls	Building Construction	8/9/2021	8/22/2021	5	10	
17	SADD Remove/Construct Outlet	Grading	8/17/2021	8/30/2021	5	11	
18	WPB Construct Deck	Building Construction	8/23/2021	9/5/2021	5	10	
19	SADD Construct and Replace	Demolition	9/1/2021	9/30/2021	5	22	
20	WPB Pave Bridge	Paving	9/6/2021	9/19/2021	5	10	
21	SADD Install Additional Monitor	Trenching	10/1/2021	10/21/2021	5	15	
22	SADD Replace Riprap	Grading	10/22/2021	11/22/2021	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	0	4.00	231	0.29
Building Construction	Forklifts	0	6.00	89	0.20
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Helipad and Water System	Cranes	0	4.00	231	0.29
SAD Helipad and Water System	Forklifts	0	6.00	89	0.20
SAD Helipad and Water System	Pumps	1	8.00	84	0.74
SAD Helipad and Water System	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SAD Repair Leaks	Cranes	0	4.00	231	0.29
SAD Repair Leaks	Forklifts	0	6.00	89	0.20
SAD Repair Leaks	Pumps	1	8.00	84	0.74
SAD Repair Leaks	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Remove/Replace JibCrane	Cranes	1	4.00	231	0.29
SAD Remove/Replace JibCrane	Forklifts	0	6.00	89	0.20
SAD Remove/Replace JibCrane	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Hoist	Cranes	1	4.00	231	0.29
SAD Hoist	Forklifts	0	6.00	89	0.20
SAD Hoist	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Construct New Spillway	Concrete/Industrial Saws	1	8.00	81	0.73
SAD Construct New Spillway	Cranes	1	4.00	231	0.29
SAD Construct New Spillway	Pumps	1	8.00	84	0.74
SAD Construct New Spillway	Rubber Tired Dozers	0	1.00	247	0.40
SAD Construct New Spillway	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SAD Electrical	Cranes	1	4.00	231	0.29
SAD Electrical	Forklifts	0	6.00	89	0.20
SAD Electrical	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SAD Install Valves	Cranes	1	4.00	231	0.29
SAD Install Valves	Forklifts	0	6.00	89	0.20
SAD Install Valves	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct Parapet Walls	Concrete/Industrial Saws	1	8.00	81	0.73

SADD Construct Parapet Walls	Pumps	2	8.00	84	0.74
SADD Construct Parapet Walls	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct Parapet Walls	Tractors/Loaders/Backhoes	0	6.00	97	0.37
SAHW Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
SAHW Demolition	Excavators	1	6.00	158	0.38
SAHW Demolition	Rubber Tired Dozers	0	1.00	247	0.40
SAHW Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
SADD Construct Downstream Butress	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct Downstream Butress	Cranes	0	4.00	231	0.29
SADD Construct Downstream Butress	Excavators	1	6.00	158	0.38
SADD Construct Downstream Butress	Forklifts	0	6.00	89	0.20
SADD Construct Downstream Butress	Rubber Tired Dozers	1	6.00	247	0.40
SADD Construct Downstream Butress	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SAHW Construct Levee	Cranes	0	4.00	231	0.29
SAHW Construct Levee	Forklifts	0	6.00	89	0.20
SAHW Construct Levee	Pumps	1	8.00	84	0.74
SAHW Construct Levee	Tractors/Loaders/Backhoes	0	8.00	97	0.37
WPB Demo	Concrete/Industrial Saws	1	8.00	81	0.73
WPB Demo	Excavators	1	6.00	158	0.38
WPB Demo	Rubber Tired Dozers	0	1.00	247	0.40
WPB Demo	Tractors/Loaders/Backhoes	1	6.00	97	0.37
WPB Clear/Grub	Graders	0	8.00	187	0.41
WPB Clear/Grub	Tractors/Loaders/Backhoes	1	8.00	97	0.37
WPB Clear/Grub	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Construct New Subdrain	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct New Subdrain	Rubber Tired Dozers	0	1.00	247	0.40
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	2	6.00	97	0.37
SADD Construct New Subdrain	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Abutments and Wing Walls	Cranes	1	4.00	231	0.29
WPB Abutments and Wing Walls	Excavators	1	6.00	158	0.38

WPB Abutments and Wing Walls	Forklifts	0	6.00	89	0.20
WPB Abutments and Wing Walls	Tractors/Loaders/Backhoes	0	8.00	97	0.37
SADD Remove/Construct Outlet Tower(s)	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Remove/Construct Outlet Tower(s)	Rubber Tired Dozers	0	1.00	247	0.40
SADD Remove/Construct Outlet Tower(s)	Tractors/Loaders/Backhoes	2	6.00	97	0.37
WPB Construct Deck	Cranes	1	4.00	231	0.29
WPB Construct Deck	Forklifts	0	6.00	89	0.20
WPB Construct Deck	Tractors/Loaders/Backhoes	1	8.00	97	0.37
SADD Construct and Replace Access Roads	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Construct and Replace Access Roads	Rollers	1	8.00	80	0.38
SADD Construct and Replace Access Roads	Rubber Tired Dozers	1	1.00	247	0.40
SADD Construct and Replace Access Roads	Tractors/Loaders/Backhoes	0	6.00	97	0.37
WPB Pave Bridge	Cement and Mortar Mixers	0	6.00	9	0.56
WPB Pave Bridge	Pavers	0	7.00	130	0.42
WPB Pave Bridge	Rollers	1	7.00	80	0.38
WPB Pave Bridge	Tractors/Loaders/Backhoes	0	7.00	97	0.37
SADD Install Additional Monitor Equip	Bore/Drill Rigs	1	8.00	221	0.50
SADD Replace Riprap	Concrete/Industrial Saws	0	8.00	81	0.73
SADD Replace Riprap	Excavators	2	8.00	158	0.38
SADD Replace Riprap	Rubber Tired Dozers	0	1.00	247	0.40
SADD Replace Riprap	Tractors/Loaders/Backhoes	0	6.00	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
Building Construction	1	6.00	103.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Helipad and Water System	2	10.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Repair Leaks	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Remove/Replace libCrane	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Hoist	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT

SAD Construct New Swallow	5	16.00	0.00	112.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAD Electrical	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SAD Install Valves	1	6.00	1.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Parapet Walls	3	4.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SAHW Demolition	3	10.00	0.00	20.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct Downstream Buttress	4	10.00	0.00	8,125.00	14.70	6.90	10.50	LD_Mix	HDT_Mix	HHDT
SAHW Construct Levee	1	6.00	8.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Demo	3	10.00	0.00	28.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Clear/Grub	1	6.00	0.00	260.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct New Subdrain	2	6.00	27.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
WPB Abutments and Wing Walls	2	8.00	7.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Remove/Construct	2	5.00	0.00	10.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Construct Deck	2	6.00	2.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Construct and Replace Access	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
WPB Pave Bridge	1	6.00	3.00	0.00	14.70	6.90	0.50	LD_Mix	HDT_Mix	HHDT
SADD Install Additional Monitor	1	3.00	1.00	30.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT
SADD Replace Riprap	2	10.00	0.00	60.00	14.70	6.90	24.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2019

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	2.3500e-003	0.0192	0.0189	3.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	2.8260	2.8260	1.9000e-004	0.0000	2.8308

Total	2.3500e-003	0.0192	0.0189	3.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	2.8260	2.8260	1.9000e-004	0.0000	2.8308
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1800e-003	0.0608	0.0166	1.3000e-004	3.2400e-003	3.8000e-004	3.6300e-003	9.4000e-004	3.7000e-004	1.3000e-003	0.0000	12.8783	12.8783	8.6000e-004	0.0000	12.8998
Worker	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	2.3300e-003	0.0610	0.0180	1.3000e-004	3.5700e-003	3.8000e-004	3.9600e-003	1.0300e-003	3.7000e-004	1.3900e-003	0.0000	13.1943	13.1943	8.7000e-004	0.0000	13.2161

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	2.3500e-003	0.0192	0.0189	3.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	2.8260	2.8260	1.9000e-004	0.0000	2.8308
Total	2.3500e-003	0.0192	0.0189	3.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	2.8260	2.8260	1.9000e-004	0.0000	2.8308

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1800e-003	0.0608	0.0166	1.3000e-004	3.2400e-003	3.8000e-004	3.6300e-003	9.4000e-004	3.7000e-004	1.3000e-003	0.0000	12.8783	12.8783	8.6000e-004	0.0000	12.8998
Worker	1.5000e-004	1.3000e-004	1.3600e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3160	0.3160	1.0000e-005	0.0000	0.3163
Total	2.3300e-003	0.0610	0.0180	1.3000e-004	3.5700e-003	3.8000e-004	3.9600e-003	1.0300e-003	3.7000e-004	1.3900e-003	0.0000	13.1943	13.1943	8.7000e-004	0.0000	13.2161

3.3 SAD Helipad and Water System - 2019

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	0.0102	0.0895	0.0882	1.4000e-004		5.7100e-003	5.7100e-003		5.5300e-003	5.5300e-003	0.0000	12.2410	12.2410	1.8300e-003	0.0000	12.2867
Total	0.0102	0.0895	0.0882	1.4000e-004		5.7100e-003	5.7100e-003		5.5300e-003	5.5300e-003	0.0000	12.2410	12.2410	1.8300e-003	0.0000	12.2867

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	6.0000e-005	1.7100e-003	4.7000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3626	0.3626	2.0000e-005	0.0000	0.3632
Worker	7.3000e-004	6.1000e-004	6.5800e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.5274	1.5274	5.0000e-005	0.0000	1.5287
Total	7.9000e-004	2.3200e-003	7.0500e-003	2.0000e-005	1.6800e-003	2.0000e-005	1.7000e-003	4.5000e-004	2.0000e-005	4.7000e-004	0.0000	1.8900	1.8900	7.0000e-005	0.0000	1.8919

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	0.0102	0.0895	0.0882	1.4000e-004		5.7100e-003	5.7100e-003		5.5300e-003	5.5300e-003	0.0000	12.2410	12.2410	1.8300e-003	0.0000	12.2867
Total	0.0102	0.0895	0.0882	1.4000e-004		5.7100e-003	5.7100e-003		5.5300e-003	5.5300e-003	0.0000	12.2410	12.2410	1.8300e-003	0.0000	12.2867

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	6.0000e-005	1.7100e-003	4.7000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3626	0.3626	2.0000e-005	0.0000	0.3632
Worker	7.3000e-004	6.1000e-004	6.5800e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.5274	1.5274	5.0000e-005	0.0000	1.5287
Total	7.9000e-004	2.3200e-003	7.0500e-003	2.0000e-005	1.6800e-003	2.0000e-005	1.7000e-003	4.5000e-004	2.0000e-005	4.7000e-004	0.0000	1.8900	1.8900	7.0000e-005	0.0000	1.8919

3.4 SAD Repair Leaks - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6900e-003	0.0141	0.0151	3.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	2.2608	2.2608	1.4000e-004	0.0000	2.2642
Total	1.6900e-003	0.0141	0.0151	3.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	2.2608	2.2608	1.4000e-004	0.0000	2.2642

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	1.0000e-005	4.3000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0994	0.0994	1.0000e-005	0.0000	0.0995
Worker	1.1000e-004	9.0000e-005	9.9000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2451	0.2451	1.0000e-005	0.0000	0.2453
Total	1.2000e-004	5.2000e-004	1.1100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3445	0.3445	2.0000e-005	0.0000	0.3449

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6900e-003	0.0141	0.0151	3.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	2.2608	2.2608	1.4000e-004	0.0000	2.2642
Total	1.6900e-003	0.0141	0.0151	3.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	2.2608	2.2608	1.4000e-004	0.0000	2.2642

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	1.0000e-005	4.3000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0994	0.0994	1.0000e-005	0.0000	0.0995
Worker	1.1000e-004	9.0000e-005	9.9000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2451	0.2451	1.0000e-005	0.0000	0.2453
Total	1.2000e-004	5.2000e-004	1.1100e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.3445	0.3445	2.0000e-005	0.0000	0.3449

3.5 SAD Remove/Replace JibCrane - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776

Total	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	1.4000e-004	1.1000e-004	1.2300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3064	0.3064	1.0000e-005	0.0000	0.3067
Total	1.6000e-004	6.5000e-004	1.3800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4306	0.4306	2.0000e-005	0.0000	0.4311

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776
Total	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	1.4000e-004	1.1000e-004	1.2300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3064	0.3064	1.0000e-005	0.0000	0.3067
Total	1.6000e-004	6.5000e-004	1.3800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4306	0.4306	2.0000e-005	0.0000	0.4311

3.6 SAD Hoist - 2020

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	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551
Total	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551

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	4.0000e-005	1.0800e-003	2.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2484	0.2484	2.0000e-005	0.0000	0.2488
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	3.2000e-004	1.3000e-003	2.7600e-003	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8612	0.8612	4.0000e-005	0.0000	0.8621

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	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551
Total	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551

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	4.0000e-005	1.0800e-003	2.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2484	0.2484	2.0000e-005	0.0000	0.2488
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	3.2000e-004	1.3000e-003	2.7600e-003	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8612	0.8612	4.0000e-005	0.0000	0.8621

3.7 SAD Construct New Spillway - 2020

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					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0899	0.8243	0.7752	1.3200e-003		0.0466	0.0466		0.0449	0.0449	0.0000	114.7644	114.7644	0.0183	0.0000	115.2230
Total	0.0899	0.8243	0.7752	1.3200e-003	5.0000e-005	0.0466	0.0466	1.0000e-005	0.0449	0.0449	0.0000	114.7644	114.7644	0.0183	0.0000	115.2230

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	5.7000e-004	0.0188	4.2100e-003	5.0000e-005	1.1500e-003	6.0000e-005	1.2100e-003	3.2000e-004	6.0000e-005	3.7000e-004	0.0000	5.0301	5.0301	3.4000e-004	0.0000	5.0386
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	4.8000e-003	3.8700e-003	0.0428	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0300e-003	9.0000e-005	3.1200e-003	0.0000	10.6221	10.6221	3.3000e-004	0.0000	10.6304
Total	5.3700e-003	0.0226	0.0470	1.7000e-004	0.0126	1.6000e-004	0.0127	3.3500e-003	1.5000e-004	3.4900e-003	0.0000	15.6522	15.6522	6.7000e-004	0.0000	15.6690

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0899	0.8243	0.7752	1.3200e-003		0.0466	0.0466		0.0449	0.0449	0.0000	114.7642	114.7642	0.0183	0.0000	115.2228
Total	0.0899	0.8243	0.7752	1.3200e-003	2.0000e-005	0.0466	0.0466	0.0000	0.0449	0.0449	0.0000	114.7642	114.7642	0.0183	0.0000	115.2228

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	5.7000e-004	0.0188	4.2100e-003	5.0000e-005	1.1500e-003	6.0000e-005	1.2100e-003	3.2000e-004	6.0000e-005	3.7000e-004	0.0000	5.0301	5.0301	3.4000e-004	0.0000	5.0386
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	4.8000e-003	3.8700e-003	0.0428	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0300e-003	9.0000e-005	3.1200e-003	0.0000	10.6221	10.6221	3.3000e-004	0.0000	10.6304
Total	5.3700e-003	0.0226	0.0470	1.7000e-004	0.0126	1.6000e-004	0.0127	3.3500e-003	1.5000e-004	3.4900e-003	0.0000	15.6522	15.6522	6.7000e-004	0.0000	15.6690

3.8 SAD Electrical - 2020

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	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551

Total	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551
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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	4.0000e-005	1.0800e-003	2.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2484	0.2484	2.0000e-005	0.0000	0.2488
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	3.2000e-004	1.3000e-003	2.7600e-003	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8612	0.8612	4.0000e-005	0.0000	0.8621

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	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551
Total	2.2700e-003	0.0270	0.0106	3.0000e-005		1.1100e-003	1.1100e-003		1.0200e-003	1.0200e-003	0.0000	2.5346	2.5346	8.2000e-004	0.0000	2.5551

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	4.0000e-005	1.0800e-003	2.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2484	0.2484	2.0000e-005	0.0000	0.2488
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	3.2000e-004	1.3000e-003	2.7600e-003	1.0000e-005	7.2000e-004	2.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8612	0.8612	4.0000e-005	0.0000	0.8621

3.9 SAD Install Valves - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776
Total	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	1.4000e-004	1.1000e-004	1.2300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3064	0.3064	1.0000e-005	0.0000	0.3067
Total	1.6000e-004	6.5000e-004	1.3800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4306	0.4306	2.0000e-005	0.0000	0.4311

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776
Total	1.1300e-003	0.0135	5.2900e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.1000e-004	5.1000e-004	0.0000	1.2673	1.2673	4.1000e-004	0.0000	1.2776

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.4000e-004	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1242	0.1242	1.0000e-005	0.0000	0.1244
Worker	1.4000e-004	1.1000e-004	1.2300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3064	0.3064	1.0000e-005	0.0000	0.3067
Total	1.6000e-004	6.5000e-004	1.3800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4306	0.4306	2.0000e-005	0.0000	0.4311

3.10 SADD Construct Parapet Walls - 2021

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-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0126	0.1040	0.1227	2.1000e-004		5.8100e-003	5.8100e-003		5.8100e-003	5.8100e-003	0.0000	18.3488	18.3488	1.0200e-003	0.0000	18.3744
Total	0.0126	0.1040	0.1227	2.1000e-004	3.0000e-005	5.8100e-003	5.8400e-003	0.0000	5.8100e-003	5.8100e-003	0.0000	18.3488	18.3488	1.0200e-003	0.0000	18.3744

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	3.2000e-004	0.0104	2.4700e-003	3.0000e-005	6.3000e-004	3.0000e-005	6.7000e-004	1.8000e-004	3.0000e-005	2.1000e-004	0.0000	2.9539	2.9539	2.0000e-004	0.0000	2.9589
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	1.9000e-004	1.5000e-004	1.6600e-003	0.0000	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4351	0.4351	1.0000e-005	0.0000	0.4354
Total	5.1000e-004	0.0105	4.1300e-003	3.0000e-005	1.1100e-003	3.0000e-005	1.1600e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	3.3891	3.3891	2.1000e-004	0.0000	3.3944

Mitigated Construction On-Site

Off-Road	6.2700e-003	0.0547	0.0704	1.1000e-004		3.0200e-003	3.0200e-003		2.9000e-003	2.9000e-003	0.0000	9.7444	9.7444	1.8700e-003	0.0000	9.7911
Total	6.2700e-003	0.0547	0.0704	1.1000e-004	1.9300e-003	3.0200e-003	4.9500e-003	2.9000e-004	2.9000e-003	3.1900e-003	0.0000	9.7444	9.7444	1.8700e-003	0.0000	9.7911

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	2.0000e-005	8.7000e-004	1.3000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.1033	0.1033	1.0000e-005	0.0000	0.1036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	3.4000e-003	1.0000e-005	4.4100e-003	1.0000e-005	4.4100e-003	1.1000e-003	1.0000e-005	1.1100e-003	0.0000	0.8900	0.8900	3.0000e-005	0.0000	0.8907
Total	4.1000e-004	1.1700e-003	3.5300e-003	1.0000e-005	4.4300e-003	1.0000e-005	4.4300e-003	1.1000e-003	1.0000e-005	1.1100e-003	0.0000	0.9933	0.9933	4.0000e-005	0.0000	0.9943

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					7.5000e-004	0.0000	7.5000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2700e-003	0.0547	0.0704	1.1000e-004		3.0200e-003	3.0200e-003		2.9000e-003	2.9000e-003	0.0000	9.7444	9.7444	1.8700e-003	0.0000	9.7911
Total	6.2700e-003	0.0547	0.0704	1.1000e-004	7.5000e-004	3.0200e-003	3.7700e-003	1.1000e-004	2.9000e-003	3.0100e-003	0.0000	9.7444	9.7444	1.8700e-003	0.0000	9.7911

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	2.0000e-005	8.7000e-004	1.3000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.1033	0.1033	1.0000e-005	0.0000	0.1036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.0000e-004	3.4000e-003	1.0000e-005	4.4100e-003	1.0000e-005	4.4100e-003	1.1000e-003	1.0000e-005	1.1100e-003	0.0000	0.8900	0.8900	3.0000e-005	0.0000	0.8907
Total	4.1000e-004	1.1700e-003	3.5300e-003	1.0000e-005	4.4300e-003	1.0000e-005	4.4300e-003	1.1000e-003	1.0000e-005	1.1100e-003	0.0000	0.9933	0.9933	4.0000e-005	0.0000	0.9943

3.12 SADD Construct Downstream Butress - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1256	0.0000	0.1256	0.0676	0.0000	0.0676	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0334	0.3426	0.2396	4.0000e-004		0.0174	0.0174		0.0160	0.0160	0.0000	35.4430	35.4430	0.0115	0.0000	35.7296
Total	0.0334	0.3426	0.2396	4.0000e-004	0.1256	0.0174	0.1430	0.0676	0.0160	0.0836	0.0000	35.4430	35.4430	0.0115	0.0000	35.7296

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	0.0212	0.7675	0.1635	1.8400e-003	0.1469	1.8500e-003	0.1488	0.0371	1.7700e-003	0.0389	0.0000	181.5174	181.5174	0.0142	0.0000	181.8715
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	1.1600e-003	9.0000e-004	0.0102	3.0000e-005	0.0132	2.0000e-005	0.0132	3.3000e-003	2.0000e-005	3.3300e-003	0.0000	2.6701	2.6701	8.0000e-005	0.0000	2.6720
Total	0.0224	0.7684	0.1738	1.8700e-003	0.1602	1.8700e-003	0.1620	0.0404	1.7900e-003	0.0422	0.0000	184.1875	184.1875	0.0143	0.0000	184.5436

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0490	0.0000	0.0490	0.0264	0.0000	0.0264	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0334	0.3426	0.2396	4.0000e-004		0.0174	0.0174		0.0160	0.0160	0.0000	35.4430	35.4430	0.0115	0.0000	35.7295
Total	0.0334	0.3426	0.2396	4.0000e-004	0.0490	0.0174	0.0664	0.0264	0.0160	0.0424	0.0000	35.4430	35.4430	0.0115	0.0000	35.7295

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	0.0212	0.7675	0.1635	1.8400e-003	0.1469	1.8500e-003	0.1488	0.0371	1.7700e-003	0.0389	0.0000	181.5174	181.5174	0.0142	0.0000	181.8715
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	1.1600e-003	9.0000e-004	0.0102	3.0000e-005	0.0132	2.0000e-005	0.0132	3.3000e-003	2.0000e-005	3.3300e-003	0.0000	2.6701	2.6701	8.0000e-005	0.0000	2.6720
Total	0.0224	0.7684	0.1738	1.8700e-003	0.1602	1.8700e-003	0.1620	0.0404	1.7900e-003	0.0422	0.0000	184.1875	184.1875	0.0143	0.0000	184.5436

3.13 SAHW Construct Levee - 2021

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	7.6100e-003	0.0642	0.0748	1.3000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	11.3042	11.3042	6.2000e-004	0.0000	11.3196
Total	7.6100e-003	0.0642	0.0748	1.3000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	11.3042	11.3042	6.2000e-004	0.0000	11.3196

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	5.0000e-004	0.0158	4.2800e-003	4.0000e-005	1.0100e-003	3.0000e-005	1.0400e-003	2.9000e-004	3.0000e-005	3.2000e-004	0.0000	3.9440	3.9440	2.4000e-004	0.0000	3.9500
Worker	5.2000e-004	4.0000e-004	4.5400e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1867	1.1867	3.0000e-005	0.0000	1.1876
Total	1.0200e-003	0.0162	8.8200e-003	5.0000e-005	2.3200e-003	4.0000e-005	2.3700e-003	6.4000e-004	4.0000e-005	6.8000e-004	0.0000	5.1307	5.1307	2.7000e-004	0.0000	5.1376

Mitigated Construction On-Site

Off-Road	3.4900e-003	0.0304	0.0391	6.0000e-005		1.6800e-003	1.6800e-003		1.6100e-003	1.6100e-003	0.0000	5.4136	5.4136	1.0400e-003	0.0000	5.4395
Total	3.4900e-003	0.0304	0.0391	6.0000e-005	3.0000e-003	1.6800e-003	4.6800e-003	4.5000e-004	1.6100e-003	2.0600e-003	0.0000	5.4136	5.4136	1.0400e-003	0.0000	5.4395

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	3.0000e-005	1.3500e-003	2.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.1606	0.1606	2.0000e-005	0.0000	0.1612
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	2.2000e-004	1.7000e-004	1.8900e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4945	0.4945	1.0000e-005	0.0000	0.4948
Total	2.5000e-004	1.5200e-003	2.1000e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.6551	0.6551	3.0000e-005	0.0000	0.6560

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					1.1700e-003	0.0000	1.1700e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4900e-003	0.0304	0.0391	6.0000e-005		1.6800e-003	1.6800e-003		1.6100e-003	1.6100e-003	0.0000	5.4135	5.4135	1.0400e-003	0.0000	5.4395
Total	3.4900e-003	0.0304	0.0391	6.0000e-005	1.1700e-003	1.6800e-003	2.8500e-003	1.8000e-004	1.6100e-003	1.7900e-003	0.0000	5.4135	5.4135	1.0400e-003	0.0000	5.4395

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	3.0000e-005	1.3500e-003	2.1000e-004	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.1606	0.1606	2.0000e-005	0.0000	0.1612
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	2.2000e-004	1.7000e-004	1.8900e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4945	0.4945	1.0000e-005	0.0000	0.4948
Total	2.5000e-004	1.5200e-003	2.1000e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.6551	0.6551	3.0000e-005	0.0000	0.6560

3.15 WPB Clear/Grub - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4000e-004	0.0000	2.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8700e-003	0.0190	0.0226	3.0000e-005		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	2.7297	2.7297	8.8000e-004	0.0000	2.7518
Total	1.8700e-003	0.0190	0.0226	3.0000e-005	2.4000e-004	1.1200e-003	1.3600e-003	4.0000e-005	1.0300e-003	1.0700e-003	0.0000	2.7297	2.7297	8.8000e-004	0.0000	2.7518

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	2.4000e-004	0.0125	1.9100e-003	2.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.4914	1.4914	2.1000e-004	0.0000	1.4966
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	2.6000e-004	2.0000e-004	2.2700e-003	1.0000e-005	1.8000e-003	1.0000e-005	1.8000e-003	4.5000e-004	0.0000	4.6000e-004	0.0000	0.5934	0.5934	2.0000e-005	0.0000	0.5938
Total	5.0000e-004	0.0127	4.1800e-003	3.0000e-005	1.9400e-003	2.0000e-005	1.9500e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	2.0848	2.0848	2.3000e-004	0.0000	2.0904

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					9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8700e-003	0.0190	0.0226	3.0000e-005		1.1200e-003	1.1200e-003		1.0300e-003	1.0300e-003	0.0000	2.7297	2.7297	8.8000e-004	0.0000	2.7518
Total	1.8700e-003	0.0190	0.0226	3.0000e-005	9.0000e-005	1.1200e-003	1.2100e-003	1.0000e-005	1.0300e-003	1.0400e-003	0.0000	2.7297	2.7297	8.8000e-004	0.0000	2.7518

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	2.4000e-004	0.0125	1.9100e-003	2.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.4914	1.4914	2.1000e-004	0.0000	1.4966
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	2.6000e-004	2.0000e-004	2.2700e-003	1.0000e-005	1.8000e-003	1.0000e-005	1.8000e-003	4.5000e-004	0.0000	4.6000e-004	0.0000	0.5934	0.5934	2.0000e-005	0.0000	0.5938
Total	5.0000e-004	0.0127	4.1800e-003	3.0000e-005	1.9400e-003	2.0000e-005	1.9500e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	2.0848	2.0848	2.3000e-004	0.0000	2.0904

3.16 SADD Construct New Subdrain - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9500e-003	0.0299	0.0356	5.0000e-005		1.7600e-003	1.7600e-003		1.6200e-003	1.6200e-003	0.0000	4.2993	4.2993	1.3900e-003	0.0000	4.3341
Total	2.9500e-003	0.0299	0.0356	5.0000e-005	0.0000	1.7600e-003	1.7600e-003	0.0000	1.6200e-003	1.6200e-003	0.0000	4.2993	4.2993	1.3900e-003	0.0000	4.3341

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	8.8000e-004	0.0280	7.5900e-003	7.0000e-005	4.3100e-003	6.0000e-005	4.3700e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	6.9882	6.9882	4.3000e-004	0.0000	6.9989
Worker	2.7000e-004	2.1000e-004	2.3800e-003	1.0000e-005	1.8900e-003	1.0000e-005	1.8900e-003	4.8000e-004	1.0000e-005	4.8000e-004	0.0000	0.6230	0.6230	2.0000e-005	0.0000	0.6235
Total	1.1500e-003	0.0282	9.9700e-003	8.0000e-005	6.2000e-003	7.0000e-005	6.2600e-003	1.6200e-003	6.0000e-005	1.6700e-003	0.0000	7.6112	7.6112	4.5000e-004	0.0000	7.6224

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9500e-003	0.0299	0.0356	5.0000e-005		1.7600e-003	1.7600e-003		1.6200e-003	1.6200e-003	0.0000	4.2993	4.2993	1.3900e-003	0.0000	4.3341
Total	2.9500e-003	0.0299	0.0356	5.0000e-005	0.0000	1.7600e-003	1.7600e-003	0.0000	1.6200e-003	1.6200e-003	0.0000	4.2993	4.2993	1.3900e-003	0.0000	4.3341

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	8.8000e-004	0.0280	7.5900e-003	7.0000e-005	4.3100e-003	6.0000e-005	4.3700e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	6.9882	6.9882	4.3000e-004	0.0000	6.9989
Worker	2.7000e-004	2.1000e-004	2.3800e-003	1.0000e-005	1.8900e-003	1.0000e-005	1.8900e-003	4.8000e-004	1.0000e-005	4.8000e-004	0.0000	0.6230	0.6230	2.0000e-005	0.0000	0.6235
Total	1.1500e-003	0.0282	9.9700e-003	8.0000e-005	6.2000e-003	7.0000e-005	6.2600e-003	1.6200e-003	6.0000e-005	1.6700e-003	0.0000	7.6112	7.6112	4.5000e-004	0.0000	7.6224

3.17 WPB Abutments and Wing Walls - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8900e-003	0.0202	0.0172	3.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	2.9688	2.9688	9.6000e-004	0.0000	2.9928

Total	1.8900e-003	0.0202	0.0172	3.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	2.9688	2.9688	9.6000e-004	0.0000	2.9928
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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	1.1000e-004	3.4500e-003	9.4000e-004	1.0000e-005	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8627	0.8627	5.0000e-005	0.0000	0.8641
Worker	1.7000e-004	1.3000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3956	0.3956	1.0000e-005	0.0000	0.3959
Total	2.8000e-004	3.5800e-003	2.4500e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.7000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	1.2583	1.2583	6.0000e-005	0.0000	1.2599

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8900e-003	0.0202	0.0172	3.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	2.9688	2.9688	9.6000e-004	0.0000	2.9928
Total	1.8900e-003	0.0202	0.0172	3.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	2.9688	2.9688	9.6000e-004	0.0000	2.9928

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	1.1000e-004	3.4500e-003	9.4000e-004	1.0000e-005	2.2000e-004	1.0000e-005	2.3000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.8627	0.8627	5.0000e-005	0.0000	0.8641
Worker	1.7000e-004	1.3000e-004	1.5100e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3956	0.3956	1.0000e-005	0.0000	0.3959
Total	2.8000e-004	3.5800e-003	2.4500e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.7000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	1.2583	1.2583	6.0000e-005	0.0000	1.2599

3.18 SADD Remove/Construct Outlet Tower(s) - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4000e-003	0.0142	0.0170	2.0000e-005		8.4000e-004	8.4000e-004		7.7000e-004	7.7000e-004	0.0000	2.0473	2.0473	6.6000e-004	0.0000	2.0638
Total	1.4000e-003	0.0142	0.0170	2.0000e-005	0.0000	8.4000e-004	8.4000e-004	0.0000	7.7000e-004	7.7000e-004	0.0000	2.0473	2.0473	6.6000e-004	0.0000	2.0638

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	4.0000e-005	1.4300e-003	3.4000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.4069	0.4069	3.0000e-005	0.0000	0.4076
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	1.1000e-004	8.0000e-005	9.5000e-004	0.0000	7.5000e-004	0.0000	7.5000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.2472	0.2472	1.0000e-005	0.0000	0.2474
Total	1.5000e-004	1.5100e-003	1.2900e-003	0.0000	1.0100e-003	0.0000	1.0100e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.6541	0.6541	4.0000e-005	0.0000	0.6550

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4000e-003	0.0142	0.0170	2.0000e-005		8.4000e-004	8.4000e-004		7.7000e-004	7.7000e-004	0.0000	2.0473	2.0473	6.6000e-004	0.0000	2.0638
Total	1.4000e-003	0.0142	0.0170	2.0000e-005	0.0000	8.4000e-004	8.4000e-004	0.0000	7.7000e-004	7.7000e-004	0.0000	2.0473	2.0473	6.6000e-004	0.0000	2.0638

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	4.0000e-005	1.4300e-003	3.4000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.4069	0.4069	3.0000e-005	0.0000	0.4076
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	1.1000e-004	8.0000e-005	9.5000e-004	0.0000	7.5000e-004	0.0000	7.5000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.2472	0.2472	1.0000e-005	0.0000	0.2474
Total	1.5000e-004	1.5100e-003	1.2900e-003	0.0000	1.0100e-003	0.0000	1.0100e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.6541	0.6541	4.0000e-005	0.0000	0.6550

3.19 WPB Construct Deck - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9700e-003	0.0216	0.0163	3.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	2.6321	2.6321	8.5000e-004	0.0000	2.6533
Total	1.9700e-003	0.0216	0.0163	3.0000e-005		1.0500e-003	1.0500e-003		9.7000e-004	9.7000e-004	0.0000	2.6321	2.6321	8.5000e-004	0.0000	2.6533

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	3.0000e-005	9.9000e-004	2.7000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2465	0.2465	2.0000e-005	0.0000	0.2469
Worker	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	1.4700e-003	0.0000	1.4700e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.2967	0.2967	1.0000e-005	0.0000	0.2969
Total	1.6000e-004	1.0900e-003	1.4000e-003	0.0000	1.7100e-003	0.0000	1.7100e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.5432	0.5432	3.0000e-005	0.0000	0.5438

Mitigated Construction On-Site

Off-Road	3.5200e-003	0.0363	0.0262	4.0000e-005		2.0300e-003	2.0300e-003		1.8600e-003	1.8600e-003	0.0000	3.5676	3.5676	1.1500e-003	0.0000	3.5964
Total	3.5200e-003	0.0363	0.0262	4.0000e-005	6.4200e-003	2.0300e-003	8.4500e-003	9.7000e-004	1.8600e-003	2.8300e-003	0.0000	3.5676	3.5676	1.1500e-003	0.0000	3.5964

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	2.9000e-004	9.4200e-003	2.2400e-003	3.0000e-005	6.2000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.6854	2.6854	1.8000e-004	0.0000	2.6899
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	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
Total	7.6000e-004	9.7900e-003	6.4000e-003	4.0000e-005	1.8300e-003	4.0000e-005	1.8700e-003	4.9000e-004	4.0000e-005	5.3000e-004	0.0000	3.7732	3.7732	2.1000e-004	0.0000	3.7785

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5000e-003	0.0000	2.5000e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5200e-003	0.0363	0.0262	4.0000e-005		2.0300e-003	2.0300e-003		1.8600e-003	1.8600e-003	0.0000	3.5676	3.5676	1.1500e-003	0.0000	3.5964
Total	3.5200e-003	0.0363	0.0262	4.0000e-005	2.5000e-003	2.0300e-003	4.5300e-003	3.8000e-004	1.8600e-003	2.2400e-003	0.0000	3.5676	3.5676	1.1500e-003	0.0000	3.5964

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	2.9000e-004	9.4200e-003	2.2400e-003	3.0000e-005	6.2000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.6854	2.6854	1.8000e-004	0.0000	2.6899
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	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
Total	7.6000e-004	9.7900e-003	6.4000e-003	4.0000e-005	1.8300e-003	4.0000e-005	1.8700e-003	4.9000e-004	4.0000e-005	5.3000e-004	0.0000	3.7732	3.7732	2.1000e-004	0.0000	3.7785

3.21 WPB Pave Bridge - 2021

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	8.3000e-004	8.4200e-003	8.2300e-003	1.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.0085	1.0085	3.3000e-004	0.0000	1.0166
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.3000e-004	8.4200e-003	8.2300e-003	1.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.0085	1.0085	3.3000e-004	0.0000	1.0166

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	5.0000e-005	1.4800e-003	4.0000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.3697	0.3697	2.0000e-005	0.0000	0.3703
Worker	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2967	0.2967	1.0000e-005	0.0000	0.2969
Total	1.8000e-004	1.5800e-003	1.5300e-003	0.0000	4.2000e-004	0.0000	4.3000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.6664	0.6664	3.0000e-005	0.0000	0.6672

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	8.3000e-004	8.4200e-003	8.2300e-003	1.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.0085	1.0085	3.3000e-004	0.0000	1.0166
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.3000e-004	8.4200e-003	8.2300e-003	1.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.0085	1.0085	3.3000e-004	0.0000	1.0166

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	5.0000e-005	1.4800e-003	4.0000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.3697	0.3697	2.0000e-005	0.0000	0.3703
Worker	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2967	0.2967	1.0000e-005	0.0000	0.2969
Total	1.8000e-004	1.5800e-003	1.5300e-003	0.0000	4.2000e-004	0.0000	4.3000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.6664	0.6664	3.0000e-005	0.0000	0.6672

3.22 SADD Install Additional Monitor Equip - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9400e-003	0.0227	0.0156	7.0000e-005		6.9000e-004	6.9000e-004		6.3000e-004	6.3000e-004	0.0000	6.2056	6.2056	2.0100e-003	0.0000	6.2557
Total	1.9400e-003	0.0227	0.0156	7.0000e-005		6.9000e-004	6.9000e-004		6.3000e-004	6.3000e-004	0.0000	6.2056	6.2056	2.0100e-003	0.0000	6.2557

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	4.7100e-003	1.1200e-003	1.0000e-005	3.1000e-004	1.0000e-005	3.2000e-004	8.0000e-005	1.0000e-005	1.0000e-004	0.0000	1.3427	1.3427	9.0000e-005	0.0000	1.3450
Vendor	2.0000e-005	7.4000e-004	2.0000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1849	0.1849	1.0000e-005	0.0000	0.1852
Worker	1.0000e-004	8.0000e-005	8.5000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2225	0.2225	1.0000e-005	0.0000	0.2227
Total	2.7000e-004	5.5300e-003	2.1700e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.7501	1.7501	1.1000e-004	0.0000	1.7528

Mitigated Construction On-Site

Off-Road	5.0400e-003	0.0474	0.0720	1.1000e-004		2.3000e-003	2.3000e-003		2.1100e-003	2.1100e-003	0.0000	9.9829	9.9829	3.2300e-003	0.0000	10.0636
Total	5.0400e-003	0.0474	0.0720	1.1000e-004	3.0000e-005	2.3000e-003	2.3300e-003	0.0000	2.1100e-003	2.1100e-003	0.0000	9.9829	9.9829	3.2300e-003	0.0000	10.0636

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	2.9000e-004	9.4200e-003	2.2400e-003	3.0000e-005	6.2000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.6854	2.6854	1.8000e-004	0.0000	2.6899
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	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
Total	7.6000e-004	9.7900e-003	6.4000e-003	4.0000e-005	1.8300e-003	4.0000e-005	1.8700e-003	4.9000e-004	4.0000e-005	5.3000e-004	0.0000	3.7732	3.7732	2.1000e-004	0.0000	3.7785

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					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0400e-003	0.0474	0.0720	1.1000e-004		2.3000e-003	2.3000e-003		2.1100e-003	2.1100e-003	0.0000	9.9829	9.9829	3.2300e-003	0.0000	10.0636
Total	5.0400e-003	0.0474	0.0720	1.1000e-004	1.0000e-005	2.3000e-003	2.3100e-003	0.0000	2.1100e-003	2.1100e-003	0.0000	9.9829	9.9829	3.2300e-003	0.0000	10.0636

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	2.9000e-004	9.4200e-003	2.2400e-003	3.0000e-005	6.2000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.6854	2.6854	1.8000e-004	0.0000	2.6899
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	4.7000e-004	3.7000e-004	4.1600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0878	1.0878	3.0000e-005	0.0000	1.0886
Total	7.6000e-004	9.7900e-003	6.4000e-003	4.0000e-005	1.8300e-003	4.0000e-005	1.8700e-003	4.9000e-004	4.0000e-005	5.3000e-004	0.0000	3.7732	3.7732	2.1000e-004	0.0000	3.7785

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
	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

	Natural Gas 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					
User Defined Recreational	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

	Natural Gas 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					
User Defined Recreational	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			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000

Total		0.0000	0.0000	0.0000	0.0000
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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	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

	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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	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			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Appendix B

Resume of Document Preparer

Years of Experience:

- 12

Years with the Firm:

- 4

Education:

- 2014/MS/Urban and Regional Planning/California State Polytechnic University, Pomona
- 2011/MA/Geography/California State University, Fullerton
- 2006/BA/History/University of California, Santa Barbara

Experience Highlights/Strengths

- 12 years of experience providing environmental consulting services for transportation projects
- Certified AICP

Licenses/Certifications:

- American Institute of Certified Planners/American Planning Association/027853

SEAN NOONAN, AICP

Environmental Planner

Description of Overall Work Experience

Sean Noonan, AICP, is an Environmental Planner and Project Manager with 12 years of experience providing environmental leadership on various public and private projects across Southern California. Sean manages preparation of CEQA/NEPA environmental documents and supporting environmental technical studies. He is also experienced in providing his clients with support related to regulatory permitting.

Relevant Project Experience

Explorer Well - 2023 - CEQA Lead Agency: City of Pasadena: This project involved the development and operation of a new water treatment well and an 800-foot-segment of raw water pipeline. As environmental planner, Sean managed the development of environmental technical studies and the preparation of an IS/MND for this project.

Ranch Hills Planned Development - 2021-2023 - CEQA Lead Agency: County of Orange: This project involved the replacement of a racquet and pickleball club with a Planned Unit Development consisting of 17 buildings containing 34 single-family townhome units and 3 single-family detached units for a total of 37 units. As environmental planner, Sean managed the development of environmental technical studies and the preparation of an EIR for this project.

Gateway Heights - 2021-2023 - CEQA Lead Agency: City of Moreno

Valley: This project involved the construction of 108 detached condominium units on 16.6 acres in the hills of Moreno Valley. As an environmental planner, Sean managed preparation of technical studies and prepared an IS/MND for this project.

Civic Center Master Plan - 2022-2023 - CEQA Lead Agency: City of Moorpark: This project included the phased development of a new Civic Center in the City of Moorpark. As environmental planner, Sean managed the preparation of environmental technical studies and managed preparation of an EIR.

Kindred Church Expansion Project - 2021-2022 - CEQA Lead Agency: City of Anaheim: This project consisted of the expansion of an existing church campus by 9,839 SF with an increase of 180 seats in the auditorium, the addition of two "mini-plazas" for ministry activities, new modular structures, modifications for circulation and parking, stormwater design, and utility relocations. As environmental planner, Sean managed the development of environmental technical studies and the preparation of an IS/MND for this project.

Carlsbad Veterans Memorial Park - 2021-2023 - CEQA Lead Agency: City of Carlsbad: This project consisted of the development of a new public park on approximately 38 acres. The Project site is an environmentally sensitive site with steep topography in the City of Carlsbad. The project included a Veterans memorial plaza/gathering area, playgrounds, a bike park, formal picnic areas, passive recreation areas, outdoor exercise area, an outdoor education area, open turf, and multi-use trails. As environmental planner, Sean managed the development of environmental technical studies and the preparation of an EIR for this project.

Huntington Plaza Mixed-Use Project – 2020-2021 – CEQA Lead Agency: City of Arcadia: This project consisted of a mixed-use development composed of two buildings containing 139 residential units and 10,200 square feet of ground-floor commercial uses. As environmental planner, Sean managed the development of environmental technical studies and the preparation of an IS/MND for this project.

SR-133/Great Park Boulevard – 2022-2023 – CEQA Lead Agency: Caltrans:

Environmental planner for this project to improve and add ramps at SR-133 and Great Park Boulevard in Irvine, CA. Sean prepared and processed a Preliminary Environmental Assessment Report (PEAR) for this project to identify future technical analyses, likely mitigation requirements, and potential environmental concerns for this project during the preliminary design phase.

Crenshaw Boulevard Complete Streets Improvements – 2022-2023 – CEQA Lead Agency: City of Inglewood:

Environmental planner for this project to provide bicycle and pedestrian improvements and to improve traffic operations on Crenshaw Boulevard in Inglewood, CA. Sean prepared and processed a Preliminary Environmental Study (PES) form for this project and obtained a Categorical Exclusion NEPA approval.

SR-1 (Lincoln Boulevard) Multimodal Improvements Project – 2020-2024 – CEQA/NEPA Lead Agency: Caltrans. This project includes transportation improvements on Lincoln Boulevard between Fiji Way and Jefferson Boulevard in Los Angeles. The project includes replacement of the Lincoln Boulevard Bridge over Ballona Creek, replacement of the Culver Boulevard overpass, and widening of the roadway to include sidewalks, bicycle lanes, and room for future transit. As environmental planner, Sean led preparation of technical studies and an EIR/EA for this project, as well as outreach to Coastal Commission and CDFW staff.

Hyperion/Glendale Intersection Improvements Project – 2021-2022 – CEQA Lead Agency: City of Los Angeles: This project consisted of the provision of bicycle, pedestrian, and intersection turning lane improvements on Hyperion Avenue and Glendale Boulevard in Los Angeles. As environmental planner, Sean prepared an Initial Study Checklist and managed environmental technical studies.

Eastern Avenue Multimodal Improvements Project – 2022-2023 – CEQA Lead Agency: City of Los Angeles: This project included traffic calming, bicycle, and pedestrian amenities along a 1.5 mile stretch of Eastern Avenue in East Los Angeles. Sean provided the City and project team with support related to the CEQA and NEPA processes, including preparation of a Preliminary Environmental Study (PES) form and coordination with Caltrans to obtain issuance of a Categorical Exclusion (CE) for the project. Sean provided support related to hazardous waste/materials and cultural matters on this project.

Calexico Multimodal Transit Center – 2021-2023 – CEQA Lead Agency: Imperial County Transportation Commission (ICTC): This project consisted of the construction of a new transit center and sidewalks in Calexico. Sean provided the City and project team with support related to the CEQA and NEPA processes, including preparation of a Preliminary Environmental Study (PES) form and coordination with Caltrans to obtain issuance of a Categorical Exclusion (CE) for the project.

SR-14/Palmdale Boulevard Interchange Improvements – 2021-2023 – CEQA Lead Agency: Caltrans: This project consisted of improvements to the SR-14/SR-138/ Palmdale Boulevard Interchange. As environmental planner, Sean managed the preparation of environmental technical studies and managed preparation of an IS/MND.