

US Army Corps of Engineers®

SANTA FE DAM BASIN

SPOILS MATERIAL STOCKPILE REMOVAL PROJECT IRWINDALE, CALIFORNIA

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

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1.0 Introduction

This draft Supplemental Environmental Assessment (SEA) was prepared by the US Army Corps of Engineers (Corps) for the proposed removal of approximately 250,000 cubic yards of spoils material currently located in the Santa Fe Flood Risk Management Basin, in order to comply with the National Environmental Protection Act (NEPA) (42 United States Code (U.S.C.) § 4321 et seq.); the Council on Environmental Quality regulations published at 40 C.F.R. Part 1500 et seq.; and the Corps' procedures for implementing NEPA published at 33 C.F.R. Part 230; and to document compliance with applicable environmental laws, regulations, and requirements.

This draft SEA supplements the EA prepared in 2013. Additional elements such as on-site processing of the spoils material and in-kind services, which were not previously proposed in the 2013 EA, are evaluated in this draft SEA. A notice of intent to prepare the draft SEA, published in March of 2015, included a description of the proposed revised haul routes. Subsequent to the posting of the notice, the Corps received substantive public comments, leading to the determination that further analysis be conducted. This draft supplemental EA further refines the proposed haul routes in order to further minimize environmental impacts.

The purpose of the draft SEA is to provide information on the existing environmental conditions within the area of the proposed removal and the potential environmental effects of the No-Action Alternative and various alternative actions so decision makers can determine the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.1 Project Authorities

The Corps manages the Basin pursuant to the Santa Fe Dam Basin Mater Plan, dated September 2011. Issuance of the easement is authorized under Title 10 U.S.C. Section 2668.

1.2 Purpose and Need

Statement of Need

Spoils material from the construction of various facilities within Santa Fe Basin have been deposited near the active channel of the San Gabriel River. There is a need to remove approximately 250,000 cubic yards of spoil material from the site.

Statement of Purpose

The Santa Fe Dam project functions to minimize flood risks. The purpose of the project is to improve project performance and facilitate ongoing operations and maintenance activities.

1.3 Project Area

The proposed project area includes an approximately 3.5-acre parcel including the current location of the spoil material in the northwest part of the Santa Fe Basin in the city of Irwindale, California, near the intersection of the Interstate 210 (I-210) and Interstate (I-605)

freeways. The project area also includes the ingress and egress routes to the spoils material location, and the staging area within the Basin. The project area is depicted in Figures 1-4.

1.4 Project Description

The Corps proposes to remove approximately 250,000 cubic yards of spoil material from the Santa Fe Flood Risk Management Basin as part of its long-term maintenance operations. The material generally consists of sand, gravel, and cobble material from maintenance activities over the past several decades, such as excavation for the construction of nearby percolation ponds, and silty sand from the outlet works. The project would include excavation and use or disposal of the stockpiled material. The Corps proposes to grant a temporary easement to a contractor for access to perform the activities. In support of the easement, the contractor would also provide in-kind services. The contractor would resurface two 0.2 acre parking lots near the dam control house off Arrow Highway as in-kind services.

Site preparation

Site preparation consists of work at both the processing and spoil material stockpile areas. Site boundaries would be delineated and marked for the duration of the project. Existing vegetation within the 2.5-acre area where the material is located would be grubbed and debris removed using rubber-tired loaders. Cleared vegetation would be temporarily stored adjacent to the processing area for on-site mulching and placement or off-site disposal. Other debris would be hauled off-site for disposal. An approximately 1-acre rectangular processing area adjacent to the 2.5-acre stockpile area would be graded. Unpaved access roads within the immediate vicinity of the stockpile would be graded and compacted to facilitate access for on-road vehicles.

Spoil Material processing and removal offsite

Existing vegetation growing on the stockpile would be grubbed and debris removed using earthmoving equipment. Material from the stockpile would be removed with a bulldozer to form temporary stockpiles. A loader would load the stockpiles into trucks for transport down the access ramp to the processing site, which would first be established in an approximately 2-acre rectangular area immediately adjacent to the stockpile. Following sufficient excavation at the stockpile the processing equipment would be moved to the stockpile footprint itself where processing and removal would continue. Processing the sediment on top of the stockpile would minimize double handling and improve efficiency. Typically, sediment would be loaded into a hopper to screen out large cobbles and boulders. From the hopper, the material is sized by fixed or vibrating screens to separate the oversize material from the smaller, marketable sizes. Oversize material would be directed to a crusher for size reduction to produce crushed aggregate or to produce manufactured sands. Following crushing, the material is returned to the screening operation for sizing.

Approximately 1,920-2,140 cubic yards (2,500-3000 tons) of material per day would be processed. The processed material would be loaded by a loader into trucks and hauled offsite to commercial facilities. With the use of 14 cubic yard trucks, approximately 137 to 153 truckloads of processed materials could leave the Basin each day. In total,

approximately 18,600 roundtrip truck loads would be required to remove the accumulated spoil material.

Processing duration would range from 23 to 26 weeks. The rate of processing materials and number of trucks available would influence the processing duration.

Proposed hours of operation for the processing phase are from 6 a.m. to 6 p.m., Monday through Friday.

Final grading and herbicide application

Subsequent to complete removal, the stockpile and processing areas would be graded to match the surrounding grade. A licensed herbicide applicator would apply herbicides to disturbed areas for two years. Since the stockpile area is immediately adjacent to the active channel of the San Gabriel River, herbicides approved by the U.S. Environmental Protection Agency for use in or with the vicinity of aquatic areas would be used. The herbicide would be applied to emergent, warm season foliage prior to or during the period of active growth in accordance with manufacturer's instructions.

In-Kind Services

In support of the easement issued to the contractor, the contractor would resurface two 0.2 acre parking lots near the dam control house off Arrow Highway.

Environmental Commitments

All environmental commitments from the 2013 EA are incorporated herein by reference and would be implemented as applicable. Some of these prior commitments have been revised or updated, and are listed in Section 8.0. Additional environmental commitments would also be implemented pursuant to this draft SEA, and are described further in Section 3.0. The list of all applicable environmental commitments for the project is provided in Section 8.0.

2.0 Alternatives

NEPA requires an evaluation of a reasonable range of alternatives, including a No Federal Action Alternative. Two action alternatives are also carried forward in this draft SEA for analysis of potential environmental impacts. Both of these alternatives, described further below, include use of trucks to haul the spoil material out of the basin. Although methods other than trucks were considered for removal of the material in the 2013 EA, it was determined through the analysis in the 2013 EA that truck hauling would be the appropriate method for removing the spoil material from the basin. The range of alternatives carried forward in this draft SEA therefore focuses on the specific ingress and egress routes to and from the material stockpile.

2.1 Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, trucks would use the Peckham Road gate for both ingress and egress, with specific routes dependent upon the highway from which the trucks would approach the

Basin. Unpaved roads would be watered at regular intervals to minimize fugitive dust. See Figure 1.

Ingress Route

Empty trucks from the Interstate 210 Freeway (I-210) would exit at Irwindale Avenue and proceed to the Peckham Road gate. Empty trucks from the Interstate 605 Freeway (I-605) would exit at Live Oak Avenue and proceed to the gate via Arrow Highway and Irwindale Avenue. Once inside the basin, trucks would briefly utilize two-lane paved roads that service the Los Angeles County-leased recreational areas as shown on Figure 1. The paved roads are used by Los Angeles County vehicles for operation and maintenance activities such as mowing and trash removal. The ingress route would transition to two unpaved access roads: Southern and Northern Roads. The Southern Access Road is located in the lower basin and follows the interior alignment of the dam structure. The Northern Access Road circumscribes the northern border of the recreational lake. The two roads conjoin near the inlet structure. Past the junction point, trucks would proceed along an unpaved access road towards the spoil material stockpile and processing area.

The unpaved road past the junction is located in the lower basin, immediately upstream of the inlet works. This road is periodically subject to flooding during the rainy season (October through March) and may become temporarily unusable. In such case, Storm Weather Route Option might be used as needed as part of Alternative 1 (see Section 2.3).

Egress Route

Loaded trucks would exit the basin in the reverse direction.

In-Kind Services

In support of the easement issued to the contractor, the contractor would resurface two 0.2 acre parking lots near the dam control house off Arrow Highway.

2.2 Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Under Alternative 2, trucks would use the Duarte Road gate for ingress and the Peckham Road gate (as described in Alternative 1) for egress. Unpaved roads would be watered at regular intervals to minimize fugitive dust.

Ingress Route

Empty trucks on the I-210 and I-605 would exit the freeways at the Huntington Drive off ramp. Trucks would access the Duarte Road gate via Huntington Drive, Buena Vista Street, and Duarte Road. Once inside the basin, trucks would proceed on unpaved roads to the spoil material stockpile.

Egress Route

Loaded trucks would exit the basin using the route described for Alternative 1. As described in Alternative 1, the unpaved road past the junction is located in the lower basin, immediately upstream of the inlet works. This road is periodically subject to flooding during

the rainy season (October through March) and may become temporarily unusable. In such case, Storm Weather Route Option might be used as needed as part of Alternative 2 (see Section 2.3).

In-Kind Services

In support of the easement issued to the contractor, the contractor would resurface two 0.2 acre parking lots near the dam control house off Arrow Highway.

2.3 Storm Weather Route Option (Duarte Road Gate Ingress & Egress)

Alternatives 1 and 2 use unpaved access roads which are located in the lower basin, immediately upstream of the inlet works. Thus, they are periodically subject to flooding during the rainy season (October through March) and may become temporarily unusable. In such cases, Storm Weather Route Option would be temporarily implemented. However, waters held behind the dam are usually released in a matter of hours, and interior roads become sufficiently dry in a matter of days. Furthermore, given the arid environment of southern California, use of the Storm Weather Route Option is expected to be infrequent and short in duration. Operations would resume under Alternative 1 or 2 once the interior roads are accessible.

Ingress Route

Empty trucks exiting I-210 and I-605 would access the gate at Duarte Road via Huntington Drive, Buena Vista Street, and Duarte Road. Once inside the basin, trucks would proceed on unpaved roads to the spoil material stockpile.

Egress Route

Loaded trucks would exit the basin through the Duarte Road Gate using unpaved access roads. Upon exiting the basin, trucks would proceed through Highland Avenue and Huntington Drive and access the I-210 and I-605 via the onramp off Huntington Drive.

2.4 No Action Alternative

Under the No Action Alternative, the spoil material would not be processed on-site nor hauled off-site. The stockpile would remain in place. The contractor would not resurface two 0.2 acre parking lots near the dam control house off Arrow Highway.

FOUO Figure 1: Alternative 1





Figure 2: Alternative 2



FOUO

Figure 3: Storm Weather Ingress Route



Drawn By: EM CESPL-AM-OM-EE

FOUO

Figure 4: Storm Weather Egress Route



3.0 Affected Environment and Environmental Consequences

3.1 Topography, Geology, and Substrate

Affected Environment

Topography

Elevation within the Basin ranges from 750 feet at the upstream boundary to approximately 421 feet at the downstream boundary. The elevation at the spoil material stockpile ranges from approximately 475 to 500 feet. The topography near the stockpile is relatively flat, gently sloping southeast towards the dam outlet works.

Geology

The Basin is located on a large alluvial fan system formed by the erosion of the southern flank of the San Gabriel Mountains. The Basin is situated on a large deposit of poorly-sorted alluvium consisting of sand, gravel, cobbles, and boulders. The stockpile is composed of alluvium excavated by the Los Angeles County for the construction of nearby percolation ponds as well as silty sand from the outlet works.

Significance Threshold

Impacts would be considered significant if the alternative substantially:

- Changes the topography or geological composition of the substrate.
- Increases wind or water erosion of soils or loss of topsoil.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. The underlying alluvium would be left intact. Subsequent to complete removal, the stockpile and processing areas would be graded to match the surrounding grade. Impacts to the general topography from the removal of amount would be minimal. The area would continue to slope and drain towards the southeast. There would be no impacts to the composition of substrate.

The spoil material stockpile is currently exposed to wind and water erosion. With removal of the stockpile, the area would be exposed at its original grade and would remain exposed to wind and water erosion. Grading activities would compact the underlying soils. Loose topsoil would be subject to wind erosion. However, soils are expected to stabilize over time as plants establish on the site via natural recruitment. Therefore, significant changes in erosion rates are not anticipated.

In-Kind Services: Two existing 0.2 acre asphalt parking lots would be resurfaced. Resurfacing of existing parking lot would not alter the existing topography and contours. The existing

parking lots form an impermeable barrier between the environment and the soils below. Resurfacing operations would treat the surface of the existing parking lots with additional asphalt and slurry. The additional asphalt and slurry would retain the existing impermeable barrier. There would be no impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, existing topography and sedimentation rates would remain unchanged. The stockpile would remain exposed to wind and water erosion as at present. The two parking lots adjacent to the control house will continue to retain the existing asphalt pavements.

3.2 Surface Water Quality

Affected Environment

The proposed action would be staged in the uplands adjacent to west bank of the San Gabriel River (SGR) within the Basin which is located approximately 3 miles downstream and southwest of Azusa Canyon. Due to the relatively undeveloped upstream watershed, runoff entering the Basin from upstream contains minimal amounts of pollutants associated with urbanization such as metals, pathogens, nutrients, and trash. The reach of SGR entering the Basin is not identified as an impaired waterway pursuant to Clean Water Act Section 303(d).

Santa Fe Dam is operated primarily for flood risk management. As a result, water is not impounded for long periods. The short duration of water impoundments does not provide sufficient residence time to affect notable changes in water quality. Sediment may settle out of the water column during periods of basin impoundment which may reduce the sediment load of outflows.

The stockpile is located in the uplands, approximately 100 feet outside of waters of the US.

Significance Threshold

Impacts would be considered significant if the alternative:

• Substantially degrades surface water quality.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. The stockpile is located in the uplands approximately 100 feet west of the SGR. As a result, all work would occur outside of aquatic areas. Furthermore, the SGR is an ephemeral riverine system. As a result, most surface flows are present only during storms. Thus, there would be no impacts to surface waters from the spoil material excavation and sorting during dry weather.

Heavy machinery and trucks disturbing the previously consolidated spoil material would expose looser topsoil, which could be displaced by runoff from rainwater to adjacent areas and could result in a temporary increase in turbidity during storms. However, the sediment load within storm flows would be high. As a result, sediment entering the SGR from the 2.5-acre work area would not notably increase turbidity. Upon completion of construction, the substrate would naturally be re-compacted, resulting in firmer substrate less prone to erosion.

The use of earth moving equipment and industrial processing machinery could result in accidental discharges of oil and lubricants. During rainstorms, surface flows could potentially convey these petroleum-based products into the water column. The potential impact would be minimized with the implementation of a storm water pollution prevention plan (SWPPP).

Removal of the spoil material stockpile would not require discharge of impermeable substrates within the project area or surrounding areas. Use of trucks on unpaved interior access roads leading to and from Peckham Road Gate would not result in further disturbance of topsoil since topsoil on these roads have already been disturbed. Thus, periodic inundation of these roads would not increase turbidity. Based on the above, there would be less than significant impacts to surface water quality.

In-Kind Services: Two existing 0.2 acre asphalt parking lots would be resurfaced. The existing asphalt forms an impermeable barrier between the environment and the soils below. Thus, resurfacing operations would not result in disturbance of topsoil nor would the work takes place within aquatic areas. Resurfacing operations would treat the surface of the existing parking lots with additional asphalt and slurry. Most volatile organic compounds associated with slurry are expected to evaporate during the curing process. Storm runoff could mobilize minimal amounts of residual organic compounds into the water column. Impacts would be minimal.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, there would be no use of earth moving equipment that could result in loose topsoil. The stockpile would remain exposed to wind and water erosion, as at present. There would be no impacts to water quality. Existing groundwater recharge function would remain unchanged. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

Environmental Commitments

- WR-1 A Storm Water Pollution Prevention Plan (SWPPP) would be prepared to reduce the potential for accidental release of fuels, lubricants, and other materials. This plan will include the designation of refueling locations, emergency response procedures, and reporting requirements for any spill that occurs. Equipment for spill cleanup will be kept at the staging area for immediate use.
- WR-2 Rumble strips would be placed at ingress and egress locations or at locations where the haul routes transition from unpaved to paved roads.
- WR-3 Utilize trucks with haul covers.

3.3 Air Quality

The project area is within the South Coast Air Basin (SCAB) which includes Los Angeles, Orange, and portions of Riverside and San Bernardino Counties. Air quality within the project area is governed by the South Coast Air Quality Management District (SCAQMD).

Affected Environment

National Ambient Air Quality Standards

To protect the public health and welfare, the Federal government identified a number of criteria air pollutants and established ambient air quality standards through the Federal Clean Air Act for each. The air pollutants for which Federal standards have been promulgated via the National Ambient Air Quality Standards (NAAQS) include ozone (O3), carbon monoxide (CO), suspended particulate matter (PM), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead (Pb). PM emissions are regulated in two size classes: Particulates up to 10 microns in diameter (PM10) and particulates up to 2.5 microns in diameter (PM2.5).

A region is given the status of "attainment" or "unclassified" if the NAAQS have not been exceeded. A status of "nonattainment" for particular criteria pollutants is assigned if the NAAQS have been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a "maintenance area," indicating the requirement to establish and enforce a plan to maintain attainment of the standard. Federal attainment status designations for the SCAB are summarized in Table 1.

General Conformity Rule

Section 176(c) of the federal Clean Air Act states that a federal agency cannot issue a permit for, or support an activity within, a nonattainment or maintenance area unless the agency determines it will conform to the most recent U.S. Environmental Protection Agencyapproved State Implementation Plan (SIP). Thus, a federal action must not:

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.

• Delay the timely attainment of any standard, interim emission reduction, or other milestone.

A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by the federal action would equal or exceed rates specified in 40 C.F.R. 93.153.

Pollutant	Attainment Status	General Conformity De Minimis Rates	
		(tons/year)	
Ozone (VOC)	Nonattainment, extreme	10	
СО	Attainment/Maintenance	100	
NO ₂	Attainment/Maintenance	100	
SO_2	Attainment	100	
PM_{10}	Attainment/Maintenance	100	
PM _{2.5}	Nonattainment	100	
Pb	Nonattainment	25	

The SCAB is currently in extreme nonattainment for ozone (precursors: VOC or NOx); nonattainment for PM2.5; attainment/maintenance for PM10; attainment/maintenance for NO2; and attainment/maintenance for CO; and nonattainment for lead. Based on the present attainment designation for the SCAB, a Federal action would conform to the SIP if annual emissions are below 100 tons of CO, PM2.5, PM10, or N02, 10 tons of VOC, or 25 tons of lead.

Regional Significance Thresholds

The SCAQMD has developed Regional Significance Thresholds (RSTs) for mass daily emission rates of criteria pollutants for both construction and operational sources. RSTs 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 in the SCAB.

Table 2: SCAQMD Regional Air Quality Significance Thresholds ¹					
Pollutant	Construction				
Nitrogen Oxide (NOx)	100 lbs/day				
Reactive Organic Gas (ROG) (or VOC ²)	75 lbs/day				
Particle Pollution (PM10)	150 lbs/day				
Particle Pollution (PM2.5)	55 lbs/day				
Sulfur Oxides (SOx)	150 lbs/day				
Carbon Monoxide (CO)	550 lbs/day				
Lead	3 lbs/day				
1. Source: http://www.aqmd.gov/docs/defay	ult-source/ceqa/handbook/scaqmd-air-				
2 Per CalEEMod Appendix A ROG and V	2 A A A A A A A A A A A A A A A A A A A				
purpose of comparing to significance thresholds.					

Emission Estimates Methodology

Emissions were estimated using CalEEMod.2013.2.2 emission modeling software.

Each of the action alternatives would require one dozer and two loaders to excavate and haul stockpile material to the processing site. A jaw crusher, cone crusher, conveyer, and generator would be present at the processing site to sort material and prepare it for hauling to commercial locations. Emissions from the equipment above would constitute off road emissions. On-road emissions would include emissions from haul trucks and water trucks as well as the workers' vehicles.

The following assumptions were used to calculate off-road emissions: 330 work days at 12 hours per day. The following assumptions were used to calculate on-road emissions: 153 round trips daily haul trips at 40 miles and 30 worker round trips at 14.7 miles (CalEEMod default).

Estimates of lead emissions were not calculated. Lead emissions from mobile sources in California have significantly decreased due to the near elimination of lead in fuels. Thus, CalEEMod, the SCAQMD-approved emission modeling software, does not provide estimated emissions for lead. Little to no quantifiable and foreseeable lead emissions would be generated by any of the alternatives.

Ozone (O3) formation is driven by two major classes of directly emitted precursors: nitrogen oxides (NOx) and volatile organic compounds (VOC). The relation between O3, NOx and VOC is driven by complex nonlinear photochemistry. Due to the variability in rates of ozone formation, CalEEMod does not provide estimates for ozone. Instead, the emissions

associated with ozone precursors (i.e., ROG) are calculated and used as a surrogate for reporting ozone emissions.

Aggregate operations and parking lot resurfacing were modeled together. Estimated emissions include both operations.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). Currently, there are no Federal standards for GHG emissions and no Federal regulations have been set at this time, though the CEQ has issued draft guidance on the consideration of GHG emissions, entitled Revised Draft Guidance on the Consideration of GHG emissions and the Effects of Climate Change in NEPA Reviews, dated December 24, 2014, and published at 79 Federal Register 77801. This draft guidance establishes a recommended reference point of 25,000 metric tons of annual CO2 emissions as warranting further review.

Significance Threshold

Impacts would be considered significant if the alternative:

- Exceeds General Conformity Rule de minimis thresholds
- Exceeds any SCAQMD daily RSTs

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, off-road emissions would include one bulldozer and a loader working in conjunction to excavate spoil material and haul spoil material to the processing site located at the foot of the spoil material stockpile. A jaw crusher, one cone crusher, and one conveyer would process the spoil material. A loader would be used to load haul trucks. The equipment will operate 12 hours per day for approximately 350 days. Operations may not be continuous. On-road emissions would include emissions from 153 daily truck round trips as well as daily round trip commutes for approximately 15 workers. Fugitive emissions of PM2.5 and PM10 would occur from use of unpaved roads and material handling. Fugitive emissions of PM2.5 and PM10 would be minimized through implementation of all air quality environmental commitments.

In-Kind Services: Resurfacing two parking lots would result in emissions of VOCs from the slurry and off road emissions from paving equipment. Aggregate operations and parking lot resurfacing were modeled together in CalEEMod. Estimated emissions include both operations.

As shown in Table 3, estimated annual emissions would not exceed the Clean Air Act General Conformity de minimis thresholds. As a result, a General Conformity Analysis would not be required. As shown in Table 4, GHG emissions would not exceed CEQ recommended reference point of 25,000 metric tons of annual CO2 emissions as warranting further review. As shown in Table 5 estimated emissions would not exceed daily SCAQMD emissions thresholds. Therefore, Alternative 1 would entail less than significant impacts to air quality. Fugitive emissions of PM2.5 and PM10 associated with the use of unpaved roads and material handling would be minimized through implementation of all air quality environmental commitments. Air quality emissions calculations and assumptions are provided in Appendix A.

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Comparison of Estimated Annual Emissions to General Conformity De Mimimis Thresholds						
Pollutants	General Conformity Rates (tons/yr)	2015 Estimated Emissions (tons/year)	2016 Estimated Emissions (tons/year)			
VOC	10	0.38	1.07			
NO2	100	3.68	10.25			
СО	100	2.33	6.77			
Pb	25	-	-			
PM10	100	1.98	2.85			
PM2.5	100	1.05	1.43			

Table 4: Comparison of Estimated GHG Emissions to CEQ GHG Guideance					
CEQ GHG Guidelines (tons/yr)	2015 Estimated Emissions (tons/year)	2016 Estimated Emissions (tons/year)			
25,000	325	959			

Table 5: Compari	son of Estimated Daily Emi	ssions to SCAQMD Thre	esholds
Pollutants	Regional Significance Thresholds (lbs/day)	2015 Estimated Emissions (lbs/day)	2016 Estimated Emissions (lbs/day)
VOC	75	9.34	8.72
NO _X	100	88.16	82.78
СО	550	56.07	54.77
SOx	150	0.08	0.08
PM ₁₀	150	15.91	15.43
PM _{2.5}	55	7.65	7.24

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The stockpile would remain in place. There would be no emissions associated with the use of off-road and on-road vehicles. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

Environmental Commitments

- AQ-5 Water unpaved road access roads and other disturbed areas near the spoil material stockpile at least two times per day during periods of dry weather, or apply CARB certified soil binders per manufacturer's recommendations.
- AQ-6 Ensure compliance with SCAQMD Rule 1157.

3.4 Noise

This section evaluates noise impacts within the human-built environment. Impacts to other migratory birds and endangered species are discussed under the Biological Resources section.

Affected Environment

Existing Noise Environment

The sediment stockpile is located within an undeveloped area of the basin. The primary noise source is the I-605 located approximately 850 feet to the northwest. Sound level measurements recorded on February 12, 2015, at the southwest side of the stockpile indicated ambient noise levels at approximately 52 dB.

City of Duarte

The following roadways within the city of Duarte could be used during maintenance activities: Huntington Drive, Buena Vista Road, Duarte Road, and Highland Avenue.

All four roadways are designated as arterials (Duarte 2007, p. 8) and allow for heavy duty truck traffic pursuant to Duarte Municipal Code Section 11.08.020. The surrounding land uses primarily consist of areas zoned for commercial, industrial, and multi-unit residential. Noise level ranges at major intersections for the four roadways are listed in Table 5.

Intersection	Noise Level Ranges (dBA)
Highland Avenue near Orange Grove Road	74
Huntington Drive near Oak Avenue	75
Buena Vista Road near 210 off ramp	77
Duarte Road near Hope Drive	73
Huntington Drive near I-605 on ramp	80

City of Irwindale

Haul trucks using the South Peckham Road exit would use South Irwindale Avenue or Arrow Highway to access I-210 and I-605 respectively. Land uses adjacent to these two major roadways consist primarily of industrial and commercial uses. Both are designated as truck routes (Irwindale 2008, p. 95). As a result, the general plan designates the corridors along both roadways as "Areas of High Ambient Noise" (Irwindale 2008, p.148). Average peak noise level along Arrow Highway at River Grade Road ranges is 77 dBA. Noise level along Irwindale Avenue is assumed to be similar.

Noise Associated with Haul Trucks

Noise levels associated with diesel haul trucks at 50 feet is approximately 76 dBA (FHWA 2006).

Noise Associated with Aggregate Processing Equipment

A National Institute of Occupational Health study of sand and gravel operations indicates that noise levels within 50 feet of processing equipment such as cone crushers and triple-deck screens can range from 85 dBA to 95 dBA. Noise levels at approximately 100 feet ranges from 80 dBA to 90 dBA. Noise levels at 200 feet is approximately 70 dBA (NIOSH 2014, Fig. 15).

Noise Associated with Off-Road Construction Equipment

Typical construction equipment generates noise levels ranging from approximately 76 to 88 dBA at a distance of 50 feet from the source, with slightly higher levels of about 88 to 91 dBA for certain types of earthmoving and impact equipment.

Significance Threshold

Impacts would be considered significant if the alternative:

• A long term increase in noise levels above ambient noise levels by 5 dBA.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, the use of aggregate processing and earthmoving equipment would result in sound levels ranging from approximately 85 dBA to 95 dBA at approximately 50 feet. The rate sound of attenuation is approximately 6 dBA for every doubling of distance from a noise source. At a distance of 1,600 feet, the sound levels would range from approximately 55 dBA to 65 dBA. However, there are no receptors within the immediate vicinity of the spoil material stockpile. The closest receptor is an industrial park located approximately 2,800 feet to the north at East Duarte Road. At this distance, noise from the aggregate processing operations would be indistinguishable from ambient noise levels. Based on the ambient sound levels at Duarte Road in Table 6, ambient noise levels near this area would range from 61-83 dBA. These levels would remain unaffected. Noise levels in the processing area would return to ambient levels upon completion of the project. There would be no significant noise impacts associated with the use of aggregate processing and earthmoving equipment at the sediment stockpile.

Haul trucks using the South Peckham Road exit would use Irwindale Avenue or Arrow Highway to access I-210 and I-605 respectively. Sound levels of haul trucks at 50 feet are approximately 76 dBA (FHWA 2006). Most receptors are located between 50 and 100 feet away from the trucks. The rate of attenuation is approximately 6 dBA for every doubling of distance from a noise source. Thus, the estimated noise level from trucking for most receptors would range from approximately 70 dBA to 76 dBA. The sound level range whether minimum (70 dBA) or maximum (76 dBA) would not exceed the average peak ambient sound level of 77 dBA for Arrow Highway and Irwindale Avenue. Last, a 3 dBA increase or decrease in the average traffic noise level is associated with doubling or halving of traffic volume. Trucking under this alternative could result in an additional 13 trucks per hour on major arteries for the duration of the work. Since the additional trucks would not double the traffic volume, as more than 13 trucks per hour currently use the proposed routes, there would be no noticeable difference in average noise levels associated with additional traffic on major arteries. Impacts would be temporary and less than significant.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Average peak noise level along Arrow Highway at River Grade Road is 77 dBA. Typical construction equipment generates noise levels ranging from approximately 76 to 88 dBA at a distance of 50 feet from the source. The rate of attenuation is approximately 6 dBA for every doubling of distance from a noise source. The closest noise receptors are industrial operations and an industrial office park located approximately 200 feet away. Thus, the estimated noise level from resurfacing operations is expected to range from approximately 66 to 82 dBA. The ambient noise level at Arrow Highway (77 dBA) would mask the minimum sound level of 66 dBA while the maximum sound level of 82 dBA would exceed the ambient noise level at Arrow Highway by 5 dBA. However, the resurfacing operation would be temporary, and those levels would return to pre-project levels upon completion of construction. Impacts would be temporary and less than significant.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Ingress through Duarte Road gate would require empty trucks to exit the I-210 or the I-605 at the terminus of I-605 at Huntington Drive. Trucks would proceed to Duarte Road gate via Huntington Drive, Buena Vista Street, and Duarte Road. The surrounding land uses primarily consist of areas zoned for commercial, industrial, and multi-unit residential. Sound levels of haul trucks at 50 feet are approximately 76 dBA (FHWA 2006). Most receptors are located between 50 and 100 feet away from the trucks. The rate of attenuation is approximately 6 dBA for every doubling of distance from a noise source. Thus, the estimated noise level from trucking for most receptors would range from approximately 70 dBA to 76 dBA. The sound level range whether minimum (70 dBA) or maximum (76 dBA) would not exceed the average peak ambient sound levels in Table 6 by 5 dBA. Last, a 3 dBA increase or decrease in the average traffic noise level is associated with doubling or halving of traffic volume. Trucking under this alternative would result in an additional 13 trucks per hour on major arteries for the duration of the work. Since the additional trucks would not double the traffic volume, as more than 13 trucks per hour currently use the proposed routes, there would be no noticeable difference in average noise levels associated with additional traffic on major arteries. Impacts would be temporary and less than significant.

Impacts from in-kind services would be the same as those characterized under Alternative 1. Impacts would be temporary and less than significant.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no noise emissions associated with the use of off-road and on-road vehicles. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

Environmental Commitments

N-2 All equipment used would be muffled and maintained in good operating condition. All internal combustion engine driven equipment would be fitted with well-maintained mufflers in accordance with manufacturer's recommendations.

3.5 Biological Resources

Affected Environment

The affected area within the Santa Fe Dam basin for the project includes the spoil material stockpile and processing site, as well as staging areas and the access routes from the nearest paved road to the stockpile.

Flora

The spoil material stockpile is located within a ruderal area that has been substantially altered by maintenance or construction. Vegetation found in this area includes species such as black mustard (Brassica nigra), telegraph weed (Heterotheca grandiflora), tobacco tree, castor bean, prickly Russian thistle (Salsola tragus), and giant wildrye (Elymus condensatus).

Two major vegetation alliances are present within the vicinity of the spoil material stockpile.

- Artemisia californica Shrubland Alliance is present in the uplands within the vicinity of the spoil material stockpile. Representative species include California sage-brush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Artemisia ludoviciana*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), coastal prickly pear cactus (*Opuntia littoralis*), valley cholla (*Cylindropuntia californica*), and California yerba santa (*Eriodictyon californicum*). Some of this alliance found in the Basin forms a transition zone east of the Riversidian alluvial fan sage scrub alliance located east of the stockpile and which is extensive in the eastern Basin, dominating the area between the man-made lake within the Santa Fe Dam Recreation Area and the northern-most Basin.
- *Salix exigua* Shrubland Alliance is present in riverine areas within the vicinity of the spoil material stockpile, approximately, approximately 500 feet and farther to the south and southeast of the stockpile and reach fullest expression approximately 1,000 feet or more from the stockpile. The better sites are composed of dense, broadleafed, winter-deciduous riparian thickets dominated by several willow species including red

willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), and sandbar willow (*Salix exigua*) with scattered emergent Fremont cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). Other plant species common to this community include mule fat (*Baccharis salicifolia*) and Southern California black walnut (*Juglans californica*); and invasive species such as giant cane (*Arundo donax*), tobacco tree (*Nicotiana glauca*), and castor bean (*Ricinus communis*).

Fauna

Species common to the Basin, including upstream San Gabriel River to Azusa Canyon, include native and non-native fishes, amphibians, reptiles, mammals, and birds. Over 100 bird species use the Basin for breeding, wintering, or are residents. Bat species are also present and use the Basin for roosting, breeding, and are year-round residents. Dry upland areas may host common lizard or snake species. Non-native species such as feral cats and dogs are also found in the Basin. The altered seasonal flows due to upstream reservoirs and existing barriers to fish passage severely limit fish presence in the Basin although native freshwater fishes that were historically present in waters of the Basin.

Special Status Listed Taxa

The least Bell's vireo (Vireo bellii pusillus) was listed as endangered in May 1986 (USFWS 1986). Critical habitat for the species was designated in 1994, though it does not extend into the Basin. The species primarily inhabits riparian woodlands, scrublands, and thickets for breeding. The vireo are present in the Salix exigua shrubland community located approximately 1,600 feet south of the spoil material stockpile within riverine areas.

Significance Threshold

Impacts would be considered significant if the alternative results in:

- Substantial loss of individuals or populations of a federally listed or proposed endangered or threatened species or its habitat.
- Substantial and permanent increase in the ambient noise levels near known vireo nesting areas that may interfere with breeding behavior of the species.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. One bulldozer and a loader would work in conjunction to excavate and haul material to the processing site located at the foot of the spoil material stockpile. The stockpile is located within a ruderal area that has been substantially altered by maintenance or construction. Vegetation found in this area includes species such as black mustard (*Brassica nigra*), telegraph weed (*Heterotheca grandiflora*), tobacco tree, castor bean, prickly Russian thistle (*Salsola tragus*), and giant wildrye (*Elymus condensatus*). Thus, excavation of the spoil material stockpile would result in the loss of nonnative vegetation within a ruderal area. Processed material would be hauled off-site via

existing maintenance and access roads. Based on the above, there would be no loss of individuals or populations of a federally listed or proposed endangered or threatened species or its habitat.

The use of aggregate processing and earthmoving equipment would result in sound levels ranging from approximately 85 dBA to 95 dBA at approximately 50 feet. However, there are no vireos within the immediate vicinity of the spoil material stockpile. Per surveys in 2013, 2014, and 2015, vireos are located approximately 1,600 feet southeast of the spoil material stockpile within the riparian woodlands. At this distance, atmospheric attenuation of sound levels would range from approximately 55 dBA to 65 dBA. Foliage within the riparian woodlands would further attenuate noise levels. Thus, there would be no noticeable increase beyond the ambient noise level of 52 dBA that may interfere with breeding behavior of the vireo. Furthermore, the vireos are acclimated to nesting within a relatively noisy environment due to the presence of the I-210 Freeway as well as recreational and maintenance activities within the immediate vicinity of nesting areas. There would be no significant impacts.

A portion of the unpaved access road leading away from the processing site to the junction of the Northern and Southern Access Roads partially circumscribes the outer periphery of the vireo nesting areas demarcating the nesting and non-nesting habitat. Vireos closest to the road are located at the road segment closest to the dam outlet works. Peak ambient noise levels within this area is approximately 65 dBA due to the close proximity to the outlet works where recreational and maintenance activities are more common. Sound levels of haul trucks at 50 feet are approximately 76 dBA (FHWA 2006). Vireos closest to the road are located approximately 125 feet to 150 feet away. The rate of sound of attenuation is approximately 6 dBA for every doubling of distance from a noise source. Thus, the estimated noise level from the trucks with atmospheric attenuation would be less than 70 dBA. Furthermore, foliage within the riparian woodlands would further attenuate noise levels. Thus, use of the unpaved road within the vicinity of vireo nesting areas would not result in a notable increase of noise beyond the ambient noise levels. Furthermore, the vireos are acclimated to nesting within a relatively noisy environment due to the presence of the I-210 Freeway as well as recreational and maintenance activities within the immediate vicinity of nesting areas. Impacts would be temporary and there would be no significant impacts.

Based on the above, Alternative 1 would result in no effect to the vireo, and would be in compliance with Section 7 of the Endangered Species Act.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. There are no biological resources on site or in adjacent areas since the two parking lots are located between toe of the dam and Arrow Highway.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts associated with on-site processing and egress through Peckham Road gate would be the same as those characterized under Alternative 1.

Routes associated with ingress through Duarte Road gate traverse through fully developed urban areas outside of the Basin. There would be no noise impacts to the vireo associated with haul trucks.

Impacts from in-kind services would be the same as those characterized under Alternative 1.

Based on the above, Alternative 2 would result in no effect to the vireo, and would be in compliance with Section 7 of the Endangered Species Act.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no noise impacts associated with on-site processing and off-site transport of the material. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

Environmental Commitments

BR-1 A biologist would be on site as needed to monitor hauling activities at the outset of nesting season.

BR-2 Aggregate processing and hauling activities would only occur between 6 a.m. to 6 p.m.

3.6 Cultural Resources

Affected Environment

The area of potential effects (APE) for the project is land directly or indirectly impacted and includes the stockpile and processing site, as well as staging and access routes from the nearest paved road. The stockpile is located on a terrace at the western bank of the San Gabriel River. The terrace area has been used as a spoil material placement site from the 1980's to present.

No historic resources listed on or eligible for the National Register of Historic Places are known to be present within the APE. The APE is previously disturbed uplands and urban landscapes.

Significance Threshold:

Impacts would be considered significant if the alternative results in:

- Permanent modification of characteristics and qualities of a resource listed or eligible for listing on the National Register of Historic Places.
- The removal or destruction of prehistoric cultural resources.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, one bulldozer and a loader working in conjunction would excavate and haul spoil material to the processing site located at the foot of the spoil material stockpile. The stockpile consists of alluvial substrate excavated from the construction of detention ponds. There would be no excavation activities below the surrounding grade. Furthermore, the processing plant would be located at the base of the stockpile in a previously disturbed area. Processed spoil material would be hauled off-site via existing access and maintenance roads. The project area is highly disturbed due to previous maintenance and construction activities. Based on the above and with implementation of Environmental Commitments below, there would be no significant impacts to cultural resources.

Alternative 1 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic Preservation Officer regarding this determination. Alternative 1 would be in compliance with the National Historic Preservation Act.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Resurfacing operations would not require ground disturbing activities. There would be no potential to cause effects for this part of the undertaking.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

Alternative 2 would not result in significant impacts to cultural resources and would have no effect on historic properties and would be in compliance with the National Historic Preservation Act.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The stockpile would remain in place. There would be no impacts to cultural resources. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.7 Hazardous, Toxic, and Radioactive Materials

Affected Environment

According to the California Department of Toxic Substances Control's EnviroStor database, there are no hazardous, toxic, or radioactive material sites within the vicinity of the spoil material stockpile or in upstream areas within the San Gabriel Mountains. Furthermore, land uses and operations that could result in the manufacturing, processing, or transportation of such material are not authorized within the Basin.

Significance Threshold:

Impacts would be considered significant if the alternative results in:

• Long-term exposure of humans, wildlife, wildlife habitat and the general environment to hazardous materials.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, one bulldozer and a loader working in conjunction would excavate and haul spoil material to the processing site located at the foot of the spoil material stockpile. The stockpile consists of alluvial substrate excavated from the construction of detention ponds. There would be no excavation activities below the surrounding grade. Furthermore, there would be no discharge of materials at the project site. Processed spoil material would be hauled off-site via existing access and maintenance roads. There are no hazardous, toxic, or radioactive waste material sites within the vicinity of the spoil material stockpile. There would be no long-term exposure of humans, wildlife, wildlife habitat and the general environment to hazardous materials. There would be no impacts.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Resurfacing operations would use petroleum-based chemicals for tack coats and asphalt emulsion. Most volatile organic compounds associated within these chemicals are expected to evaporate during the curing process. Upon completion of the curing process, these chemicals would remain embedded within the asphalt matrix. Weathering and surface wear would over time release these chemicals into the environment either through evaporation or introduction to the water column during storm flows. However, the amount and concentration of chemicals leached into the environment are likely to be low and would result in de minimis impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to cultural resources. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.8 Socioeconomics and Environmental Justice

Affected Environment

The project area is located adjacent to the cities of Irwindale and Duarte within the County of Los Angeles. The demographic for both cities as well as Los Angeles County are shown in Table 6. Demographics for Los Angeles County serve as a reference for comparison. In general, Irwindale has a higher percentage of Hispanic/Latinos and lower percentages of other minority populations relative to Los Angeles County. Irwindale has higher median income relative to Los Angeles County. Percentage of minority populations in Durate are approximately the same as Los Angeles County. Duarte has a higher median income relative to Los Angeles County.

Demographics Parameters	Los Angeles County	City of Duarte	City of Irwindale
Total population	10.041.797	21.668	1.466
White	26.6%	25.2%	4.8%
Black	7.9%	6.5%	0.3%
American Indian/Native Alaskan	0.2%	0.3%	0.1%
Asian	13.8%	15.9%	1.8%
Other	2.4%	2.7%	0.8%
Hispanic/Latino	49%	49.4%	92.2%
Median Household Income	\$53,125	\$61,549	\$60,565

There are no schools immediately adjacent to routes identified in any of the alternatives. One hospital (City of Hope) is adjacent to East Duarte Road.

Significance Threshold:

Impacts would be considered significant if the alternative results in:

- A substantial shift in population, housing, and employment.
- Disproportionate adverse environmental impacts to minority or low-income populations.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. Direct impacts of spoil material processing such as noise and dust would be limited to the immediate area around the spoil material stockpile and would not impact surrounding communities.

Off-site spoil material transport would result in a temporary increase in truck traffic through a portion of the city of Irwindale, a primarily minority community. However, the trucks would traverse through an industrial/commercial area, well away from residential areas located approximately 1.5 miles south of the proposed haul route. Haul routes are designated as truck routes. Furthermore, the roadways are used by trucks servicing aggregate processing operations located to the east and southwest of the Basin in the city of Irwindale. Currently, there are 22 sand and gravel mines inside city limits encompassing approximately 39% of city land. Six of the 22 sites are actively mined (Irwindale 2014). Estimated annual vehicle trips associated with the Olive mine alone is approximately 17,857. Thus, relative to existing impacts from nearby permanent aggregate processing operations, emissions of air pollutants from temporary hauling operations would not result in disproportionate adverse environmental impacts to minority populations. Also, estimated emissions of air pollutants for the proposed action would not exceed daily SCAQMD emissions thresholds.

The work would provide temporary employment to aggregate processing equipment operators, earthmoving equipment operators, and truck drivers. The work would not require additional housing for laborers since the project is readily within commuting distance from most parts of Los Angeles County. Furthermore, the work would not entail the construction of infrastructure or utilities that would result in growth of the surrounding area, nor would the work increase capacity of existing infrastructure that would induce growth. The work would not lead to a substantial shift in population, housing, and employment. Impacts would be less than significant.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Land uses within the immediate vicinity of the parking lots are industrial and commercial complexes. Direct impacts from resurfacing operations such as noise and odors would be limited to the immediate area around the parking lots and would not impact surrounding communities. Noise levels and odors would return to pre-project conditions upon completion of work.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Direct impacts from spoil material processing would be the same as those characterized under Alternative 1.

Off-site spoil material transport would result in a temporary increase in truck traffic and emissions through major arterials and designated trunk routes in the city of Duarte. Land uses immediately adjacent to haul routes consist primarily of commercial uses. Furthermore, Interstate 210 roughly bisects the area where hauling routes are located. Thus, relative to existing emissions from the major arterials and those from the Interstate 210, emissions of air pollutants from temporary hauling operations would not result in disproportionate adverse

environmental impacts to minority populations. Also, estimated emissions of air pollutants for the proposed action would not exceed daily SCAQMD emissions thresholds.

The work would provide temporary employment to aggregate processing equipment operators, earthmoving equipment operators, and truck drivers. The work would not require additional housing for laborers since the project is readily within commuting distance from most parts of Los Angeles County. Furthermore, the work would not entail the construction of infrastructure or utilities that would result in growth of the surrounding area, nor would the work increase capacity of existing infrastructure that would induce growth. The work would not lead to a substantial shift in population, housing, and employment. Impacts would be less than significant.

Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to socioeconomics and environmental justice. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.9 Traffic and Transportation

Affected Environment

The Basin is located in the southeast quadrant of the intersection of I-210 and I-605. It is surrounded by a number of arterials in the cities of Duarte and Irwindale. Major north-south roadways within Duarte include Buena Vista Street and Highland Avenue. Duarte Road and Huntington Drive are major east-west roadways. The Duarte Road Gate has ingress via the eastern terminus of Duarte Road and egress via the southern terminus of Highland Avenue. Huntington Drive provides direct access to I-605 and interchanges with the I-210. Buena Vista Street provides direct access to the I-605. All four roadways are designated as arterials (Duarte 2007, p. 8) and allow for truck traffic pursuant to Duarte Municipal Code Section 11.08.020:

Table 7: Designated Trucks Routes in the City of Duarte

Route	Restrictions
Huntington Drive	For its entire distance within the city.
Duarte Road	From Mountain Avenue to Highland Avenue
Buena Vista Street	Huntington Drive to Southerly city limits
Highland Avenue	Huntington Drive to Duarte Road
Source: Duarte Municipal Code Section	11.08.020

Major east-west roadways within Irwindale include Arrow Highway and Live Oak Avenue. Live Oak Avenue has access to the I-605 via Arrow Highway. Irwindale Avenue is a major north-south roadway with direct access to the I-210. Peckham Road Gate can be accessed via Irwindale Avenue. All three roadways are designated as truck routes and major highways (Irwindale 2008, p. 95, p. 148).

A roadway's ability to accommodate is described in terms of Level of Service (LOS). The LOS scale is a qualitative measure of traffic conditions (traffic flow) where a LOS A, LOS B, and LOS C represent excellent to good operating conditions, LOS D represents tolerable operating conditions for short periods of time, LOS E represents congested traffic conditions with short stop-and-go type of operations, and LOS F represents severe congestion.

Table 8: Level of Service Criteria					
Level of Service	Volume/Capacity Ratio	Definition			
А	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.			
В	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.			
С	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.			
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.			
Е	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.			
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.			

Roadway Name	Roadway Designatio n	Designate d Truck Routes?	Daily Traffic Volume	Capacity	Volume to Capacity Ratio	Level of Service ^a
Arrow Highway ^b	Highway	Y	31,287	40,000	0.78	С
Buena Vista Street ^c	Arterial	Y	18,860	32,000	0.59	А
Duarte Road ^c	Arterial	Y	12,740	32,000	0.40	А
Highland Avenue ^c	Arterial	Y	11,480	16,000	0.72	С
Huntington Drive ^c	Arterial	Y	23,810	32,000	0.74	С
Irwindale Avenue ^b	Highway	Y	28,652	40,000	0.72	С
Live Oak Avenue ^c	Highway	Y	27,300	40,000	0.68	В

The LOS ratings for roadways within proposed hauling routes are shown in Table 9.

Significance Threshold

Impacts would be considered significant if the alternative:

• Substantially increase traffic levels.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 153 maximum daily haul trips would be required. Empty trucks exiting Interstate 210 Freeway (I-210) would access the gate at Peckham Road via Irwindale Avenue. Trucks exiting the Interstate 605 Freeway (I-605) would Live Oak Avenue, Arrow Highway and Irwindale Avenue. All three roadways are designated as truck routes and major highways (Irwindale 2008, p. 95, p. 148). Use of trucks on these roadways would be in compliance with the Irwindale General Plan.

In addition to 153 maximum daily haul trips, approximately 15 workers would commute daily to the Basin. The increase from the temporary addition of approximately 168 daily trips spread out over more than 12 hours would not change the LOS for affected roadways (see Table 10). Furthermore, there is sufficient space within the basin of Santa Fe Dam to accommodate all trucks. Thus, there would be no trucks idling and queuing on local roadways outside the basin. Based on the above, impacts would be less than significant.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. The work would likely require two to three truck trips for the delivery of paving equipment to the site at the beginning of construction. Approximately 5 truck trips would be required for delivery of materials during the resurfacing process. Approximately 5 workers would commute to the site daily for the duration of work. Overall, approximately 7 additional daily trips are anticipated for the duration of work. Vehicles exiting I-605 would access the site via Arrow Highway. Vehicles exiting I-210 would access the site via Irwindale Ave., Live Oak Ave., and Arrow Highway. The increase from the temporary addition of approximately 7 daily trips as shown in Table 10 would not change the LOS for affected roadways. Based on the above, impacts would be less than significant.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Under Alternative 2, approximately 153 maximum daily haul trips would be required. Ingress through Duarte Road gate would require empty trucks to exit the I-210 or the I-605 at the terminus of I-605 at Huntington Drive. Trucks would proceed to Duarte Road gate via Huntington Drive, Buena Vista Street, and Duarte Road. In addition to empty haul trucks, approximately 15 workers could utilize the routes above for their commutes. The increase from the temporary addition of approximately 168 daily trips spread out over more than 12 hours would not change the LOS for affected roadways (see Table 10). Furthermore, all segments of roadways that would be used are designated truck routes. Use of trucks on these roadways would be in compliance with Duarte Municipal Code Section 11.08.020.

Traffic impacts associated with egress through Peckham Road gate would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1. Based on the above, impacts would be less than significant.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site or hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to traffic. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

Table 10: Projected Changes in Level of Service							
Roadway Name	Daily Traffic Volume	Maximum Projected Increase in Traffic Volume	Capacity	Projected Volume to Capacity Ratio	Projected Level of Service		
Arrow Highway	31,287	168	40,000	0.78	С		
Buena Vista Street	18,860	168	32,000	0.59	А		
Duarte Road	12,740	168	32,000	0.40	А		
Highland Avenue	11,480	168	16,000	0.72	С		
Huntington Drive	23,810	168	32,000	0.74	С		
Irwindale Avenue	28,652	168	40,000	0.72	С		
Live Oak Avenue	27,300	168	40,000	0.68	В		

3.10 Utilities

Affected Environment

A variety of utilities such as water, electrical power, heating fuel, and sanitary sewerage services are provided within the Basin, primarily to serve the developed recreation amenities. Utility owners represented in the Basin include the Sanitation Districts of Los Angeles County, Azusa Light and Water and Verizon. No specific utilities are provided in areas to be utilized in stockpile processing or hauling in the Project Area.

Significance Threshold:

Impacts would be considered significant if the alternative:

- Requires a substantial modification or relocation of existing utilities that would result in major disruption of services.
- Increases demand for services beyond existing capacity.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. The work would not require excavation that could damage or disrupt underground utilities. The processing equipment would be staged at the foot of the material stockpile, away from overhead utilities. All trucks would use existing access roads within the basin. Thus, there would be no substantial modification or relocation of existing utilities that would result in major disruption of services. Outside of the basin, haul trucks would utilize designated truck routes. Thus, impacts to buried utilities within local roadways are not anticipated. Furthermore, the work would not entail the construction of infrastructure that would result in increased demand for utilities. There would be no impacts.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. The work would not require excavation that could damage or disrupt underground utilities. The parking capacity of the lots would remain unchanged. There would be no impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to utilities. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.11 Aesthetics

Affected Environment

The project area is located within an undeveloped area of the basin. The spoil material stockpile forms a distinct protrusion within a flat landscape. The foreground surrounding the stockpile is comprised of an open and expansive landscape with beige and brown hues as well as heterogeneous textures associated with upland scrubs. The background is composed of distant solid gray lines due the I-605, I-210 freeways and the crest of the dam.

The parking lots where in-kind services would be performed are located adjacent to the dam outlet structures. The monolithic face of the dam and the outlet works dominate the vista. Other visual elements and the surrounding area include industrial areas as well as Arrow Highway.

Significance Threshold

Impacts would be considered significant if the alternative results in:

• A substantial modification of the existing views.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, geometric forms and bright colors associated with construction equipment would temporarily be visible from a distance at the spoil material stockpile for the duration of construction. Upon completion of work, the distinct protrusion associated with the spoil material stockpile would no longer be visible. The spoil material stockpile area would be reintegrated with the flat landscape. Upon revegetation of the area via natural recruitment, the footprint would exhibit beige and brown hues as well as heterogeneous textures associated with upland scrubs. The area would be restored to the vista associated with an open, vegetated landscape. Impacts would be beneficial and less than significant.

Hauling processed spoil material off-site via major arterials would not result in impacts to aesthetics.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. The work would not result in introduction of structures or colors that would be out of character that would be notable or incompatible with the surrounding vista. There would be no impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Impacts from on-site processing and hauling off-site would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to aesthetics. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.12 Recreation

Affected Environment

An approximately 200-acre area including a recreational lake in the southeast portion of the Basin is leased to the county of Los Angeles for recreational use. The primary recreation amenities in this area include picnic and park grounds and swimming and fishing in the

recreational lake. There are no formal sports fields, although there are several playgrounds throughout the park. A nature center is also located within the leased area. Beyond the leased area is a network of hiking trails. Furthermore, the San Gabriel River Trail, a paved pedestrian and bicycle trail, traverses the Basin. A model airplane field is located adjacent to the spillway.

The spoil material stockpile area is located within an undeveloped portion of the Basin at the northwest corner. There are no recreational facilities within the immediate vicinity of the stockpile.

The parking lots where in-kind services would be performed are located adjacent to the dam outlet structures. The lots are for Corps operation and maintenance vehicles, and are not associated with recreational facilities.

Significance Threshold

Impacts would be considered significant if the alternative results in:

• A substantial and long term disruption of existing authorized recreational activities.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, approximately 250,000 cy of alluvium from the spoil material stockpile would be processed on-site and hauled off-site. On-site processing would not affect recreational activities since the site is over 1.5 road-miles away from the Los Angeles County recreational area. Although, Peckham Road serves as a secondary access to the recreational area, it is not actively used by the County of Los Angeles to control access to the recreational area. Thus, ingress and egress through Peckham Road would not affect public access to the recreational area.

Haul trucks would use unpaved access roads within the basin. The roads for the most part are located away from the Los Angeles County recreational area, hiking trails and bike paths. Near the Peckham Road exit, the haul routes merge with paved roads that service the Los Angeles County-leased recreational areas. The paved roads circumscribe the southern perimeter of the leased recreational area. Bicyclists and joggers use some sections of the roads. Thus, there would be simultaneous use of roads for both hauling operations and recreation. However, the impacts would be localized to the sections of the road used for hauling. A traffic-pedestrian safety management plan would be implemented where haul trucks are expected to share the roadway with bicyclists, joggers, and other recreational users (see Environmental Commitment for Public Health and Safety below). Multiple bike and jogging paths are available within the Basin. Further, most use occurs on weekends, when the haul trucks would not be in operation. Impacts to recreation would be less than significant.

Temporary use of Storm Weather Option routes through Duarte Road gate as needed would avoid impacts to recreation since there are no recreational facilities within the vicinity of the Storm Weather Option routes. However, use of these routes are expected to be infrequent and short in duration. Operations would resume under Alternative 1 once the interior roads are accessible.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Resurfacing operations would not require staging areas outside of the immediate work area such as nearby recreational facilities. Furthermore, the lots are not associated with any recreational facilities. There would be no impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Ingress through Duarte Road gate would require empty trucks to exit the I-210 or the I-605 at the terminus of I-605 at Huntington Drive. Trucks would proceed to Duarte Road gate via Huntington Drive, Buena Vista Street, and Duarte Road. The roadways are major arterials designated for truck traffic. There are no recreational facilities adjacent to the segments of the roadways that will be utilized. There would be no impacts to recreation.

Impacts to recreation associated with egress through Peckham Road gate would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. There would be no impacts to recreation. Two existing 0.2 acre asphalt parking lots would not be resurfaced.

3.13 Public Health and Safety

Affected Environment

Due to the presence of these recreational amenities discussed above, the Basin is frequented by the general public on a daily basis. The number of visitors peak during weekends. Though trails and bicycle paths are located throughout the Basin, most visitors are mostly concentrated within the 200 acre, county-leased recreational area. The main access to the recreational area is the Azusa Canyon Road gate located off Arrow Highway. The gate is also the closest to the recreational area through this gate. The Peckham Road gate located less than a half-mile away provides secondary access to the recreational area. Paved and unpaved roads within the Basin provide emergency access for areas beyond the Los Angeles County-leased recreational area.

The parking lots where in-kind services would be performed are located adjacent to the dam outlet structures. The lots are for Corps operation and maintenance vehicles, and are not associated with recreational facilities. People are not typically present in these two areas. No roads cross through the parking lots.

Significance Threshold

Impacts would be considered significant if the alternative:

- Impairs implementation of or physically interfere with an existing emergency response.
- Substantial increases safety risks for the general public.

Environmental Consequences

Alternative 1 (Peckham Road Gate Ingress & Egress) (Preferred Alternative)

Under Alternative 1, haul trucks would use the Peckham Road gate for ingress and egress. The Azusa Canyon Road gate would not be used. As a result, the primary emergency vehicle access to the Basin would remain unaffected.

Haul trucks would use unpaved access roads within the basin. The roads for the most part are located away from the Los Angeles County recreational area, hiking trails and bike paths. Near the Peckham Road exit, the haul routes merge with paved roads that service the Los Angeles County-leased recreational areas. The paved roads circumscribe the southern perimeter of the leased recreational area. Bicyclists and joggers use some sections of the roads. Haul trucks utilizing roads where bicyclists and joggers may be present increases the risk for accidents. However, with implementation of a traffic-pedestrian safety management plan which would include the use of flagmen and signage, the potential risk for accidents would be attenuated. Impacts would be less than significant.

Temporary use of Storm Weather Option routes through Duarte Road gate as needed would decrease impacts to health and safety since the potential for presence of bicyclists and joggers near the Storm Weather Option routes is less. However, use of these routes are expected to be infrequent and short in duration. Operations would resume under Alternative 1 once the interior roads are accessible.

In-Kind Services: Two existing 0.2 acre asphalt parking lots adjacent to Arrow Highway would be resurfaced. Resurfacing operations would not require staging areas outside of the immediate work area such as nearby recreational facilities. Furthermore, the lots are not associated with any recreational facilities. Since there are no roads through the parking areas, resurfacing operations would not interfere with emergency responses. There would be no impacts.

Alternative 2 (Duarte Road Gate Ingress & Peckham Road Gate Egress)

Under Alternative 2, haul trucks would use the Duarte Road gate for ingress and Peckham Road gate egress. The Azusa Canyon Road gate would not be used. As a result, the primary emergency vehicle access to the Basin would remain unaffected.

Ingress through Duarte Road gate would require empty trucks to exit the I-210 or the I-605 at the terminus of I-605 at Huntington Drive. Trucks would proceed to Duarte Road gate via Huntington Drive, Buena Vista Street, and Duarte Road. The roadways are major arterials designated for truck traffic. The city of Duarte plans to construct bicycle lanes along

Highland Avenue and Duarte Road in concert with completion of the Metro Gold Line Extension project. Haul trucks utilizing roads where bicyclists and joggers may be present increases the risk for accidents. However, with implementation of a traffic-pedestrian safety management plan which would include the use of flagmen and signage, the potential risk for accidents would be attenuated. Impacts would be less than significant.

Egress through Peckham Road gate would require the use of unpaved and paved roads within the Basin. Impacts would be the same as those characterized under Alternative 1. Impacts from in-kind services would be the same as those characterized under Alternative 1.

No Action Alternative

Under the No Action Alternative, spoil material would not be processed on-site nor hauled off-site. The spoil material stockpile would remain in place. Two existing 0.2 acre asphalt parking lots would not be resurfaced. There would be no impacts to public safety.

Environmental Commitments

PS-1 Prepare and implement a traffic-pedestrian safety management plan for areas where haul trucks are expected to share the roadway with bicyclists, joggers, and other recreational users within the Santa Fe Dam basin as well as immediately adjacent areas. Incorporate the use of flagmen and signage as part of the plan.

4.0 Cumulative Impacts

A cumulative impact is an "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over time (40 CFR § 1508.7). CEQ's guidance for considering cumulative effects states that NEPA documents "should compare the cumulative effects of multiple actions with appropriate national, regional, state, or community goals to determine whether the total effect is significant" (CEQ 1997). The area of consideration for cumulative impacts is the Santa Fe Dam basin and roadways immediately adjacent to the facility.

Past

Construction of Santa Fe Dam was completed in 1948. The Basin mostly remain undeveloped until the Corps and Los Angeles County jointly developed recreational facilities from 1976 through 1984. The recreational area encompasses approximately 200 acres at the southern boundary of the Basin. From the late 1970s through the early 1980s, Los Angeles County constructed groundwater recharge basins over an approximately 125 acre area near the intersection of the I-210 and the I-605. General operations and maintenance activities were likely performed at regular intervals to maintain the dam structure and the basin.

Present

Present Corps activities within the Basin primarily entail routine operations and maintenance activities to maintain the dam structure and the basin. Annual maintenance activities

typically occur over a two week period between March and April. The operational area immediately upstream of the inlet works is cleared of spoil material and debris. Debris caught on the inlet works is removed. Structural damages are repaired. The area adjacent to the log boom and associated anchor points are cleared. Once every five years, the energy dissipater immediately downstream of the outlet works is cleaned. The structure is dewatered, spoil material is removed, and damaged concrete baffles and blocks are repaired.

Present Los Angeles County Parks and Recreation activities within the Basin include maintenance and management of the approximately 200 acre recreational area. Activities include maintenance of buildings and roads as well as recreational amenities such as playgrounds and picnic grounds including appurtenant structures such as bathrooms. Furthermore, the Los Angeles County Department of Public Works continues to maintain the groundwater recharging basins.

The Los Angeles County Metropolitan Transportation Authority is currently utilizing an approximately 6 acre area at the northern border of the Basin immediately adjacent to Duarte Road as a construction staging area during construction of the MTA's Gold Line extension project.

Future

Future Corps activities in the Basin include continued operations and maintenance activities to maintain the dam structure and the basin. Furthermore, outgrants would be evaluated and issued as appropriate to parties requiring temporary easement for construction projects outside of the Basin such as the MTA Gold Line extension or for seasonal festivals such as the Renaissance Fair.

Los Angeles County Department of Parks and Recreation would continue to operate and maintain the 200 acre recreational area. The leased area is fully built out. No further expansion of the recreational area is anticipated.

Los Angeles County Department of Public Works would continue to operate and maintain the groundwater recharging basins. No further expansion is anticipated.

Los Angeles County Metropolitan Transportation Authority would continue and complete extension of the Gold Line adjacent to Duarte Road. The city of Duarte would construct bicycle lanes along Highland Avenue and Duarte Road in concert with completion of the extension project.

4.1 Cumulative Impacts Analysis

With exception of the No Action Alternative, all alternatives entail on-site processing and offsite transport of approximately 250,000 cy alluvium.

Air Quality

The Basin is located within the SCAB which continues to be in nonattainment for the criteria pollutants listed in Table 3. Past and present maintenance activities performed by the

Corps or Los Angeles County entailed repairs that were limited in scope, size, and duration. Emissions associated with such activities are temporary. It is unlikely that emissions from these activities exceeded the General Conformity de minimis rates. Continued operation of the recreational area within the basin results in increased emissions during weekends, the peak visitation period.

Furthermore, Renaissance Pleasure Faire, a seasonal festival held on the grounds of the basin from April through May draws visitors on the weekends. Emissions from the recreational area and special events such as the Renaissance Pleasure Faire result in periodic increases in emissions. However, due to the temporary nature of emissions, it is unlikely that recreational uses within the basin would exceed SCAQMD emissions thresholds or the General Conformity de minimis rates.

Likewise, estimated emissions associated with Alternatives 1 and 2 would entail temporary impacts to air quality during construction but would not exceed the SCAQMD Regional Significance Thresholds or the General Conformity de minimis rates. Emissions associated with foreseeably future actions are likely to be temporary and are not likely to succeed regulatory threshold. Impacts would be less than significant.

Biological Resources

Native shrubs and native riparian vegetation present within the basin. The native shrubs are found in the uplands outside of the active channel of the San Gabriel River. Riparian vegetation including shrubs and trees as well as riversidian scrub are found in the active channel of the river or on adjacent terraces. It is likely that vegetation was present throughout the entire 1,970 acre footprint of the Basin subsequent to construction of the dam structure. Likewise, the Basin likely supported a robust avian population. The areas immediately adjacent to the upstream toe of the dam as well as the approach to the outlet works were likely kept free of vegetation.

Development of the Los Angeles County recreation area likely resulted in removal of upland shrubs from the recreational area's approximately 200 acre footprint. Likewise, development of the groundwater recharging basins likely resulted in the removal of approximately 125 acres of upland vegetation. Currently, Los Angeles County maintenance practices do not extend beyond the footprints already developed. The majority of the Basin outside of the developed areas continue to support vegetation. Furthermore, the Basin continues to provide habitat for birds including the federally endangered vireo. Per 2014 surveys, the vireo are concentrated in the riparian forest away from the Los Angeles County recreation area.

Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. Los Angeles County continues to maintain the developed areas. The scope and size of these maintenance practices will likely remain unchanged for the foreseeable future. In addition, the development of lands within the Basin beyond the existing land uses is unlikely in the foreseeable future. As a result, the existing flora and fauna are expected to remain unchanged.

Implementation of Alternatives 1 or 2 would require clearing and cropping of non-native vegetation on top of the spoil material stockpile. Upon completion of removal, the footprint would be regraded to match the surrounding grade. The 5 acre footprint is expected to be vegetated via natural recruitment. As a result, native upland and riparian vegetation would continue to be present throughout the majority of the basin. Impacts would be less than significant.

Noise

Subsequent to the construction of the Basin, the interior of the Basin was undeveloped. Furthermore, the areas surrounding the Basin were likely not fully developed. Thus, it is likely that the ambient noise level within the Basin in the past was similar to that associated with open space, ranging from 45 dBA to 50 dBA. Past routine operations and maintenance activities temporarily elevated noise levels. Noise levels returned to ambient levels upon completion of work.

Ambient noise levels at the outer perimeter of the basin likely increased in conjunction with further development of surrounding areas. Currently, road noise from adjacent freeways (I-210 and I-605) as well as major arterials such as Arrow Highway, Irwindale Avenue, and Duarte Road are the major sources of noise. Based on the Corps' 2014 noise level measurements, the average ambient noise levels could range from 65 dBA to 75 dBA. Development and use of the Los Angeles County recreational area likely resulted in a slight increase in ambient noise level within the southern area of the Basin. Based on the Corps' 2014 noise level from 55 dBA to 65 dBA. Due to atmospheric attenuation of noise, the ambient noise levels in the undeveloped interior of the Basin likely remain unchanged (45 dBA – 50 dBA).

Implementation of Alternatives 1 or 2 would result in temporary elevation of noise levels within the immediate vicinity of the spoil material stockpile. Noise levels on the major arterials associated the off-site transport would not result in notable increases.

Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. Los Angeles County continues to maintain the recreational area. Maintenance activities would temporarily elevate noise levels in areas immediately adjacent to these activities. These levels would return to baseline ambient levels upon completion of work. The scope and size of these maintenance practices will likely remain unchanged for the foreseeable future. In addition, the development of lands within the Basin beyond the existing land uses that could result in permanent elevation of ambient noise levels is unlikely in the foreseeable future. Likewise, the cities such as Duarte and Irwindale that circumscribe the Basin are fully built out. As a result, the existing ambient noise levels are expected to remain unchanged. Based on the above, impacts would be less than significant.

Traffic

Subsequent to the construction of the Basin, the interior was undeveloped. Thus, roads within the Basin were maintenance roads that were utilized during operations and maintenance operations. Public access and visitations were likely small in number. With the

development of the Los Angeles County recreational area starting in the mid-1970s, visitations as well as traffic into the Basin increased. Los Angeles County constructed paved roads in the Basin's interior to facilitate public access to the recreational area. Traffic into and within the Basin occasionally increases during festivals held on the grounds of the recreational area such as the Renaissance Fair. Likewise, traffic associated with maintenance activities could also result in occasional increases. In both cases, traffic would return to baseline levels upon conclusion of the special events or maintenance activities. Traffic associated with public visitations are unlikely to increase beyond current levels since the recreational area is built out and there are no plans to expand the recreational area in the foreseeable future. Current Corps maintenance activities are typically small in scope and do not require large hauling operations. The maintenance regimen is expected to remain unchanged in the foreseeable future.

In the absence of historical traffic data, traffic on haul routes outside of the Basin generally increased as development of the surrounding areas increased. Furthermore, traffic is a function of regional trends such as economy, population, housing, etc. In general, further congestion of freeways and major arterials is expected since projected increases in population and road usage is far greater than increases in roadway capacity. Thus, the average daily traffic figures reported for the haul routes in Table 9 will likely trend upwards in the foreseeable future. As indicated above, traffic associated with visitations to the Los Angeles County recreational area will likely remain unchanged for the foreseeable future. Likewise, current Corps maintenance regimen will likely remain unchanged. There will be occasional temporary increases in traffic for special events such as the Renaissance Fair or major maintenance activities. However, no further developments that would permanently increase traffic on the roadways surrounding the Basin are expected in the foreseeable future. Based on the above, traffic impacts associated with the removal of 250,000 cy of settlement would not result in cumulative significant impacts.

Cultural Resources

It is likely that areas in the lower Basin, upgradient of the dam, were substantially disturbed during construction of the dam structure in the late 1940s since filled material was likely procured on-site. Corps operations and maintenance activities subsequent to the construction of the dam likely resulted in earth would activities in the lower half of the basin. The extent of the disturbance is unknown. It is unlikely that construction of the Los Angeles County recreational area resulted in substantial impacts to cultural resources since it is also located within the lower half of the basin that was originally disturbed during construction. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works, in the lower half of the basin. The maintenance activities are typically small in scope and do not require substantial earthmoving activities. Furthermore, Los Angeles County operations and maintenance activities are limited to the existing footprints of the recreational area and groundwater recharge basins. Thus, current maintenance activities within the Basin occur in previously disturbed areas. The scope and nature of these activities are expected to remain unchanged in the foreseeable future. Furthermore, there are no plans to further develop lands within the Basin for other uses in the foreseeable future. Thus, ground disturbing activities beyond maintenance of the dam, the groundwater recharge

basins, the recreational area, or other disturbed areas within the Basin are unlikely. The proposed project would excavate a man-made spoil material stockpile located within the vicinity of groundwater recharge basins and an existing maintenance road. The project would not require excavation below the surrounding grade. Based on the above, cumulative impacts would be less than significant.

Water Quality

The Basin is located at the foothills of the San Gabriel Mountains, near the mouth of a major canyon. The river is an ephemeral system. Thus, the river conveys waters only during storms. Prior to the construction of the Basin surface waters throughout the upper reaches of the San Gabriel River, upstream and downstream of the Basin, likely contained minimal amounts of pollutants associated with urban development. The high energy flows exiting the San Gabriel Mountains were likely turbid due to the presence of alluvial sediments within the water column. Construction of the Basin likely had limited impact on water quality due to the ephemeral flow regime. Water quality impacts were likely limited to temporary increases in turbidity due to earthmoving work associated with dam construction. Maintenance operations within the Basin prior to the development of non-Corps land uses may have temporarily increase in turbidity due to maintenance activities would have been non-detectable. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. The maintenance activities are typically small in scope. The maintenance regimen is expected to remain unchanged in the foreseeable future.

The development and operation of the Los Angeles County recreation area likely resulted in the use of fertilizers, herbicides, and other chemicals associated with the maintenance of recreational amenities. These chemicals likely enter the water column when a flood control pool is occasionally held in the lower basin during large storms, flooding the recreational area. This practice is in frequent. Furthermore, the amount of chemicals entering the water column from the recreational area would be de minimis relative to the amount of pollutants entering the river downstream of the Basin which convey pollutants from the highly developed larger watershed. The scope and frequency of Los Angeles County maintenance practices are likely to remain unchanged. Furthermore, there are no plans in the foreseeable future to expand the recreational area beyond the current footprint. Therefore, the amount and frequency of pollutants from the recreational area entering the water column is expected to remain unchanged.

The proposed project is located in the uplands and would have little to no impact on water quality. Based on the above, cumulative impacts would be less than significant.

Recreation

There were no authorized recreational uses within the Basin subsequent to the completion of construction in 1948. However, it is likely that there were occasional unauthorized recreational activities within the Basin. Authorized recreational uses within the Basin started with the development of the Los Angeles County recreational area in the mid-1970s.

Currently, most recreational activities are concentrated within the approximately 200-acre recreational area. However, recreational trails are present throughout the larger basin. Recreational amenities in the Basin include playgrounds, picnic grounds, and designated swimming areas. Recreational activities include biking, hiking, walking, picnicking, swimming, and fishing.

The Corps does not conduct operations and maintenance activities within areas leased to Los Angeles County. As a result, there are no disruptions to most recreational activities within the authorized recreational area. Occasional operations and maintenance activities elsewhere within the larger basin may result in temporary disruption or use of trails used by hikers and bicyclists. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. The maintenance activities are typically small in scope. The maintenance regimen is expected to remain unchanged in the foreseeable future.

The Los Angeles County recreational area is built out to the authorized limits. Furthermore, there are no plans in the foreseeable future to expand the recreational area beyond the current footprint. Therefore, amount and scope of recreational activities and uses within the Basin are expected to remain unchanged. Last, the proposed project would not result in long-term disruption of existing recreational activities. Based on the above, cumulative impacts would be less than significant.

Public Health and Safety

Public access to the Basin was limited subsequent to the completion of construction in 1948 since there were no authorized recreational uses. Public use of the Basin began with the development of the Los Angeles County recreational area in the mid-1970s. Due to the presence of these recreational amenities, the Basin is frequented by the general public on a daily basis. The number of visitors peak during weekends. Though trails and bicycle paths are located throughout the Basin, most visitors are mostly concentrated within the 200 acre, county-leased recreational area. The main access to the recreational area is the Azusa Canyon Road gate located off Arrow Highway. The gate is also the closest to the recreational area through this gate. The Peckham Road gate located less than a half-mile away provides secondary access to the recreational area. Paved and unpaved roads within the Basin provide emergency access for areas beyond the Los Angeles County-leased recreational area.

The Corps does not conduct operations and maintenance activities within areas leased to Los Angeles County. Occasional operations and maintenance activities elsewhere within the larger basin may utilize trails used by hikers and bicyclists. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. The maintenance activities are typically small in scope. The maintenance regimen is expected to remain unchanged in the foreseeable future. As a result, current and future risks to public health and safety for most operations and maintenance activities are minimal.

The Los Angeles County recreational area is built out to the authorized limits. Furthermore, there are no plans in the foreseeable future to expand the recreational area beyond the current footprint. Therefore, the number and frequency of visitors to the Basin are expected

to remain unchanged. Likewise, continued risks public health and safety associated with current and future operations and maintenance practices will likely remain low. Based on the above, cumulative impacts would be less than significant.

Aesthetics

Prior to the construction of the dam, the view of the project area was likely comprised of an open and expansive landscape with beige and brown hues as well as heterogeneous textures and non-linear forms associated with upland and riparian shrubs. Construction of the dam in the 1940s resulted in a monolithic element, gray in color and linear in form. Additional linear forms were added to the viewshed with the construction of the I-605 and I-210 freeways starting in the 1960s to accommodate rapid growth of the Los Angeles area. These elements substantially altered the viewshed. There are no capital projects the foreseeable future that would further add major elements to the viewshed.

Corps operations and maintenance practices were limited to work within the Basin or likefor-like repairs of the dam structure. Therefore, the work did not alter the views. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. The maintenance activities are typically small in scope. The maintenance regimen is expected to remain unchanged in the foreseeable future.

Interior views of the basin likely remain unaltered until the construction of the Los Angeles County recreational area. The recreational area introduced a variety of small geometric forms associated with recreational amenities within a manicured landscape. The small footprint of the 200-acre relative to the 1,970-acre footprint of the Basin attenuated the visual impacts. The Los Angeles County recreational area is built out to the authorized limits. Furthermore, there are no plans in the foreseeable future to expand the recreational area beyond the current footprint. Thus, the existing view shed is likely to remain unchanged. Based on the above, cumulative impacts would be less than significant.

Utilities

Presence of utilities within the Basin prior to and subsequent to the construction of the dam is unknown. A power transmission line traverses the Basin on the northwest corner of the Basin. Furthermore, most utilities are concentrated within the Los Angeles County recreational area. The Corps does not conduct operations and maintenance activities within areas leased to Los Angeles County or near the power transmission lines. Current Corps maintenance regimen is focused on a 10 acre area near the approach to the outlet works. The maintenance activities are typically small in scope. The maintenance regimen is expected to remain unchanged in the foreseeable future. Furthermore, there are no plans in the foreseeable future to expand the recreational area beyond the current footprint. Thus, addition of major utilities to service the recreational area is unlikely. Based on the above, cumulative impacts would be less than significant.

5.0 Compliance with Applicable Environmental Laws and Regulations

Clean Air Act of 1972, as amended, 42 U.S.C. 7401, et seq.

The proposed action would not violate any Federal air quality standards, exceed the U.S. EPA's general conformity de minimis threshold, or hinder the attainment of air quality objectives in the local air basin.

Clean Water Act (CWA) of 1972, as amended, 33 U.S.C. 1251, et seq.

The proposed action would not result in discharges of fill within the waters of the United States.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et seq.

The proposed action would not affect any federally listed species or designated critical habitat with implementation of avoidance measures. Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife Service is not required.

National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321, et seq.

This EA has evaluated a reasonable range of alternatives within the context of the purpose and need. Furthermore, this EA has evaluated and disclosed anticipated environmental impacts.

National Historic Preservation Act of 1966, as amended, 54 U.S.C. 300101, et seq.

The proposed undertaking would have no effect on historic properties. Consultation with the State Historic Preservation Officer will occur regarding this determination.

Executive Order 11988: Floodplain Management (as modified/amended by Executive Order 13960).

The proposed action would remove spoils material from the floodplain located within Santa Fe Dam. Removal of spoils material would not affect floodplain functions nor would it directly or indirectly support further development within the floodplain.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

The proposed action would not result in long-term environmental impacts that would disproportionately affect minority and low income communities.

6.0 Preparers

Carvel Bass, Ecologist Asset Management Division

Kenneth Wong, Environmental Coordinator Planning Division

7.0 References

City of Duarte. (2006). General Plan, Circulation Element.

- City of Irwindale. (2008). General Plan.
- City of Irwindale. (2014). Olive Pit Mine and Reclamation Project Environmental Impact Report. Chapter 3.8, Table 2.8 – 11.

Federal Highways Administration. (2006). Construction Noise Handbook.

National Institute for Occupational Safety and Health. (2014). Snapshot of noise and worker exposures in sand and gravel operations. http://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/sonaw.pdf. See Figure 15.

8.0 Environmental Commitments

Following are the Environmental Commitments required pursuant to the 2013 EA and the draft SEA:

GEOLOGY AND SOILS

SG-1 Work would not occur during heavy storms.

WATER RESOURCES

- WR-1 A Storm Water Pollution Prevention Plan (SWPPP) would be prepared to reduce the potential for accidental release of fuels, lubricants, and other materials. This plan will include the designation of refueling locations, emergency response procedures, and reporting requirements for any spill that occurs. Equipment for spill cleanup will be kept at the staging area for immediate use.
- WR-2 Rumble strips would be placed at ingress and egress locations or at locations where the haul routes transition from unpaved to paved roads.
- WR-3 Utilize trucks with haul covers.

AIR QUALITY

- AQ-1 A Fugitive Dust Emission Control Plan would be developed, provided by the Contractor, and implemented. Measures to be incorporated into the plan would include, but not be limited to the following:
 - Install wheel washers/cleaners or wash the wheels of trucks and other heavy equipment where vehicles exit the site or unpaved access roads.
 - Increase the frequency of watering, or implement other additional fugitive dust mitigation measures, of all disturbed fugitive dust emission sources when wind speeds (as instantaneous wind gusts) exceed 25 miles per hour.
- AQ-2 Diesel engine idle time would be restricted to no more than ten minutes duration.
- AQ-3 All on-road construction vehicles working within California would meet all applicable California on-road emission standards and would be licensed in the State of California.
- AQ-4 Activities and operations on unpaved roads areas would be minimized to the extent feasible during high wind events (winds over 25 mph) to minimize fugitive dust.
- AQ-5 Water unpaved road access roads and other disturbed areas near the spoil material stockpile at least two times per day during periods of dry weather, or apply CARB certified soil binders per manufacturer's recommendations.
- AQ-6 Ensure compliance with SCAQMD Rule 1157.

NOISE

N-1 All equipment used would be muffled and maintained in good operating condition. All internal combustion engine driven equipment would be fitted with well-maintained mufflers in accordance with manufacturer's recommendations.

BIOLOGICAL RESOURCES

BR-1 A biologist would be on site as needed to monitor hauling activities at the outset of nesting season.

- BR-2 Aggregate processing and hauling activities would only occur between 6 a.m. to 6 p.m.
- BR-3 Unpaved areas would be watered as needed (or other measures implemented) to control dust on a continual basis.
- BR-4 If, in the opinion of the Corps site Biologist that, any work would impinge upon least Bell's vireo territories, then such construction work would occur outside the migratory bird nesting/breeding season between March 15 and September 15. A project biologist with authority to stop work would be present on site during breeding-season work to ensure impacts to nesting birds are minimized to the extent practicable.

CULTURAL RESOURCES

CR-1 In the event that previously unknown cultural resources are uncovered, work in the immediate area would cease until satisfaction of the requirements in 36 CFR 800.13.

AESTHETICS AND RECREATION

- AR-1 Work and staging areas would be kept orderly and free of trash and debris.
- AR-2 A storage area for collection and storage of recyclable and green waste materials would be kept within the work area. All trash and debris would be removed from the work area at the end of each day
- AR-3 Signs would be posted prohibiting trespassing via any approved work areas.

PUBLIC HEALTH AND SAFETY

PS-1 Prepare and implement a traffic-pedestrian safety management plan for areas where haul trucks are expected to share the roadway with bicyclists, joggers, and other recreational users within the Santa Fe Dam basin as well as immediately adjacent areas. Incorporate the use of flagmen and signage as part of the plan.