Appendix A. Biological Assessment

Biological Assessment

San Gabriel River/San Jose Confluence Sediment Removal Project

U.S. Army Corps of Engineers

Los Angeles District

May 2021

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Chapter 1. Introduction

This Biological Assessment (BA) for the San Gabriel River and San Jose Creek Confluence Sediment Removal Project (Proposed Action) has been prepared by the U.S. Army Corps of Engineers (Corps) in accordance with the requirements set forth under regulations implementing Section 7 of the Endangered Species Act (ESA) (50 C.F.R. Pt. 402). This BA evaluates the potential effects of the Proposed Action on listed and proposed species and designated and proposed critical habitat and determines whether any species or habitat are likely to be adversely affected by the Proposed Action, as required in 50 CFR 402.12.

1.1. Background

The San Gabriel River 2 (SGR2) Levee System is located on the San Gabriel River in the County of Los Angeles, California. It is an integral component of the general comprehensive plan for flood risk management in the Los Angeles County Drainage Area (LACDA), authorized by the Flood Control Act of 1941. The SGR2 Levee System comprises two segments: Segment 2a (SGR2a) and Segment 2b (SGR2b). The SGR2a segment runs along the right bank of the San Gabriel River from alongside the Santa Fe Flood Control Basin outlet works, located just upstream of the San Gabriel River/San Jose Creek confluence. The SGR2b segment is the portion of the levee that runs along the right bank (pink line) of the San Gabriel River from the downstream end of the SGR2a levee segment, located just upstream of the Whittier Narrows Flood Control Basin (Figure 1).

FIGURE 1 SGR2 LEVEE SEGMENT

1.2. Purpose and Need of the Proposed Action

The purpose of the Proposed Action is to perform channel maintenance and remove approximately 127,000 cubic yards (cy) of accumulated sediment and 11.2 acres of vegetation from the San Gabriel River along the SGR2b levee segment (at the confluence of the San Gabriel River and San Jose Creek) in order to re-establish the original design elevation of the channel invert across the entire width of the San Gabriel River at this location in the river channel and restore conveyance capacity.

This Proposed Action is needed to ensure that all features of the SGR2b levee are maintained and function as intended during flood events. During a routine maintenance inspection in April 2017, significant toe erosion was discovered on the right bank of the SGR2b levee segment. Upon investigation, it was determined that the entrance angle of San Jose Creek at this location is significantly higher (58 degrees) than the 15-degree entrance angle requirement per the original channel design at the confluence. This is a direct result of significant shoaling (sediment deposition) that has occurred at the confluence of San Jose Creek and San Gabriel River. This condition has constricted flows in San Jose Creek and directed them at the SGR2b levee embankment. Due to this, the SGR2b levee's embankment is actively being scoured and undermined. When areas of bank instability or erosion are left unattended, the continued bank erosion will continue to form sediment shoals within a river channel, causing a reduction in channel capacity. As the shoals grow in size, it continues to support vegetation and divert the channel flow into the riverbank, causing further bank erosion and instability, eventually leading to a risk of levee/bank failure.

Removing the accumulated sediment and vegetation will allow the original entrance angle of San Jose Creek to be re-established and reduce the risk of levee failure and damage by restoring the flow conveyance capacity to the San Gabriel River and San Jose Creek at the confluence.

1.3. Threatened, Endangered, Proposed Threatened or Proposed Endangered Species, Designated Critical Habitat

Table 1 contains the federally-listed and proposed species and designated and proposed critical habitat that may be present in the Action Area (defined in Section 1.6) and the Corps' assessment of whether the Proposed Action is likely to adversely affect such species or habitat based on habitat suitability and best scientific and commercial data available. This table includes species that are part of the Corps' formal consultation request for the Proposed Action under Section 7 of the Endangered Species Act (ESA), as well as species for which the Corps has made a no effect determination. Supporting analyses are provided in Chapters 2 and 3 of this document.

TABLE 1. FEDERALLY ENDANGERED, THREATENED, PROPOSED ENDANGERED OR PROPOSED THREATENED SPECIES, DESIGNATED OR PROPOSED CRITICAL HABITAT IN THE ACTION AREA

Common Name	Scientific Name	Status	Corps' Determination
Nevin's Barberry	*Berberis nevinii*	E	No Effect
San Gabriel Mountains dudleya	*Dudleya densiflora*	E	No Effect
Slender-horned spineflower	*Dodecahema leptoceras*	E	No Effect
Braunton's milk vetch	*Astragalus brauntonii*	E	No Effect
Least Bell's vireo	*Vireo bellii pusillus*	E	May Affect – Likely to Adversely Affect
Southwestern willow flycatcher	*Empidonax traillii extimus*	E	No Effect
Coastal California gnatcatcher	*Polioptila californica californica*	T	May Affect - Not likely to Adversely Effect
Santa Ana Sucker	*Catostomus santaanae*	T	No Effect
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	T	No Effect
Coastal California gnatcatcher critical habitat	*Polioptila californica californica*	D	May Affect - Not likely to Adversely Effect
E = endangered, T = threatened, D = designated			

1.4. Consultation History

On January 5, 2021, January 20, 2021 and February 2, 2021, the Corps held teleconferences with the U.S. Fish and Wildlife Service (USFWS) to discuss the Proposed Action, including proposed work and potential measures intended to avoid, minimize, or offset effects of the Proposed Action.

1.5. Description of Action Area and Proposed Action

1.5.1 Project Location

The Proposed Action is located in the cities of South El Monte and Industry, Los Angeles County, approximately 11 miles east of downtown Los Angeles, and 17 miles upstream of the Pacific Ocean. The site of the Proposed Action is located north of Interstate 605 and east of the Pomona Freeway (State Route 60), within and adjacent to the San Gabriel River and San Jose Creek. The Proposed Action is located on federal, city, and county land.

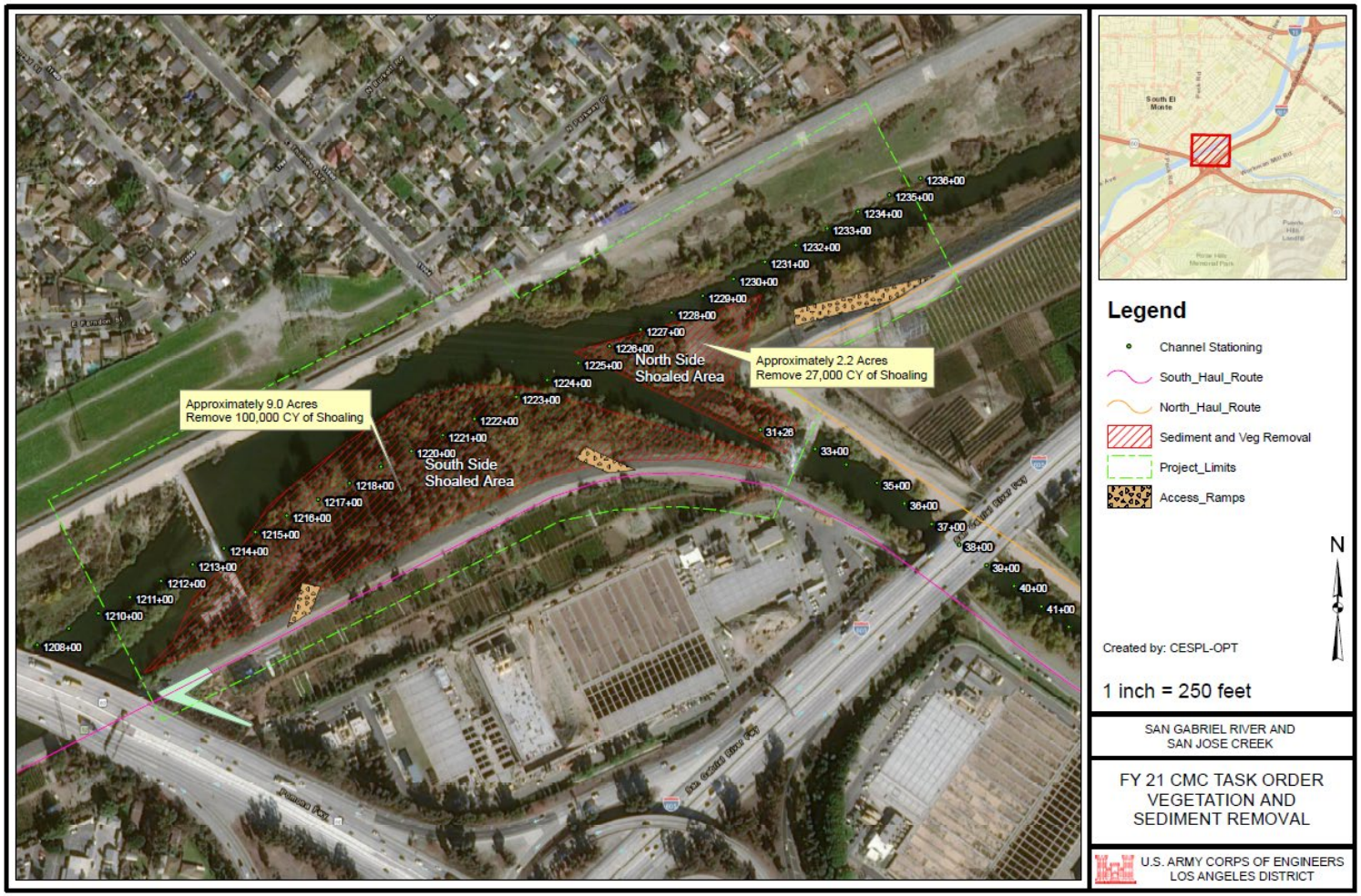

FIGURE 2. PROPOSED ACTION LOCATION AND FEATURES

1.5.2 Action Area

The Action Area is located on the San Gabriel River at the confluence of San Jose Creek to the Whittier Narrows Dam (Reservoir) as shown in Figure 2. The Action Area includes the temporary construction easement (TCE) where sediment removal activities will occur (up to the edge of the channel embankment, (filled in red)), staging areas, haul routes, and proposed enhancement areas (Figure 3). The Action Area was determined by accounting for direct impacts of the Proposed Action within the footprint and indirect impacts from the Proposed Action such as noise and vibrations that extend beyond the project footprint.

FIGURE 3. PROPOSED ACTION AND TCE – ACTION AREA

1.5.3 Detailed Description of Proposed Action

The Proposed Action consists of removing approximately 127,000 cy of accumulated material and 11.2 acres of vegetation and sediment at the San Gabriel River and San Jose Creek confluence to ensure that all features of the SGR2b levee perform as intended during flood events (Figure 2). The contractor would determine the methodology for vegetation and sediment removal. Typically, vegetation would be piled separately, loaded, and hauled to a green waste facility. The sediment would be removed with excavators. The substrate would be sorted into piles by type: rocks, relatively dry sediment, and wet sediment (piled to “dry out”). Loaders would load sediment into dump trucks to be hauled to the designated disposal facility.

The channel in SGR2b segment is trapezoidal and comprised of concrete/grouted stone with an earthen invert. Accumulated sediment would be excavated to the design elevation of the channel invert across the entire width of the channel between the San Gabriel River/San Jose Creek confluence and the Pomona Freeway (State Route 60). The construction footprint is approximately 11.2 acres. The design elevation for the channel invert is the top of the toe. The depth of the sediment ranges from 3 to 10 feet. Sediment removal preparation may include dewatering and/or water diversion of the immediate project area to perform the vegetation and accumulated sediment removal. Prior to construction, the work area within waters of the US would be temporarily dewatered and isolated from nuisance and/or low flows. Water from the dewatering operations would be pumped back into the channel. All dewatering structures would be removed prior to the rainy season or upon completion of construction, whichever occurs first. If dewatering or diversion occur as necessary within the existing channel this would be done in compliance with applicable Section 404 and 401 permitting requirements and National Pollution Discharge Elimination System (NPDES) construction stormwater permit (Section 402) prior to construction because the area of disturbance outside WOTUS will exceed one (1) acre of disturbance limit. Best Management Practices (BMP’s) will be utilized to reduce water quality concerns and turbidity and under direction of a qualified biological monitor. There would be no structural alterations or modifications to the engineered channel.

Staging Areas

Two staging areas (A and B) for the Proposed Action are proposed. Staging area A (approximately 0.23 acre in size) would be located at the southwest corner of the project area. Staging area B (approximately 0.16 acre in size) would be located south of the project area, off Workman Mill road and along San Jose Creek (Figure 4 and 5).

FIGURE 4. LOCATION OF STAGING AREA A

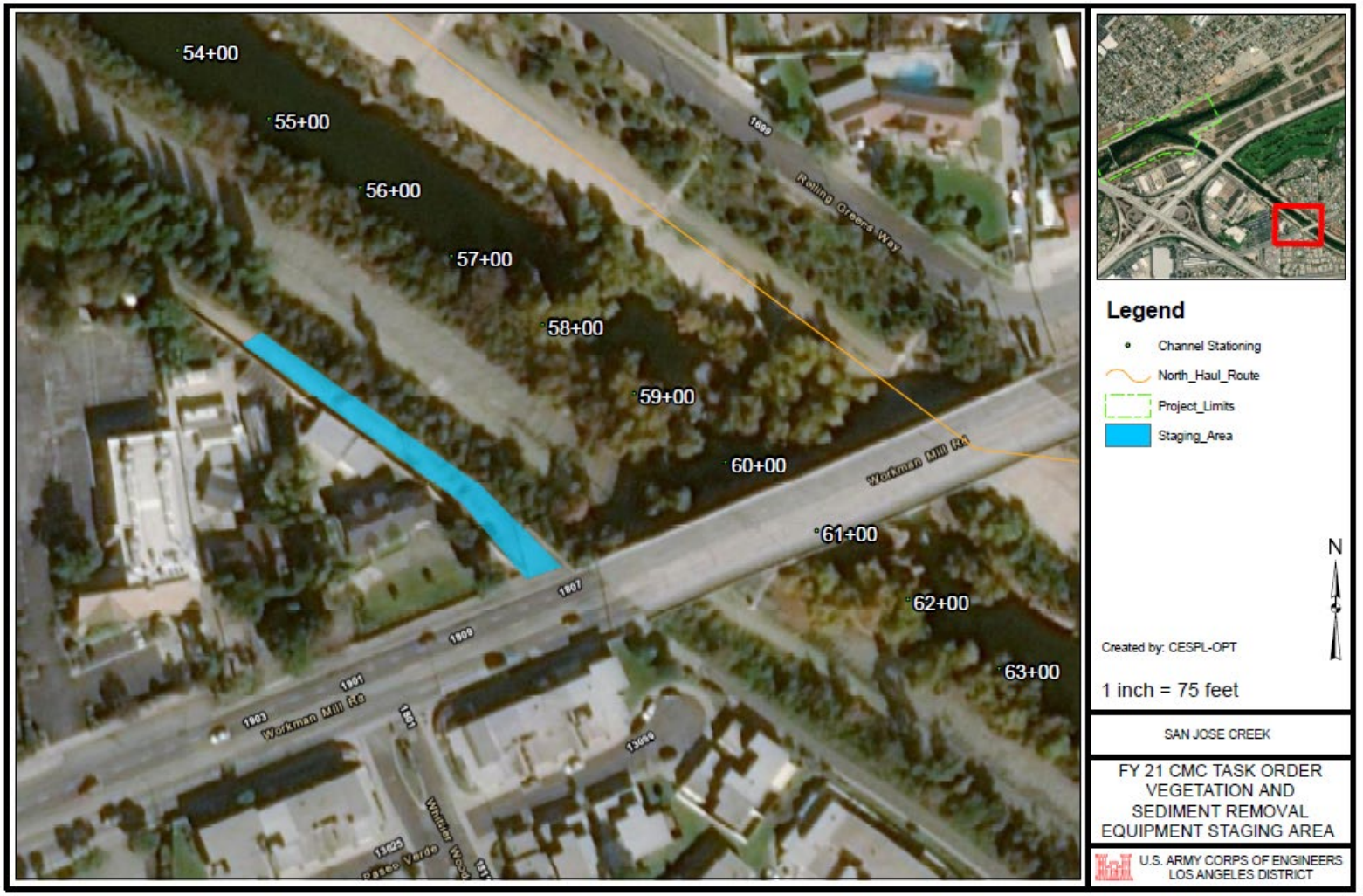

FIGURE 5 LOCATION OF STAGING AREA B

Site Access and Haul Routes

Construction vehicles would access the project area from the adjacent Los Angeles County Sanitation District property. Up to three (3) proposed temporary access ramps would be constructed to allow access into the channel. See Figure 2 for potential locations of the temporary ramps. The temporary ramps would measure approximately 120 feet (ft.) long, 15 ft. wide, and 2 ft. high and would be comprised of clean, earthen fill. Prior to construction, the contractor would submit the design of the temporary ramps to the Corps for review.

Haul roads requiring vehicular access would be needed during the removal of vegetation and sediment to transport equipment, fill material, and other construction materials. The haul route is aligned north to south and would be used to access the southern portion of the project area where the access ramps would be constructed (Figure 2). The haul route is on existing paved road that have relatively consistent use by vehicles. Construction equipment and haul trucks would utilize existing highways, roadways, and temporary access ramps constructed for the Proposed Action.

For disposal, the haul route would begin at the project area and end at a commercial landfill, American Bin Company, located approximately 32 miles northwest of the project area. Construction equipment and haul trucks would utilize the temporary ramps constructed for the Proposed Action and existing roadways.

Organic materials, trees, shrubs, and abandoned timber structures, as well as inorganic materials, would be disposed of by hauling to the American Bin Company (Figure 6). Disposal of these materials by burning or burying at the project area would not be permitted. Although it is not anticipated that hazardous substances would be present in the material removed, prior to disposal, the collected material would undergo testing to determine (by the contractor) appropriate disposal techniques. If potentially toxic soils are encountered, lay down yards for drying and/or sorting of materials are located in the cities of Pomona or Riverside and would be used for disposal.

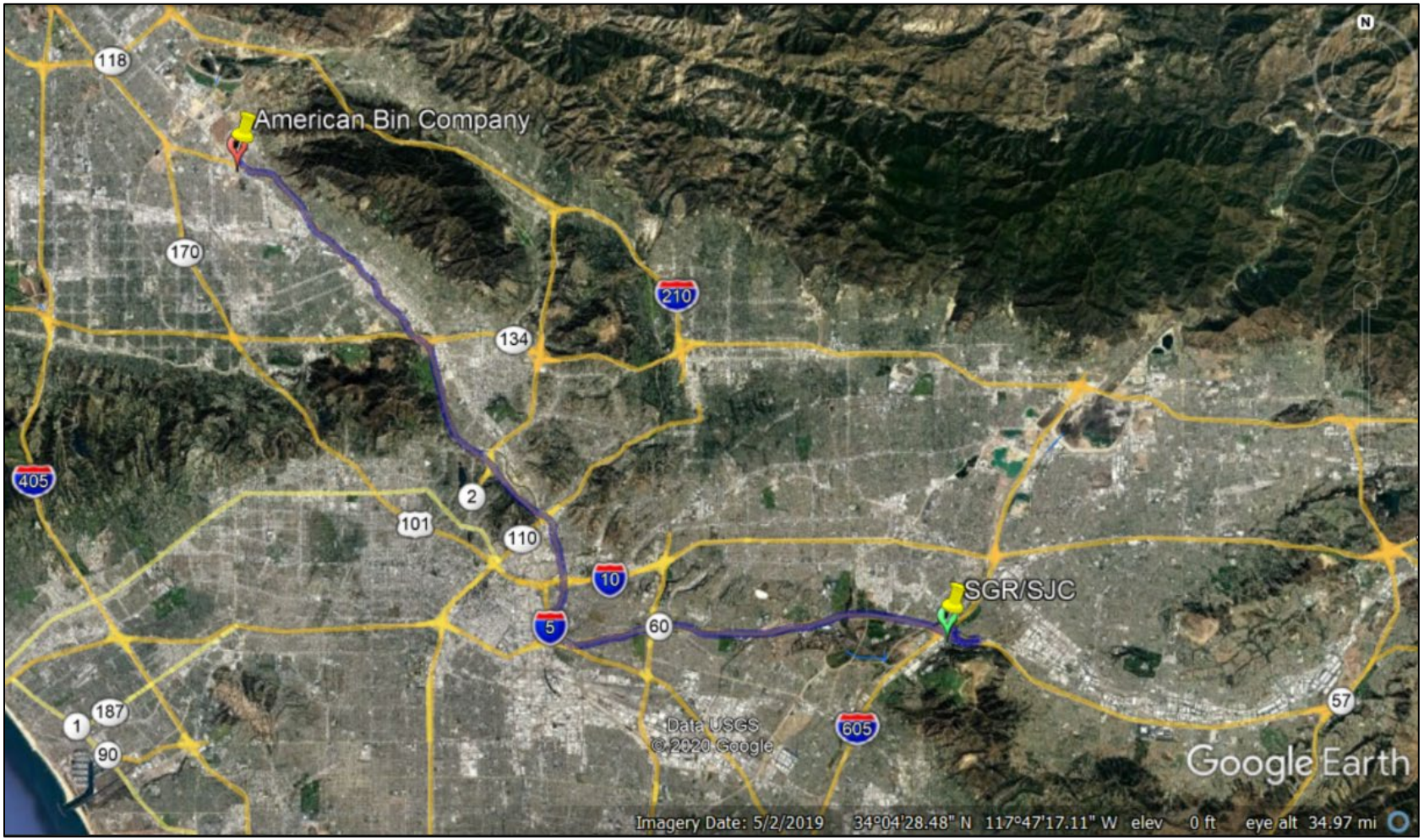

FIGURE 6. LOCATION OF AMERICAN BIN COMPANY – HAUL ROUTE

Construction Equipment

Construction equipment would likely include a combination of water trucks, waste trucks, haul trucks, crawler and front-end loaders, dozers, skid-steers, excavators, loaders, and pickup trucks.

Construction Schedule

Construction is scheduled to commence in Fall 2021 through Fall 2024 and would only occur during periods when least Bell's vireo and coastal California gnatcatcher are not nesting (avoidance from March 1 – September 15). It is possible that the Proposed Action would be constructed in stages, with multiple start dates and construction periods for various phases depending on funding, environmental windows, and weather delays. Construction phasing may result in an extension of the overall project duration beyond Fall 2024.

Proposed construction hours would be 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 7:00 p.m. on Saturday. Occasional overtime work may be required to maintain the construction schedule, but timing would comply with local noise ordinances.

1.5.4 Measures Intended to Avoid, Minimize, or Offset Effects of the Proposed Action

There is a total of 31.4 acres of habitat impacts estimated for the 131.4 acre Proposed Action Area. Of that total, 11.2 acres are permanent impacts from the removal of vegetation and sediment, and 20.2 acres are temporary impacts within the project footprint including the enhancement of wetland/riparian habitat. Conservation measures would ensure less that significant effects of the Proposed Action by minimizing the removal of and impacts to vegetation, to the extent practicable, along the channel, staging areas and ingress/egress locations. The vegetation communities within the Action Area were categorized based on the potential to meet least Bell's vireo suitable habitat quality with the implementation of an exotic/invasive removal management plan. This plan would follow similar guidelines as set in the LACDA O&M Manual (Corps, 1999). The enhancement activities would be implemented for a period of 10 years. The Corps proposes to offset the permanent impacts to wetland/riparian habitat at a 2:1 ratio. Table 2 summarizes the impacts, offset ratio, and number of acres intended to offset permanent impacts of the Proposed Action, including 10-years of vegetation management.

A total of 20.2 acres of wetland/riparian habitat would be enhanced to offset permanent impacts to nine (9) acres of suitable least Bell's vireo riparian habitat at a 2:1 ratio and permanent impacts to 2.2 acres of disturbed non-native vegetation at a 1:1 ratio. According to the vegetation data collected and mapped (Woods 2019), there are a total of 20.7 acres available for creditable riparian habitat enhancement opportunities.

Vegetative cover categories (see Figure 7 and Table 2) include:

1. Mixed Canopy Non-native Vegetation, non-native woodland, Mixed canopy- disturbed (moderate to low quality, creditable mitigation); This vegetation category offers the most opportunity for enhancement of habitat.
2. Mixed Wetland/Riparian Canopy Native Vegetation (high quality, not creditable mitigation).
3. Eucalyptus Grove and Giant Reed (*Arundo donax*) – removal only (low quality, not creditable mitigation).
4. Pepperweed (*Lepidium latifolium*), poison hemlock (Conium maculatum), and mustard (*Brassica sp*.) – removal only (low quality, not creditable mitigation).
5. Herbaceous or low growing shrubs/sub-shrubs, cattail aquatic herbaceous (moderate quality, could be creditable); and
6. Barren, unvegetated (low quality, not creditable mitigation).

Habitat enhancement activities would meet the following conditions:

- Enhancement activities must be initiated immediately following the completion of the construction of the Proposed Action; exotic/invasive removal of plant species will only occur during periods when least Bell's vireo and coastal California gnatcatcher are not nesting (nesting period is from March 1 – September 15)
- Exotic/invasive plant species 100% removal in target riparian areas in the Mixed Canopy Non-Native Vegetation for 10-years (as shown in Table 2 and Figure 7)

TABLE 2. SUMMARY OF PROPOSED OFFSET AND VEGETATION CATEGORIES

Plant Community Type	Total acreage	Project Component Permanent Impacts (acres)	Project Component Temporary Impacts (acres)
Mixed Canopy Native Vegetation	67.9	9	0
Mixed Canopy/Non-native Invasive vegetation	20.7	2.2	18.8
Non-native homogeneous or herbaceous/low growing vegetation	41.6	0	0
Barren	1.2	NA	NA
		Total Vegetation Acres	**131.4**

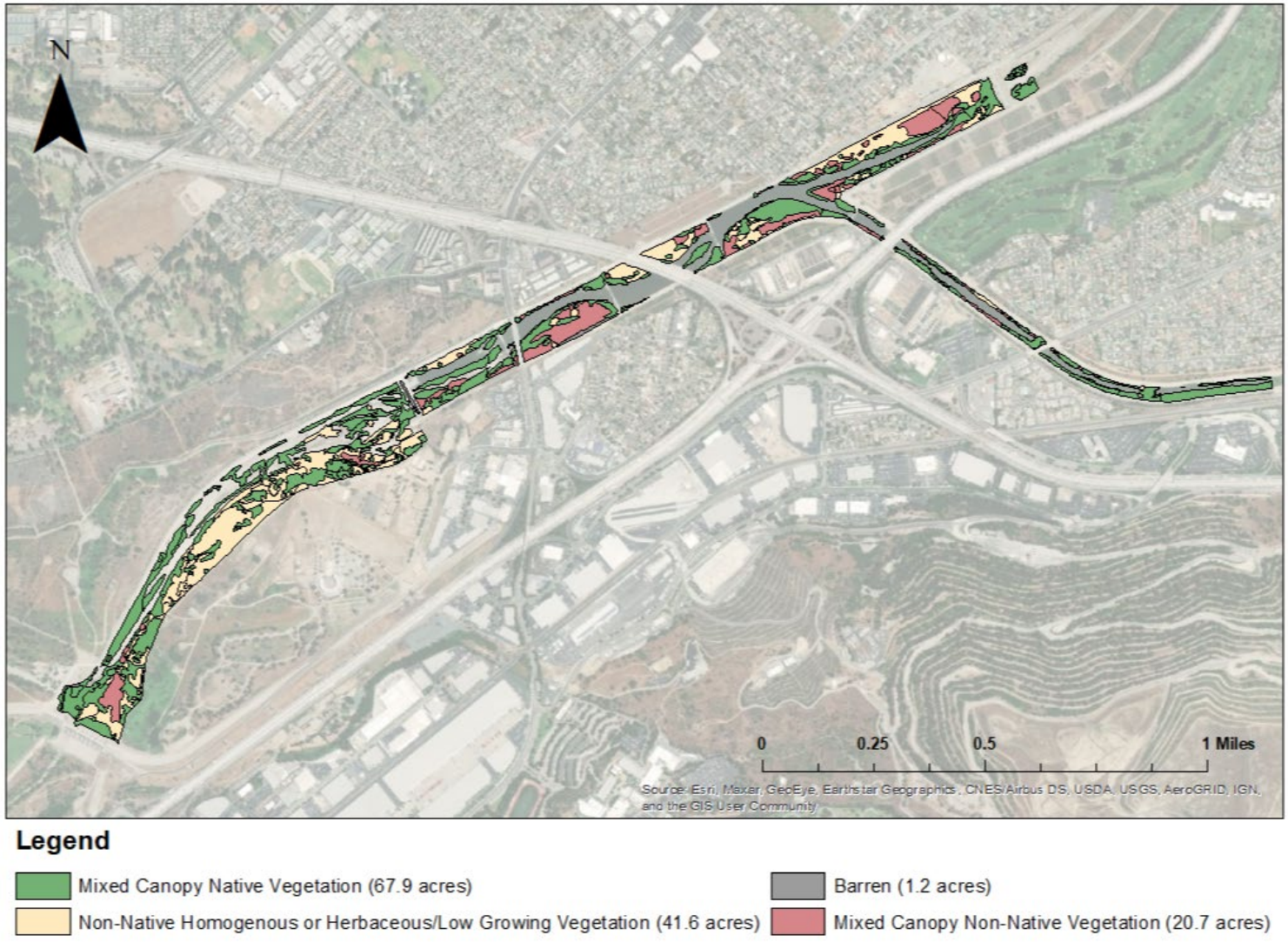

FIGURE 7. VEGETATION COVER CATEGORIES MAP

1.5.5 Environmental Commitments

The following measures are either intended to avoid or minimize impacts during construction (e.g., conducting surveys, ensuring activities remain within the project footprint) or provide habitat enhancement and passive restoration in the Action Area to offset permanent losses to wetland/riparian habitat:

BIO-1 The Corps shall conduct annual presence /absence surveys during the nesting seasons that entails surveys for least Bell's vireo (April 10 - July 31) and coastal California gnatcatcher (March 1 - June 30) in spring and early summer during construction. The survey information will be provided to USFWS on an annual basis.

BIO-2 The contractor shall clear sediment and vegetation associated with project construction within potential vireo habitat only during period when least Bell's vireo and coastal California gnatcatcher are not nesting (avoidance from March 1 – September 15).

BIO-3 The Corps will enhance two acres of least Bell's vireo habitat (through non-native removal) for each acre of wetland/riparian habitat permanently impacted by the Proposed Action. This will equate to 18-acres of passive restoration/enhancement to compensate for 9 acres of permanent impacts to least Bell's vireo territories utilizing suitable riparian habitat. The 2:1 ratio for riparian/wetland habitat impacts and 1:1 for non-native vegetation assumes that the enhancement area will be actively maintained for a 10-year period, for a total of 20.2 acres of enhancement. Exotic/invasive removal of plant species will only occur during periods when least Bell's vireo and coastal California gnatcatcher are not nesting (nesting period is from March 1 – September 15).

BIO-4 Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to designated construction boundaries, including staging areas or routes of travel. The construction area(s) will be the minimal area necessary to complete the Proposed Action and will be specified in the construction plans. Highly visible barriers (such as orange construction fencing) will be installed around all riparian and sensitive habitats adjacent to the project area to designate limits of construction activities. These barriers will be maintained until the completion of all construction activities and removed at the completion of the project.

BIO-5 The Corps biologist (or environmental monitor) will monitor construction activities at initiation of construction and weekly checks to ensure compliance with environmental commitments.

BIO-6 Prior to construction activities, a Corps qualified biologist (or environmental monitor) shall conduct pre-construction environmental training for all construction crew members. The training shall focus on required avoidance/minimization measures and conditions of regulatory agency permits and approvals. The training shall also include a summary of sensitive species and habitats potentially present within the Action Area.

BIO-7 Prior to any ground-disturbing activities (e.g. mechanized clearing or rough grading) for all project related construction activities, a Corps qualified biologist (or environmental monitor) shall conduct pre-construction surveys of the project area for terrestrial special-status wildlife species. During these surveys the biologist will:

1. Inspect/survey the project area, for any sensitive wildlife species;
2. In the event of the discovery of a non-listed, special-status ground-dwelling animal, such as a burrowing owl or special-status reptile, attempts will be made to recover and relocate the animal to adjacent suitable habitat within the project area at least 200 feet from the limits of construction activities. Burrowing owl surveys and relocations would follow established protocols;
3. Ensure the limits to construction are clearly marked.

BIO-8 Best management practices shall be implemented to reduce impacts to native habitats, including the following:

1. All equipment maintenance, staging, and dispending of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement best management practices to prevent runoff carrying toxic substances from entering the San Gabriel River or San Jose Creek and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
2. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Los Angeles (LA) County Fire Department) and when activities may produce sparks. Emergency contacts for the LA County Fire Station No. 90 on 3207 Cogswell Road will be established.
3. To the extent feasible, the contractor will prevent exotic weeds from establishing within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.

Chapter 2. Environmental Baseline and Special Status Species

2.1 Environmental Baseline

"Environmental baseline" refers to the condition of the listed species or its designated critical habitat in the Action Area, without the consequences to the listed species or designated critical habitat caused by the Proposed Action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the Action Area, the anticipated impacts of all proposed Federal projects in the Action Area that have undergone section 7 consultation, and the impacts of State and private actions which are contemporaneous with the consultation in progress. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify (like flood risk management operations) are part of the environmental baseline (50 C.F.R. 402.02).

The Action Area is located on the San Gabriel River at the confluence of San Jose Creek to the Reservoir. The Flood Control Act of 1936, as amended, included authorization for work on the San Gabriel River and Rio Hondo as approved by the Chief of Engineers, U.S. Army. The Reservoir was authorized as a unit of the general comprehensive plan for flood risk management in the LACDA authorized by the Flood Control Act of 1941. Construction of the Reservoir was completed in 1957. The primary purpose of the Reservoir is to provide flood risk management for the residents of Los Angeles and Orange counties residing downstream of the dam. The Reservoir is defined as the area upstream or behind the Dam structure that may be inundated with water during storm events. The Federal government owns 2,640.1 acres in fee and has limited rights over an additional 186.5 acres through flowage easements (2,828.6 acres in total). The Corps considers the 2,828.6 acres of land to be the Reservoir (See Figure 8). Information presented in this Chapter is based on recent surveys, literature reviews, and coordination with regulatory agencies and technical experts. The Action Area has been surveyed by biologists from the Corps, Wood Environment & Infrastructure Solutions, Inc. (Wood 2020) and the United States Geological Survey (USGS, 2019) to document the presence and locations of biological resources and sensitive species. California Department of Fish and Wildlife (CDFW), USFWS, and California Native Plant Society (CNPS) sensitive species occurrence databases were reviewed for the Action Area. This section summarizes the results of database reviews and surveys to present an up to date and thorough description of the environmental baseline.

FIGURE 8. WHITTIER ARROWS DAM RESERVOIR

2.2 Habitat Condition in the Action Area

The topography of the Action Area ranges from flat within the channel to approximate 25-30 percent slope increase in elevation to the trails above and along the upper banks. The majority of the Action Area is disturbed from a combination of homeless encampments, recreational, and equestrian use and existing invasive and exotic plants.

The San Gabriel River watershed is south of the Whittier Narrows Recreation Area and Nature Center and essentially an island of open space in the densely urbanized San Gabriel Valley. The habitat has been significantly altered from its historic condition by the construction of the Reservoir. Since construction, vegetation communities have been further altered by several factors, including drought (CDWR 2009), fires, natural and human-caused erosion, planting of non-native species, and ongoing routine maintenance activities (Los Angeles County 2010). These disturbances have allowed invasive plant species to become established, and these have become widespread. Competing interests for open space include recreation, agriculture, wildlife conservation, education, and infrastructure.

Most of the Action Area proper is disturbed from a combination of recreational uses, especially equestrian. Artificial features such as roads, bike paths, bridges, flood control facilities, and equestrian trails are scattered throughout the area. The topography of the Action Area within the river is flat. Elevation gradients are subtle. The river channel is comprised of thick, soft sand with little to no coarse gravel or cobbles.

Homeless people use the vegetated channel bottom to set up camps and crude shelters, usually hidden within areas of dense vegetation. The current estimate of the number of homeless residing in the Reservoir is about 250 people (USACE 2019). Suitable habitat for vireo and dispersing gnatcatchers is negatively affected by the use of the Reservoir by homeless. Negative effects include vegetation removal for shelters, increased noise, lighting and disturbance, and fire ignition. Fires degrade habitat and have resulted in the direct loss of nests (USACE 2019).

2.3 Vegetation

Surveys were conducted in spring and fall of 2019 within the Action Area (Figure 9, 10, and 11). The recent vegetation mapping efforts remain relatively consistent with the previous findings in Baseline Monitoring Report San Gabriel River Riparian Adaptive Management Plan (Wood, 2020). The native and disturbed vegetation communities are interspersed, therefore breaks in community type are determined based on dominant species type and professional judgment of the biologist surveying. There are a total of 15 vegetation and cover types within the Action Area. Ornamental landscape, trails and parks have been included in the developed cover type. Table 2 lists the cover types and impact types within the Action Area. The vegetation types were referenced to the Manual of California Vegetation (2021, CNPS) and the map was created using ArcGIS with recent base map imagery. The riparian plant communities in the Action Area are considered sensitive habitat types for their part in the ecological function of the watershed. These communities play important roles in the

life histories for a broad diversity of both common and special-status wildlife species. While non-native habitats are not protected, these communities still provide important foraging and refugia habitat for a variety of sensitive wildlife species including coastal California gnatcatcher (*Polioptila californica californica*) and least Bell's vireo (*Vireo belli pusillus*). While non-native habitats are not protected, these communities still provide important foraging and refugia habitat for a variety of sensitive plants including Nevin's barberry (*Berberis nevinii*). There will not be any direct or indirect impacts on native vegetation outside of the project footprint.

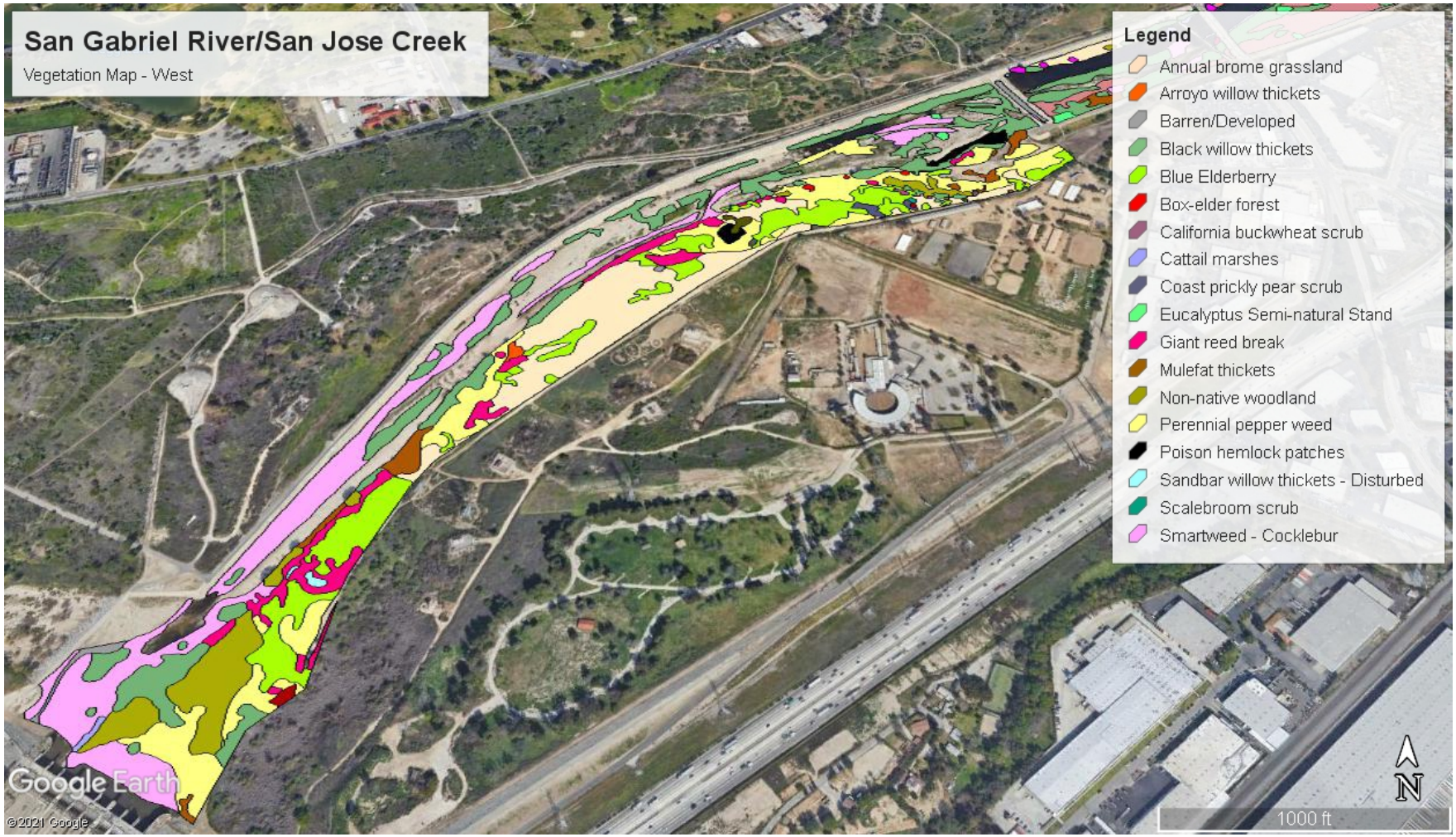

FIGURE 9. VEGETATION COMMUNITIES WITHIN THE ACTION AREA (WEST)

FIGURE 10. VEGETATION COMMUNITIES WITHIN THE ACTION AREA (CENTER)

FIGURE 11. VEGETATION COMMUNITIES WITHIN THE ACTION AREA (EAST)

2.3.1 Black Willow Thickets

Black willow thickets are comprised of winter-deciduous trees that require water near the soil surface. Black willow (*Salix goodingii*) dominate and co-dominate tree species cottonwood (*Populus fremontii*) form a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mulefat (*Baccharis salicifolia*), non-native grasses (*Bromus sp.*) and short pod mustard (*Hirshfeldia incana*).

2.3.2 Arroyo Willow Thickets

Arroyo willow thickets is comprised of winter-deciduous trees that require water near the soil surface. arroyo willow (*Salix lasiolepis*) forms a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species included mulefat, and non-native grasses.

2.3.3 Arroyo Willow Thickets-Disturbed

Arroyo willow thickets is comprised of winter-deciduous trees that require water near the soil surface. arroyo willow (*Salix lasiolepis*) with co-dominate species forms a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species included mulefat, castor bean (*Ricinus communis*), sweet fennel (*Foeniculum vulgare*), short pod mustard, and non-native grasses.

2.3.4 Mulefat Thickets

This vegetation type is a shrubby riparian scrub community comprised of mulefat (*Baccharis salicifolia*), elderberry (*Sambucus nigra*), small willows, commonly found near intermittent drainages and along floodplains. This community is sustained by seasonal flooding followed by dry periods but relies on a shallow water table.

2.3.5 Mulefat Thickets-Disturbed

This vegetation type contains the same vegetation composition as mulefat thicket except that there is some type of disturbance. Consists of shrubby riparian scrub community comprised of mulefat, elderberry, small willows, and Mexican fan palm (*Washingtonia robusta*), commonly found near intermittent drainages and along floodplains. This community is sustained by seasonal flooding followed by dry periods but relies on a shallow water table. The community is considered disturbed because of the high presence of nonnative species interspersed within the community. Nonnative species with high cover include sweet fennel, castor bean, poison hemlock, non-native grasses and shortpod mustard.

2.3.6 Giant Reed Breaks

This vegetation type is dominated by giant reed (*Arundo donax*). Within the Action Area large patches or swaths of mature giant reed mixed with native riparian species such as willows and cottonwood. Where giant reed patches occur, there is little to no understory.

2.3.7 Barren

This cover type is found in some areas along the edges of the embankment and adjacent horse trail.

2.3.8 Non-Native Woodland

This vegetation type represents the areas that are dominated by nonnative and sometimes ornamental trees. Eucalyptus (*Eucalyptus* sp.) is the dominant species in this cover type which is generally found on the edge of the embankment. Other species observed include Mexican fan palm, Shamel ash (*Fraxinus uhdei*), common fig (*Ficus carica*), and chinaberry (*Melia azedarach*). The understory is mostly ruderal or ornamental grasses and forbs.

2.3.9 Developed

This cover type represents the areas that have been developed by buildings or other similar developments and landscaped vegetation for residential and recreational purposes. There are numerous developed areas in the Action Area including access roads, trails, grouted levee, and culverts and areas cleared of vegetation, such as horse trails.

2.3.10 Annual brome grassland

This vegetation type is in areas along the San Gabriel River adjacent to previously disturbed or recreational areas.

2.3.11 Sandbar Willow Thickets

This vegetation type is within temporarily flooded floodplains, depositions along rivers and streams, and at springs. Consists of shrubby riparian scrub community comprised of sandbar willow, other small willows. The community is considered disturbed because of the high presence of non-native species interspersed within the community. Nonnative species with high cover include sweet fennel, castor bean, poison hemlock, non-native grasses, and short pod mustard.

2.3.12 Sandbar Willow Thickets-Disturbed

This vegetation type contains the same vegetation composition as sandbar willow thicket except that there is some type of disturbance. Sandbar willow is typically found growing in temporarily flooded floodplains, depositions along rivers and streams, and at springs. Consists of shrubby riparian scrub community comprised of sandbar willow, other small willows, and an herbaceous understory. The community is considered disturbed because of the high presence of non-native species interspersed within the community. Nonnative species with high cover include sweet fennel, castor bean, poison hemlock, non-native grasses, and short pod mustard.

2.3.13 Smartweed - cocklebur

This vegetation type cover is open to continuous relative cover in marshes and regularly disturbed vernally wet ponds, fields, and stream terraces. The Smartweed- cocklebur was observed growing along the stream banks down to the water edge.

2.3.14 Eucalyptus Semi-Natural Stands

This vegetation type represents the areas that are dominated by non-native ornamental Eucalyptus trees. Other species in the understory may include ruderal or ornamental grasses and forbs.

2.3.15 Cattail Marshes

This vegetation type is semi-permanently flooded freshwater or brackish marshes dominated by cattails (*Typha angustifolia, T. domingensis, and T. latifolia*) in the herbaceous layer and sometimes with emergent trees present at low cover, including willow species. The cattail marsh habitat was observed in areas were water flows were sheltered or contained.

2.4 Aquatic Resources

The San Gabriel River watershed originates from the top of the south facing peaks of the San Gabriel Mountains across the San Gabriel Valley to the Pacific Ocean. The drainage divide on the north is formed by the ridge between Little and Big Rock Creeks and the upper San Gabriel River, on the west by the ridge between the Big Tujunga watershed, and the West Fork of the San Gabriel River, and in the east by the ridge between Lytle and San Antonio Creeks and the East Fork of the San Gabriel River. The San Gabriel River flows through the cities of Irwindale, Baldwin Park, El Monte, Pico Rivera, Downey, Bellflower, Hawaiian Gardens, and Long Beach before reaching the Pacific Ocean.

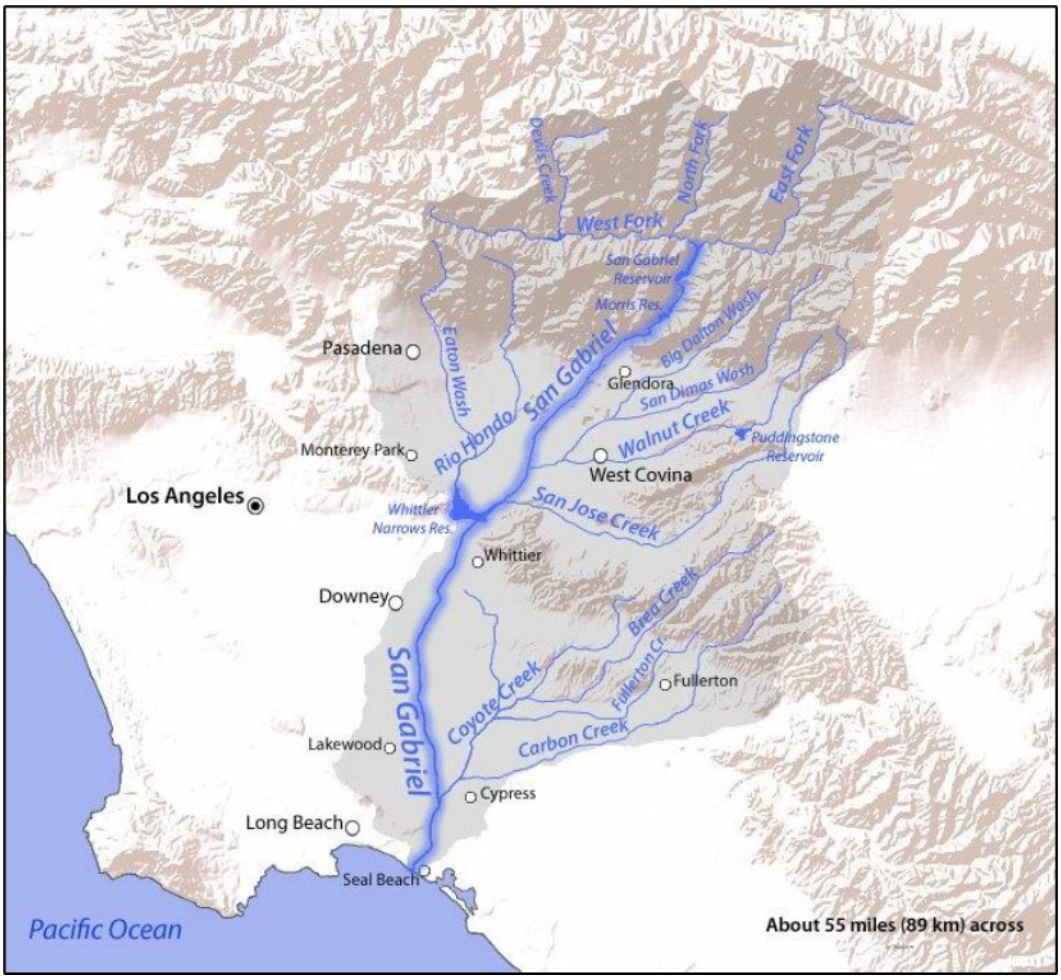

FIGURE 12. LOCATION OF THE SAN GABRIEL RIVER AND SAN JOSE CREEK

A preliminary jurisdictional determination (PJD) of Waters of the U.S. (WOTUS) within the Action Area has been prepared. A PJD may include the delineation limits of all aquatic resources on a parcel, without determining the jurisdictional status of such aquatic resources. Although the Navigable Waters Protection Rule (NWPR) went into effect in June 2020, PJDs are advisory in nature and make no legally binding determination of jurisdiction. The jurisdictional delineation is based on satellite imagery, field observations from vegetation surveys, and engineering surveys.

Potential tributary WOTUS include San Gabriel River and San Jose Creek. The San Gabriel River is a direct tributary to the Pacific Ocean, an (a)(1) water. San Jose Creek is a tributary of the San Gabriel River (Figure 12).

Stream gauge records from a site immediately upstream of Whittier Narrows Dam indicates that the San Gabriel River intermittently conveyed flows from September 30, 2018 through December 5, 2018. The river continuously conveyed flows from December 6, 2018 to April 1, 2019, a five-month

period. Non-storm flows averaged approximately 50 cfs. Peak storm flows ranged from 1,050 cfs to 5,200 cfs.

Scour and sedimentation, demarcating the active channel, as evident on satellite imagery was used to identify OHWM. In total there are approximately 117 acres of potential WOTUS in the Action Area as shown in Figure 13.

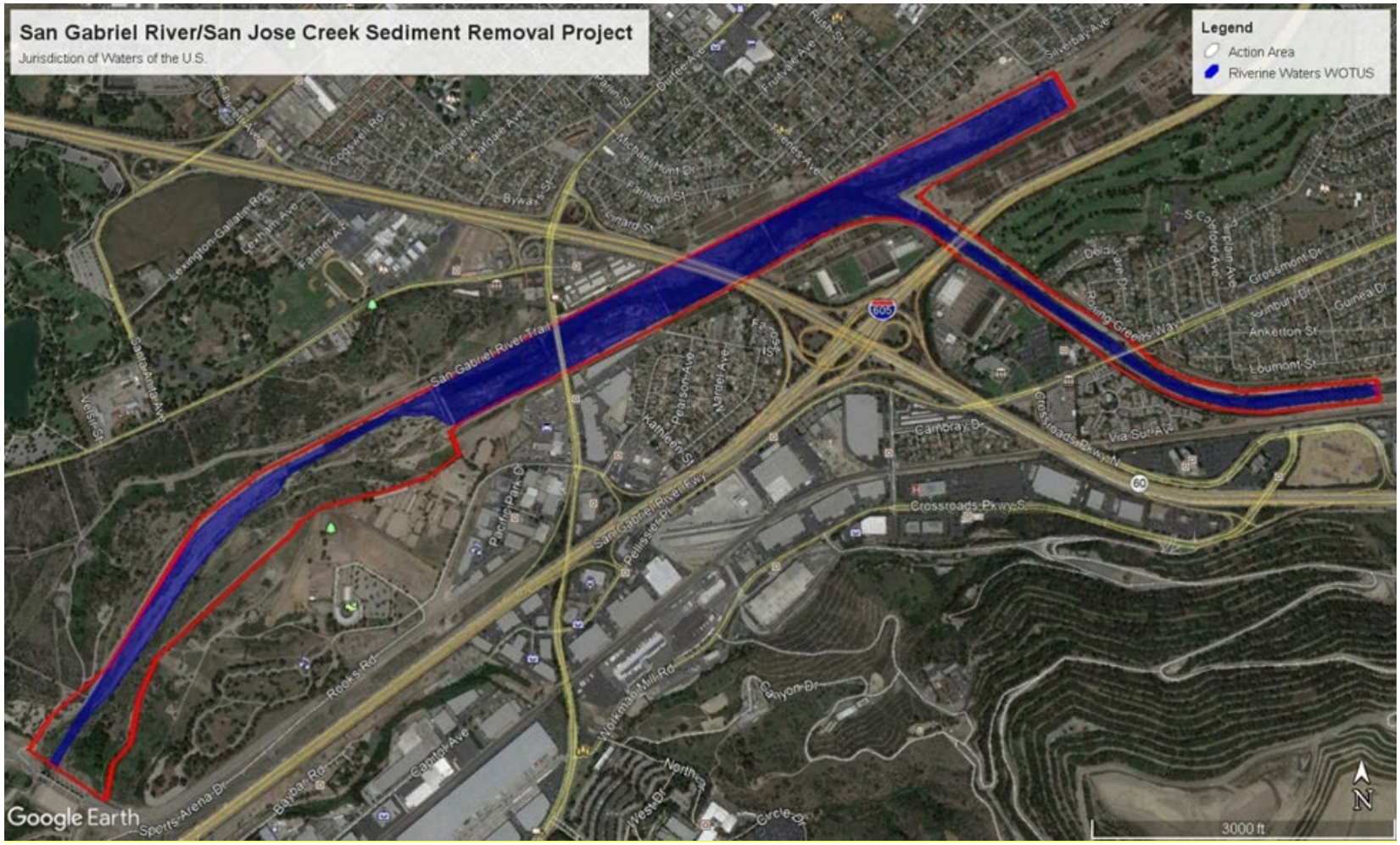

FIGURE 13. POTENTIAL JURISDICTIONAL WATERS OF THE U.S. IN THE ACTION AREA

2.5 Wildlife

The Action Area contains both riparian and upland habitat for wildlife. Riparian communities support some of the most diverse assemblages of wildlife and provide access to water, shade, and cover. In addition, riparian systems and wetlands are frequently considered one of the most productive forms of wildlife habitat in North America. The San Gabriel River and San Jose Creek supports extensive riparian and aquatic habitat. Many bird species are wholly, or at least partially, dependent on riparian plant communities to perpetuate their kind (Warner et.al., 1984). In the Action Area the vegetation is also critical to many wildlife species as many aquatic and semi-aquatic species rely on adjacent terrestrial habitats to complete their life cycles (Semlitsch and Bodie 2003, Burke and Gibbons 1995). Riparian vegetation provides necessary foraging and nesting habitat for many bird species (Rottenborn 1999, Bolger et al 1997); even relatively disturbed areas that are adjacent to existing riparian vegetation can be important to a suite of common and sensitive wildlife.

The riparian and upland habitats that occur in the Action Area provide habitat for a variety of resident and migratory wildlife species including several special-status species. Of particular importance are riparian and streambed areas that provide potential habitat for the least Bell's vireo (*Vireo bellii pusillus*) and coastal California gnatcatcher (*Polioptila californica californica*).

The development surrounding the riparian portion of the Action Area makes it part of a key movement corridor and/or dispersal habitat for a number of wildlife species that use the San Gabriel River to connect to other areas within the watershed. Continuous riparian riverine habitat is upstream and downstream from the project alignment, increasing the likelihood of wildlife presence within the Action Area and directly adjacent. Some species, such as mourning dove, northern mockingbird, and California house finch are positively correlated with urbanization, but most species were negatively correlated and prefer to inhabit undeveloped spaces. Factors associated with urbanization that are expected to contribute to lower species richness and densities in riparian zones near developed areas include an increase in the number of domestic cats (Rottenborn 1997), an increase in people recreating in riparian areas, noise, collisions on roads, and movement of people and domestic animals (Rottenborn 1999). The frequency of human visitation along the river embankment and adjacent recreational trails may adversely affect wildlife use in the Action Area to some degree.

The only federally listed species observed within the Action Area is least Bell's vireo and coastal California gnatcatcher which occur throughout the Action Area. A full list of special-status species and determination of each species' potential to occur due to literature review and documented past observations within the Action Area is found in Appendix A. An updated observed species list from Action Area specific surveys can be found in Appendix B.

2.6 Current Status of Species and Critical Habitat

United States Geological Survey (USGS) conducted surveys for least Bell's vireo and coastal California gnatcatcher within the Action Area as documented in the Western Ecological Research Center's draft data summary report entitled *Least Bell's Vireo (Vireo bellii pusillus), Coastal California Gnatcatcher (Polioptila californica californica), and Southwestern Willow Flycatcher (Empidonax traillii extimus) Surveys at the Whittier Narrows Dam, Draft Final 2019*, see results below. The following species are not expected to occur within the Action Area due to marginal or no suitable habitat, lack of recent sightings, and/or due to lack of detection during focused surveys: Nevin's barberry (*Berberis nevinii*), San Gabriel Mountains dudleya (*Dudleya densiflora*) Slender-horned spineflower (*Dodecahema leptoceras*), Braunton's milk vetch (*Astragalus brauntonii)*, Southwestern willow flycatcher (*Empidonax traillii extimus*), Santa Ana Sucker (*Catostomus santaanae*), and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*) (see Appendix A). These species are not discussed further as the Corps has made no effect determinations. The following sections discuss the species of concern, results of surveys, and critical habitat designated in the Action Area.

2.6.1 Least Bell's Vireo

Least Bell's vireo (LBVI) is a federal and state endangered species and a Western Riverside MSHCP covered species. LBVI is one of four subspecies of Bell's vireo recognized by the American Ornithologist's Union (AOU 1957). It is the western-most subspecies, breeding entirely within California and northern Baja California. LBVI was listed as a federally endangered species in 1986 (51 FR 16474). Critical habitat for the species was designated in 1994 (59 FR 4845); however, none occurs within the Action Area. LBVI are migratory and are only present in southern California from approximately mid-March through mid-September.

The species breeds in dense, shrubby riparian vegetation in the vicinity of water or dry-river bottoms below 2,000 feet, often dominated by willows (*Salix* spp.), mulefat (*Baccharis salicifolia*) and California wild rose (*Rosa californica*), but may also utilize various shrubs, trees, and vines (Franzreb 1989). Nests are typically found in low-lying, dense vegetation in the riparian zones, most frequently in 5- to 10-year-old stands. When LBVI nest in mature riparian woodlands, they nest in areas with a substantial, robust understory of willows as well as other plant species. LBVI generally prefer semi-complex riparian habitats that have understory scrub and ample vertical complexity; riparian areas with no understory are less likely to be used. In California, a dense shrub layer

associated with riparian habitat was found to be the most critical structural component of occupied LBVI habitat (Kus et al. 2010). In more xeric areas, this species will readily utilize unconventional habitats, including mesquites and tamarisk. In riverine habitat, in Southern California, this species

typically has territory sizes that average two (2) acres in size (Kus et al. 2010). LBVI are extremely site- tenacious and return to the same nesting habitat every year (Salata 1983).

Survey Results

The results of the 2014-15 Corps LBVI surveys (all observations in 2014 and 2015) (Figure 14) and the results of the 2019 USGS protocol survey (territory centers in 2019) (Figure 15) are presented herein. No surveys were conducted in 2018, and the 2016-17 LBVI data were not available at the time of this analysis.

During the 2019 protocol surveys conducted in 2019 by the USGS, one LBVI pair was confirmed within the sediment/vegetation removal area. A second possible pair was observed but considered "undetermined" as it was not confirmed that the male was paired. For the purposes of this analysis, it is assumed there are two pairs located within the sediment/vegetation removal area. Seven (7) additional least Bell's vireo pairs are located within the habitat enhancement areas. Locations of detected LBVI territories within the Action Area are shown in Figure 15. The 2014 and 2015 observations below were not protocol surveys and did not differentiate nesting, foraging and post-breeding dispersal observations.

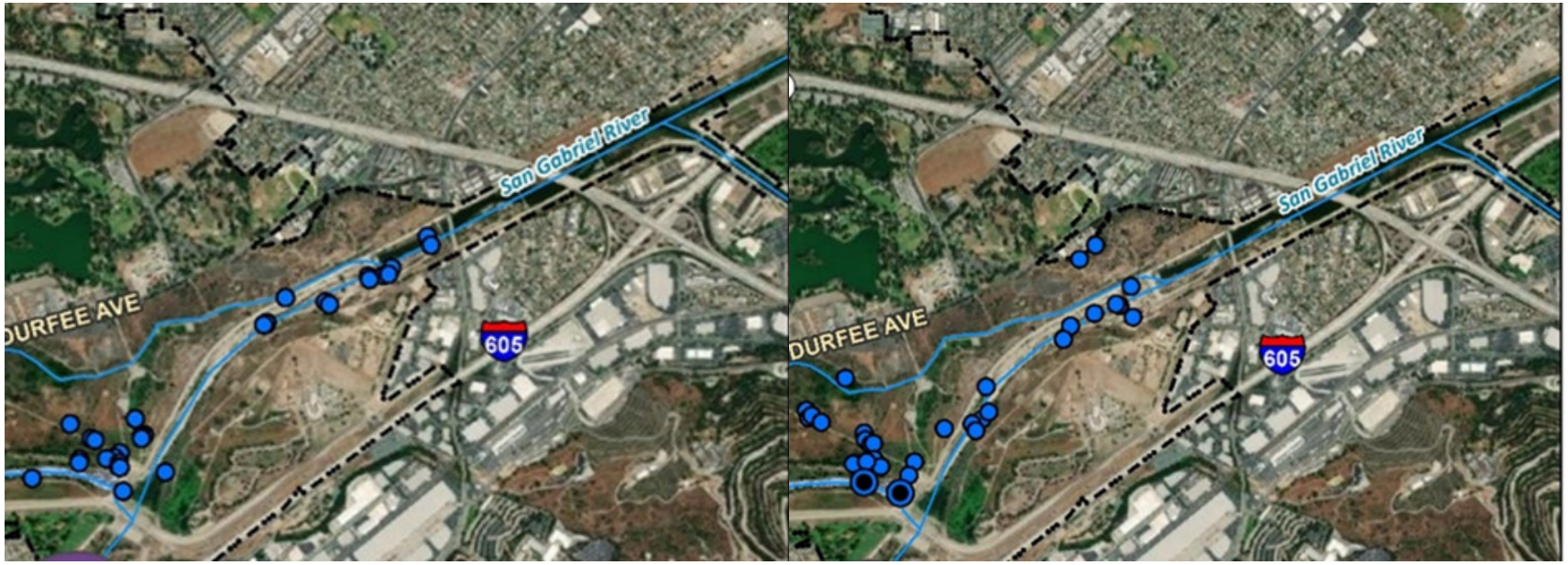

FIGURE 14. LBVI LOCATIONS 2015 SURVEYS AND 2014 SURVEYS

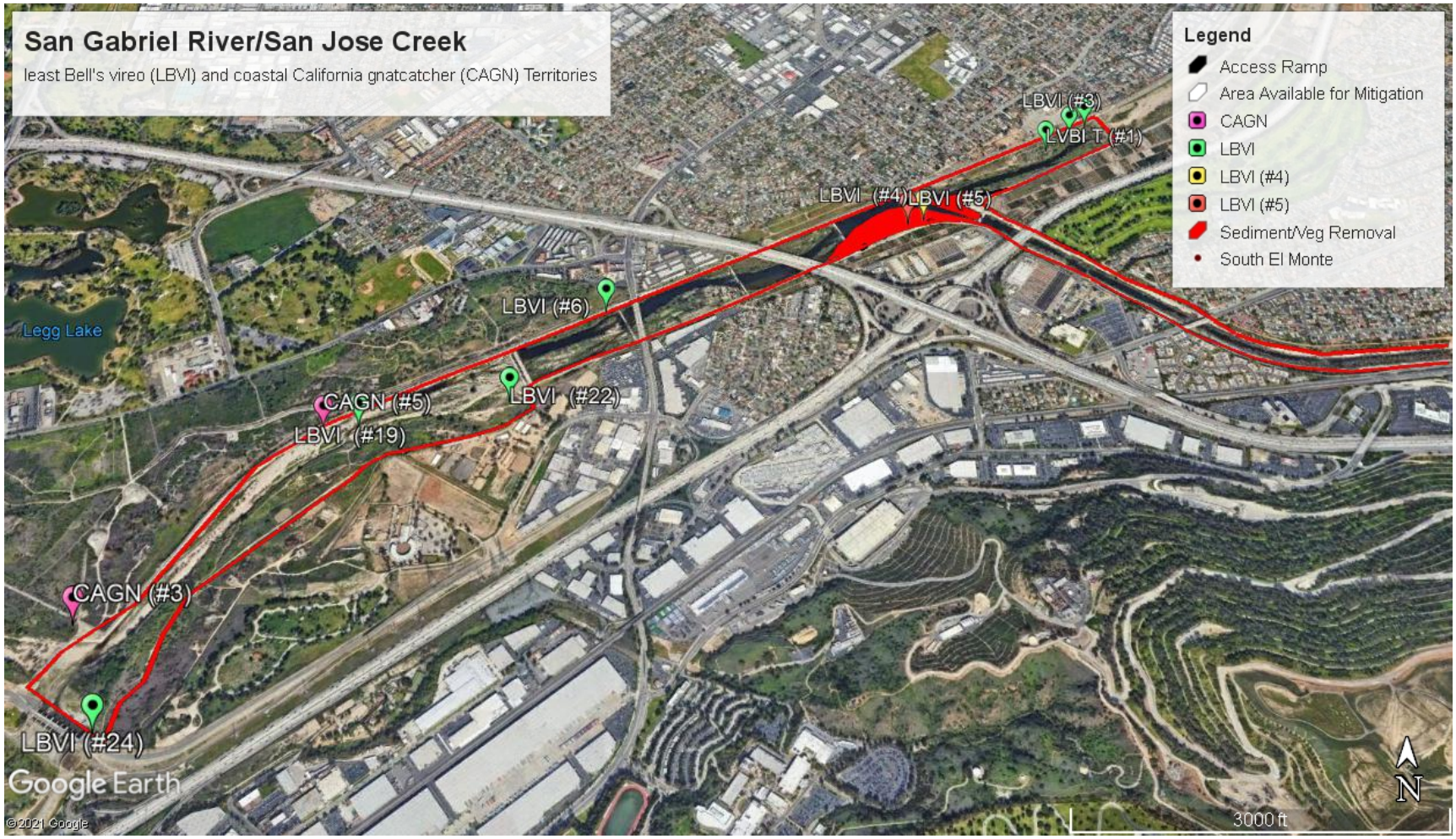

FIGURE 15. 2019 SURVEY DATA FOR LBVI AND CAGN TERRITORIES WITHIN THE ACTION AREA

2.6.2 Coastal California Gnatcatcher (CAGN)

The coastal subspecies of the CAGN is a small gray songbird has been observed utilizing areas of marginal habitat within the inundation areas of the Reservoir. The species was listed as threatened by the USFWS in 1993 (USFWS 1993). Critical habitat for this subspecies was designated by the USFWS in 2000.

CAGN are monogamous and stay paired throughout their lifetime, and the pair establishes a territory and stays within the same territory year-round. The breeding season extends from approximately February 15 through August 30, with peak nesting activity occurring from mid-March through mid-May. The incubation period takes 14 days and the young fledge at eight to 13 days. The young are dependent on their parents for up to three or four weeks; however, fledglings may continue to associate with their parents for several months (USFWS 1997). Once juveniles reach maturity, they are flushed out of the territory and forced to disperse by parents. CAGN offspring may disperse to adjacent suitable habitat to pair and establish new territories.

Foraging by CAGN primarily consists of gleaning sessile prey from foliage while quickly moving through branches of shrubs. Larger prey items are beaten against a branch before being swallowed whole or fed to juveniles (Atwood and Bontrager 2001).

CAGN are year-round residents of southern California. CAGN generally prefer to forage, breed, and nest in sage scrub habitat, which is a broad category of upland vegetation dominated by California sagebrush, California buckwheat, white sage (*Salvia apiana*), and black sage (*Salvia mellifera*) (Beyers and Wirtz 1997). Historically, CAGN have been described as restricted to coastal sage scrub habitat. However, it is now known that CAGN may also use disturbed mixed scrub, chaparral, grassland, and riparian habitats in proximity to coastal sage scrub for dispersal and foraging (Atwood and Bontrager 2020). CAGN adults of both sexes, as well as juveniles, have been observed foraging in non-coastal sage scrub for extend periods just subsequent to nesting, and diurnal shifts in CAGN habitat use from coastal sage to non-coastal sage habitats have also been observed (Campbell et al. 1998). Patterns of CAGN use of non-coastal sage scrub habitat appears to occur for a variety of reasons, often driven by site-specific dynamics, and may occur year-round. While CAGN are known to make significant use of non-coastal sage scrub habitats, CAGN are still not thought to regularly nest independent of coastal sage scrub (Campbell et al. 1998).

FIGURE 16. CAGN LOCATION 2019 SURVEY AND DESIGNATED CRITICAL HABITAT

CAGN Designated Critical Habitat

Designated critical habitat (DCH) for the species contains one or more Physical or Biological Features (PBFs) that are essential for a species' primary biological needs of foraging, nesting, rearing of young, intra-specific communication, roosting, dispersal, genetic exchange, or sheltering (Atwood 1990). For CAGN DCH, there are two defined PBFs:

1. Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provides space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and

2. Non-sage scrub habitats such as chapparal, grassland, riparian areas, in proximity to sage scrub habitat described for PBF 1 above that provide space for dispersal, foraging and nesting.

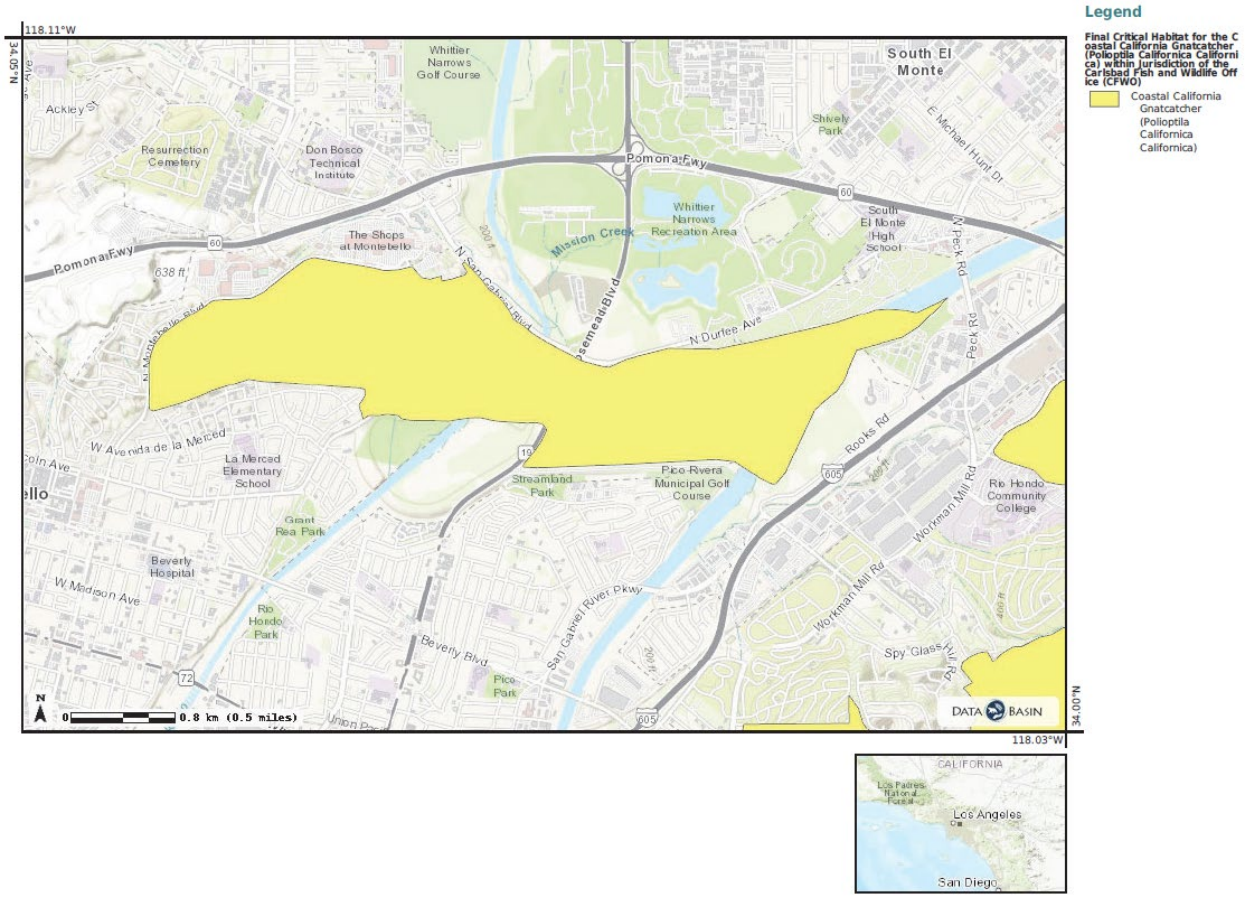

FIGURE 17. CAGN DESIGNATED CRITICAL HABITAT

CAGN Survey Results

Survey methods and analyses for CAGN are generally similar to those performed for LBVI as already described. However, CAGN location surveys were only performed in 2019. In addition, public observation data from the eBird web portal was also reviewed.

USGS biologists observed six (6) CAGN territories in the Reservoir in 2019 (Figure 16). Of the 6 observed two (2) territories were observed within the Action Area. In one location, juvenile CAGN were observed multiple times with two to three independent juveniles foraging and interacting with one another. At a second location, a single juvenile was observed quickly dispersing through disturbed riparian scrub habitat within a few hundred feet of the Action Area.

Between 2019 and 2021, Corps biologists made additional observations in the Reservoir. CAGN have been observed along the San Gabriel Blvd corridor, as well as along Lincoln Ave and in the vicinity of the visitor's center. The area of documented CAGN is consistent with the corridor of DCH crossing the Action Area. CAGN likely utilize any portion of this area where suitable habitat is found. Outside of the single nest discovered in 2020 near Lincoln Ave, observations have been limited to foraging and dispersal. However, CAGN may attempt to nest in other areas of suitable habitat in this corridor in the future. Due to the paucity of focused survey data, information available from the public birding portal eBird was also reviewed within the Action Area. Based on a review of the observation data and notes in eBird, CAGN observations were consistent with the patterns described above. CAGN have frequently been reported using habitat along the Lincoln Ave corridor. CAGN usage of the Action Area does not appear to be seasonally limited, as observations from nearly every month of the year have been reported in eBird.

Approximately 563 acres of CAGN DCH occurs within the Reservoir (Figure 17). This DCH is within Unit 9: East Los Angeles County. The area of documented CAGN dispersals is consistent with the corridor of DCH crossing the Action Area (Figure 16).

Chapter 3. Effects of the Proposed Action

The "effects of the action" include all the consequences to listed species or designated critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. These effects are considered along with the environmental baseline and cumulative effects to determine the overall effects to the species. Effects of the action may occur later in time and may include consequences outside the immediate area involved in the action (50 CFR 402.02). The conservation measures listed in Chapter 1 will be implemented to avoid, minimize, or offset effects of the Proposed Action.

Effects to LBVI Individuals

Nine (9) LVBI territories were observed with the Action Area, of which four (4) LBVI pairs were confirmed, three (3) possible pairs were observed but considered "Undetermined" as it was not confirmed that the male was paired, and two (2) transient as they were not detected on two or more consecutive surveys after its initial detection. A total of approximately six (6) acres of occupied habitat will be permanently impacted, this habitat will be permanently removed from the shoaling areas (Figure 2). Approximately nine (9) acres of the Action Area, including six acres of occupied habitat, provide preferred suitable biological characteristics within the mapped areas. Adjacent habitat near the territories (approximately 5.2 additional acres) is primarily disturbed habitat and does not contain the preferred biological characteristics for the species.

Direct and indirect impacts to LBVI include displacement of established territories causing adverse effects to seven (7) territories within the Action Area. This would result in potential permanent displacement of two territories and temporary displacement of five (5) territories. This is assuming suitable LBVI habitat is available throughout the Reservoir and that displaced LBVI throughout the Reservoir and Whittier Narrows recreational areas would be able to utilize other suitable habitat in the area. As mentioned above, riparian vegetation that contains preferred biological characteristics for this species will be permanently removed. Other indirect impacts from construction include noise, dust, and human presence. Birds use their sense of hearing to locate their young and mates, to establish and defend territories, and to locate and evade predators (Scherzinger, 1970). Dust can also visually impair vireos and degrade air quality and human presence can cause vireos to abandon territories and nests.

To avoid impacts to LBVI, the Corps will complete all sediment removal activities outside of the breeding season (i.e., project activities will not occur between March 1 to September 15) (BIO-2). Additionally, the removal of sediment will require the removal of homeless encampments, which will help to minimize disturbance to nesting activities occurring in adjacent habitat. Additional measures to minimize and avoid impacts to LBVI include (BIO-1) surveys for LBVI in spring and early summer (March 1 through September 15) annually during construction, (BIO-4) limit construction activities to designated areas, (BIO-5) weekly biological monitoring to ensure compliance, (BIO-6) and (BIO-7) pre-construction training and surveys, and (BIO-8) BMPs for erosion and pollutants.

To offset effects to LBVI from the Proposed Action, the Corps is proposing 20.2-acres of enhancement for 10-years within the Action Area (BIO-3). Enhancement is proposed within the disturbed riparian areas where invasive/exotic vegetation is dominant in the Action Area. The proposed enhancement will include removal of exotic/invasive vegetation from this area to increase the habitat value through passive restoration and create additional suitable nesting habitat for LBVI in the Action Area. A large percentage of the vegetation to be removed is exotic/invasive giant reed. Giant reed is known to degrade riparian habitat for LBVI and other species. The vegetation enhancement areas will be monitored and managed (weeded) annually after construction to reduce the potential for infestation.

Based on the analysis described above, the Corps has determined that the Proposed Action may affect, and is likely to adversely affect, LBVI.

Effects to CAGN Individuals and Critical Habitat

CAGN juveniles were observed dispersing through the proposed enhancement areas within the Action Area. No potential permanent displacement of territories is expected because these were juvenile CAGN dispersing through the habitat within the proposed habitat enhancement areas.

To avoid potential effects to CAGN, the Corps will complete all sediment removal activities outside of the breeding season (i.e., project activities will not occur between March 1 to September 15) (BIO-2). Additionally, the removal of sediment will require the removal of homeless encampments, which will help to minimize disturbance to nesting activities occurring in adjacent habitat. Additional measures to minimize and avoid impacts to CAGN include (BIO-1) surveys for CAGN in spring and early summer (March 1 through September 15) annually during construction, (BIO-4) limit construction activities to designated areas, (BIO-5) weekly biological monitoring to ensure compliance, (BIO-6) and (BIO-7) pre-construction training and surveys, and (BIO-8) BMP’s for erosion and pollutants and sensitive species monitoring would occur through the duration of construction activities.

Upon project completion, habitat enhancement will improve habitat for CAGN and any potential impacts to CAGN designated critical habitat would be limited to enhancement activities. Based on the analysis described above, the Corps has determined that the Proposed Action may affect, but is not likely to adversely affect, CAGN or its designated critical habitat.

Chapter 4. Cumulative Effects

"Cumulative effects" include the effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur in the action area subject to consultation. 50 C.F.R. 402.02.

Homeless encampments have increased substantially within the Reservoir over the last several years (circa 40-50 camps). These homeless encampments have impacted and are likely to continue to impact the understory habitat within the Action Area that are currently utilized by the LBVI for nesting and CAGN for foraging (including CAGN DCH). On occasion, local law enforcement organizations take action to control homeless encampments in the Reservoir. However, it is not possible to predict or analyze how the distribution or abundance of homeless encampments in the Reservoir will impact LBVI, CAGN or CAGN DCH in the future.

Regular equestrian and recreational use of pre-hardened and trails and access roads occurs throughout the Reservoir. Recreational facilities will continue to be used into the foreseeable future. Adjacent areas will continue to be used and developed although the Reservoir will remain primarily reserved for flood risk management purposes and compatible uses, such as recreation. Recreational users will continue to visit the Reservoir. In comparison with present conditions, the proposed project would not have a significant adverse cumulative effect on the site, as the potential impacts would be temporary from construction.

No other private or state projects are occurring or planned to occur in the Action Area, therefore the Corps has determined that there are no cumulative effects for the Proposed Project.

Chapter 5. Literature Cited

AllAboutBirds: Online Guide to birds and bird watching, research and conservation. The Cornell Lab. 2021. Cornell University. https://www.allaboutbirds.org/. Assessed January 2021.

Allison, LJ, C E. Paradzick, J W. Rourke, and T D. McCarthey. 2003. A Characterization of Vegetation in Nesting and Non-Nesting Plots for Southwestern Willow Flycatchers in Central Arizona. Studies in Avian Biologist 26:81-90.

Atwood, J. L., and D. R. Bontrager. (2020). California Gnatcatcher (*Polioptila californica*), version 1.0. In Birds of the World (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.calgna.01

Baldwin, B G., D H. Goldman, D J. Keil, R. Patterson, T J. Rosatti, and D H. Wilken, (eds.). 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, CA.

Bolger, D.T., Scott, T.A. and Rotenberry, J.T., 1997. Breeding Bird Abundance in an Urbanizing Landscape in Coastal Southern California: *Conservation Biology*, *11*(2), pp.406-421.

Burke, V.J. and Gibbons, J.W., 1995. Terrestrial buffer zones and wetland conservation: a case study of freshwater turtles in a Carolina bay. *Conservation Biology*, *9*(6), pp.1365-1369.

California Department of Fish and Wildlife. Conservation and Management of Wildlife and Habitat. https://wildlife.ca.gov/Conservation. Accessed: January-February 2021

Calflora: Information on California plants for education, research, and conservation. Online. 2014. Berkeley, California: The Calflora Database [a non-profit organization].
Available: https://www.calflora.org/ (Accessed: February 2021).

Calfish: California Fish Website. 2021. University of California, Agriculture and Natural Resources. http://calfish.ucdavis.edu/species/. Assessed on February 2021.

California Native Plant Society (CNPS). 2021. A Manual of California Vegetation, Online Edition. http://www.cnps.org/cnps/vegetation/; searched on [January 2021]. California Native Plant Society, Sacramento, CA.

CNPS, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Available at http://www.rareplants.cnps.org. Accessed February 2021.

Franzreb, K. 1989. Ecology and Conservation of the Endangered Least Bell's Vireo. U.S. Department of the Interior, Fish and Wildlife Service.

Kus, Barbara, Steven L. Hopp, R. Roy Johnson and Bryan T. Brown. 2010. Bell's Vireo (*Vireo bellii*), version 2.0. In The Birds of North America (P. G. Rodewald, editor). Cornell Lab of Ornithology, Ithaca, New York, USA.

Kus, B. E. (1998). Use of restored riparian habitat by the endangered Least Bell's Vireo (*Vireo bellii pusillus*). Restoration Ecology 6:75–82.

Rottenborn, S.C., 1999. Predicting the impacts of urbanization on riparian bird communities. Biological conservation, 88(3), pp.289-299.

Semlitsch, R.D. and Bodie, J.R., 2003. Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles. *Conservation Biology*, *17*(5), pp.1219-1228.

USFWS. 1994. Designation of Critical Habitat for Least Bell's Vireo. Federal Register 50 CFR 17. 02 February 1994.

USFWS. 1998. Endangered species consultation handbook: Procedures for conducting consultation and conference activities under section 7 of the Endangered Species Act. U.S. Fish and Wildlife Service and National Marine Fisheries Service, Washington, D.C.

USFWS. 2002. Final Recovery Plan, Southwestern Willow Flycatcher (Empidonax traillii extimus). Department of the Interior, U.S. Fish and Wildlife Service, Region 2, Albuquerque, New Mexico. August.

Warner, R.E., 1984. Structural, floristic, and condition inventory of Central Valley riparian systems. California Riparian Systems. RE Warner, and KM Hendrix, Eds. University of California Press, Berkeley, CA, pp.356-3

Appendix A Special-Status Species Potential to Occur

Special Status Species and their Probability to Occur

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
Arctostaphylos glandulosa ssp. Gabrielensis	San Gabriel manzanita	Fed: none Calif: none CRPR: 1B.2	Perennial evergreen shrub, Chaparral on granitic soils; endemic; 595 - 1500 meters elevation	Jan - April	**Not Likely to Occur.** No suitable habitat.
Astragalus brauntonii	Braunton's milk vetch	Fed: **END** Calif: none CRPR:1B.1	Subshrub or perennial herb; scattered patches in Ventura, LA, & Orange cos.; foothills below about 2100 ft. elev.; chaparral, often on carbonate soils; often follows fire or soil disturbance	Jan - Aug	**Low.** Coastal Sage scrub (CSS) present, disturbed, not found during surveys.
Atriplex parishii	Parish's brittlescale	Fed: none Calif: none CRPR: 1B.2	Annual herb; Shadscale Scrub, Alkali Sink, Freshwater Wetlands, wetland-riparian; alkaline or clay soils; 1300-1675 ft elevation	Jun - Oct	**Not Likely to Occur.** No suitable habitat
Atriplex serenana var. davidsonii	Davidson's saltscale	Fed: none Calif: none CRPR: 1B.2	Annual herb; alkaline. • Coastal bluff scrub • Coastal scrub; about 10- 200-meter elev.	Apr - Oct	**Not Likely to Occur.** No suitable habitat
Berberis nevinii	Nevin's barberry	Fed: **END** Calif: **END** CRPR: 1B.1	Perennial evergreen shrub; sandy or gravelly; Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; 70 - 825 meters	(Feb)Mar-Jun	**Low.** No suitable habitat. Observed within one mile of the Action Area
Calochortus clavatus var. gracilis	slender mariposa-lily	Fed: none Calif: none CRPR: 1B.2	Bulb; chaparral, valley grassland, foothill woodland and coastal sage scrub; Ventura to Orange Cos., inland to Riverside and San Bernardino Cos.; about 1050 - 3280 ft. elev.	Mar - Jun	**Not Likely to Occur.** Outside of elevation range.
Calochortus weedii var. *intermedius*	Weed's mariposa lily	Fed: none Calif: none CRPR: 1B.2	Perennial herb; shrublands, grassland, various soils, about 600 - 2800 ft. elev.; coastal southern Calif., inland to western Riverside Co.	May - Jul	**Not Likely to Occur.** No suitable habitat

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
Calochortus plummerae	Plummer's mariposa-lily	Fed: none Calif: none CRPR: 4.2	Perennial herb (bulb) that is endemic (limited) to California. Chaparral, Foothill Woodland, Yellow Pine Forest, Coastal Sage Scrub, Valley Grassland	May-Jul	**Moderate.** Habitat present
Calystegia felix	Lucky morning-glory	Fed: none Calif: none CRPR: 1B.1	Annual rhizomatous herb; historically associated with wetland and marshy places, but also can be found in drier areas; meadows, seeps and riparian scrub.	May - Jul	**Low.** Riparian scrub present, not found during surveys.
Centromadia parryi ssp. australis	Southern tarplant	Fed: none Calif: none CRPR: 1B.1	annual herb; salt-marsh, vernal-pools, edges	May-Nov	**Not Likely to Occur.** No suitable habitat
Centromadia pungens ssp. laevis	Smooth tarplant	Fed: none Calif: none CRPR: 1B.1	Annual herb; found in alkaline soils at 330 – 2000 feet elev. within chenopod scrub, meadows, seeps, playas, riparian woodlands, valley and foothill grassland.	Apr - Sep	**Low.** Habitat present
Chorizanthe parryi var. parryi	parry's spineflower	Fed: none Calif: none CRPR: 1B.1	Annual herb; Chaparral, Coastal Sage Scrub	Apr-Jun	**Moderate.** Habitat present
Cladium californicum	claifornia saw-grass	Fed: none Calif: none CRPR: 2B.2	perennial grasslike herb; Occurs in wetlands freshwater-marsh habitats Freshwater Wetlands, Alkali Sink, wetland-riparian	Jun-Sep	**Not Likely to Occur.** No suitable habitat
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Fed: none Calif: none CRPR: 2B.2	annual herb or vine (parasitic) that is native to California.	Jul-Oct	**Moderate.** Habitat present
Dodecahema leptoceras	Slender-horned spineflower	Fed: **END** Calif: **END** CRPR: 1B.1	Annual herb; mature chaparral, cismontane woodland, coastal scrub; about 650 – 2500 feet elev.	Apr - Jun	**Low.** No suitable habitat. Heavily disturbed.
Dudleya multicaulis	Many-stemmed dudleya	Fed: none Calif: none CRPR: 1B.2	Perennial herb; heavy soils or sandstone outcrops; grassland or shrubland below about 2600 ft. elev.; LA to SD Co, inland to San	Apr - Jul	**Low.** CSS habitat present.

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
			Gabriel Mtn foothills and W Riv Co.		
Dudleya cymosa ssp. crebrifolia	San Gabriel River dudleya	Fed: none Calif: none CRPR: 1B.2	perennial herb; Northern Oak Woodland, Foothill Woodland, Chaparral, Yellow Pine Forest, Coastal Sage Scrub	Jun-Jul	**Low.** Habitat present, Heavily disturbed
Dudleya densiflora	San Gabriel Mountains dudleya	Fed: **END** Calif: **END** CRPR: 1B.1	perennial herb; Chaparral, Yellow Pine Forest, Coastal Sage Scrub	Mar-Jun	**Low.** Habitat present, Heavily disturbed
Dudleya multicaulis	Many-stemmed dudleya	Fed: none Calif: none CRPR: 1B.2	perennial herb; perennial herb, Chaparral, Valley Grassland, Coastal Sage Scrub	Apr-Jul	**Low.** Habitat present, Heavily disturbed
Galium grande	San Gabriel bedstraw	Fed: none Calif: none CRPR: 1B.2	Shrub; Chaparral, Foothill Woodland, Yellow Pine Forest, Mixed Evergreen Forest	Jan-Jul	**Not Likely to Occur.** No suitable habitat**.**
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	Fed: none Calif: none CRPR: 1A	perennial herb (rhizomatous); Associated with freshwater-marsh, saltmarsh, coastal Coastal Salt Marsh, wetland-riparian	Aug-Oct	**Not Likely to Occur. E**xtinct
Horkelia cuneata var. puberula	Mesa horkelia	Fed: none Calif: none CRPR: 1B.1	perennial herb; Dry, sandy, coastal chaparral;	Feb-Jul	**Not Likely to Occur.** No suitable habitat
Imperata brevifolia	California satintail	Fed: none Calif: none CRPR: 2B.1	Perennial grass; Chaparral, Coastal Sage Scrub, Creosote Bush Scrub, wetland-riparian	Sept-May	**Low.** Habitat present. Heavily disturbed
Juglans californica var. *californica*	So. California black walnut	Fed: none Calif: none CRPR: 4.2	Tree or large shrub; woodland, coastal sage scrub, chaparral, below about 3000 ft. elev.; Ventura, LA, Orange, San Bernardino cos.	Mar - Aug	**High.** Habitat present
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Fed: none Calif: none CRPR: 1B.1	Annual herb; associated with saltmarsh, playas, vernal-pools, coastal Alkali Sink, Coastal Salt Marsh, Freshwater Wetlands, wetland-riparian	Feb-Jun	**Not Likely to Occur.** No suitable habitat

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	Fed: none Calif: none CRPR: 4.3	Ephemeral spring annual; shrublands; sea level to about 2900 ft. elev.; LA Co, most Channel Islands, inland to W Riv & San Bern cos, S to Baja Calif	Jan - Jul	**Not Likely to Occur.** No suitable habitat
Linanthus concinnus	San Gabriel linanthus	Fed: none Calif: none CRPR: 1B.2	Annual herb; Red Fir Forest, Yellow Pine Forest	Apr-Jul	**Not Likely to Occur.** No suitable habitat**.**
Muhlenbergia californica	California muhly	Fed: none Calif: none CRPR:4.3	perennial grass (rhizomatous); Chaparral, Yellow Pine Forest, Coastal Sage Scrub, wetland-riparian	Jun-Sept	**Moderate.** Habitat present
Navarretia prostrata	prostrate vernal pool navarretia	Fed: none Calif: none CRPR: 1B.2	Annual herb; Coastal Sage Scrub, wetland-riparian	Apr-Jul	**Low.** Habitat present
Orcuttia californica	California Orcutt grass	Fed: none Calif: none CRPR: 1B.1	Annual grass; Valley Grassland, Freshwater Wetlands, wetland-riparian	Apr-Aug	**Not Likely to Occur.** No suitable habitat
Orobanche valida ssp. valida	Rock Creek broomrape	Fed: none Calif: none CRPR: 1B.2	perennial herb (parasitic); Chaparral, Pinyon-Juniper Woodland	May-Sept	**Not Likely to Occur.** No suitable habitat
Phacelia stellaris	Brand's star phacelia	Fed: none Calif: none CRPR: 1B.1	Annual herb; Coastal Strand, Coastal Sage Scrub	Mar-Jun	**Low.** Habitat present

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
Pseudognaphalium leucocephalum	White rabbit-tobacco	Fed: none Calif: none CRPR: 2.2	Perennial herb; 100 - 7000 ft. elev.; sandy and gravelly chaparral, cismontane woodland, coastal scrub and riparian woodland	Jul - Dec	**Moderate**. Habitat present but not found during surveys.
Ribes divaricatum var. parishii	Parish's gooseberry	Fed: none Calif: none CRPR: 1A	Perennial shrub; endemic (limited) to California Coastal Sage Scrub, wetland-riparian, and riparian	Feb - Apr	**Not Likely to Occur.** Presumed extinct.
Scutellaria bolanderi ssp. austromontana	southern mountains scullcap	Fed: none Calif: none CRPR: 1B.2	perennial herb (rhizomatous); endemic (limited) to California. Chaparral, Foothill Woodland, Yellow Pine Forest, wetland-riparian	Jun - Aug	**Not Likely to Occur.** No suitable habitat.
Sidalcea neomexicana	Salt spring checkerbloom	Fed: none Calif: none CRPR: 2B.2	Perennial her; alkaline or mesic soils in chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub or playas at 50 – 3000 ft. elev.	Mar – Jun	**Not Likely to Occur.** No suitable habitat.
Symphyotrichum defoliatum	San Bernardino Aster	Fed: none Calif: none CRPR: 1B.2	Perennial rhizomatous herb; near ditches, streams, springs, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows, seeps, marshes, swamps and valley and foothill grassland; 1500 – 5800 ft. elev	Jul – Dec	**Not Likely to Occur.** Outside of elevation range.
Symphyotrichum greatae	Greata's aster	Fed: none Calif: none CRPR: 1B.3	perennial herb (rhizomatous) endemic (limited) to California. Chaparral	Jun - Oct	**Not Likely to Occur.** Outside of elevation range
Thelypteris puberula var. sonorensis	Sonoran maiden fern	Fed: none Calif: none CRPR: 2B.2	Pteridophyte, is a fern (rhizomatous) that is native to California, Arizona, Baja California, Sonora, Mexico. Meadows and seeps, wetland-riparian	Jan - Sept	**Not Likely to Occur.** Outside of elevation range.
VEGETATION COMMUNITIES					

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Flower season	Occurrence Potential
Southern California Arroyo Chub/Santa Ana Sucker Stream		CNDDB			**Not present**
Southern Sycamore Alder Riparian Woodland		CNDDB	Tall deciduous streamside woodland that is dominated by western sycamore and occasional white alders. Seldom form closed canopies and appear as scattered trees.		**Not present.**
Southern Coast Live Oak Riparian Forest		CNDDB			**Not present.**
Canyon Live Oak Ravine Forest		CNDDB			**Not present.**
Open Engelmann Oak Woodland		CNDDB			**Not present**
California Walnut Woodland		CNDDB	Consists of mainly California walnut trees with a semi open canopy that allows for a grassy understory. Typically occurs in relatively moist areas with fine textured soils near slopes.		**Not present**
Riversidian Alluvial Fan Sage Scrub		CNDDB			**Not present**
Walnut Forest		CNDDB	Consists of mainly California walnut trees with a semi open canopy that allows for a grassy understory. Typically occurs in relatively moist areas with fine textured soils near slopes.		**Not Present**
San Gabriel manzanita		Fed: none Calif: none CRPR: 1B.2	Perennial evergreen shrub, Chaparral on granitic soils; endemic; 595 - 1500 meters elevation	Jan - April	**Not Likely to Occur.** No suitable habitat.

Special Status Wildlife and their Probability to Occur Within the Project Area

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
INVERTEBRATES				
Bombus crotchii	Crotch bumble bee	Fed: none Calif: **Candidate END**	Inhabits open grassland and scrub habitats in CA. nesting occurs underground.	**Low.** Habitat quality is less than ideal for this species to occur.
Palaeoxenus dohrni	Dohrn's elegant eucnemid beetle	Fed: none Calif: none	Largely found in a mixed coniferous forest system in the mountains.	**Not likely to occur**: No suitable habitat
FISH				
Catostomus santaanae	Santa Ana sucker	Fed: **THR** Calif: none	Major cismontane stream systems in S Calif. incl. Sta Ana Riv., formerly below 3000 ft. elev.; extant populations near Riverside and downstream. Year-round	**Low.** This species is known from portions of the San Gabriel River where suitable habitat occurs. Potentially could be present during times of heavy flows if washed downstream from occupied habitat.
Gila orcutti	Arroyo chub	Fed: none Calif: SSC	Slow-flowing sections or backwaters, cismontane stream systems in S Calif. incl. Sta Ana Riv.; extant populations near Riverside and down-stream; introduced populations occur outside historic native range Year-round	**Low.** Re-introduced to the Los Angeles basin.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	Fed: none Calif: SSC	Speckled Dace prefer habitat that includes clear, well oxygenated water, with movement due to a current or waves. Prefer areas with deep cover or overhead protection from vegetation or woody debris; small streams.	**Low.** Range historically includes the San Gabriel and Los Angeles basin but have not been recently documented.
AMPHIBIANS				
Bufo californicus	Arroyo toad	Fed: **END** Calif: none	The arroyo toad is found in the southern part of the Coast Ranges of California; Prefers semi-arid regions near washes or intermittent streams. Habitats used	**Not likely to occur:** No suitable habitat

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
			include valley-foothill and desert riparian as well as a variety of more arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral and sagebrush.	
Spea hammondii	Western spadefoot	Fed: none Calif: SSC	Breeds in quiet streams, temporary ponds, vernal pools, burrows in sand during dry season; sea level to about 4500 ft. elev.; Central Val to N Baja. October-April	**Not likely to occur**: No suitable habitat
Rana boylii	foothill yellow-legged frog	Fed: none Calif: **END**	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools	**Low.** Endangered in Southern California, where it is absent from most of its historic range.
Rana muscosa	southern mountain yellow-legged frog	Fed: **END** Calif: **END**	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools	**Not likely to occur:** Endangered in Southern California and the southern Sierra Nevada Mountains, where it is absent from most of its historic range. Outside of the elevation range.
Taricha torosa	Coast Range newt	Fed: none Calif: SSC	found commonly in the Coast Ranges of California. Occurs primarily in valley-foothill hardwood, valley foothill hardwood-conifer, coastal scrub and mixed chaparral, but is also known from annual grassland and mixed conifer types.	**Low:** Some suitable habitat available
REPTILES				
Aniella stebbinsi	Southern California legless lizard	Fed: none CA: SSC	Sandy or loose loamy soils under sparse vegetation; soil moisture is essential; prefer soils with high moisture content.	**Low.** Although scattered records occur for this subspecies throughout western Los Angeles County, the project area supports only marginal

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
				habitat, at best due to its isolation, frequent flooding, and surrounding disturbance; not identified during surveys.
Arizona elegans occidentalis	California glossy snake	Fed: none Calif: SSC	Found in northern California to Baja California. Inhabits arid scrub, rocky washes, grasslands, chaparral	**Moderate.** Suitable habitat present, not observed during surveys
Aspidoscelis tigris stejnegeri	coastal whiptail	Fed: none Calif: SSC	This subspecies is found in coastal Southern California; inhabits a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	**High.** Suitable habitat present, not observed during surveys
Thamnophis hammondii	two- striped garter	Fed: none Calif: SSC	Found in southern California where it ranges east through the Transverse Ranges, and south through the coastal area and the Peninsular Ranges into northern Baja California.	**High.** Prefers water sources - pools, creeks, cattle tanks, and others, often in rocky areas. Associated vegetation: oak woodland, willow, coastal sage scrub, scrub oak, sparse pine, chaparral, and brushland.
Emys marmorata	Western pond turtle	Fed: none Calif: SSC	Perennial ponds, streams; breed & overwinter in adjacent uplands; coastal S and cent. Calif., NW Baja Calif., below about 4800 ft. elev.	**Low.** Suitable habitat present. This species was not observed during surveys
Phrynosoma blainvillii"	Coast horned lizard	Fed: none CA: SSC	Sandy soils, forest, shrubland or grassland; W Calif. from LA Co through Baja Calif., below about 6000 ft. elev.	**Low:** This species has been known to occur in a variety of habitats but is known in this region to be near foothills and open areas.
BIRDS				
Accipiter cooperii	Cooper's hawk	Fed: none Calif: SSC	Nests and hunts in forest & woodland, also forages in open areas; most of US, Central and S America.	**Present:** This species was last observed flying over and foraging in the project area during surveys. Nesting habitat is available within and near the project area; however, no active nests

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
				have been found or reported.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	Fed: none Calif: SSC	Valley foothill-hardwood, hardwood conifer forest, chaparral, valley-foothill riparian forest, coniferous forest, wet meadows	**Not Likely to Occur.** No suitable habitat.
Ammodramus savannarum	Grasshopper sparrow	Fed: none Calif: SSC	Dense grasslands on rolling hills, lowland plains; in valleys and on hillsides on lower mountain slopes; favors native grasslands with a mix of grasses, forbs, and scattered shrubs.	**Not Likely to Occur.** No suitable habitat.
Athene cunicularia)	Burrowing owl	Fed: none Calif: SSC (burrow sites)	Open, dry perennial or annual grasslands, deserts, and scrublands characterized by low-growing vegetation; subterranean nester, dependent upon burrowing mammals, particularly California ground squirrels	**Low.** This species has been known to occur in a variety of habitats but is known in this region to be near disturbed open areas near foothills.
Buteo swainsoni	Swainson's hawk	Fed: none Calif: **THR**	Breeds in interior valleys and high desert with scattered large trees or riparian woodland corridors surrounded by open fields, desert scrub or agriculture.	**Low:** Although this species was formerly common in southern California, it no longer breeds in the region.
Campylorhynchus brunneicapillus sandiegensis	Cactus wren	Fed: none Calif: SSC MSHCP: covered	Species require tall opuntia cactus for nesting and roosting.	**Not Likely to Occur**. No suitable habitat.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	Fed: **THR** Calif: **END**	Strongly associated with large complex riparian woodlands.	**Low.** This species was not detected during surveys of the proposed project area; this species is not expected to use the project area as it is not as continuous as the species prefers.
Cypseloides niger	black swift	Fed: none Calif: SSC	Found along the coast of California declining in breeding. Prefers coastal cliffs.	**Not Likely to Occur**. No suitable habitat.
Empidonax traillii extimus	Southwestern willow flycatcher	Fed: **END** Calif: **END** (nesting)	Riparian obligate. Breeds in willow riparian forests & shrublands at scattered locations in SW US and N Baja;	**Low.** Known from three surrounding USGS quads. Successful nesting was documented in the

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
			winters in Cent. Amer.; threatened by habitat loss and cowbird parasitism.	Prado Basin from 1988 to 2007; not detected in the project area during previous annual surveys.
Falco peregrines	American peregrine falcon	Fed: none Calif: FP	Prefers coastal estuaries and other wetlands; occurs in S. California as a rare migrant	**Not Likely to Occur.** No suitable habitat.
Icteria virens	Yellow-breasted chat	Fed: none Calif: SSC (nesting)	Summer resident; inhabits riparian thickets of willow and other brushy tangles near water courses; nests in low, dense riparian vegetation; nests and forages within 10 feet of ground	**High.** Although not observed within the project area this species is known to occur in and near riparian habitat; project area supports suitable nesting habitat.
Polioptila californica californica	Coastal California gnatcatcher	Fed: **THR** Calif: SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in southern California; low scrub in arid washes, on mesas and slopes	**Moderate:** This species was observed during surveys. Juveniles were observed dispersing through small patches of disturbed coastal sage scrub within the project site.
Riparia riparia	Bank swallow	Fed: none Calif: **THR**	Generally found near water, both breeding and in migration. Preferred habitats include riverbanks, creeks seashores, and lakes.	**Moderate**: Species is relatively common within riparian corridors.
Vireo bellii pusillus	Least Bell's vireo	Fed: **END** Calif: **END**	Summer resident of southern California in low riparian habitats in vicinity of water or dry river bottoms; found below 2000 ft; nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mesquite, and mulefat.	**Present.** This species has been documented breeding in and adjacent to the project area (USGS, 2019).
MAMMALS				
Corynorhinus townsendii	Townsend's big-eared bat	Fed: none Calif: SSC	Found throughout California but now considered uncommon; is most abundant in mesic habitats. Roosts in caves building crevices, tunnels, mines.	**Low:** Lacks preferred habitat for species to roost
Eumops perotis	Western mastiff bat	Fed: none	Found on costal range	**Moderate:** Suitable

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
californicus		Calif: SSC	of southern California; prefers open, semi-arid to arid habitats	habitat present; previously thought to have been extirpated.
Lasionycteris noctivagans	Silver-haired bat	Fed: none Calif: SSC	Occurs in southern California from Ventura and San Bernardino Cos. south to Mexico; habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Summer range is generally below 2750 m	**Low:** Lacks preferred habitat for species to roost
Lasiurus blossevillii	Western red bat	Fed: none Calif: SSC	Found locally common in some areas of California, occurring from Shasta Co. to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests.	**Low:** Suitable riparian habitat available.
Lasiurus cinereus	hoary bat	Fed: none Calif: SSC	Found at any location in California, although distribution patchy in southeastern deserts. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range.	**Low:** Lacks preferred habitat for species.
Lasiurus xanthinus	Western yellow bat	Fed: none Calif: SSC	The western yellow bat is uncommon in California, known only in Los Angeles and San Bernardino south to the Mexican border. This species has been recorded below 600 m (2000 ft) in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	**Low:** Suitable riparian habitat available
Nyctinomops femorosaccus	pocketed free-tailed bat	Fed: none Calif: SSC	The pocketed free-tailed bat is found in Riverside,	**Not Likely to Occur.** No suitable habitat.

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
			San Diego, and Imperial cos. This species is rare in California but is more common in Mexico. Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	
Nyctinomops macrotis	big free-tailed bat	Fed: none Calif: SSC	Generalist predator, mainly on small mammals; many habitats, US, Mexico, S Canada (excl. deserts).	**High:** Species is relatively common within riparian corridors, but rarely observed.
Lepus californicus bennettii	black-tailed jackrabbit	Fed: none Calif: SSC	Common throughout the state, except at the highest elevations. Abundant at lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats.	**Not Likely to Occur.** Lacks preferred habitat
Onychomys torridus ramona	southern grasshopper mouse	Fed: none Calif: SSC	Common in arid desert habitats of California. Alkali desert scrub and desert scrub habitats are preferred including succulent shrub, wash, and riparian areas. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	**High:** Suitable habitat present; common in scrub habitats.
Ovis canadensis nelsoni	desert bighorn sheep	Fed: none Calif: **FP**	Uncommon in California; Prefers alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian (DeForge 1980, Monson and Sumner 1980, Wehausen 1980). ommon in California;	**Not Likely to Occur.** No suitable habitat.
Taxidea taxus	American badger	Fed: none	Uncommon, permanent	**Not Likely to Occur.**

Scientific Name	Common Name	Conservation Status	Habitat and Distribution	Occurrence Probability in Project Area
		Calif: SSC	resident found throughout California. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Lacks preferred suitable habitat.

Appendix B Species Observed

Observed Plants Species List

Eudicots	
Muskroot Family	Adoxaceae
blue elderberry	*Sambucus nigra ssp. caerulea*
Fig-Marigold Family	Aizoaceae
small-flowered iceplant	*Mesembryanthemum nodiflorum**
Amaranth Family	Amaranthaceae
tumbling pigweed	*Amaranthus sp.* (dried)*
Sumac Family	Anacardiaceae
Peruvian pepper tree	*Schinus molle**
poison oak	*Toxicodendron diversilobum*
Carrot Family	Apiaceae
common celery	*Apium graveolens**
common poison hemlock	*Conium maculatum**
Sunflower Family	Asteraceae
bur-sage	*Ambrosia acanthicarpa (seedling on bluff)*
California sagebrush	*Artemisia californica*
Douglas' or California mugwort	*Artemisia douglasiana*
coyote brush or chaparral broom	*Baccharis pilularis*
mule fat	*Baccharis salicifolia ssp. salicifolia*
California brickellbush	*Brickellia californica*
calendula	*Calendula officinalis**
Italian thistle	*Carduus pycnocephalus var. pycnocephalus**
tocalote/Maltese star thistle	*Centaurea melitensis**
common horseweed	*Erigeron canadensis*

Australian brass-buttons	*Cotula australis**
California encilia	*Encelia californica*
grassland goldenbush	*Ericameria palmeri var. pachylepis*
gazania	*Gazania linearis**
western sunflower	*Helianthus annuus*
bristly ox-tongue	*Helminthotheca echioides**
coastal goldenbush	*Isocoma menziesii*
white everlasting	*Pseudognaphalium microcephalum*
Spanish sunflower	*Pulicaria paludosa**
common groundsel	*Senecio vulgaris**
common sow thistle	*Sonchus oleraceus**
common dandelion	*Taraxacum officinale**
earless crown beard	*Verbesina encelioides ssp. exauriculata**
spiny clotbur	*Xanthium spinosum*
Borage Family	Boraginaceae
common fiddleneck	*Amsinckia intermedia*
rigid fiddleneck	*Amsinckia menziesii*
slender pectocarya	*Pectocarya linearis ssp. ferocula*
common phacelia	*Phacelia distans*
Mustard Family	Brassicaceae
black mustard	*Brassica Nigra**
sahara mustard	*Brassica tournefortii**
shepherd's purse	*Capsella bursa-pastoris**
shortpod mustard	*Hirschfeldia incana**
white water cress	*Nasturtium officinale**
London rocket	*Sisymbrium irio**
Cactus Family	Cactaceae
Indian fig	*Opuntia ficus-indica**

Goosefoot Family	Chenopodiaceae
Australian saltbush	*Atriplex semibaccata**
Russian thistle	*Salsola tragus**
Morning-Glory Family	Convolvulaceae
common morning-glory	*Ipomoea purpurea**
Stonecrop Family	Crassulaceae
sand pigmy-stonescrop/pygmy-weed	*Crassula connata*
Gourd Family	Cucurbitaceae
chilicothe/wild cucumber	*Marah macrocarpa*
watermelon	*Citrullus lanatus*
Spurge Family	Euphorbiaceae
rattlesnake spurge	*Euphorbia albomarginata*
California croton	*Croton californicus*
doveweed / turkey mullein	*Croton setiger*
castor bean	*Ricinus communis**
Legume Family	Fabaceae
coastal deerweed	*Acmispon glaber*
arroyo lupine	*Lupinus succulentus*
California burclover	*Medicago polymorpha**
white sweetclover	*Melilotus albus**
Geranium Family	Geraniaceae
red-stemmed filaree	*Erodium cicutarium**
Mint Family	Lamiaceae
common horehound	*Marrubium vulgare**
Mallow Family	Malvaceae
cheeseweed	*Malva parviflora**
Montia Family	Montiaceae
red maids	*Calandrinia ciliata*

Figwort Family	Scrophulariaceae
prostrate myoporum	*Myoporum parvifolium**
Myrtle Family	Myrtaceae
gum	*Eucalyptus sp.**
Four-O'clock Family	Nyctaginaceae
bougainvillea	*Bougainvillea sp.**
Olive Family	Oleaceae
velvet ash/Arizona flowering-ash	*Fraxinus sp.*
Lopseed Family	Phrymaceae
seep monkeyflower	*Erythranthe guttata*
Buckwheat Family	Polygonaceae
California buckwheat	*Eriogonum fasciculatum*
willow smartweed	*Persicaria lapathifolia*
sheep sorrel	*Rumex acetosella**
willow dock	*Rumex sp. (seedling)*
Rose Family	Rosaceae
toyon / christmas berry	*Heteromeles arbutifolia*
California rose	*Rosa californica*
California blackberry	*Rubus ursinus*
Willow Family	Salicaceae
Fremont cottonwood	*Populus fremontii ssp. fremontii*
black willow	*Salix goodingii*
red willow	*Salix laevigata*
arroyo willow	*Salix lasiolepis*
Quassia Family	Simaroubaceae
Tree of heaven	*Ailanthus Altissima**
Nightshade Family	Solanaceae
tree tobacco	*Nicotiana glauca**

white horse-nettle	*Solanum elaeagnifolium**
Tamarisk Family	Tamaricaceae
Mediterranean tamarix	*Tamarix ramosissima**
Nettle Family	Urticaceae
hoary nettle	*Urtica dioica ssp. holosericea*
dwarf nettle	*Urtica urens**
Vervain Family	Verbenaceae
lantana	*Lantana sp.**
Mistletoe Family	Viscaceae
big leaf mistletoe	*Phoradendron leucarpum ssp. macrophyllum*
Grape Family	Vitaceae
desert wild grape	*Vitis girdiana*
Monocots	
Palm Family	Arecaceae
Canary Island palm	*Phoenix canariensis**
Mexican fan palm	*Washingtonia robusta**
Sedge Family	Cyperaceae
tall umbrella-sedge	Cyperus eragrostis (? No inflorescence)
sedge	Scirpus sp. (seedling)
Iris Family	Iridaceae
fortnight lily	*Dietes sp.**
Grass Family	Poaceae
giant reed	*Arundo donax**
slender wild oat	*Avena spp.**
ripgut grass	*Bromus spp.**
bermuda grass	*Cynodon dactylon**
smilo grass / millett ricegrass	*Stipa miliacea var. miliacea [Piptatherum miliaceum]**

Cattail Family	Typhaceae
broad-leaved cattail	*Typha latifolia*

Non-native species are indicated by an asterisk. Special-status species are indicated by two asterisks. Other species may have been overlooked or inactive/absent because of the season. Plants were identified using keys, descriptions, and illustrations in Baldwin et al (2012) and other regional references. Wildlife taxonomy and nomenclature generally follow Stebbins (2003) for amphibians and reptiles, AOU (1998) for birds, and Wilson and Ruff (1999) for mammals.

Observed Wildlife Species List

COMMON NAME	SCIENTIFIC NAME
VERTEBRATE ANIMALS	
AMPHIBIANS	AMPHIBIA
Treefrogs and Allies	Hylidae
California treefrog	*Pseudacris cadaverina*
REPTILES	REPTILIA
Spiny Lizards, Horned Lizards, etc.	Phrynosomatidae
Western fence lizard	*Sceloporus occidentalis*
BIRDS	AVES
Cormorants	Phalacrocoracidae
double-crested cormorant	*Phalacrocorax auritus*
Herons and Bitterns	Ardeidae
great egret	*Ardea alba*
Vultures	Cathartidae
turkey vulture	*Cathartes aura*
Geese and Ducks	Anatidae
Mallard	*Anas platyrhynchos*
Hawks, Eagles and Kites	Accipitridae
white-tailed kite	*Elanus leucurus*

	northern harrier	*Circus hudsonius*
	Cooper’s hawk	*Accipiter cooperii*
	red-shouldered hawk	*Buteo lineatus*
	red-tailed hawk	*Buteo jamaicensis*
Falcons		Falconidae
	American kestrel	*Falco sparverius*
Gulls and Terns		Laridae
	California gull	*Larus californicus*
Pidgeons and Doves		Columbidae
	mourning dove	*Zenaida macroura*
Cuckoos and Roadrunners		Cuculidae
	greater roadrunner	Geococcyx californianus
Owls		Strigidae
	great horned owl	*Bubo virginianus*
Hummingbirds		Trochilidae
	Anna’s hummingbird	*Calypte anna*
Woodpeckers		Picidae
	nuttall’s woodpecker	*Dryobates nuttallii*
	downy woodpecker	*Dryobates pubescens*
	Northern flicker	*Colaptes auratus*
Tyrant Flycatchers		Tyrannidae
	black phoebe	*Sayornis nigricans*
	Say’s phoebe	*Sayornis saya*
	Cassin's kingbird	*Tyrannus vociferans*
Vireos		Vireonidae
**	least Bell's vireo	*Vireo bellii pusillus*
Jays and Crows		Corvidae
	California scrub-jay	*Aphelocoma californica*
	American crow	*Corvus brachyrhynchos*

common raven	*Corvus corax*
Bushtits	Aegithalidae
bushtit	*Psaltriparus minimus*
Wrens	Troglodytidae
Bewick's wren	*Thryomanes bewickii*
house wren	*Troglodytes aedon*
Kinglets	Regulidae
ruby-crowned kinglet	*Regulus calendula*
Bluebirds and Thrushes	Turdidae
Western bluebird	*Sialia mexicana*
Wrentits	Timaliidae
wrentit	*Chamaea fasciata*
Mockingbirds and Thrashers	Mimidae
Northern mockingbird	*Mimus polyglottos*
California thrasher	*Toxostoma redivivum*
Wood Warblers	Parulidae
orange-crowned warbler	*Oreothlypis celata*
yellow-rumped warbler	*Setophaga coronata*
common yellowthroat	*Geothlypis trichas*
Towhees and Sparrows	Emberizidae
spotted towhee	*Pipilo maculatus*
California towhee	*Melozone crissalis*
song sparrow	*Melospiza melodia*
white-crowned sparrow	*Zonotrichia leucophrys*
golden-crowned sparrow	*Zonotrichia atricapilla*
Blackbirds and Orioles	Icteridae
hooded oriole	*Icterus cucullatus*
Finches	Fringillidae
house finch	*Haemorhous mexicanus*

lesser goldfinch	*Spinus psaltria*
MAMMALS	MAMMALIA
Hares and Rabbits	Leporidae
desert cottontail	*Sylvilagus audubonii*
Squirrels	Sciuridae
California ground squirrel	*Ostospermophilus beecheyi*
Pocket Gophers	Geomyidae
Botta's pocket gopher (burrows)	*Thomomys bottae*
Dogs, Wolves and Foxes	Canidae
* domestic dog	*Canis familiaris*
coyote (scat, tracks)	*Canis latrans*
Raccoons	Procyonidae
common raccoon (tracks)	*Procyon lotor*
Skunks	Mephitidae
striped skunk	*Mephitis mephitis*
Horses	Equidea
* domestic horse	*Equus caballus*
Pigs	Suidae
* feral pig	*Sus scrofa*

Special-status species are indicated by two asterisks. Other species may have been overlooked or inactive/absent because of the season (amphibians are more active during/after rains, reptiles during summer, some birds (and bats) migrate out of the area for summer or winter, some mammals hibernate etc.), or because of the time of the survey (some species are strictly nocturnal). Wildlife taxonomy and nomenclature generally follow Stebbins (2003) for amphibians and reptiles, AOU (1998) for birds, and Wilson and Ruff (1999) for mammals.

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California gull	*Larus californicus*
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Horses		Equidea
*	domestic horse	*Equus caballus*
Pigs		Suidae
*	feral pig	*Sus scrofa*

Appendix B. Section 106 Consultation Letter to SHPO

Appendix C. Clean Water Act Section 404(b)(1) Evaluation

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SAN GABRIEL RIVER AND SAN JOSE CREEK CONFLUENCE:

SEDIMENT AND VEGETATION REMOVAL

COUNTY OF LOS ANGELES, CALIFORNIA

CLEAN WATER ACT SECTION 404(B)(1) EVALUATION

April 2021

1 INTRODUCTION

Section 404 of the Clean Water Act (CWA) governs the discharge of dredged or fill material into Waters of the U.S. Although the Corps does not process and issue permits for its own activities, the Corps authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including application of the Section 404(b)(1) Guidelines, 33 Code of Federal Regulations (C.F.R.) 336.1(a). The following evaluation is intended to succinctly state and evaluate information regarding the effects of discharges of dredged or fill material into the waters of the U.S. As such, it is not meant to stand alone and relies heavily upon information provided in the environmental document to which it is attached.

Under the Section 404(b)(1) Guidelines, an analysis of practicable alternatives is the primary tool used to determine whether a proposed discharge is prohibited. The Section 404(b)(1) Guidelines prohibit discharges of dredged or fill material into Waters of the U.S. if a practicable alternative to the proposed discharge exists that would have less adverse impacts on the aquatic ecosystem, including wetlands, as long as the alternative does not have other significant adverse environmental impacts (40 C.F.R. 230.10(a)). An alternative is considered practicable if it is available and capable of being implemented after considering cost, existing technology, and logistics in light of overall project purpose (40 C.F.R. 230.10(a)(2)). The Section 404(b)(1) Guidelines follow a sequential approach to project planning that considers mitigation measures only after the project proponent shows no practicable alternatives are available to achieve the overall project purpose with less environmental impacts. Once it is determined that no practicable alternatives are available, the guidelines then require that appropriate and practicable steps be taken to minimize potential adverse effects on the aquatic ecosystem (40 C.F.R. 230.10(d)). Such steps may include actions controlling discharge location, material to be discharged, the fate of material after discharge or method of dispersion, and actions related to technology, plant and animal populations, or human use (40 C.F.R. 230.70-230.77).

Beyond the requirement for demonstrating that no practicable alternatives to the proposed discharge exist, the Section 404(b)(1) Guidelines also require the Corps to compile findings related to the environmental impacts of discharge of dredged or fill material. The Corps must make findings concerning the anticipated changes caused by the discharge to the physical and chemical substrate and to the biological and human use characteristics of the discharge site.

These Guidelines also indicate that the level of effort associated with the preparation of the alternatives' analysis be commensurate with the magnitude of the impact and/or discharge activity (40 C.F.R. 230.6(b)).

The San Gabriel River 2b (SGR2b) levee is part of the larger Los Angeles County Drainage Area (LACDA). The LACDA is a comprehensive flood-risk management plan, and its purpose is to provide flood risk reduction to areas susceptible to flooding within Los Angeles County. Significant flooding between 1914 and 1934 emphasized the need for major flood risk management projects in southern California.

During a routine maintenance inspection in April 2017, significant toe erosion was discovered on the right bank of the SGR2b levee which is normally underwater. During the 2018 levee periodic inspection, the levee was further examined for deficiencies. It was determined that the entrance angle of San Jose Creek is 58 degrees, significantly higher than the 15-degree entrance angle requirement for design of a channel confluence. It was also determined that significant shoaling at the confluence of San Jose Creek and San Gabriel River have impinged and directed flows at the levee embankment. This section of levee was previously repaired and fortified with derrick stone. Despite the placed stone, the impingement persists, and the levee's embankment is actively being scoured, undermined and is at risk of failing. A failure of the

levee system would increase the risk associated with flooding, as well as, the potential risk of loss of life. See Figure 1.

2 BASIC AND OVERALL PROJECT PURPOSE

2.1 Basic Project Purpose

The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether a project is water dependent. The Section 404(b)(1) Guidelines state that if an activity associated with the discharge proposed for a special aquatic site does not require access or proximity to, or siting within, the special aquatic site in question to fulfill its basic purpose, the activity is not water-dependent.

For this project, the basic project purpose is flood-risk reduction, which is water dependent.

2.2 Overall Project Purpose

The overall project purpose serves as the basis for the Corps' section 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the goals and accounts for logistical considerations for the project, and which allows a reasonable range of alternatives to be analyzed. It is critical that the overall project purpose be defined to provide for a meaningful evaluation of alternatives. It should not be so narrowly defined as to give undue deference to the preferred alternative, thereby unreasonably limiting the consideration of alternatives. Conversely, it should not be so broadly defined as to render the evaluation unreasonable and meaningless.

For this project, the overall project purpose is to alleviate the impinged flows that are actively scouring and damaging the levee and restore the 15-degree entrance angle requirement for design of a channel confluence.

Figure 1. Excessive sediment and vegetation have directed flows at the levee's embankment

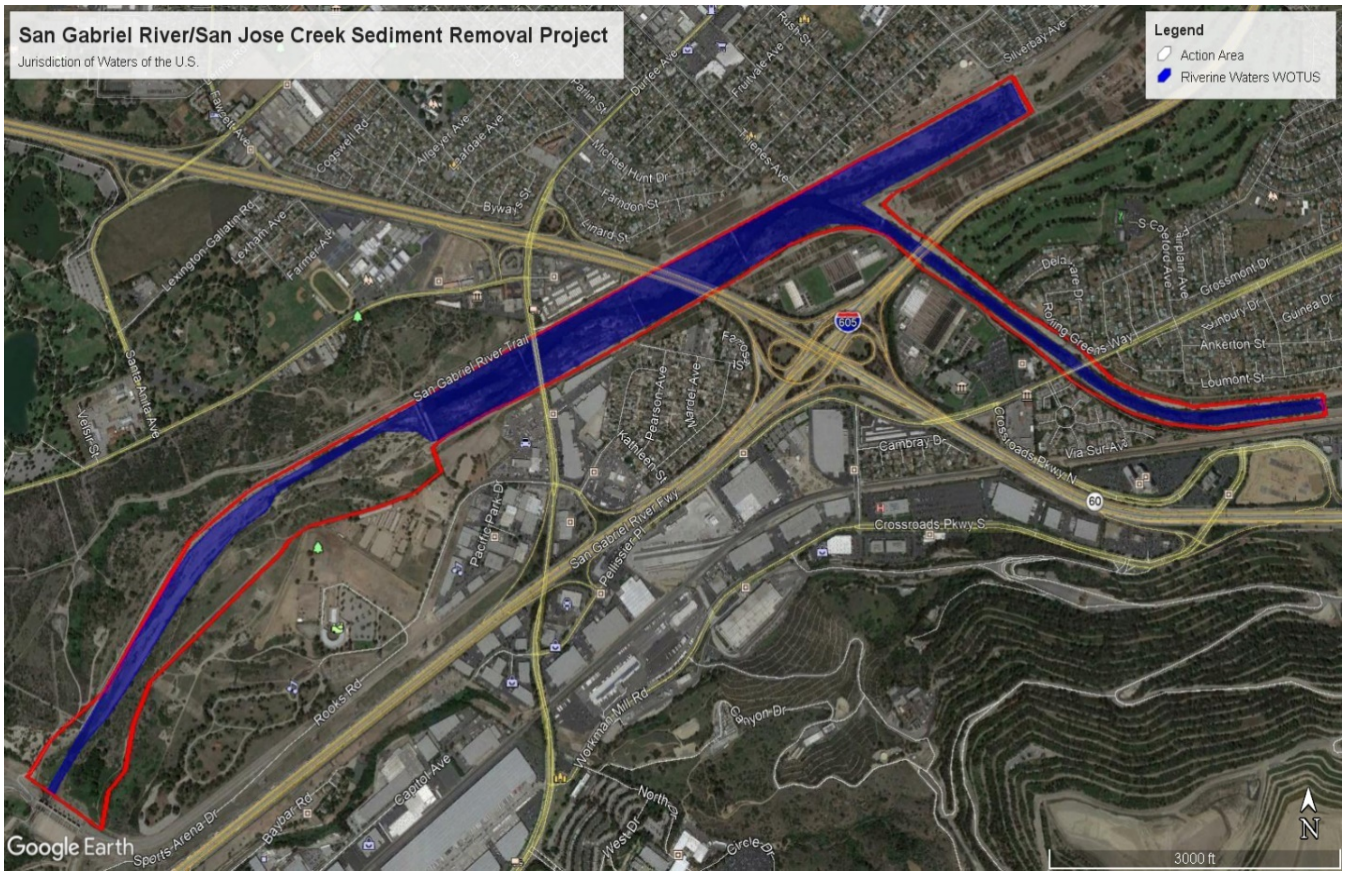

Figure 2- Preliminary Jurisdictional Delineation of Waters of the U.S.- San Gabriel River and San Jose Creek Confluence

3 Jurisdictional Determination of the Waters of the U.S.

A preliminary jurisdictional determination (PJD) of Waters of the U.S. (WOTUS) within the project area was prepared. A PJD may include the delineation limits of all aquatic resources on a parcel, without determining the jurisdictional status of such aquatic resources. Although the Navigable Waters Protection Rule (NWPR) went into effect in June 2020, PJDs are advisory in nature and make no legally binding determination of jurisdiction. Potential WOTUS are shown in Figure 2.

4 ALTERNATIVES CONSIDERED

Per the 404(b)(1) Guidelines, alternatives analysis required by the National Environmental Policy Act (NEPA) will generally suffice as the alternatives analysis under the Guidelines. On occasion, these NEPA documents may address a broader range of alternatives than required to be considered under Guidelines or may not have considered the alternatives in sufficient detail to respond to the requirements of these Guidelines. In the latter case, it may be necessary to supplement these NEPA documents with this additional information.

Alternatives considered for the operations and maintenance action under NEPA included additional reinforcement of the SGR2b levee (Alternative 1) which is experiencing significant erosion, the removal of the excess accumulated sediment and vegetation to return the channel to design elevations and angles

(Alternative 2-proposed action), and minimal accumulated sediment and vegetation removal to reduce impacts to mature vegetation within the San Gabriel River channel (Alternative 3), and no action (Alternative 4).

Reinforcement of the SGR2b levee, with the repair of the derrick stone, will not reduce or alleviate the impinged flows at the confluence of the San Gabriel River and the San Jose Creek. Sedimentation and shoaling will persist, and erosion will continue. This alternative was rejected from further consideration under NEPA. To minimize impacts within the channel, Alternative 3 was considered. This would consist of only removing a small portion of the accumulated sediment and vegetation, leaving most of the shoaling in place. It was determined this would not bring the entrance angle of San Jose Creek back to the 15-degree entrance angle requirement for design of a channel confluence and was therefore rejected from further consideration under NEPA. The no action alternative would not meet the overall project purpose and is not evaluated in this document. The Proposed Action, Alternative 2, would consist of removing the excess accumulated sediment and vegetation in its entirety, bringing the design elevations and 15-degree entrance angle back into compliance with design parameters. The proposed action is the only alternative to meet the overall project purpose.

The nature of the Proposed Action would require work within WOTUS.

4.1 Proposed Action Alternative

The Proposed Action consists of the removing approximately 127,000 cubic yards (cy) of excess accumulated material and 11.2 acres of vegetation as part of operation and maintenance of the channel (Figure 3). The channel in this reach is trapezoidal and comprised of concrete/grouted stone with an earthen invert. Sediment will be excavated to the design elevation of the channel invert across the entire width of the channel between the San Gabriel River/San Jose Creek confluence and the Pomona Freeway (State Route 60). The maintenance footprint is approximately 17.8 acres. The design elevation for the channel invert is the top of the toe.

The depth of the sediment to be removed ranges from 3 to 10 feet. No structural alterations or modifications of structural elements of the engineered channel will occur.

Maintenance activities may include dewatering and/or water diversion for the immediate project footprint to perform the vegetation and sediment removal.

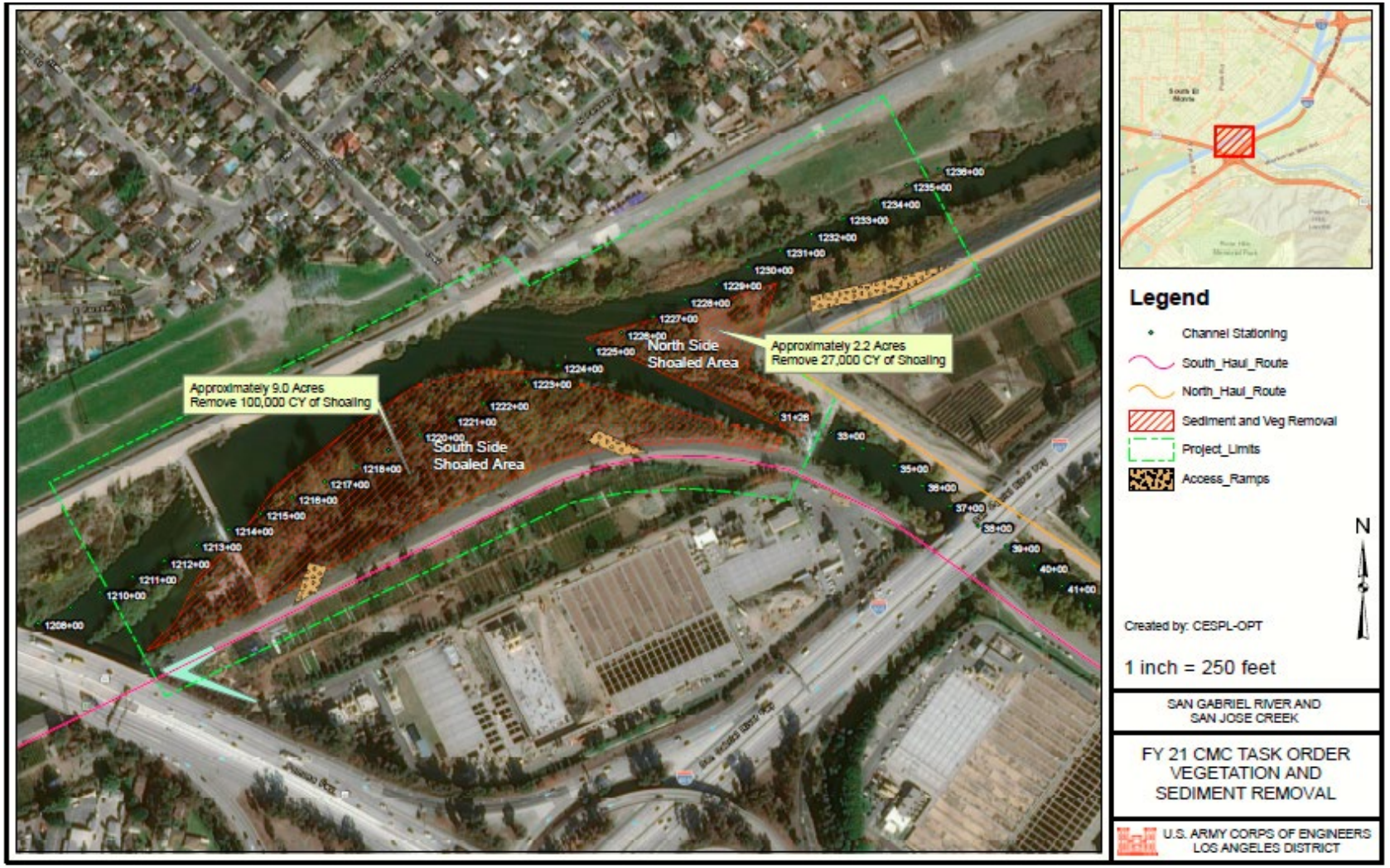

Figure 3-Proposed Action boundary for sediment and vegetation removal, staging and access.

Two staging areas are proposed. One staging area will be located in the southwest corner of the project area, measuring approximately 0.23 acres. A second staging area would be located south of the project area, off Workman Mill road and along San Jose Creek and would measure approximately 0.16 acres (Figure 4 and 5).

Figure 4 – Proposed Staging Areas

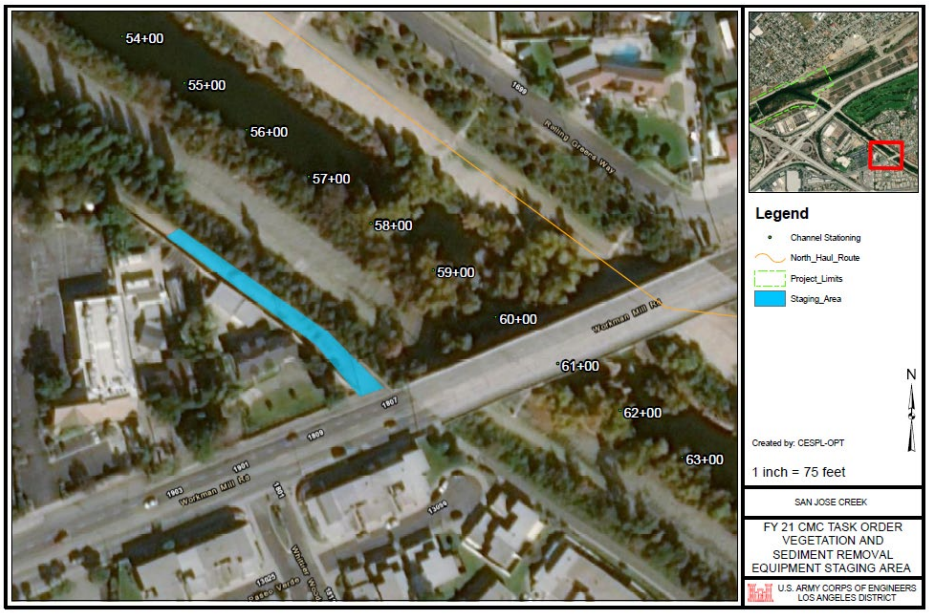

Figure 5 – Proposed Staging Areas

Maintenance-related vehicles would access the site from the Los Angeles County Sanitation District. Up to three temporary access ramps would be constructed to allow access into the channel (See Figure 3 for proposed locations). Figure 6 shows an example of a temporary access ramp. The temporary access ramps would measure approximately 120 feet long, 15 ft. wide, and 2 ft. high and would be comprised of clean earthen fill and/or excess accumulated material from on-site within the project footprint. Approximately 2,000 cy of fill will be required for temporary access into the channel. To minimize turbidity, fiber rollsand or sandbags would be installed below the ramp during its construction and removal. Prior to maintenance, the contractor would submit the design of the temporary ramps to the Corps for review and approval.

Figure 6- Example of tempoary access ramp and fill placement

The Corps has committed to mitigating at a 2:1 ratio for permanent impacts to riparian habitat. Approximately, 11.2 acres of permanentimpacts to riparian habitat would result from the accumulated sediment and vegetation removal, and 17.8 acres of temporary impacts are anticipated from the staging areas and ingress egress locations, some of which would occur outside of WOTUS. A total of 18 acres of compensatory mitigation in the form of enhancement is proposed to offset permanent impacts to 9.0 acres of riparian habitat through invasive/non-native species removal within the project area (Figure 7).

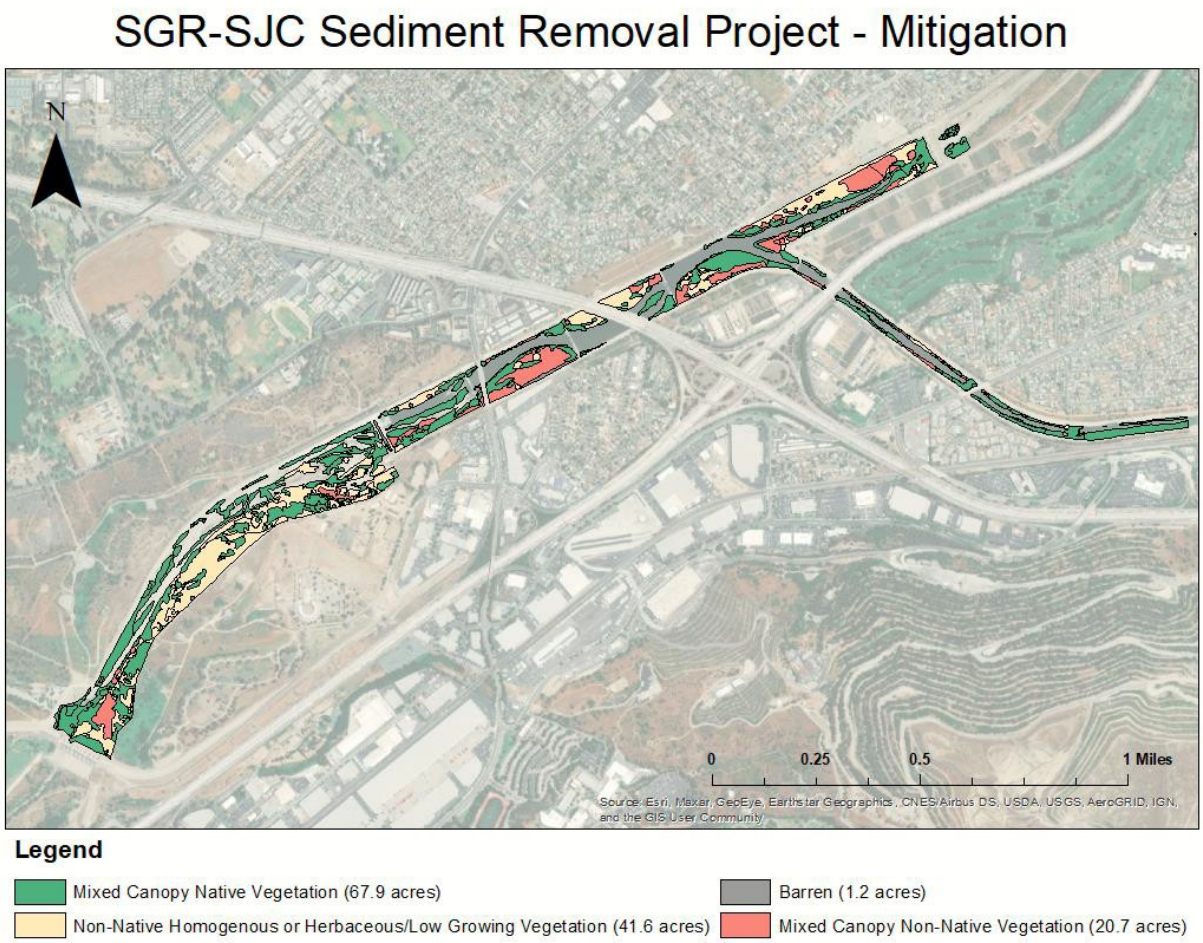

Figure 7 - Area of potential vegetation enhancement through invasive species removal. Total acreage proposed is 18 acres.

The breakdown of the proposed discharges of dredge and fill material into WOTUS is shown in Table 1.

Table 1 Estimated Quantities of Fill Material to be Excavated and Processed

Item	Quantity (cy)
Accumulated Sediment	127,000
General fill	2,000
Total	**129,000**

All excess accumulated sediment and material will be properly disposed of off-site. Organic materials, trees, shrubs, and abandoned timber structures would be disposed of by hauling to the American Bin Company, a local commercial site. Disposal of excess materials by burning or burying at the project site would not be permitted. Although it is not anticipated that toxins would be present in the material removed prior to disposal, the accumulated material would undergo testing to determine appropriate disposal techniques. Lay down yards are available if drying and/or sorting is required and facilities in the cities of Pomona or Riverside would be used to dispose of any potentially toxic soils. Inorganic materials would be taken to American Bin Company in Sun Valley, CA, a commercial landfill.

4.2 No Action Alternative

Under the No Action Alternative, the Corps would not modify the existing channel conditions within SGR2b. No excess accumulated sediment or vegetation will be removed. Concerns regarding continued shoaling and erosion will continue under current conditions.

5 ENVIRONMENTAL EFFECTS

The purpose of the Section 404(b)(1) Guidelines is to restore and maintain the chemical, physical, and biological integrity of the WOTUS through the control of discharges of dredged or fill material. Except as provided under CWA Section 404(b)(1), no discharge of dredged or fill material will be authorized if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences. In accordance with the Section 404(b)(1) Guidelines, the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment must be determined.

The following discussion evaluates impacts of the proposed action alternative on environmental resources identified in Subpart C through Subpart F of the Section 404(b)(1) Guidelines.

5.1 Physical and Chemical Characteristics Determinations (Subpart C)

5.1.1 Substrate

The project area is located in the "Whittier Narrows," a structurally controlled erosional gap. The Whittier Narrows is a two-mile wide gap in the topographic divide that separates the San Gabriel Valley on the north from the Coastal Plain on the south. Plunging folds from both the Puente and Montebello Hills meet to form a synclinal structure which has been the depositional site for thousands of feet of Tertiary and Quaternary sediments. The gap is filled with approximately 800 ft. of Quaternary marine and non-marine sediments. The lower 650 ft. of these sediments are Lower Pleistocene sediments of the San Pedro Formation. The uppermost aquifer, the Holocene Gaspur Aquifer is comprised of boulders cobbles and gravely sands that were deposited roughly 15,000 to 10,000 years ago. Roughly 7,000 to 5,000 years ago the climate became dryer and warmer and the Rio Hondo and San Gabriel River became ephemeral steams that meandered across a broad floodplain approximately two miles wide depositing fine-grained sands, silty sands, and silts. Superimposed within the braided deposits are randomly distributed coarse sand and gravel stringers and cut and scour fills that were deposited during flood events that occur during periods of prolonged and heavy rainfall. The thickness of these recent sediments varies from 0 ft. adjacent to the hills, to approximately 120 ft. in the center. The upper 50 ft. of the foundation materials have a basal coarse grained section (the upper portion of the Gaspur) overlain by a variable thickness (generally 30 to 35 ft.) of more heterogeneous sediments that include relatively thinner lenses of fine to coarse-grained sands, silty sands, and silts. These sediments are not horizontally continuous over large areas and are indicative of a stream system that was variously meandering, braiding, eroding, and aggrading.

Bedrock of the Puente Hills and the Montebello Hills includes crystalline rocks of Mesozoic and pre-Mesozoic age overlain by sedimentary and volcanic rocks that range in age from the Eocene to Pliocene. The Pliocene Fernando Formation is the bedrock immediately underlying the Pleistocene and Holocene

sediments in the Whittier Narrows. Although the recent sediments are over 1,000 ft. thick in the Narrows and over 2,500 ft. thick elsewhere, they are about 800 ft. thick in the area of the Dam.

The Holocene deposits which form most of the foundation under the Whittier Narrows Dam have a basal coarse-grained section of variable thickness which is hydraulically continuous with the somewhat finer grained alluvial which overlays it. The thickness of the Holocene alluvium varies from zero at the margins of the basin to approximately 120 ft. towards the center. The most recent alluvium consists of sand and gravel within layers of partially cemented fine sand, silty sand, sandy silt, silt and clayey silt. Organic matter exists in a few of the silt layers. The fine sand and silt layers are neither widespread nor horizontally continuous, but probably are more lenticular and inter spaced with coarser and more pervious materials. Medium to medium density silty sand, sand, gravelly sand, and sandy gravel are the predominant foundation soils. Well compacted Pleistocene silty sands underlie the Holocene deposits that form the foundation of the right abutment.

Approximately 127,000 cy of accumulated material would be removed from the San Gabriel River and San Jose Creek confluence. The composition of the accumulated material is homogeneous. Thus, removal of the accumulated material would mostly expose additional boulders and cobbles. Sediment remaining in the interstitial space would be composed of gravel, rough sand, and fines with gravel and rough sand the predominant constituents. Though the exposed surface would continue to remain exposed to wind and water, potential for erosion is minimal since the predominant material is coarse sand. Coarse sand is not easily carried by wind and settles out of the water column quickly. Boulders and cobbles would not be subject to movement from wind action. Though some movement of topsoil composed of fines and sand is expected, increased wind erosion potential is minimal due to consolidation and compaction. The temporary absence of vegetation from the newly exposed surface could increase wind and water erosion. However, any change would not be notable because the substrate is already exposed to wind and water and sediment removal would occur immediately after vegetation removal.

Additionally, the installation of access ramps may be needed for construction. Approximately, 2,000 cy of material will be needed. Material for the ramps will either be obtained from excess sediment on site or from commercially available sources. With the completion of construction, the material whether excess sediment or imported fill will be removed from the site in its entirety. Ultimately this will not change the substrate within the channel. Potential for dewatering or diversion may occur within the channel. Turbidity may increase but will be also be temporary in nature. Measures will be taken to ensure water quality standards are adhered to during construction; temporary BMPs may be utilized include waddle placement, use of filter socks and/or allowing the downstream flows to disperse over cobble before entering the active channel resulting in drop out of sediment.

Some water erosion during storm flows is possible, but sedimentation is more likely. The hydraulics, in addition to channel roughness, at the bend at the San Gabriel River and San Jose Creek confluence promote sedimentation. Sediment equilibrium within the water column would determine sedimentation or erosion rates. Wind and water erosion would be minimal.

5.1.2 Suspended Particulates and Turbidity

Under the Proposed Action Alternative, approximately 127,000 cy of accumulated sediment material and 11.2 acres of vegetation would be removed from the San Gabriel River channel impacting approximately

11.2 acres of WOTUS.

Sandbars throughout the project footprint extend from the left bank, low flows are impinged against the right bank and the sandbars are not in contact with flows. Except for work on the sandbar-low flow interface, most earthwork would not increase turbidity.

Removal of the accumulated materials would require approximately three excavators, two loaders, and dump trucks to work within the channel invert. Use of maintenance-related vehicles increases the potential for accidental release of fuels, solvents, or other petroleum-based contaminants. However, best management practices (BMPs) would be implemented to reduce the likelihood for accidental releases. Fueling would occur outside of the channel. Potential contaminants would also be kept outside of the channel and within designated containers. Any spills that occurred would be cleaned up immediately. In addition, BMPs would be implemented which may include use of fiber rolls, gravel bags, waddles, filter socks and/or allowing the downstream flows to disperse over cobble before entering the active channel resulting in drop out of sediment to reduce the potential for increased turbidity; however, water quality standards will be adhered to throughout construction. Additionally, a storm water pollution prevention plan (SWPPP) would be developed to minimize possible pollutants from entering the WOTUS from upland areas of the project should the area of disturbance exceed one (1) acre.

Maintenance would not entail discharge of permanent fill material within WOTUS. However, up to three earthen access ramps would be placed within WOTUS during maintenance, resulting in the temporary discharge of fill material. To minimize turbidity, fiber rolls and or gravel bags would be installed below the ramp during its construction and removal.

The discharges or dredged and fill material would comply with the Section 401 Technically Conditioned Water Quality Certification (WQC) for the U.S. Army Corps of Engineers Los Angeles District, Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) Activities Associated with the Los Angeles County Drainage Area (LACDA) Project System, Los Angeles County.

5.1.3 Contaminants

The potential exists for impacts to surface water quality to result from accidental leaks or spills of potentially hazardous materials, including fuels and lubricants required for operation of construction vehicles and equipment.

To protect against potential negative effects to water quality, there are several design criteria and environmental commitments in place as discussed in Section 6 below.

5.1.4 Current Patterns and Water Circulation

The removal of the excess accumulated material from the San Gabriel River will return the capacity of the channel to its intended design capacity. This will nominally increase the width of the channel to accommodate active flows and return the confluence back to the 15-degree design requirement, which in turn will reduce the erosion of the SGR2b levee. Dewatering or redirecting of flows may be needed to accommodate operation and maintenance activities within the project footprint. This would be temporary in nature, and flows would be returned to their natural state after completion. No structural alterations or modifications of structural elements of the engineered channel will occur. No significant changes in current patterns or water circulation are anticipated.

5.1.5 Cumulative Impacts

Potential cumulative impacts on water resources and hydrology from the Proposed Action will be temporary in nature. Placement of fill or use of accumulated sediment for access routes may temporarily increase turbidity within the immediate project vicinity; however, BMPs and good housekeeping measures will be in place to minimize impacts due to sedimentation and/or the introduction of other potential contaminants through compaction, the use of gravel bags, and/or waddles and ensuring spill prevention and cleanup procedures are in place. The discharges or dredged and fill material would comply with the Section 401 Technically Conditioned Water Quality Certification (WQC) for the U.S. Army Corps of Engineers Los Angeles District, Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) Activities Associated with the Los Angeles County Drainage Area (LACDA) Project System, Los Angeles County and not exceed Water Quality Standards. Ultimately, long term impacts to the substrate and water quality are not anticipated as the Proposed Action will return the channel to its intended design elevations, relieving impingement of flows and reducing sediment buildup.

5.2 Potential Effects on Biological Characteristics of the Aquatic Ecosystem (Subpart D)

5.2.1 Threatened and Endangered Wildlife

Least Bell's Vireo (FE)
Least Bell's vireo (vireo) are known to currently maintain seven (7) territories within the project area. Of the seven (7) known territories occurring within the project area, two lie within the permanent construction footprint, five (5) lie within the remainder of the project area. This would result in potential permanent displacement of two territories and temporary displacement of five (5) territories as a result of the vegetation and sediment removal. This is assuming suitable vireo habitat is available throughout the Whitter Narrows Reservoir and that displaced vireo throughout the Reservoir and Whittier Narrows recreational areas would be able to utilize other suitable habitat in the area. To avoid potential effects to vireo, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of construction activities including the placement of 2,000 cy of material for access and the removal of the 127,000 cy of accumulated sediment. Additionally, considering the large width of the floodplain, movement of vireo would not be constricted within the adjacent area. Although increased competition for nest sites and other resources could occur until construction is completed.

Vireo use their sense of hearing to locate their young and mates, to establish and defend territories, and to locate and evade predators (Scherzinger, 1970). The impact of construction noise on nesting vireo is not well understood. Excessive noise levels have the potential to cause behavioral changes, physiological effects, such as temporary or permanent loss of hearing, and can result in masking of important auditory cues, such as predator alert calls. Vireo may also abandon a nest and general territory if they cannot tolerate the loud noises, in which case eggs and/or hatchlings would be abandoned, inhibiting further recruitment to the population at least temporarily.

Fugitive dust emissions from construction activities has the potential to impair the vision of vireo nesting within and adjacent to the project area. Additionally, increased human presence can cause disturbances to vireo, resulting in nest and/or territory abandonment. BMPs would be implemented to minimize fugitive dust emissions.

As described earlier, nonnative species comprise a large percentage of the project area. Vegetation clearing at the beginning of construction and site enhancement after construction would create an overall improvement in riparian habitat within the project area.

Coastal California gnatcatcher (FT)
Coastal California gnatcatchers (gnatcatcher) are known to currently disperse two (2) territories within the project area. Of the two (2) known territories occurring within the project area, none are within the permanent construction footprint including the placement of 2,000 cy of material for access and the removal of the 127,000 cy of accumulated sediment. No potential permanent displacement of territories is expected because these were juvenile gnatcatchers dispersing through the habitat within and adjacent to the project area. To avoid potential effects to gnatcatcher, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of construction activities. Additionally, considering the large width of the floodplain, movement of gnatcatcher would not be constricted within the adjacent area. Although increased competition for nest sites and other resources could occur until construction is completed.

A total of approximately 95 acres of designated critical habitat fall within the project area. Approximately one-third (1/3) of designated critical habitat would be temporarily impacted during enhancement and maintenance within the project footprint. Of the total critical habitat within the project area, a small portion provides PBFs (i.e., breeding and foraging habitat) required for gnatcatcher occupation. Designated critical habitat outside of the project limit footprint would be enhanced after construction is completed.

The impact of construction noise on nesting gnatcatcher is not well understood. Excessive noise levels have the potential to cause behavioral changes, physiological effects, such as movement from the area. Gnatcatcher may also abandon a nest and general territory if they cannot tolerate the loud noises, in which case eggs and/or hatchlings would be abandoned, inhibiting further recruitment to the population at least temporarily.

Implementation of BMP's as described earlier for vireo would also be implemented for gnatcatcher. BMPs would be implemented to minimize fugitive dust emissions. Awareness of the potential effects of spreading nonnative plant species and prevention and eradication techniques.

5.2.2 Fish, Crustaceans, Mollusks, and other Aquatic Organisms

Turbidity could directly impact aquatic organisms with limited mobility. However, turbidity impacts would be temporary and be limited to construction and will be minimized using BMPs.

5.2.3 Other Wildlife

The Proposed Action would include design aspects and implementation of BMPs and measures that would address potential effects related to temporary habitat loss, excessive noise, increased human presence, fugitive dust emissions, and habitat movement. The San Gabriel River watershed has significant ecological importance for wildlife and provides a transition between fragmented habitats in the region. The Proposed Action would remove the shoaling along the southeast bank of the San Gabriel River. It is not anticipated to cause a physical impediment to or block any known movement pathways. As the permanent project footprint ranges between 20-40 feet wide in the channel, the project would not significantly constrict wildlife movement. Furthermore, implementation of avoidance/minimization and offsetting measures developed as part of the Proposed Action would ensure that impacts to wildlife

movement corridors and habitat linkages would not be significant. Permanent and temporary impacts to habitat would be offset by approximately 18 acres of enhancement through removal of non-native species. The Proposed Action would not result in a substantial loss to the population of wildlife or wildlife movement.

5.2.4 Cumulative Impacts

The Proposed Action may impact up to five (5) known territories of the vireo. Two (2) territories lie within the permanent construction footprint for sediment and vegetation removal, and five (5) lie within the remainder of the project area including the 18 acres of vegetation enhancement through the removal of non-native species. This would result in potential permanent displacement of two (2) territories and temporary displacement of five (5) territories. To minimize potential impacts vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of construction activities. Though immediate impacts of construction may occur, long term impacts are not anticipated. 18 acres of vegetation enhancement through non-native species removal will result in an increase in habitat value and create additional suitable nesting habitat for the vireo within and immediately adjacent to the project footprint. Potential cumulative impacts on biological resources, water resources and hydrology from the Proposed Action are anticipated to be less than significant.

5.3 Potential Effects on Special Aquatic Sites (Subpart E)

5.3.1 Wetlands and Vegetated Shallows

No wetlands and vegetated shallows exist within the project area. Therefore, none would be impacted by the Proposed Action.

5.3.2 Mud Flats

No mud flats exist within the project area. Therefore, none would be impacted by the Proposed Action.

5.3.3 Coral Reefs

No coral reefs exist within the project area. Therefore, none would be impacted by the Proposed Action.

5.3.4 Riffle and Pool Complexes

No riffle and pool complexes exist within the project area. Therefore, none would be impacted by the Proposed Action.

5.3.5 Cumulative Impacts

As the above resources under Section 5.3 do not occur within the project footprint, the potential cumulative impacts on water resources and hydrology from the Proposed Action are less than significant.

5.4 Potential Effects on Human Use (Subpart F)

5.4.1 Municipal and Private Water Suppliers

The Proposed Action is not anticipated to impact utilities or water supply within the project area. Water

would be required for dust abatement and cleaning of construction equipment. The amount of water required would depend on the length of access roads, weather conditions, road surface conditions, and other site-specific conditions. However, water use would not affect availability of water for the local population or other needs of the surrounding cities.

5.4.2 Recreational and Commercial Fisheries

There are no commercial or recreational fisheries within the project area.

5.4.3 Water-Related Recreation

There are no water-related recreation activities within areas where construction or mitigation would occur.

5.4.4 Aesthetics

Under Proposed Action, the sediment and vegetation removal would be visible during the operations and maintenance. The Proposed Action would include accumulated sediment and vegetation removal, staging areas and access ramps, as well as the potential for dewatering or stream diversion within the channel. The project features can be seen in Figures 3-6. Within the immediate project vicinity there are several recreational areas including the San Gabriel River Trail to the north and the San Gabriel River Trail – Eastern Bank which shares the maintenance access road as a multi-use path. Therefore, activities would be visible to recreationalists, pedestrians, homeowners and businesses. However, given that activities are temporary, these impacts would not be adverse.

5.4.5 Parks, national and historical monuments, national seashores, wilderness areas, and research sites

There are no parks, national and historical monuments, national seashores, wilderness areas, or research sites within the project area.

5.4.6 Cumulative Impacts

Potential cumulative impacts on human uses from the Proposed Action are not anticipated as utilities, recreational and commercial fisheries, water-related recreation and parks and wilderness areas do not occur within the project footprint. Any potential impacts to aesthetics will be temporary in nature and would not be considered adverse or significant.

5.5 Evaluation and Testing (Subpart G)

The Proposed Action Alternative would result mostly in discharges of native and/or commercial fill within WOTUS associated with earthmoving activities and access. All excess accumulated sediment and vegetation material will be removed from WOTUS before project completion.

Fill material for constructing the access ramps would be obtained from the project site or would be chemically inert and would not leach contaminants into the water column. Per 40 C.F.R 230.60(a), testing is not required.

6 ACTIONS TO MINIMIZE ADVERSE EFFECTS (Subpart H)

Environmental commitments include project design features and best management practices that are incorporated into the project description to avoid and/or reduce potential impacts. The following environmental commitments have been incorporated into the Proposed Action for the purposes of minimizing environmental effects.

Air Quality

AQ-1 The project contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.

AQ-2 The project contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.

AQ-3 The project contractor shall use Caterpillar pre-chamber diesel engines or equivalent and perform proper maintenance and operation.

AQ-4 The project contractor shall electrify equipment, where feasible.

AQ-5 The project contractor shall restrict the idling of construction equipment to 10 minutes.

AQ-6 The project contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel.

AQ-7 The project contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).

AQ-8 The project contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area.

AQ-9 The project contractor shall schedule all material deliveries to the construction site outside of peak traffic hours, and minimize other truck trips during peak traffic hours.

AQ-10 The project contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).

The following measures will be implemented to reduce construction emissions of PM10:

AQ-11 The project contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stockpiles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.

AQ-12 In areas where dewatering is not required, the project contractor shall water active grading/excavation sites at least twice daily.

AQ-13 The project contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.

AQ-14 The project contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).

AQ-15 The project contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum heights of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.

AQ-16 The Corps shall ensure all heavy equipment is maintained in a proper state of tune as per the manufacturer's specifications.

AQ-17 The project contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.

AQ-18 The project contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads or wash off trucks and any equipment leaving the site each trip.

AQ-19 The project contractor shall apply water three times daily or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces.

AQ-20 The project contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph or less.

Biological Resources

BR-1 The Corps shall conduct presence/absence surveys during the nesting seasons that entails surveys for least Bell's vireo (April 10 - July 31) and Coastal California gnatcatcher (March 15 - June 30) in spring and early summer during construction. The survey information will be provided to USFWS on an annual basis.

BR-2 The Corps biologist (or environmental monitor) will monitor construction activities at initiation of construction and weekly checks to ensure compliance with environmental commitments.

BR-3 The contractor shall clear sediment and vegetation associated with project construction within potential vireo habitat only during period when least Bell's vireo and coastal California

gnatcatcher are not nesting (avoidance from March 1 – September 15).

BR-4 The Corps will enhance two acres of least Bell's vireo habitat (through non-native removal) for each acre of wetland/riparian habitat permanently impacted by the Proposed Action. This will equate to 18-acres of passive restoration/enhancement to compensate for 9 acres of permanent impacts to least Bell's vireo territories utilizing suitable riparian habitat. The 2:1 ratio for riparian/wetland habitat impacts and 1:1 for non-native vegetation assumes that the enhancement area will be actively maintained for a 10-year period, for a total of 20.2 acres of enhancement. Exotic/invasive removal of plant species will only occur during periods when least Bell's vireo and coastal California gnatcatcher are not nesting (nesting period is from March 1 – September 15).

BR-5 Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to designated construction boundaries, including staging areas or routes of travel. The construction area(s) will be the minimal area necessary to complete the Proposed Action and will be specified in the construction plans. Highly visible barriers (such as orange construction fencing) will be installed around all riparian and sensitive habitats adjacent to the project limits footprint to designate limits of construction activities. These barriers will be maintained until the completion of all construction activities and removed at the completion of the project.

BR-6 Prior to construction activities, a Corps qualified biologist (or environmental monitor) shall conduct pre-construction environmental training for all construction crew members. The training shall focus on required avoidance/minimization measures and conditions of regulatory agency permits and approvals. The training shall also include a summary of sensitive species and habitats potentially present within the project area.

BR-7 Prior to any ground-disturbing activities (e.g. mechanized clearing or rough grading) for all project-related construction activities, a qualified biologist shall conduct pre-construction surveys of the project area for special-status wildlife species. During these surveys the biologist will:

a. Inspect the project area for any sensitive wildlife species.
b. In the event of the discovery of a non-listed, special-status ground-dwelling animal, such as a burrowing owl or special-status reptile, attempts will be made to recover and relocate the animal to adjacent suitable habitat within the project area at least 200 feet from the limits of construction activities. Burrowing owl surveys and relocations would follow established protocols;
c. The Corps will ensure the limits to construction are clearly marked.

BR-8 Best management practices shall be implemented to reduce impacts to native habitats, including the following:

a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement BMPs to prevent runoff carrying toxic substances from entering the San Gabriel River or San Jose Creek. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Los Angeles (LA) County Fire Department) and when activities may produce sparks. Emergency contacts for the LA County Fire Station No. 90 on 3207 Cogswell Road will be established.
c. To the extent feasible, the project contractor will prevent exotic weeds from establishing

within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.

Water Resources and Hydrology

WR-1 Comply with conditions of the Clean Water Act Section 401 Technically Conditioned Water Quality Certification (401 WQC) for the U.S. Army Corps of Engineers Los Angeles District, Operation, Maintenance, Repair, Replacement and Rehabilitation Activities Associated with the Los Angeles County Drainage Area Project System, Los Angeles County.

WR-2 Except for activities carried out under § 404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

WR-3 The Corps shall maintain a copy of the Section 401 WQC and supporting documentation at the activity work site during work for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work/participating in described activity shall be adequately informed and trained regarding the conditions of the 401 WQC.

WR-4 Activities shall not cause visible oil, grease, or foam in the receiving water.

WR-5 Refueling of equipment within the waterway is prohibited.

WR-6 Equipment shall be staged outside of waters of the United States. Storage areas shall be provided with containment, including drip pans and/or placement of absorbent material.

WR-7 The Corps shall perform inspections of construction equipment prior to being utilized in surface waters to ensure leaks from the equipment are not occurring and are not a threat to water quality.

WR-8 The project contractor shall develop and maintain onsite a project-specific Spill Prevention Containment and Cleanup Plan outlining the practices to prevent, minimize, and/or clean up potential spills during construction of the project. The Plan must detail the project elements, construction equipment types and location, access and staging and construction sequence.

WR-9 Raw cement, concrete (or washing thereof), asphalt, drilling fluids, lubricants, paints, coating material, oil, petroleum products, or any other substances which could be hazardous to fish and wildlife resulting from or disturbed by project-related activities, shall be prevented from contaminating the soil and/or entering waters of the United States.

WR-10 Silt fencing, straw wattles, or other effective management practices must be used along the construction zone to minimize soil or sediment migrating into the waters of the United States through the entire duration of the project.

WR-11 All disturbed by project activities that could contribute to water quality impairment shall be protected from erosion.

WR-12 All materials resulting from the activity shall be removed from the site and disposed of properly.

WR-13 The Corps shall provide to the Regional Water Board a Notice of Completion (NOC) no later than 45 days after activity completion. The NOC shall demonstrate that the activity has been carried out in accordance with the activity description in the Notification and/or provide an explanation as to any deviations/modifications. The NOC shall include a map of the activity location(s) and representative pre-and post-construction photographs. Each photograph shall include a descriptive title, date taken, photographic site, and photographic orientation. The NOC will include all water quality data collected.

WR-14 The discharge of petroleum products, any construction materials, hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, raw cement, concrete, asphalt, paint, coating material, drilling fluids, or other construction-related potentially hazardous substances to surface water and/or soil is prohibited.

Noise

N-1 Maintenance activities shall occur between 7:00 a.m. and 7:00 p.m. Monday through Friday, and 8:00 a.m. to 7:00 p.m. on Saturday.

Cultural Resources

CR-1 In the event that previously unknown cultural resources are discovered during project construction within the Corps' area of potential effects, the project contractor shall cease all ground disturbing activities within thirty feet of the find and shall notify the Corps within 24

hours. The Corps shall follow the requirements stipulated at 36 CFR 800.13 regarding post-review discoveries. Construction within thirty feet of the find may not resume until the Corps has completed the requirements of 36 CFR 800.13.

7 COMPENSATORY MITIGATION FOR LOSSES OF AQUATIC RESOURCES (SUBPART J)

All discharges of fill would result in short-term, minimal impacts to physical and chemical characteristics of the aquatic ecosystem. Proposed Action would not result in temporary or permanent impacts to wetland WOTUS

To compensate for the loss of aquatic resources, the Corps has proposed mitigating at a 2:1 ratio for permanent impacts to riparian habitat (Environmental commitment BR-4). Approximately, 11.2 acres of permanent impacts will result from the accumulated sediment and vegetation removal, and 17.8 acres of temporary impacts is anticipated from the staging areas and access ramp locations, some of which will occur outside of WOTUS. A total of 18 acres of compensatory mitigation in the form of enhancement is proposed to offset permanent impacts to 9.0 acres of riparian habitat. This will include vegetation enhancement through invasive/non-native species removal within and near the project area (Figure 6). The vegetation enhancement area will be conducted for a minimum of 10 years. The enhancement areas are being coordinated with the USFWS as part of the formal consultation with the USFWS under section 7 of the Endangered Species Act.

8 CONCLUSION

Based on the preliminary analysis above, the Proposed Action is in compliance with the 404(b)(1) Guidelines. The final 404(b)(1) evaluation and Findings of Compliance will be included with the Final evaluation.

Prepared by: Emily Lester
Date: April 23, 2021

Appendix D. Clean Water Act Section 401 Water Quality Certification and notification

US Army Corps of Engineers
Los Angeles District

Operations Division
915 Wilshire Blvd, 11th Floor
Los Angeles, CA. 90017

NOTIFICATION: Pursuant to Section II.B. of the May 12, 2017 Memorandum of Understanding (MOU) Between the United States Army Corps of Engineers, Los Angeles District and the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), Concerning Operation, Maintenance, Repair, Replacement, and Rehabilitation of the Los Angeles County Drainage Area Project in Waters of the United States.

SUBJECT: Maintenance of the SGR2b levee segment at the confluence of the San Gabriel River and San Jose Creek.

Overall Project Description: During a routine maintenance inspection in April 2017, significant toe erosion was discovered on the right bank of the SGR2b levee. During the 2018 Levee Periodic Inspection, it was determined that the entrance angle of San Jose Creek is 58.6 degrees, which is significantly greater than the current maximum design angle of 12-degrees that is allowed per EM 1110-2-1601 (Hydraulic Design of Flood Control Channels). It was also determined that significant shoaling at the confluence of San Jose Creek and San Gabriel River have impinged flows and directed them at the levee embankment causing accelerated erosion. The section of levee was previously repaired and fortified with derrick stone. Despite the placed stone, the levee's embankment is still actively being scoured, and may potentially be undermined creating risk of failure.

The SGR2b levee is part of the larger Los Angeles County Drainage Area (LACDA). The LACDA is a comprehensive flood-risk management plan, and its purpose is to provide flood risk reduction to areas susceptible to flooding within Los Angeles County. Significant flooding between 1914 and 1934 emphasized the need for major flood risk management projects in southern California. A failure of the levee system would increase the risk associated with flooding, as well as the potential risk of loss of life and extensive property damage. In addition to this, several transmission towers on the land side of the levee where the erosion is occurring would be affected in the event of a levee failure.

The Corps proposes to implement sediment and vegetation removal required maintenance activities within the Gabriel River and San Jose Creek within the SGR2b levee segment to relieve the impinged flows that are actively scouring and damaging the levee. The SGR2b segment is located within the cities of South El Monte and Industry, Los Angeles County, approximately 11 miles east

of downtown Los Angeles, CA (Figure 1). The maintenance activities will include the removal of approximately 127,000 cubic yards of accumulated material and associated vegetation within 11.2 acres. Sediment will be excavated to the design elevation of the channel invert across the entire width of the channel between the San Gabriel and San Jose confluence and the Pomona Freeway (State Route 60). The design elevation for the channel invert is the top of the toe. The depth of the sediment ranges approximately from 3- 10 feet and the total construction footprint is approximately 17.8 acres. No structural alterations or modifications of structural elements of the engineered channel will take place.

Two staging areas are proposed (Figure 2). One staging area will be in the southwest corner of the project area, measuring approximately 0.23 acres. A second staging area would be located south of the project area, off Workman Mill road and along San Jose Creek, and would measure approximately 0.16 acres.

Up to four temporary access ramps would be constructed to allow access into the channel. The temporary ramps would measure approximately 120 feet long, 15 ft. wide, and 2 ft. high and would be comprised of clean earthen fill or available existing excess material from the channel. Approximately 2000 cy of fill will be required to construct the temporary access ramps. The material would be obtained from the channel or from acceptable available commercial sources. Prior to construction, the contractor would submit the design of the temporary ramps to the Corps for review.

Maintenance activities may include dewatering and/or water diversion of the immediate project area to perform the vegetation and accumulated sediment removal.

In coordination with the US Fish and Wildlife Service (USFWS), the Corps has committed to mitigating 2:1 for permanent impacts to riparian habitat. Approximately, 11.2 acres of permanent impacts will result from the accumulated sediment and vegetation removal, and 17.8 acres of temporary impacts is anticipated from the staging areas and ingress egress locations, some of which will occur outside of Waters of the US. Permanent impacts to riparian habitat will require mitigation. A total of 18 acres of mitigation will be required to offset permanent impacts to 9.0 acres of riparian habitat. This will include vegetation enhancement through invasive species removal within and near the project area in accordance with the USFWS agreed upon locations (Figure 4).

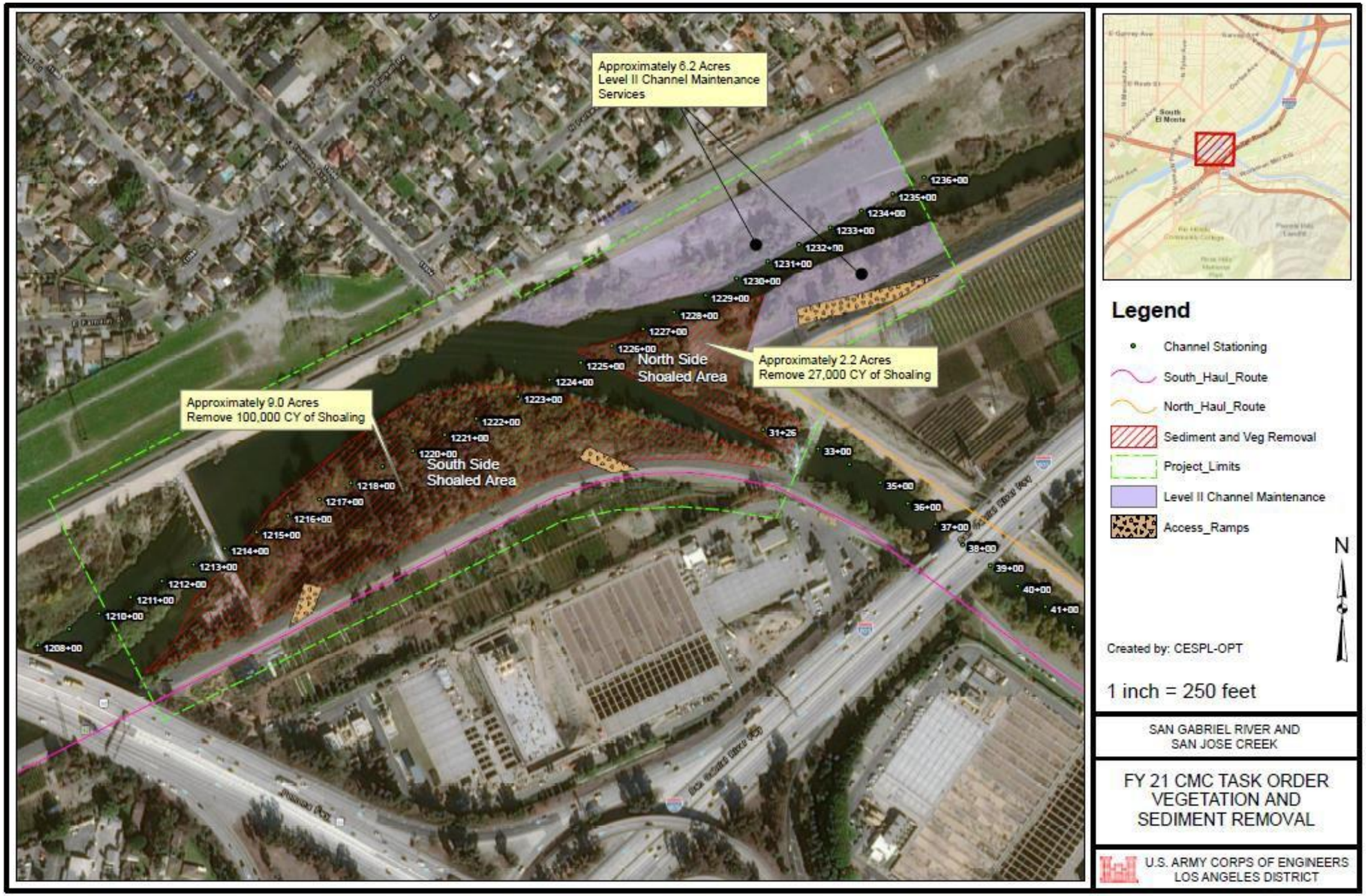

Figure 1. Project Location and Components

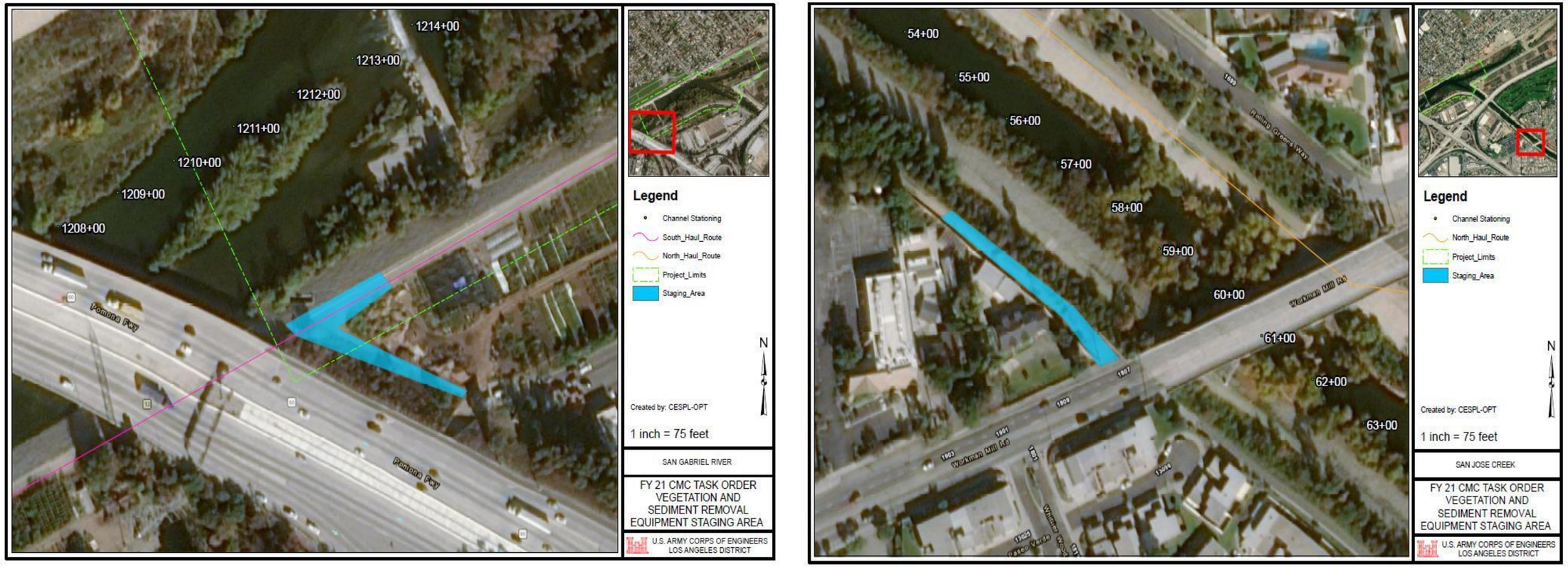

Figure 2. Staging Area Locations

Figure 3. The accumulated sediment and vegetation that is impinging the flows from San Jose Creek.

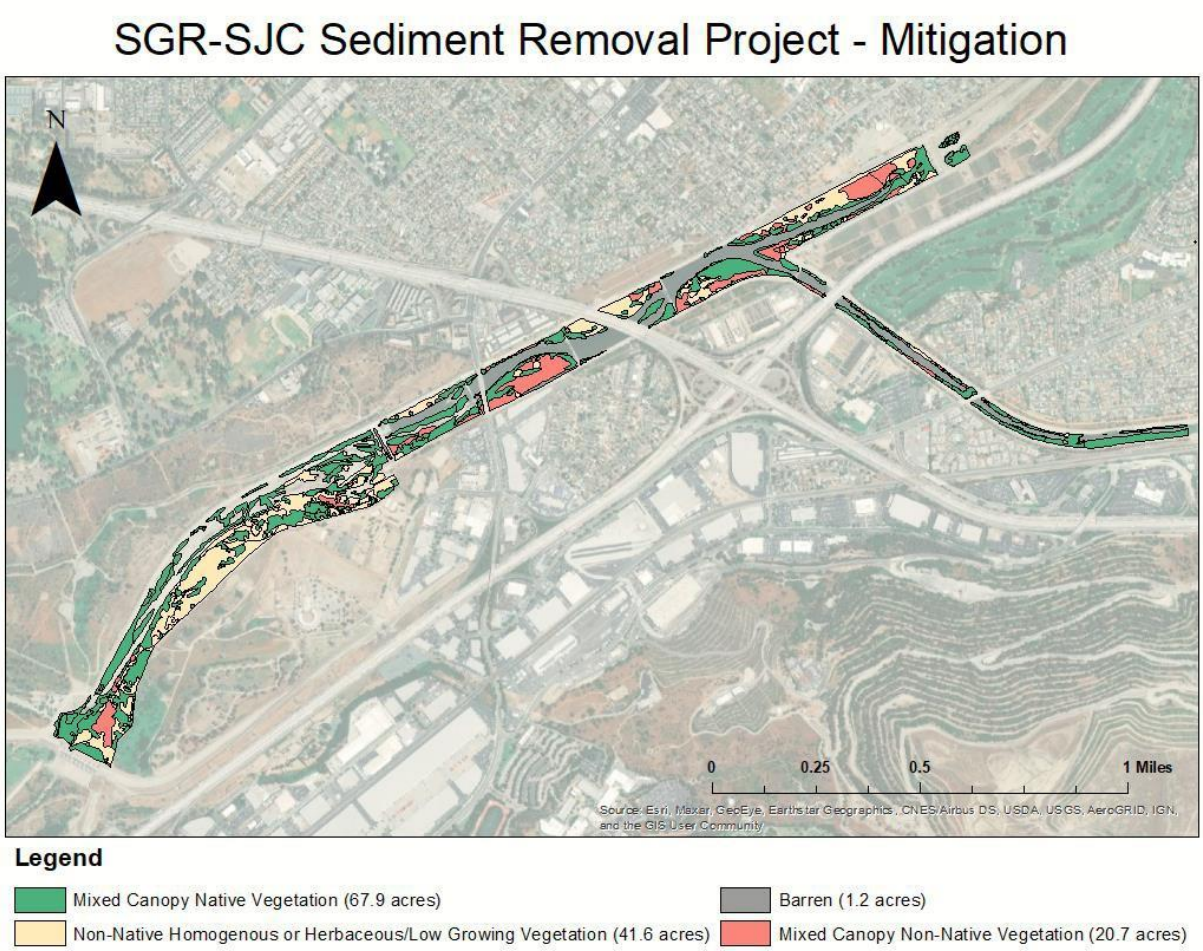

Figure 4. Area of potential vegetation enhancement through invasive species removal. Total acreage will account for 18 acres of mitigation to be finalized through USFWS coordination.

Proposed Schedule: Construction is scheduled to commence in Fall 2021 and finish in Fall 2024. It is possible that the activities would be completed in stages, with multiple start dates and construction periods for various phases depending on funding, environmental windows, and weather delays. Construction phasing may result in an extension of the overall project duration beyond Fall 2024.

Proposed construction hours would be 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 7:00 p.m. on Saturday. Occasional overtime work may be required to maintain the construction schedule, but timing would comply with local noise ordinances.

Name of Receiving Water Body(ies): San Gabriel River

Describe Potential Impacts to Water Quality: The proposed action would entail repair of an existing portion of channel and levee. The channel in this reach is trapezoidal and comprised of concrete/grouted stone with an earthen invert and would return the project area to the as built condition. There would be no loss of waters of the US.

The proposed action would require ground-disturbing work and use of construction equipment within the San Gabriel and San Jose Rivers. Prior to construction, the work area within waters of the US would be temporarily dewatered and isolated from nuisance and/or low flows. Water from the dewatering operations would be pumped back into the channel. All dewatering structures would be removed prior to the rainy season or upon completion of construction, whichever occurs first. Temporary access ramps would be constructed to allow access into the channel. The temporary ramps would measure approximately 120 feet long, 15 ft. wide, and 2 ft. high and would be comprised of clean earthen fill or existing excess material from the channel. Approximately 2000 cy of fill will be required to construct the temporary access ramps. Approximately 127,000 cy of accumulated sediment and associated vegetation will be removed.

Movement of vehicles across the channel during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding low-flows, work within the rivers would result in no increases in turbidity. Use of construction vehicles increases the potential for accidental release of fuels, solvents, or other petroleum-based contaminants. Discharge of fill materials are not expected to result in long-term introduction of contaminants into the water column. All temporary fill would be chemically inert and would be removed upon completion of construction.

Amount, in Acres and Linear Feet (where appropriate), of Waters of the United States Would be Impacted by the Activity, and Identify the Impact(s) as Permanent or Temporary: The activities will result in approximately 11.2 acres of permanent impacts from the removal of accumulated sediment and vegetation; 7 acres of temporary construction impacts associated with temporary access, and approximately 18 acres of temporary impacts as a result of the vegetation enhancement through invasive species removal.

Indicate the Amount (cubic yards) and Type of Fill Material to be Discharged/Installed in Waters of the United States:

Accumulated Sediment Removal: 127,000 cubic yards (cy)
Access Ramp (Fill placement): 2,000 cy

Best Management Practices (BMPs) to be Implemented to Avoid and/or Minimize Impacts to Jurisdictional Waters of the United States:

Appendix I: Technical Certification Conditions

In addition to standard conditions outlined in the notification, the Corps shall satisfy the following:

1. Except for activities carried out under§ 404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.
☒Yes, ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

2. The Corps shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the activity work site during work for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work/participating in described activity shall be adequately informed and trained regarding the conditions of this Certification.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

3. Activities shall not cause visible oil, grease, or foam in the receiving water.
☒Yes ☐ No ☐ Not Applicable
Rationale if "No" or "Not Applicable" is entered:

4. Refueling of equipment within the waterway is prohibited.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

5. Equipment shall be staged outside of waters of the United States. Storage areas shall be provided with containment including drip pans and/or placement of absorbent material.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

6. The Corps must perform inspections of construction equipment prior to utilizing it in surface waters to ensure leaks from the equipment are not occurring and are not a threat to water quality.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

7. The Corps shall develop and maintain onsite a project-specific Spill Prevention, Containment and Cleanup Plan outlining the practices to prevent, minimize, and/or clean up potential spills during construction of the project. The Plan must detail the project elements, construction equipment types and location, access and staging and construction sequence.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

8. Raw cement, concrete (or washing thereof), asphalt, drilling fluids, lubricants, paints, coating material, oil, petroleum products, or any other substances which could be hazardous to fish and wildlife resulting from or disturbed by project-related activities, shall be prevented from contaminating the soil and/or entering waters of the United States.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

9. Silt fencing, straw wattles, or other effective management practices must be used along the construction zone to minimize soil or sediment along the embankments from migrating into the waters of the United States through the entire duration of the project.
☒Yes ☐ No ☐ Not Applicable
Rationale if "No" or "Not Applicable" is entered:

10. All earthen embankment areas disturbed by project activities that could contribute to water quality impairment shall be protected from erosion.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

11. All temporarily affected areas in soft bottom channels shall be restored to pre-construction contours upon completion of construction activities.
☒Yes ☐No Not Applicable
Rationale if "No" or "Not Applicable" is entered:

12. All materials resulting from the activity shall be removed from the site and disposed of properly.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

13. This Certification does not allow permanent water diversion of flow from the receiving water. This Certification is invalid if any water is permanently diverted as a part of the activity.
☒Yes No☐ ☐ Not Applicable
Rationale if "No" or "Not Applicable" is entered:

14. If surface flows in the work area exceed an average water depth of 6 inches, measured by using a yard stick at three or more random locations that account for water depth variability within the work area, the Corps shall isolate the work area via water diversion unless technically

infeasible or financially impracticable. In the event water diversion is technically infeasible or financially impracticable, other BMPs to protect water quality shall be implemented in order to avoid and minimize impacts to water quality, especially to limit increases to turbidity. Other BMP methods to control turbidity may include downstream check dams, or gravel, or compost filled turbidity socks, or other appropriate methods. In the event the Corps implements a BMP in place of a water diversion, the Corps shall document for the record why a water diversion was not implemented. Upon its request, the Corps shall share such record with the Regional Water Board. If water diversion is anticipated, the Corps shall follow its Los Angeles County Drainage Area Project *Water Diversion and Best Management Practices Guide.* If water quality monitoring indicates that an activity will adversely impact water quality, the Corps shall alter or modify water diversion or BMPs to minimize impacts to water quality.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

15. The discharge of petroleum products, any construction materials, hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, raw cement, concrete, asphalt, paint, coating material, drilling fluids, or other construction-related potentially hazardous substances to surface water and/or soil is prohibited. In the event of a prohibited discharge, the Corps shall notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Settlement Agreement within 24-hours of the discharge.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

16. If construction or groundwater dewatering is proposed or anticipated, the Corps shall obtain any necessary NPDES permits prior to discharging waste.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

17. The Corps shall allow the staff of the Regional Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, to enter the work area for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this Certification.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

18. The Corps shall conduct water quality monitoring to ensure effectiveness of water diversions and/or other in-water work or BMPs implemented in lieu of water diversions. If surface flows are present, upstream and downstream monitoring for the following shall be implemented:

- pH
- temperature
- dissolved oxygen
- turbidity

These constituents shall be measured at least once prior to diversion or other BMP implementation and then monitored on a daily basis during the first week and then on a weekly

basis, thereafter, until the in-stream work is complete. Monitoring shall take place during the period when clearing activities are occurring. The Corps shall review water quality data each day water quality data is collected.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

19. Pre-project planning shall include consideration of contingency measures to address various flow discharges, if anticipated.
☒Yes ☐No ☐Not Applicable
Rationale if "No" or "Not Applicable" is entered:

20. When invasive species may be encountered, BMPs to limit the spread of invasive species shall be considered and implemented to the extent appropriate as follows:

(a) The District shall follow the Regional General Permit 41 BMPs in the removal and disposal of invasive plants.

(b) All equipment, including equipment for personnel such as hand tools, survey equipment and boots, that have been deployed in an area which supports New Zealand mud snails, shall be subject to a program of inspection and be carefully cleaned before use at an additional project site.

(c) Construction and maintenance personnel shall be instructed in invasive species control methods.

☒Yes ☐No Not Applicable
Rationale if "No" or "Not Applicable" is entered:

Attachment(s): The Corps' Draft NEPA and Biological Assessment are attached hereto. Final Documents will be provided when they are available.

Notification of Completion: In accordance with Condition D of the Certification, no later than 45 days after activity completion, the Corps will provide the LARWQCB, by email, with a Notice of Completion demonstrating that the activity has been carried out in accordance with the activity description above and/or provide an explanation as to any deviations/modification accompanied with a map of the activity location(s) and representative pre-and post-construction photographs, with each photograph including a descriptive title, date taken, photographic site, and photographic orientation and all water quality data collected.

PREPARED BY:

Emily Lester

Date: 04/14/2021

Emily Lester
Biologist, Planning Division, Environmental Resources Branch, Regional Planning Section
Los Angeles District, USACE

REVIEWED BY:

SNYDER.TREVOR.ROIGH.1187728017 Digitally signed by SNYDER.TREVOR.ROIGH.1187728017 Date: 2021.04.22 13:53:43 -07'00'

Date: 4/22/2021

Trevor Snyder
Project Manager, Los Angeles River Operations Division
Los Angeles District, USACE

APPROVED BY:

Michael Turanitza, PhD Digitally signed by Michael Turanitza, PhD Date: 2021.04.22 14:38:38 -07'00'

Date: _____

Michael Turanitza
Deputy Chief, Operations Division, Chief, Management Support Branch
Los Angeles District, USACE

ATTACHMENT A

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE UNITED STATES ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

AND

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

CONCERNING

OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION

OF THE LOS ANGELES COUNTY DRAINAGE AREA PROJECT

IN WATERS OF THE UNITED STATES

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is entered into pursuant to a settlement agreement executed on May 8, 2017 ("Agreement") between the United States Army Corps of Engineers, Los Angeles District ("District") and the California Regional Water Quality Control Board, Los Angeles Region ("Regional Water Board"), collectively referred to as the "Signatories."

RECITALS

WHEREAS, the Los Angeles County Drainage Area ("LACDA") project is a congressionally authorized flood risk management project the District constructed pursuant to the Emergency Relief Appropriation Act of 1935, as amended, and the Flood Control Act of 1936, as amended.

WHEREAS, the LACDA project included the construction of Hansen, Sepulveda, Santa Fe, Whittier Narrows, Lopez and Haines Canyon Debris Basin flood risk management basins, debris basins in 31 tributary canyons, 93 miles of main channel and 147 miles of tributary channels, including 316 bridges on the Los Angeles, Rio Hondo, and San Gabriel rivers. Construction of the LACDA project took 20 years to complete. Linear LACDA facilities include segmented reaches of channels throughout Los Angeles County, and are composed of concrete rectangular channels, concrete trapezoidal channels, or soft bottom channels with reinforced or armored trapezoidal embankments.

WHEREAS, pursuant to the Flood Control Act of 1938, the United States Army Corps of Engineers ("Corps") is authorized to perform operation, maintenance, repair, replacement, and rehabilitation ("OMRR&R") of certain sections and/or features of the LACDA project, including 5 dam basins, 1 debris basin and 45 non-contiguous miles of linear levee and channel.

WHEREAS, Clean Water Act ("CWA") § 301, 33 U.S.C. § 1311(a), prohibits "the discharge of any pollutant" except in compliance with a permit or as otherwise authorized under the CWA.

WHEREAS, CWA § 404, 33 U.S.C. § 1344 authorizes the Corps to issue permits for discharges of dredged or fill material into waters of the United States.

WHEREAS, CWA § 404(t), 33 U.S.C. § 1344(t), provides that "[n]othing in this section shall preclude or deny the right of any State or interstate agency to control the discharge of dredged or fill material in any portion of navigable waters within the jurisdiction of such States, including any activity by any Federal agency, and each agency shall comply with such State or interstate requirements both substantive and procedural to control the discharge of dredged or fill material to the same extent that any person is subject to such requirements."

WHEREAS, activities that do not result in a discharge of any pollutant into waters of the United States do not require a CWA § 404 permit; and not all discharges require a permit under the CWA pursuant to 33 U.S.C. § 1344(f)(1) and 33 C.F.R. § 323.2(d)(3).

WHEREAS, CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1), provides that "[a]ny applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate."

WHEREAS, 33 C.F.R. § 336.1, provides that "[a]lthough the Corps does not process and issue permits for its own activities, the Corps authorizes its own discharge of dredged or fill material by applying all applicable substantive legal requirements including [application for] state water quality certification for discharges of dredged or fill material into waters of the U.S."

WHEREAS, individual LACDA project OMRR&R activities, such as temporary stream diversion and dewatering and removal of accumulated sediment and vegetation from soft bottom channels, may involve discharges of dredged or fill material into water of the United States for which the District may be required to seek CWA § 401 certification from the Regional Water Board.

WHEREAS, other individual LACDA project OMRR&R activities may not involve discharges of any pollutant into waters of the United States, or may involve only discharges of dredged or fill material that are exempt or excepted from CWA permitting requirements, and therefore would not require the District to seek CWA § 401 certification from the Regional Water Board.

NOW, THEREFORE, the Signatories hereby acknowledge and declare as follows:

I. PURPOSE

A. In the interest of mutual cooperation, the Regional Water Board and the District have developed this MOU to coordinate the respective regulatory processes associated with the District's LACDA OMRR&R activities in waters of the United States.

B. The Signatories recognize that this MOU provides guidance about the nature of, or extent of, water quality control measures described in Section II that may be required for individual LACDA project OMRR&R activities that may require CWA § 401 certification.

II. WATER QUALITY CONTROL MEASURES

A. The District agrees to notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Agreement by email on our around October 31 of each Federal fiscal year this MOU is in effect, listing the planned LACDA projects OMRR&R activities and specific locations in LACDA for that year, and indicating, to the extent known, whether the activity falls under Section II.B. or II.C. of this MOU. For activities planned in Federal fiscal year 2017, the District agrees to notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Agreement of those activities by email within thirty (30) days of the execution of the MOU.

B. CWA § 401 Water Quality Certification for Certain LACDA Project OMRR&R Activities.

1. The CWA § 401 Water Quality Certification attached hereto and incorporated by reference as Exhibit A shall apply to LACDA project OMRR&R activities that involve discharges of dredged or fill material that are subject to CWA permitting requirements. The District agrees to comply with the conditions of that certification.

2. To the extent not otherwise certified under CWA § 401, categories of LACDA OMRR&R activities that may result in discharges of dredged or fill material into waters of the United States and those covered by the CWA § 401 Water Quality Certification attached hereto as Exhibit A, include, but are not limited to:

a. The repair, rehabilitation, or replacement of any previously constructed structures or fill that result in deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement.

b. The removal of sediment and associated vegetation, resulting from activities associated with the maintenance of earthen debris basins or earthen retention/detention basins that were constructed by the District.

c. Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys. The term "exploratory trenching" means mechanical land

clearing of the upper soil profile to expose bedrock or substrate, for the purpose of mapping or sampling the exposed material.

d. Temporary structures, work, and discharges, including cofferdams, necessary for construction activities, water diversion, access fills, or dewatering of construction sites.

e. Mechanized land clearing, mechanized mulching, mechanized removal, chipping, and excavation of living or dead invasive, exotic plants from the bottom of earthen channels, and the temporary stockpiling of invasive plants within such earthen channels.

f. Mechanized land clearing of sediment and associated vegetation, including clearing of multiple stands of emergent vegetation or significant vegetation, from earthen bottom channels.

C. Other Individual LACDA Project OMRR&R Activities

1. Individual LACDA project OMRR&R activities for which CWA § 401 water quality certification may not be required include, but are not limited to:

a. Discharges of dredged or fill material resulting from activities associated with the maintenance, repair, rehabilitation, or replacement of any previously constructed structures or fill *that do not* result in deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement.
b. Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chain sawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
c. Activities that involve removal of accumulated sediment and vegetation from fully lined, grouted-stone and concrete channels, when water diversions are not used.

2. For any such LACDA project OMRR&R activities in water of the United States:

a. The District agrees to consider and implement best management practices ("BMPs"), to the extent appropriate. Potential BMPs are identified in Exhibit B, attached hereto and incorporated by reference. The BMPs identified in Exhibit B may not be applicable to every individual LACDA project OMRR&R activity, nor is every possible BMP listed for every individual LACDA project OMRR&R activity. In the event the District implements "other BMPs" to limit increases of turbidity levels caused by individual LACDA project OMRR&R activities, such as downstream check dams, clean gravel-filled or compost-filled turbidity/filter socks, the parties recognize that these "other BMPs" may result in the discharge of dredge or fill

material that is not exempt from the need for a CWA § 401 water quality certification. For this reason, the Regional Water Board has expressly waived § 401 water quality certification for "other BMPs" implemented by the District should they result in a discharge of dredged or fill material into waters of the United States. Such waiver is attached hereto as Exhibit C and incorporated by reference.

b. The District agrees to notify the Regional Water Board by email at least 45 calendar days prior to commencing an individual LACDA project OMRR&R activity, which includes information provided below, except in the case of an emergency:

(1) Activity description

(2) Proposed schedule (start date, and completion date)

(3) Name(s) of receiving water body(ies)

(4) A brief description of the BMPs to be implemented to avoid and/or minimize impacts to waters of the United States.

c. Under emergency circumstances, the District shall alert the Regional Water Board, via telephone and email, of a potential emergency activity and notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Agreement of the information described in the subparagraph b, above, as soon as practicable.

3. Within fifteen (15) working days of receipt of the District's notification, the Regional Water Board may transmit comments by email to the District concerning the adequacy of the District's BMPs. The District agrees to consider the Regional Water Board's comments concerning the adequacy of the specific BMPs to be implemented. The Regional Water Board agrees that the District retains the discretion in determining the appropriateness of the adequacy of the BMPs pursuant to Section II.C. of this MOU based on the specific facts and application of relevant statutes and regulations.

4. The District agrees to notify the Water Board by email no later than thirty (30) calendar days after completion of an individual LACDA project OMRR&R activity subject to Section II.C., providing a description of the work completed, a map of the project location, and representative pre- and post-OMRR&R activity photographs.

III. GENERAL PRINCIPLES

A. This MOU applies to the District's OMRR&R activities associated with the LACDA project, and does not have broader applicability beyond LACDA project features for which the District retains OMRR&R responsibility.

B. This MOU does not modify existing agency authorities by reducing, expanding or transferring any of the statutory or regulatory authorities and responsibilities of any of the Signatories.

C. Nothing in this MOU shall be construed as obligating any of the Signatories to the expenditure of funds in excess of appropriations authorized by law or otherwise commit any signatory to actions for which it lacks statutory authority.

D. This MOU does not, and is not intended to, create any other right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, the State of California, any agencies thereof, any officers or employees thereof, or any other person, except as provided in the Agreement.

E. The policies and procedures contained within this MOU are intended solely to improve the working relationships of the Signatories in connection with decisions with regard to individual LACDA project OMRR&R activities. This MOU does not restrict either the District or the Regional Water Board in exercising its discretion in each case to make regulatory decisions based on its judgment about the specific facts and application of relevant statutes and regulations.

F. This MOU may be modified, as necessary, by mutual agreement of both parties, by a written amendment signed and dated by an authorized representative of each party.

G. This MOU will remain in force for 10 years from the effective date.

H. This MOU is not a final Federal agency action by the District, and does not, and is not intended to, create any right, benefit, or responsibility, substantive or procedural, enforceable at law or equity by any person or party against the United States, its agencies, its officers, or any other person, except as provided in the Agreement.

I. This MOU is to be construed in a manner consistent with all existing laws and regulations.

J. This MOU neither expands nor is in derogation of those powers and authorities vested in the Signatories by applicable laws, statutes, or regulations.

K. This MOU does not alter or modify compliance with any applicable Federal or State laws or regulations.

L. This MOU does not direct or apply to any party outside of the signatory agencies. The terms of this MOU are not intended to be enforceable by any party other than the Signatories hereto.

M. All provisions in this MOU are subject to the availability of funds.

ACCORDINGLY, the Signatories have signed this Memorandum of Understanding on the dates set forth below, to be effective for all purposes as of the date last signed, subject to the execution of the

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Agreement. The signatures may be executed using counterpart original documents.

U.S. Army Corps of Engineers, Los Angeles District

Dated: 12 May 2017

Kirk E. Gibbs
Colonel, US Army
Commander and District Engineer

California Regional Water Quality Control Board, Los Angeles Region

Samuel Unger

Dated: May 8, 2017

Samuel Unger, P.E.
Executive Officer

Exhibit A

CWA § 401 Water Quality Certification

CLEAN WATER ACT § 401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION; U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT, OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R) ACTIVITIES ASSOCIATED WITH THE LOS ANGELES COUNTY DRAINAGE AREA (LACDA) PROJECT SYSTEM, LOS ANGELES COUNTY

This Order is a Water Quality Certification (Certification) for the OMRR&R of the LACDA project (Project) system in waters of the United States by the U.S. Army Corps of Engineers, Los Angeles District (District). This Certification provides coverage for permanent and temporary impacts to waters of the United States. For OMRR&R activities, the District will take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States, shall minimize adverse impacts to native, aquatic vegetation and water quality in the activity work areas, and shall not adversely impact water quality, aquatic vegetation, or aquatic habitat downstream of the Project activity work areas.

This Certification provides regulatory coverage for the District's OMRR&R of 5 flood risk management dam basins, 1 debris basin and approximately 45 miles of flood risk management channels and levees within Los Angeles County related to the Project. Coverage under this Certification is for OMRR&R activities conducted in waters of the United States within Los Angeles County, which include: Haines Canyon Debris Basin, Hansen Dam, Lopez Dam, Santa Fe Dam, Sepulveda Dam, Whittier Narrows Dam, Alhambra/San Pasqual Wash, Ballona Creek, Compton Creek, Los Angeles River, Haines Canyon Channel, upper and lower Rio Hondo, San Gabriel River (above and below Whitter Narrows Dam), San Gabriel River (above Santa Fe Dam), and San Jose Creek.

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This Order serves as a Certification action that is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to § 13330 of the California Water Code and § 3867 of the California Code of Regulations.

2. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to § 3855(b) of the California Code of Regulations, and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. All reports, notices, or other documents required by this Certification or requested by the Los Angeles Regional Water Quality Control Board (Regional Water Board) shall be signed by either a principal executive officer or ranking elected official or by a duly authorized representative of that person.

4. Any person signing a document under Standard Condition number 3 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am

aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

B. CERTIFICATION CONDITIONS:

1. Routine Notification

In addition to the above standard conditions, the District shall notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Settlement Agreement by email at least 75 days prior to discharging dredged or fill material into waters of the United States. The notification shall include the following:

(a) Activity Description

(b) Proposed Schedule (start date, and completion date)

(c) Name(s) of Receiving Water Body(ies)

(d) Describe potential impacts to water quality

(e) Amount, in ACRES and LINEAR FEET (where appropriate), of waters of the United States would be impacted by the activity, and identify the impacts(s) as permanent and/or temporary.

(f) Indicate the amount (cubic yards) and type of fill material to be discharged/installed in waters of the United States

(g) Briefly describe best management practices (BMPs) to be implemented to avoid and/or minimize impacts to waters of the United States, including preservations of habitats, erosion control measures, project scheduling, flow diversions, etc.

(h) The District shall attach to the notification a copy of the District's compliance with the National Environmental Policy Act and Clean Water Act 404(b)(1) Guidelines, as applicable.

2. Emergency Notification:

Under emergency circumstances, the District shall alert the Regional Water Board's contact persons pursuant to paragraph 7 of the Settlement Agreement, via a phone call and email, of a potential emergency project as soon as known and make a notification by email of the information in paragraphs B.1.(a-h) above, as soon as practicable.

C. TECHNICAL CERTIFICATION CONDITIONS:

In addition to the above standard conditions, the District shall satisfy the following:

1. Except for activities carried out under § 404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

2. The District shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the activity work site during work for review by site personnel and agencies. All

personnel (employees, contractors, and subcontractors) performing work/participating in described activity shall be adequately informed and trained regarding the conditions of this Certification.

3. Activities shall not cause visible oil, grease, or foam in the receiving water.

4. Refueling of equipment within the waterway is prohibited.

5. Equipment shall be staged outside of waters of the United States. Storage areas shall be provided with containment including drip pans and/or placement of absorbent material.

6. The District must perform inspections of construction equipment prior to utilizing it in surface waters to ensure leaks from the equipment are not occurring and are not a threat to water quality.

7. The District shall develop and maintain onsite a project-specific Spill Prevention, Containment and Cleanup Plan outlining the practices to prevent, minimize, and/or clean up potential spills during construction of the project. The Plan must detail the project elements, construction equipment types and location, access and staging and construction sequence.

8. Raw cement, concrete (or washing thereof), asphalt, drilling fluids, lubricants, paints, coating material, oil, petroleum products, or any other substances which could be hazardous to fish and wildlife resulting from or disturbed by project-related activities, shall be prevented from contaminating the soil and/or entering waters of the United States.

9. Silt fencing, straw wattles, or other effective management practices must be used along the construction zone to minimize soil or sediment along the embankments from migrating into the waters of the United States through the entire duration of the project.

10. All earthen embankment areas disturbed by project activities that could contribute to water quality impairment shall be protected from erosion.

11. All temporarily affected areas in soft bottom channels shall be restored to pre-construction contours upon completion of construction activities.

12. All materials resulting from the activity shall be removed from the site and disposed of properly.

13. This Certification does not allow permanent water diversion of flow from the receiving water. This Certification is invalid if any water is permanently diverted as a part of the activity.

14. If surface flows in the work area exceed an average water depth of 6 inches, measured by using a yard stick at three or more random locations that account for water depth variability within the work area, the District shall isolate the work area via water diversion unless technically infeasible or financially impracticable. In the event water diversion is technically infeasible or financially impracticable, other BMPs to protect water quality shall be implemented in order to avoid and minimize impacts to water quality, especially to limit increases to turbidity. Other BMP methods to control turbidity may include downstream check dams, or gravel, or compost filled turbidity socks, or other appropriate methods. In the event the District implements a BMP in place of a water diversion, the District shall document for the record why a water diversion was not implemented. Upon its request, the District shall share such record with the Regional Water Board. If water diversion is anticipated, the District shall follow the

District's Los Angeles County Drainage Area Project *Water Diversion and Best Management Practices Guide*. If water quality monitoring indicates that an activity will adversely impact water quality, the District shall alter or modify water diversion or BMPs to minimize impacts to water quality.

15. The discharge of petroleum products, any construction materials, hazardous materials, pesticides, fuels, lubricants, oils, hydraulic fluids, raw cement, concrete, asphalt, paint, coating material, drilling fluids, or other construction-related potentially hazardous substances to surface water and/or soil is prohibited. In the event of a prohibited discharge, the District shall notify the Regional Water Board's contact persons pursuant to paragraph 7 of the Settlement Agreement within 24-hours of the discharge.

16. If construction or groundwater dewatering is proposed or anticipated, the District shall obtain any necessary NPDES permits prior to discharging waste.

17. The District shall allow the staff of the Regional Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, to enter the work area for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this Certification.

18. The District shall conduct water quality monitoring to ensure effectiveness of water diversions and/or other in-water work or BMPs implemented in lieu of water diversions. If surface flows are present, upstream and downstream monitoring for the following shall be implemented:

☐ pH

☐ temperature

☐ dissolved oxygen

☐ turbidity

These constituents shall be measured at least once prior to diversion or other BMP implementation and then monitored on a daily basis during the first week and then on a weekly basis, thereafter, until the in-stream work is complete. Monitoring shall take place during the period when clearing activities are occurring. The District shall review water quality data each day water quality data is collected.

19. Pre-project planning shall include consideration of contingency measures to address various flow discharges, if anticipated.

20. When invasive species may be encountered, BMPs to limit the spread of invasive species shall be considered and implemented to the extent appropriate as follows:

(a) The District shall follow the Regional General Permit 41 BMPs in the removal and disposal of invasive plants.

(b) All equipment, including equipment for personnel such as hand tools, survey equipment and boots, that have been deployed in an area which supports New Zealand mud snails, shall be subject to a program of inspection and be carefully cleaned before use at an additional project site.

(c) Construction and maintenance personnel shall be instructed in invasive species control methods.

D. NOTIFICATIONS AND REPORTS:

21. The District shall provide a Notice of Completion (NOC) no later than 45 days after activity completion. The NOC shall demonstrate that the activity has been carried out in accordance with the activity description in the Notification and/or provide an explanation as to any deviations/modifications. The NOC shall include a map of the activity location(s) and representative pre-and post-construction photographs. Each photograph shall include a descriptive title, date taken, photographic site, and photographic orientation. The NOC will include all water quality data collected.

WATER QUALITY CERTIFICATION:

I hereby certify that as long as all of the conditions listed in this certification are met, any discharge of dredged or fill material into waters of the United States related to OMRR&R of the Project will comply with the applicable provisions of § 301 ("Effluent Limitations"), § 302 ("Water Quality Related Effluent Limitations"), § 303 ("Water Quality Standards and Implementation Plans"), § 306 ("National Standards of Performance"), and § 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act.

California Regional Water Quality Control Board, Los Angeles Region

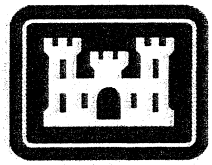
Samuel Unger Dated: May 8, 2017

Samuel Unger, P.E.
Executive Officer

Exhibit A, Attachment 1

Los Angeles County Drainage Area Project

Water Diversion and Best Management Practices Guide



US Army Corps
of Engineers®

Los Angeles County Drainage Area Project

Water Diversion and Best Management Practices Guide

Los Angeles District

April 2015

1.0 INTRODUCTION

The U.S. Army Corps of Engineers' ongoing maintenance program of the Los Angeles County Drainage Area (LACDA) system entails the proper operation and function of six flood risk management facilities and approximately 34 miles of flood control channels and levees within Los Angeles County (see Figure 1). Routine maintenance and repair activities ensure proper operation of the outlet works and preserve design flow conveyance and retention capacities of the LACDA system.

1.1 PURPOSE

This document describes temporary water diversion structures and associated best management practices that would be implemented as appropriate for routine and periodic maintenance activities within aquatic areas of LACDA.

Most flows within the LACDA system are riverine. The lone exception is the terminus of Ballona Creek where riverine flows are subject to tidal influence. Moreover, most flows within the system are ephemeral. One major exception is the Los Angeles River downstream of Sepulveda Basin where flows are perennial due to discharge of treated water from the Tillman Water Reclamation Plant and the Los Angeles-Glendale Water Reclamation Plant. If present, reclaimed waters within the system are typically low flows.

Though scheduled maintenance is conducted year-round, most of the work is done in the dry due to the absence of flows in many channels and basins within LACDA. In cases where in-water work may be required, the Corps would assess the potential impacts to water quality. If deemed appropriate, temporary water diversion structures would be discharged in order to avoid and minimize impacts to water quality during routine maintenance activities within aquatic areas of LACDA.

2.0 FACILITY TYPES AND DESCRIPTIONS

2.1 BASIN FACILITIES

The Corps operates and maintains six basin facilities within LACDA. With the exception of Haines Canyon Debris Basin and Lopez Dams, the remaining LACDA basin facilities support a variety of land uses including but not limited to recreation, education, equestrian, military, and wastewater treatment. The

dominant land use is recreation. Recreational areas are leased to the City of Los Angeles at Hansen Dam and Sepulveda Dam. The County of Los Angeles leases recreational areas within the basins for Santa Fe and Whittier Narrows Dam. The lessees are responsible for all operations and maintenance activities within the leased lands. The Corps maintains small operational areas primarily within the vicinity of the inlet and outlet works.

Facility Name	**Total Area (acre)**	**Operational Area (acre)**	**Location (lat/long WGS 84)**
Haines Canyon Debris Basin	7.6	n/a[1]	34 15 40 , -118 16 37
Hansen Dam	1,500	8.5	34 15 41, -118 23 06
Lopez Dam	103	5.9	34 18 21, -118 24 36
Santa Fe Dam	1,970	10.0	34 07 04, -117 57 19
Sepulveda Dam	2,121	10.8	34 10 26, -118 29 23
Whittier Narrows Dam	2,812	7.0	34 1 18, -118 04 53

[1] Neither annual nor routine periodic maintenance is performed at Haines Canyon Debris Basin on an annual basis. The last maintenance activity within the aquatic area occurred in 2010 in order to remove sediment and debris from the Station Fire. Prior to that action, the basin had not been cleaned for 40 years.

2.2 LINEAR FACILITIES

Linear LACDA facilities include segmented reaches of channels throughout Los Angeles County. They are composed of concrete rectangular channels; concrete trapezoidal channels or soft bottom channels with reinforced or armored trapezoidal embankments.

Facility Name	**Channel Configuration**	**Length (miles)**
Alhambra/San Pasqual Wash	concrete rectangular	4
Ballona Creek	soft bottom	xxx
Ballona Creek	concrete trapezoidal	1.6
Compton Creek	concrete rectangular	4.5

Los Angeles River	concrete/soft bottom	3
Los Angeles River	concrete rectangular	3.7
Los Angeles River (Glendale Narrows)	soft bottom/reinforced trapezoidal	12
Haines Canyon Channel	concrete rectangular	1.8
Rio Hondo	concrete rectangular	
San Gabriel River (above Whittier Narrows Dam)	soft bottom/armored trapezoidal embankment	1.2
San Gabriel River (above Santa Fe Dam)	soft bottom/armored trapezoidal embankment	3
San Jose Creek	soft bottom/armored trapezoidal embankment	1

3.0 ROUTINE MAINTENANCE ACTIVITIES IN AQUATIC AREAS

3.1 DAM OUTLET WORKS AND APPROACH CLEANOUT

Debris, sediment and vegetation from the approaches to the dams may be removed in preparation for the storm season. Vegetation and debris clogging the outlet works (e.g., gates) or appurtenant structures such as log booms may also be removed. The activity may require the use of backhoes, loaders, or dozers working in a channel in combination with dump trucks. Equipment would enter the channel via existing access ramps.

3.2 CONCRETE CHANNEL CLEANOUT

Debris, sediment and vegetation from concrete channels are removed on a monthly basis to maintain conveyance capacities and vector control. There are approximately 4,000 cubic yards (cy) of debris, sediment, and vegetation that need to be removed from Corps-maintained concrete channels. Approximately 100 cy of debris are removed monthly from concrete channels using grapple trucks, rubber-tired dump trucks with a grapple arm attachment. The use of grapple trucks eliminates the need for temporary stockpiles in aquatic areas. However, backhoes or loaders working in a channel in combination with dump trucks may be utilized as needed. Equipment would enter the channel via existing access ramps.

3.3 SOFT BOTTOM CHANNEL CLEANOUT

The primary activity within soft bottom channels is trash removal. Approximately 3,500 tons of trash is removed annually using grapple trucks. In addition, vegetation near the levee toes may be removed in order to maintain levee structural integrity. Construction equipment such as backhoes, loaders, and excavators may be utilized as needed. Equipment would enter the channel via existing access ramps. Vegetation is removed from levee toes and concrete inverts via hand tools.

3.4 STRUCTURAL REPAIR

Repair activities within basin and channel facilities may include replacement or repair of damaged structures. In-channel repair activities would entail re-shaping and re-compaction of earthen channels to repair erosion damage, replacement of damaged concrete in lined channels and other in-kind replacement bank protection. These types of repairs do not alter the facility footprint or change the designed uses.

3.5 ROUTINE MAINTENANCE ACTIVITIES BY BASIN FACILITIES

- **Haines Canyon Debris Basin:** Neither annual nor routine periodic maintenance is performed at Haines Canyon Debris Basin on an annual basis. The last maintenance activity within the aquatic area occurred in 2010 in order to remove sediment and debris from the Station Fire. Prior to that action, the basin had not been cleaned for 40 years.

- **Hansen Dam:** Annual maintenance activities typically occur over a two-week period between January and February. The operational area immediately upstream of the inlet works is cleared of sediment and debris. Debris caught on the inlet works is removed. Approximately 1,000 cy of debris and sediment are typically removed. Structural damages are repaired. Vegetation may be mowed or removed by other means as needed. See Figure 2.

- **Lopez Dam:** Annual maintenance activities typically occur over a two-week period between October and November. The operational area immediately upstream of the inlet works is cleared of sediment and debris. Debris caught on the inlet works is removed. Approximately 5,000 cy of debris and sediment are typically removed. Structural damages are repaired. Vegetation may be mowed or removed by other means as needed. See Figure 3.

- **Santa Fe Dam:** 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 sediment 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, sediment is removed, and damaged concrete baffles and blocks are repaired. See Figure 4.

- **Sepulveda Dam:** Annual maintenance activities typically occur between November and December. Duration of work is typically being two weeks but may be longer based on maintenance needs. An approximately seven-acre area in the concrete lined portion of the Los Angeles River from Burbank Boulevard to the inlet works is cleared of sediment and debris. Debris caught on the inlet works is removed. Approximately 4,000 cy of debris and sediment are typically removed. Structural damages are repaired.

An approximately 48-acre area between Burbank Boulevard and the dam, outside of active channel on River Right is maintained as needed. Maintenance activities may include but are not limited to removal of non-native trees and vegetation; vegetation mowing; trimming of native trees; removal of debris and litter associated with unauthorized encampments; herbicide application; structural repair; bank stabilization; and road maintenance. See Figure 5.

- **Whittier Narrows (Rio Hondo):** Annual maintenance activities typically occur over a two-week period between February and March. The operational area immediately upstream of the inlet works is cleared of sediment and debris. Debris caught on the inlet works is removed. Structural damages are repaired. Vegetation may also be mowed or removed by other means as needed. Vegetation from an approximately 50-foot-wide by 650-foot-long rectangular area immediately downstream of the outlet works is cleared.

The area within the cross-connector channel between Rio Hondo and San Gabriel River immediately upstream of the Rosemead Boulevard crossing is cleared of sediment and debris. See Figure 6.

- **Whittier Narrows (San Gabriel River):** Annual maintenance activities typically occur over a two-week period between February and March. The operational area immediately upstream of the inlet works is cleared of sediment and debris. Debris caught on the inlet works is removed. Structural damages are repaired. Vegetation may also be mowed or removed by other means

as needed. Vegetation from an approximately 50-foot-wide by 650-foot-long rectangular area immediately downstream of the outlet works is cleared. See Figure 7.

4.0 WATER DIVERSION METHODS

4.1 TRANSVERSE COFFERDAMS

Transverse cofferdams may be used as needed in channels or basins to span the entire cross-section of the facility upstream of the maintenance or repair activity. Water would be impounded upstream of the cofferdam and a bypass system would route flows through the work area. Transverse cofferdams typically consist of sandbags, inflatable dams or k-rails. A gravity pipeline would be used to bypass water through or adjacent to the work area. In earthen bottom channels, a temporary riprap apron would be placed at the pipe outlet to dissipate energy and minimize erosion.

4.2 LONGITUDINAL COFFERDAMS

A longitudinal cofferdam may be used as needed in cases where low flows are present within the work area. The structure allows work to proceed in the dewatered portion of the channel while allowing low flows to continue along the remaining part of the channel. In concrete channels, longitudinal cofferdams would be constructed from k-rails and sandbags. The water diverting segment of the cofferdam at the upstream end of the work area would be relocated from one side of the channel to another.

4.3 DIVERSION BERM & LOW FLOW CHANNEL

In earthen bottom channels, a low flow channel would be excavated around the work area as needed. An earthen berm would be constructed from the excavated material to protect the worksite. The discharge of sediment into the temporary low flow channel would be reduced by the use of erosion and siltation controls such as silt-fencing, coir rolls (also known as straw wattles), filter fabric and silt-free sand bags.

4.4 EXCAVATED BASIN DIVERSION

A temporary detention basin may be excavated as needed upstream of a work area. Water would be bypassed via pipeline. Filter fabric or hay bale filters would be placed within the excavated basin. A stand pipe or a sump would be used to minimize sedimentation in the outflow. Wattles may be used

upstream or downstream of the excavated basin and downstream of the bypass outlet. A temporary riprap apron would be placed at the pipe outlet to dissipate energy and minimize erosion.

5.0 GENERAL BEST MANAGEMENT PRACTICES

5.1 PRE-PROJECT PLANNING

During the project and environmental planning process, the Corps will assess the need for water diversion structures. If needed, environmental planning documents prepared pursuant to the National Environmental Policy Act will identify and incorporate the appropriate water diversion structures and associated best management practices. The documents will incorporate the following information as needed:

- Type of water diversion structure and general specifications such as length, width, depth, capacity and height as appropriate.

- Construction methods, materials and anticipated duration of diversion activities.

- Erosion control BMPs, including methods, materials and installation, maintenance and removal requirements.

- A map or drawing indicating the location of structures, type and location of bypass system, cofferdam height and location of downstream discharge point.

- Location of proposed upstream and downstream water quality monitoring sites.

- Structures will be located to avoid or minimize impacts to aquatic and riparian resources.

5.2 PROJECT IMPLEMENTATION

The following BMPs will be implemented during project implementation:

- The water diversion and work area dewatering system will be in place and functional before in-channel work is started.

- While the water diversion is in place, it will be operational 24 hours a day.

- Inspection and maintenance of the water diversion and associated erosion and sediment control BMPs will be conducted on a regular basis.

- With the exception of emergency repair work, routine maintenance activities will not be conducted during a rainfall event.

5.3 POST-PROJECT IMPLEMENTATION

The following BMPs will be implemented upon completion of work:

- Water diversion structures, bypass systems and erosion controls will be removed upon completion of work. Removal normally proceeds from downstream in an upstream direction.

- Earthen channels will be restored to pre-project contours and gradients.

6.0 COFFER DAM BEST MANAGEMENT PRACTICES

6.1 CONSTRUCTION

- Cofferdam construction would be adequate to prevent seepage into or from the work area.

- Cofferdams may be constructed from sand bags, concrete k-rails, sheet piles or other appropriate materials.

- Cofferdams constructed of earth or other materials subject to erosion will be covered by erosion control measures such as filter fabric, silt-fencing, sheet-piling or other appropriate materials.

- Materials used for the construction of earthen cofferdams will not incorporate contaminated sediments, clays or other materials including concrete, pavement, trash or debris.

- Concrete k-rails or sand bags would be used to the extent practicable for construction of transverse dams. Transverse cofferdams would not be made of earth or other substances subject to erosion.

- Longitudinal cofferdams in low flow channels may be constructed from alluvium excavated from the channel and compacted onsite.

6.2 INSPECTION AND MAINTENANCE

- Regularly inspect coffer dams to check for water seepage under the dam and general integrity of the dam.

- Fix all leaks immediately.

- If water is discharged from the work area despite the cofferdam:

- Place wattles, filter fabric, silt fencing across the flow stream downstream of the work area to remove sediment from the water.

- For higher flows, construction of a downstream de-silting basin may be required.

- Clean water intake if clogged.

6.3 REMOVAL

- Upon completion of work in soft-bottom channels, reintroduce water into the channel slowly so that high turbidity is avoided.

- Remove all imported construction materials.

- After removal of the cofferdam, dismantle the bypass system and restore disturbed areas to pre-construction grades.

- Flows in an earthen bottom channel may be left within the temporary low flow channel if re-introduction of flows to the work area would result in excessive discharge of sediment downstream.

6.0 BYPASS SYSTEMS

6.1 OPEN CHANNEL BYPASS SYSTEMS

- An open channel bypass will be protected from erosion or spillage of material from channel and basin banks and slopes using readily available such as filter fabric, silt fencing, straw bales, sand bags on cofferdam banks, channel banks and slopes.

- An upstream silt catchment basin may be constructed so that silt or other deleterious materials are not allowed to pass into the open channel bypass. The silt catchment basin should be monitored and cleaned/repaired on a regular basis.

6.2 PIPELINE BYPASS SYSTEMS

- Bypass systems with pipelines may be gravity flow or pumped as necessary.

- When using a gravity flow system, the pipeline must slope continuously downgrade and therefore may have to pass through or near the work area.

- A pumped system is required where there is no available discharge point continuously downgrade of the intake (i.e., if the pipeline cannot be routed through the work area).

- Intakes and/or excavated basins may be required for gravity flow or pump-fed bypass systems.

    - Turbulence around the intake and associated turbidity may be reduced by means of ponding water behind the cofferdam or in an excavated sump.
    - In earthen bottom channels or basins, the intake pipe end would be substantially above the bottom of the ponded water or excavated basin to avoid discharge of sediments.
    - For gravity systems, a standpipe arrangement is very effective. An intake filter can also be used to screen out sediment but can be easily clogged so is not recommended if the pump must run on a 24-hour schedule.

- Outlet protection may be incorporated at the pipe outlet to prevent generation of turbidity, erosion and scour as indicated below.

- Pump sizes may be changed as appropriate to match dry weather flows.

6.4 SEDIMENT CONTROL ACTIVITIES

- Work areas, channel banks or stockpile areas adjacent to the water diversion area that could be subject to erosion during storm events would be stabilized with erosion control measures as appropriate: silt fencing, straw bales, sand bags, filter fabric, coir rolls or wattles.

- In low flow channels an upstream silt basin may be constructed so that silt or other deleterious materials settle out before passing through the water diversion area.

- Erosion control methods used to prevent siltation would be monitored and cleaned/repaired regularly.

- In order to minimize downstream turbidity for returning flows filter fabric, wattles or silt fencing would be installed downstream of the work area as appropriate. Bypass flows would be introduced into the dewatered area at the lowest velocity possible to allow minimize erosion and turbidity.

- Water diversions would not be used during clean-outs of concrete-lined channels where flows are minimal (less than three inches deep) and channel widths are narrow (25 feet or less). In low-flow channels, small bulldozers or "bobcats" would proceed upstream to downstream within the channel bottom to scrape sediment, trash and debris into piles for collection. In other low flow conditions, 6-inch diameter wattles would be sufficient to contain and filter flows within a concrete-lined channel.

6.5 OUTLET PROTECTION

- Place effectively sized outlet protection underneath pipeline outlet of where diverted water is discharged into a soft bottom channel. Rock aprons are the most common type of outlet protection for high flows; however, erosion control fabric, wattles, or silt fencing may be installed in front of an outlet to provide additional velocity reduction.

- Energy dissipation or other protection may not be necessary if the discharge is to an existing hardened structure (culvert, riprap or concrete), to deep water or a heavily vegetated area.

6.6 EQUIPMENT AND VEHICLE USE

6.6.1 Equipment Operation

- Stationary equipment such as motors, pumps, generators and welders located within or adjacent to the channel or basin will be positioned over drip pans.

- Access to the work site via existing roads and access ramps will be shown on the project plans. If no ramps are available in the immediate area, a temporary ramp may be constructed within the flagged work area. Any temporary ramp will be removed upon completion of the project.

6.6.2 Equipment Maintenance During Construction

- Any equipment or vehicles driven and/or operated within or adjacent to the channel or basin should be checked and maintained daily, to check for leaks. All maintenance will occur in a designated offsite area. The designated area will include a drain pan or drop cloth and absorbent material to clean up spills.

- Fueling and equipment maintenance will be done in a designated area removed from the area of the channel or basin such that no petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff. The designated area will include a drain pan or drop cloth and absorbent materials to clean up spills.

6.6.3 Spill Prevention, Control, and Containment

- Prior to maintenance or repair activities, methods, materials and procedures for spill prevention, control and containment would be identified. This information will be incorporated into the contract documents. Spill containment methods should address the types of materials and equipment to be used at the site. Materials for the containment of spills (i.e., absorbent materials, silt fencing, filter fabric, coir rolls) would be identified and be available onsite prior to commencement of maintenance and/or repair activities.

- Any accidental spill of hydrocarbons or coolant that may occur within the work area will be cleaned immediately. Absorbent materials will be maintained within the work area for this purpose.

- No wet concrete product will come into contact with any flowing or standing water at any time. Areas where raw cement or grout are applied or where concrete curing or finishing operations are conducted will be separated from any ponded or diverted water flows by a cofferdam or silt-free, exclusionary fencing. All equipment involved with the concrete or grouting operations will be located within a contained area while using any slurry or concrete product. A protective berm or other structure will be in place prior to maintenance and/or repair activities.

- Any spill of the grout, concrete, concrete curing or wash water adjacent to or within the work area will be removed immediately.

Exhibit B

Potential Best Management Practices

For individual LACDA project OMRR&R activities for which CWA § 401 water quality certification may not be required, the District agrees to consider and implement BMPs to the extent appropriate, including but not limited to:

1. Stationary equipment such as motors, pumps, generators and welders located within or adjacent to the channel or basin will be positioned over drip pans.

2. Access to the work site via existing roads and access ramps will be shown on the project plans.

3. Any equipment or vehicles driven and/or operated within or adjacent to the channel or basin should be checked and maintained daily, to check for leaks. All maintenance will occur in a designated offsite area. The designated offsite area will include a drain pan or drop cloth and absorbent material to clean up spills.

4. Fueling and equipment maintenance will be done in a designated area removed from the area of the channel or basin such that no petroleum products or other pollutants from the equipment may enter these areas via rainfall or runoff. The designated area will include a drain pan or drop cloth and absorbent materials to clean up spills.

5. Prior to initiation of individual LACDA Project OMRR&R activities in waters of the United States, methods, materials and procedures for spill prevention, control and containment will be identified. This information will be incorporated into the contract documents. Spill containment methods should address the types of materials and equipment to be used at the site. Materials for the containment of spills (i.e., absorbent materials, silt fencing, filter fabric, coir rolls) will be identified and be available onsite prior to commencement of individual LACDA OMRR&R activities.

6. Any accidental spill of hydrocarbons or coolant that may occur within the work area will be cleaned immediately. Absorbent materials will be maintained within the work area for this purpose.

7. Pre-project planning shall include consideration of contingency measures to address various flow discharges, if anticipated.

8. When invasive species may be encountered, BMPs to limit the spread of invasive species shall be considered and implemented as follows:

i. The District shall follow the Regional General Permit 41 BMPs in the removal and disposal of invasive plants.

ii. All equipment, including equipment for personnel such as hand tools, survey equipment and boots, that have been deployed in an area which supports New

Zealand mud snails, shall be subject to a program of inspection and be carefully cleaned before use at an additional project site.

iii. Construction and maintenance personnel shall be instructed in invasive species control methods.

9. Raw cement, concrete (or washing thereof), asphalt, drilling fluids, lubricants, paints, coating material, oil, petroleum products, or any other substances which could be hazardous to fish and wildlife resulting from or disturbed by project-related activities, shall be prevented from contaminating the soil and/or entering waters of the United States.

10. Because water diversions are not used as BMPs for individual LACDA project OMRR&R activities in MOU Section II.C., the District will consider and implement "other BMPs" to limit increases of baseline turbidity levels caused by individual LACDA project OMRR&R activities, such as downstream check dams, clean gravel-filled or compost-filled turbidity/filter socks, or other appropriate methods. Any and all "other BMPs" will be temporary in nature and completely removed upon completion of in-stream work. In Exhibit C to the MOU, the Regional Water Board has expressly waived §401 water quality certification for "other BMPs" implemented by the District should they result in a discharge of dredged or fill material into waters of the United States.

11. The District shall conduct water quality monitoring to ensure effectiveness of "other BMPs" implemented in lieu of water diversions. If surface flows are present, upstream and downstream monitoring for the following shall be implemented:

- ☐ pH
- ☐ temperature
- ☐ dissolved oxygen
- ☐ turbidity

These constituents shall be measured at least once prior to other BMP implementation in waters of the United States and then monitored on a daily basis during the first week and then on a weekly basis, thereafter, until the in-stream work is complete. Monitoring shall take place during the period when in-stream individual LACDA OMRR&R activities are occurring. The District shall review water quality data each day water quality data is collected. Upon its request, the District shall share all monitoring data with the Regional Water Board.

Exhibit C to Memorandum of Understanding

May 8, 2017

Colonel Kirk E. Gibbs
U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd.
Los Angeles, CA 90017

Dear Colonel Gibbs:

This letter concerns Exhibit B to the Memorandum of Understanding (MOU) between the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) and the United States Army Corps of Engineers, Los Angeles District (District). Specifically, this letter concerns "other BMPs," as described in paragraph 10 of Exhibit B, that the District may implement to limit increases of turbidity levels caused by in-stream individual LACDA project OMRR&R activities conducted in accordance with Section II.C. of the MOU. Should any "other BMPs" implemented by the District pursuant to paragraph 10 of Exhibit B result in a discharge of dredged or fill material into waters of the United States, the Regional Water Board hereby waives Clean Water Act § 401 water quality certification in accordance with 33 U.S.C. §1341(a) for those specific "other BMPs" that are being implemented to protect downstream water quality.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Appendix E. Environmental Justice Analysis

ENVIRONMENTAL JUSTICE ANALYSIS

Introduction

The 1994 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations, requires all federal agencies to conduct "programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, an activities do not have the effect of excluding persons (including populations) from participation, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin." Section 1-101 of the Executive Order 12898 requires federal agencies to identify and address "disproportionately high and adverse human health or environmental effects" of programs on minority and low-income populations (Executive Order 1994).

CEQ identifies minority groups as Asian, American Indian and Alaskan Native, Native Hawaiian and Pacific Island, Black or African American, and Latino. CEQ further defines minority population as any group of minorities that exceed 50 percent of the existing population within an area where a minority group comprises a meaningful greater percentage of the local population than in the general population. The CEQ criterion for defining low-income population has been adapted to identify whether the population in an affected area constitutes a low-income population. An affected geographic area is considered to consist of a low-income population (i.e., below the poverty level, for purposes of this analysis) where the percentage of low-income persons: 1) is greater than 50 percent, or 2) is meaningfully greater than the low-income population percentage in the general population or other appropriate unit of geographic analysis.

Methodology

Demographic data from the EPA's EJSCREEN, an online environmental justice screening and mapping tool, served as the source data for evaluation. EJSCREEN incorporates demographic data from the U.S. Census Bureau. Because the analysis considers disproportionate impacts, two areas must be defined to facilitate comparison between the area actually affected and a larger regional area that serves as a basis for comparison and includes the area actually affected. The larger regional area is defined as the smallest political unit that includes the affected area and is called the community of comparison. The affected area includes the project area plus an approximately 1-mile radius. The community of comparison includes the Cities of Avocado and South El Monte. Notable presence of either population would require either of the following results:

Fifty Percent Analysis: The ratio of minority or low-income population of the affected area is greater than 50%.

Meaningfully Greater Analysis: The percentage of minority or low-income population of the affected area equals to or exceeds 50 percentile relative to the community of comparison.

Results

<u>Minority and Low-Income Populations (Fifty Percent Analysis)</u>

Minority and low-income populations within the affected area are as follows: The minority population in the affected area is 96%. The low-income population in the affected area is 47%.

Minority Population (%)	Low-Income Population (%)
96	47

Minority and Low-Income Populations (Meaningfully Greater Analysis)

Comparison of minority and low-income demographics of the affected area to those in the community of comparison are shown below.

The 50th percentile for minority and low-income populations are 96% and 47%, respectively. Compared to the 50th percentile values, the area of analysis for the project is equal to the 50th percentile for minority population and for low-income population.

Locations	Minority Populations (%)	Low-Income Population (%)
South El Monte	97	51
Avocado Heights	94	34
Project Area of Analysis (1- mile)	96	47
50th Percentile	96	47

Conclusions

Presence of Minority and Low-Income Populations

For the Fifty Percent Analysis, the percentage of minority populations in the area is higher than the 50% threshold, and the percentage of low-income populations in the area is lower than the 50% threshold.

For the Meaningfully Greater Analysis both populations are equal to the 50% threshold.

Based on the above, there is a notable presence of minority and low-income populations within the area of analysis for the project.

EJSCREEN Report (Version 2020)

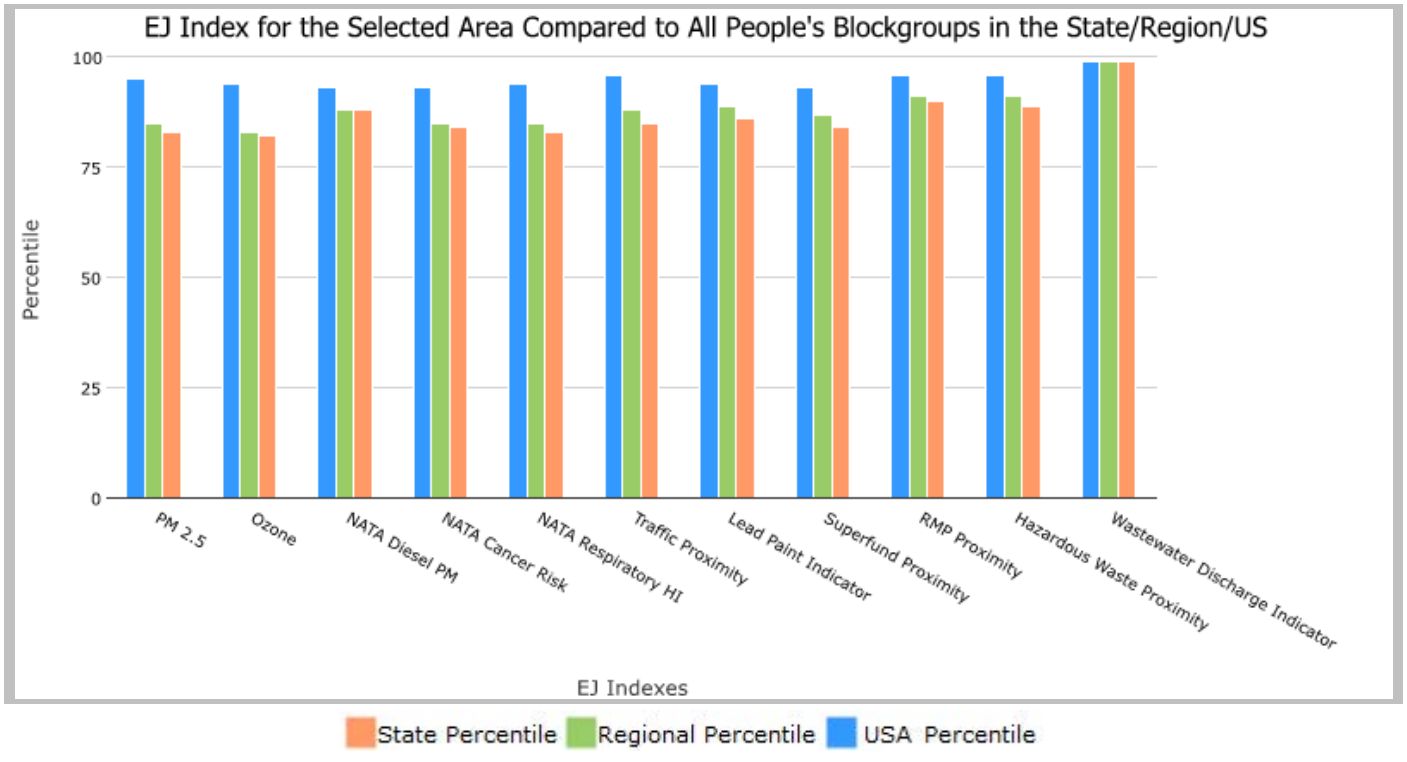
1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 30,876

Input Area (sq. miles): 5.80

SGR-SJC

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	83	85	95
EJ Index for Ozone	82	83	94
EJ Index for NATA* Diesel PM	88	88	93
EJ Index for NATA* Air Toxics Cancer Risk	84	85	93
EJ Index for NATA* Respiratory Hazard Index	83	85	94
EJ Index for Traffic Proximity and Volume	85	88	96
EJ Index for Lead Paint Indicator	86	89	94
EJ Index for Superfund Proximity	84	87	93
EJ Index for RMP Proximity	90	91	96
EJ Index for Hazardous Waste Proximity	89	91	96
EJ Index for Wastewater Discharge Indicator	99	99	99



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

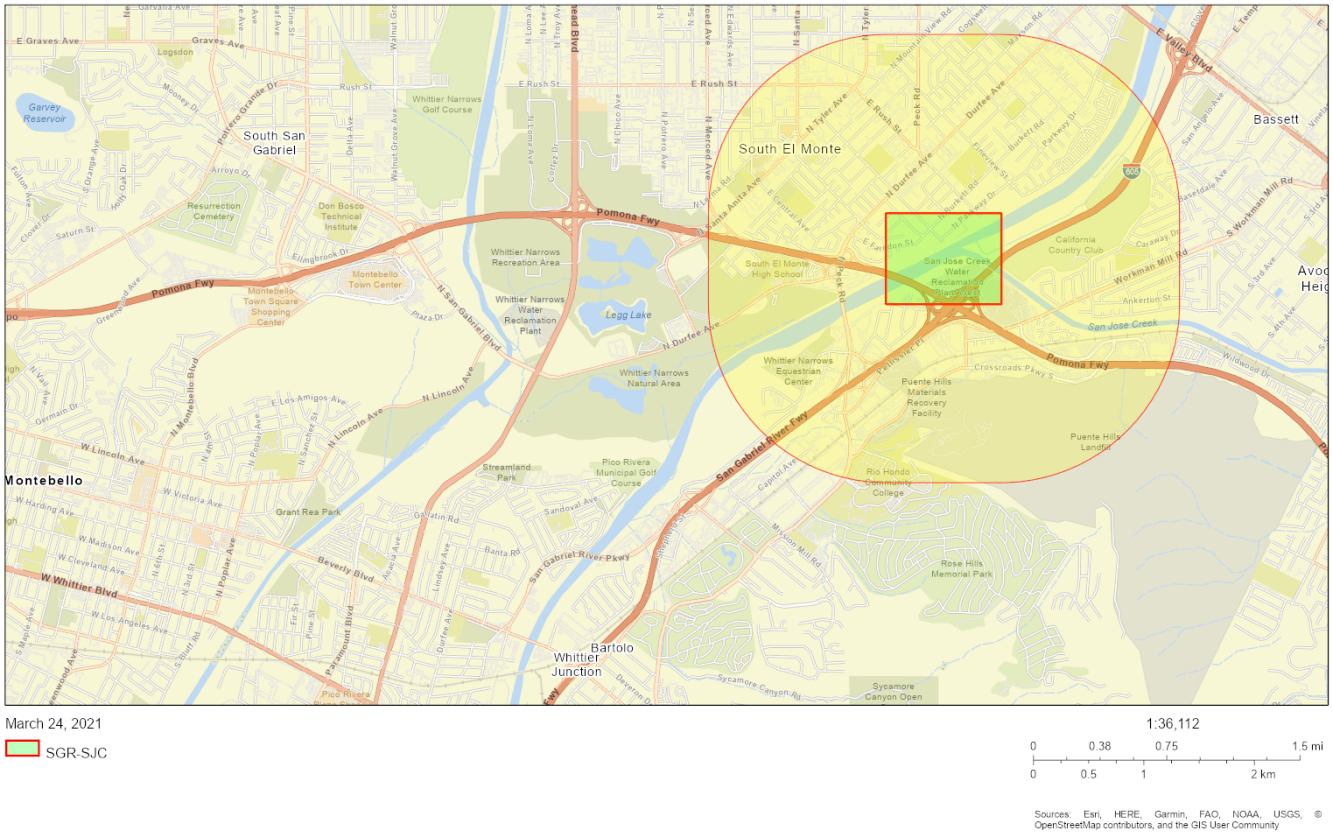
EJSCREEN Report (Version 2020)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 30,876

Input Area (sq. miles): 5.80

SGR-SJC



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	5

EJSCREEN Report (Version 2020)

1 mile Ring around the Area, CALIFORNIA, EPA Region 9

Approximate Population: 30,876

Input Area (sq. miles): 5.80

SGR-SJC

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	12.6	10.6	84	9.99	87	8.55	97
Ozone (ppb)	55.1	49.2	68	50.1	67	42.9	93
NATA* Diesel PM (µg/m^3)	0.772	0.467	87	0.479	80-90th	0.478	80-90th
NATA* Cancer Risk (lifetime risk per million)	44	36	87	35	80-90th	32	90-95th
NATA* Respiratory Hazard Index	0.66	0.55	81	0.53	80-90th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	2400	2000	75	1700	79	750	92
Lead Paint Indicator (% Pre-1960 Housing)	0.49	0.29	74	0.24	78	0.28	76
Superfund Proximity (site count/km distance)	0.16	0.17	75	0.15	79	0.13	80
RMP Proximity (facility count/km distance)	2.3	1.1	86	0.99	88	0.74	92
Hazardous Waste Proximity (facility count/km distance)	11	6.2	81	5.3	85	5	93
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	490	18	99	18	99	9.4	99
Demographic Indicators							
Demographic Index	71%	47%	84	46%	85	36%	90
People of Color Population	96%	62%	89	60%	90	39%	94
Low Income Population	47%	33%	74	33%	73	33%	76
Linguistically Isolated Population	18%	9%	82	8%	85	4%	92
Population With Less Than High School Education	38%	17%	86	16%	87	13%	95
Population Under 5 years of age	6%	6%	54	6%	54	6%	58
Population over 64 years of age	12%	14%	49	14%	48	15%	39

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

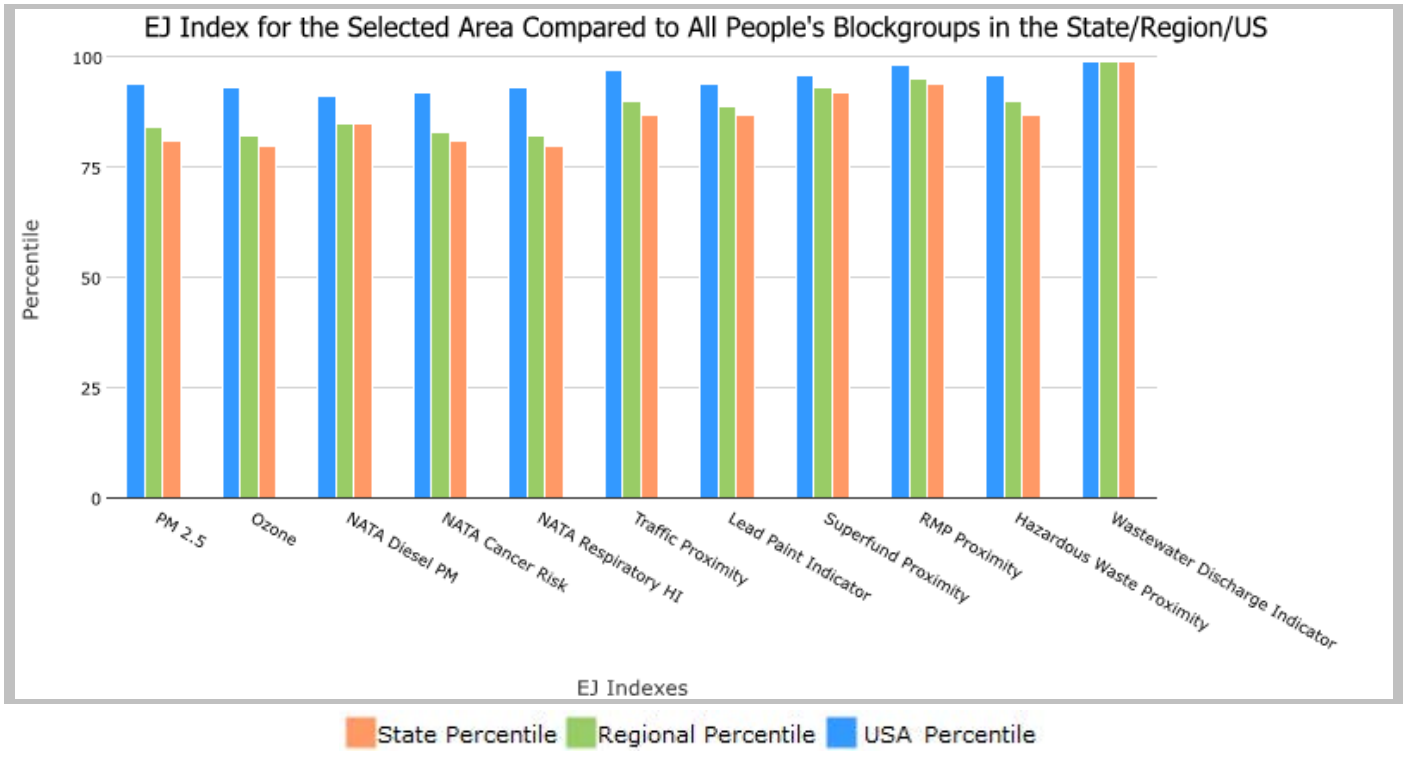
2 miles Ring Centered at 34.035970,-117.990580, CALIFORNIA, EPA Region 9

Approximate Population: 67,436

Input Area (sq. miles): 12.56

Avocado Heights

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	81	84	94
EJ Index for Ozone	80	82	93
EJ Index for NATA* Diesel PM	85	85	91
EJ Index for NATA* Air Toxics Cancer Risk	81	83	92
EJ Index for NATA* Respiratory Hazard Index	80	82	93
EJ Index for Traffic Proximity and Volume	87	90	97
EJ Index for Lead Paint Indicator	87	89	94
EJ Index for Superfund Proximity	92	93	96
EJ Index for RMP Proximity	94	95	98
EJ Index for Hazardous Waste Proximity	87	90	96
EJ Index for Wastewater Discharge Indicator	99	99	99



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

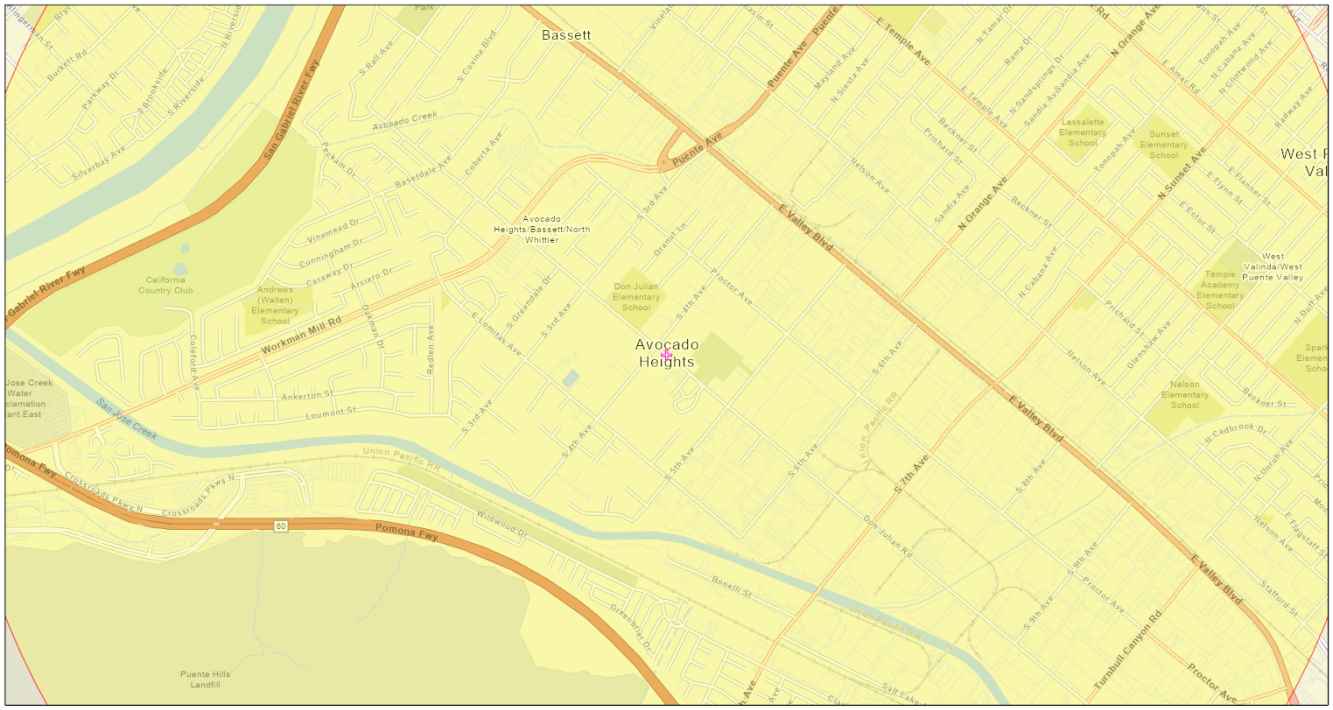
EJSCREEN Report (Version 2020)

2 miles Ring Centered at 34.035970,-117.990580, CALIFORNIA, EPA Region 9

Approximate Population: 67,436

Input Area (sq. miles): 12.56

Avocado Heights



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	15

EJSCREEN Report (Version 2020)

2 miles Ring Centered at 34.035970,-117.990580, CALIFORNIA, EPA Region 9

Approximate Population: 67,436

Input Area (sq. miles): 12.56

Avocado Heights

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	12.6	10.6	84	9.99	87	8.55	98
Ozone (ppb)	56.3	49.2	71	50.1	73	42.9	95
NATA* Diesel PM (µg/m^3)	0.687	0.467	79	0.479	70-80th	0.478	80-90th
NATA* Cancer Risk (lifetime risk per million)	42	36	83	35	80-90th	32	90-95th
NATA* Respiratory Hazard Index	0.63	0.55	76	0.53	70-80th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	2800	2000	78	1700	82	750	93
Lead Paint Indicator (% Pre-1960 Housing)	0.54	0.29	77	0.24	81	0.28	79
Superfund Proximity (site count/km distance)	0.36	0.17	91	0.15	93	0.13	93
RMP Proximity (facility count/km distance)	4.3	1.1	95	0.99	96	0.74	98
Hazardous Waste Proximity (facility count/km distance)	11	6.2	81	5.3	85	5	93
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	410	18	99	18	99	9.4	99
Demographic Indicators							
Demographic Index	64%	47%	75	46%	76	36%	85
People of Color Population	94%	62%	86	60%	88	39%	93
Low Income Population	34%	33%	58	33%	58	33%	59
Linguistically Isolated Population	15%	9%	76	8%	78	4%	89
Population With Less Than High School Education	31%	17%	79	16%	81	13%	91
Population Under 5 years of age	6%	6%	44	6%	44	6%	47
Population over 64 years of age	14%	14%	60	14%	58	15%	49

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

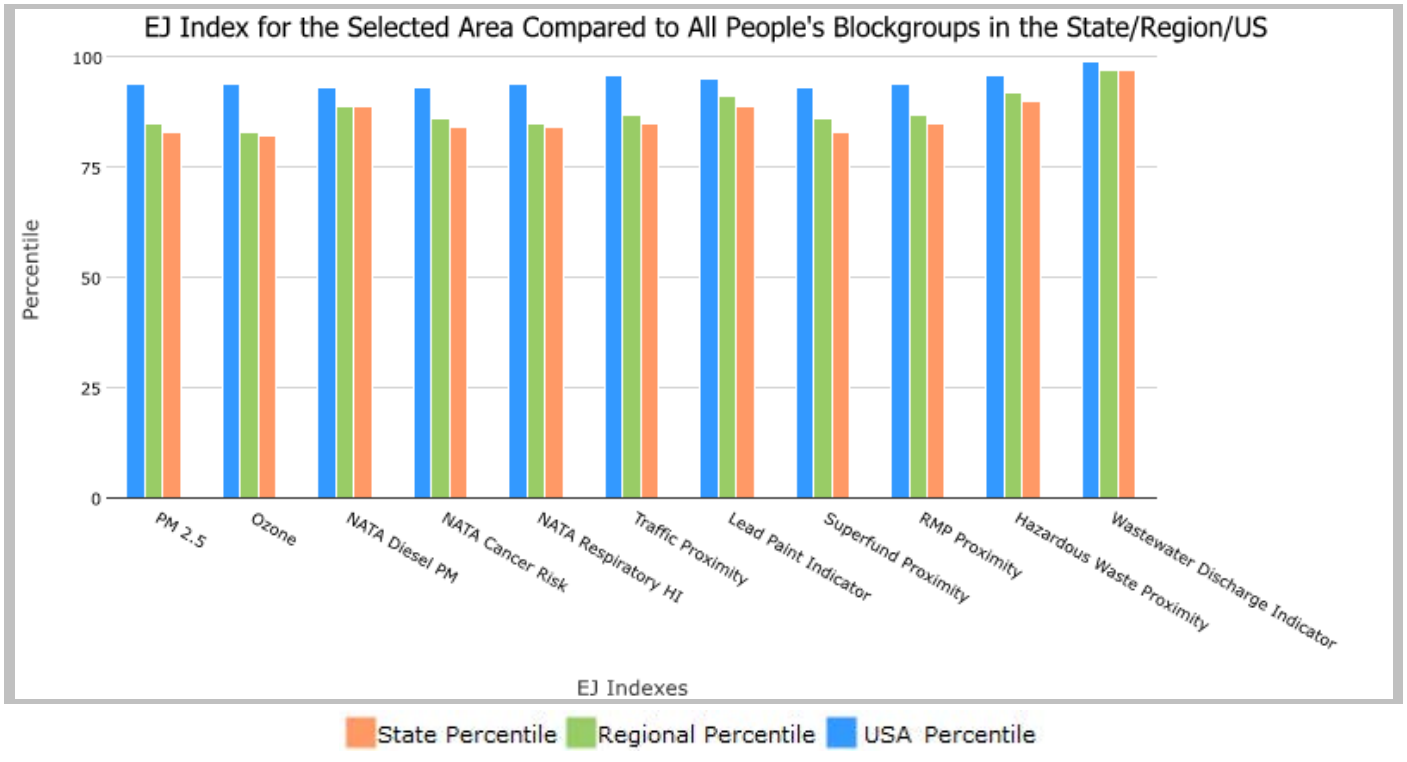
1 mile Ring Centered at 34.046500,-118.043190, CALIFORNIA, EPA Region 9

Approximate Population: 26,532

Input Area (sq. miles): 3.14

South El Monte

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	83	85	94
EJ Index for Ozone	82	83	94
EJ Index for NATA* Diesel PM	89	89	93
EJ Index for NATA* Air Toxics Cancer Risk	84	86	93
EJ Index for NATA* Respiratory Hazard Index	84	85	94
EJ Index for Traffic Proximity and Volume	85	87	96
EJ Index for Lead Paint Indicator	89	91	95
EJ Index for Superfund Proximity	83	86	93
EJ Index for RMP Proximity	85	87	94
EJ Index for Hazardous Waste Proximity	90	92	96
EJ Index for Wastewater Discharge Indicator	97	97	99



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 34.046500,-118.043190, CALIFORNIA, EPA Region 9

Approximate Population: 26,532

Input Area (sq. miles): 3.14

South El Monte

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	7

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 34.046500,-118.043190, CALIFORNIA, EPA Region 9

Approximate Population: 26,532

Input Area (sq. miles): 3.14

South El Monte

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	12.6	10.6	83	9.99	86	8.55	97
Ozone (ppb)	54.9	49.2	68	50.1	66	42.9	93
NATA* Diesel PM (µg/m^3)	0.79	0.467	88	0.479	80-90th	0.478	80-90th
NATA* Cancer Risk (lifetime risk per million)	44	36	88	35	80-90th	32	90-95th
NATA* Respiratory Hazard Index	0.67	0.55	83	0.53	80-90th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	2500	2000	76	1700	80	750	92
Lead Paint Indicator (% Pre-1960 Housing)	0.57	0.29	79	0.24	83	0.28	81
Superfund Proximity (site count/km distance)	0.16	0.17	75	0.15	79	0.13	80
RMP Proximity (facility count/km distance)	1.6	1.1	79	0.99	82	0.74	87
Hazardous Waste Proximity (facility count/km distance)	12	6.2	84	5.3	87	5	94
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	8.6	18	95	18	96	9.4	97
Demographic Indicators							
Demographic Index	74%	47%	87	46%	88	36%	92
People of Color Population	97%	62%	92	60%	93	39%	95
Low Income Population	51%	33%	78	33%	78	33%	80
Linguistically Isolated Population	22%	9%	88	8%	89	4%	94
Population With Less Than High School Education	44%	17%	90	16%	92	13%	97
Population Under 5 years of age	7%	6%	57	6%	57	6%	60
Population over 64 years of age	12%	14%	49	14%	48	15%	38

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

Appendix F. Air Quality Evaluation

San Gabriel & San Jose Creek O&M

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	0.00	User Defined Unit	29.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2021
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility N/A

Land Use - population N/A

Construction Phase - 40 work days per year

Off-road Equipment - See project list for dozers

Grading -

Trips and VMT - 70 trips per day x 40 = 2,800 total haul trips

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	100	0
tblConstructionPhase	NumDays	45.00	40.00

tblConsumerProducts	ROG_EF	1.98E-05	2.14E-05
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.1430e-003	0.00
tblFleetMix	MCY	5.0780e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.9100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.4790e-003	0.00
tblFleetMix	SBUS	6.8200e-004	0.00
tblFleetMix	UBUS	2.2700e-003	0.00
tblGrading	AcresOfGrading	40.00	0.00
tblGrading	MaterialExported	0.00	43,333.00
tblGrading	MaterialImported	0.00	3,000.00
tblLandUse	LotAcreage	0.00	29.00
tblOffRoadEquipment	HorsePower	247.00	255.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripNumber	5,792.00	2,800.00
tblTripsAndVMT	VendorTripLength	6.90	0.00
tblTripsAndVMT	WorkerTripNumber	40.00	30.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1515	1.9852	1.1816	3.8300e-003	0.4126	0.0598	0.4724	0.2123	0.0551	0.2674	0.0000	355.9763	355.9763	0.0677	0.0000	357.6690
Maximum	**0.1515**	**1.9852**	**1.1816**	**3.8300e-003**	**0.4126**	**0.0598**	**0.4724**	**0.2123**	**0.0551**	**0.2674**	**0.0000**	**355.9763**	**355.9763**	**0.0677**	**0.0000**	**357.6690**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1515	1.9852	1.1816	3.8300e-003	0.4126	0.0598	0.4724	0.2123	0.0551	0.2674	0.0000	355.9761	355.9761	0.0677	0.0000	357.6688
Maximum	**0.1515**	**1.9852**	**1.1816**	**3.8300e-003**	**0.4126**	**0.0598**	**0.4724**	**0.2123**	**0.0551**	**0.2674**	**0.0000**	**355.9761**	**355.9761**	**0.0677**	**0.0000**	**357.6688**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-31-2021	9-30-2021	1.1701	1.1701
		Highest	1.1701	1.1701

2.2 Overall Operational

Unmitigated Operational

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

2.2 Overall Operational

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	8/31/2021	10/25/2021	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	4	8.00	158	0.38
Grading	Off-Highway Trucks	1	4.00	402	0.38
Grading	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Rubber Tired Loaders	4	8.00	203	0.36
Grading	Skid Steer Loaders	2	8.00	65	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	16	30.00	0.00	2,800.00	14.70	0.00	35.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3640	0.0000	0.3640	0.1990	0.0000	0.1990	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1300	1.4013	1.0149	1.9800e-003		0.0578	0.0578		0.0531	0.0531	0.0000	173.5827	173.5827	0.0561	0.0000	174.9862
Total	**0.1300**	**1.4013**	**1.0149**	**1.9800e-003**	**0.3640**	**0.0578**	**0.4217**	**0.1990**	**0.0531**	**0.2522**	**0.0000**	**173.5827**	**173.5827**	**0.0561**	**0.0000**	**174.9862**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0189	0.5819	0.1441	1.7900e-003	0.0421	1.9900e-003	0.0441	0.0116	1.9000e-003	0.0135	0.0000	176.4601	176.4601	0.0114	0.0000	176.7450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5800e-003	2.0100e-003	0.0227	7.0000e-005	6.5700e-003	5.0000e-005	6.6300e-003	1.7500e-003	5.0000e-005	1.8000e-003	0.0000	5.9335	5.9335	1.7000e-004	0.0000	5.9379
Total	**0.0215**	**0.5839**	**0.1668**	**1.8600e-003**	**0.0487**	**2.0400e-003**	**0.0507**	**0.0133**	**1.9500e-003**	**0.0153**	**0.0000**	**182.3936**	**182.3936**	**0.0116**	**0.0000**	**182.6828**

3.2 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3640	0.0000	0.3640	0.1990	0.0000	0.1990	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1300	1.4013	1.0149	1.9800e-003		0.0578	0.0578		0.0531	0.0531	0.0000	173.5825	173.5825	0.0561	0.0000	174.9860
Total	**0.1300**	**1.4013**	**1.0149**	**1.9800e-003**	**0.3640**	**0.0578**	**0.4217**	**0.1990**	**0.0531**	**0.2522**	**0.0000**	**173.5825**	**173.5825**	**0.0561**	**0.0000**	**174.9860**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0189	0.5819	0.1441	1.7900e-003	0.0421	1.9900e-003	0.0441	0.0116	1.9000e-003	0.0135	0.0000	176.4601	176.4601	0.0114	0.0000	176.7450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5800e-003	2.0100e-003	0.0227	7.0000e-005	6.5700e-003	5.0000e-005	6.6300e-003	1.7500e-003	5.0000e-005	1.8000e-003	0.0000	5.9335	5.9335	1.7000e-004	0.0000	5.9379
Total	**0.0215**	**0.5839**	**0.1668**	**1.8600e-003**	**0.0487**	**2.0400e-003**	**0.0507**	**0.0133**	**1.9500e-003**	**0.0153**	**0.0000**	**182.3936**	**182.3936**	**0.0116**	**0.0000**	**182.6828**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

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

6.2 Area by SubCategory

Mitigated

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

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix G. Public Notice

PUBLIC

NOTICE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

SAN GABRIEL RIVER AND SAN JOSE CREEK CONFLUENCE VEGETATION AND SEDIMENT REMOVAL

LOCATION: The project area is in the cities of South El Monte and Avocado Heights, Los Angeles County, approximately 11 miles east of downtown Los Angeles, 17 miles upstream of the Pacific Ocean. The Pomona Freeway (State Route 60 [SR-60]) and the San Gabriel River Freeway (Interstate 605 [I-605]) intersect south of the project area.

PROPOSED PROJECT: To prevent further erosion of the San Gabriel River 2b (SGR2b) levee and, thus, prevent potential failure, the proposed project will consist of removing approximately 127,000 cubic yards of accumulated excess sediment and 11.2 acres of vegetation as part of the operation and maintenance of the channel. The channel in this reach is trapezoidal and comprised of concrete/grouted stone with an earthen invert. Sediment will be excavated to the design elevation of the channel invert across the entire width of the channel between the San Gabriel River/San Jose Creek confluence and the Pomona Freeway (SR60). The maintenance footprint is approximately 17.8 acres.

The depth of the sediment ranges from 3 to 10 feet. No alterations or modifications of structural elements of the engineered channel will occur.

BACKGROUND AND AUTHORITY: During a routine maintenance inspection in April 2017, significant toe erosion was discovered on the right bank of the SGR2b levee which is normally underwater. During the 2018 levee periodic inspection, the levee was further examined for deficiencies. It was determined that the entrance angle of San Jose Creek is 58 degrees, significantly higher than the 15-degree entrance angle requirement for design of a channel confluence. It was also determined that significant shoaling at the confluence of San Jose Creek and San Gabriel River have impinged and directed flows at the levee embankment. The section of levee was previously repaired and fortified with derrick stone. Despite the placed stone, the impingement persists, and the levee's embankment is actively being scoured, undermined and is at risk of failing.

The SGR2b levee is part of the larger Los Angeles County Drainage Area (LACDA). The LACDA is a comprehensive flood-risk management plan, and its purpose is to provide flood risk reduction to areas susceptible to flooding within Los Angeles County. Significant flooding between 1914 and 1934 emphasized the need for major flood risk management projects in southern California.

A failure of the levee system would increase the risk associated with flooding, as well as, the potential risk of loss of life.

The Flood Control Act of 1936 (Pub. L. No. 74-738, § 5 (1936)) authorized Federal civil works flood risk management projects for Los Angeles County, California. The Act authorized construction of flood control structures for the Los Angeles County Drainage Area (LACDA) and the improvement of the San Gabriel River for the protection of metropolitan Los Angeles County, California.

NOTICE

PUBLIC

NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE:

The Environmental Assessment (EA) is necessary to document and evaluate the impacts of sediment and vegetation removal on environmental resources, and to document conditions in the project area.

Biological Resources: The Proposed Action, including future maintenance, would include design aspects and implementation of BMPs and measures that would address potential effects related to temporary habitat loss, excessive noise, increased human presence, fugitive dust emissions, and habitat movement. Permanent and temporary impacts to habitat would be offset by approximately 18 acres of vegetation management consisting of invasive/non-native species removal. The Proposed Action would not result in a substantial loss to the population of any native fish, wildlife, or vegetation, wildlife movement or in overall diversity of the ecosystem.

Least Bell's Vireo (FE, SE)
Least Bell's vireo (vireo) are known to currently maintain seven (7) territories within the project area. Of the seven (7) known territories occurring within the project area, two lie within the permanent construction footprint, five (5) lie within the Proposed Action. This would result in potential permanent displacement of two territories and temporary displacement of five (5) territories. This is assuming that vireo nesting beyond 200 feet from the project would continue successfully. To avoid potential effects to vireo, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of construction activities. Additionally, considering the large width of the floodplain, movement of vireo would not be constricted within the adjacent area. Although increased competition for nest sites and other resources could occur until construction is completed.

As described earlier, nonnative species comprise a large percentage of the project area. Vegetation clearing at the beginning of construction and site enhancement after construction would create an overall improvement in riparian habitat within the project area.

Coastal California gnatcatcher (FT)
Coastal California gnatcatchers (gnatcatcher) are known to currently disperse two (2) territories within the project area. Of the two (2) known territories occurring within the project area, none are within the permanent construction footprint, one is within the Proposed Action. No potential permanent displacement of territories is expected because these were juvenile gnatcatchers dispersing through the habitat within and adjacent to the project area. This is assuming that the gnatcatcher nesting beyond 200 feet from the project would continue successfully. To avoid potential effects to gnatcatcher, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of construction activities. Additionally, considering the large width of the floodplain, movement of vireo would not be constricted within the adjacent area. Although increased competition for nest sites and other resources could occur until construction is completed.

A total of approximately 95 acres of designated critical habitat fall within the project area. Approximately one-third (1/3) of designated critical habitat would be temporarily impacted during enhancement and maintenance. Of the total critical habitat within the project area, a small portion provides PBFs (i.e., breeding and foraging habitat) required for gnatcatcher occupation. Designated critical habitat outside of the permanent construction area would be enhanced after construction is completed.

PUBLIC NOTICE

Cultural Resources: Most of this area is previously disturbed, located within an active stream channel, and no archaeological resources have been recorded or are likely to occur within this area. Sediments to be removed would not extend below the original design elevation of the channel invert (the top of the toe) across the entire width of the San Gabriel River at this location in the river channel. Although the proposed undertaking is within a levee segment that may contribute to the eligibility of the San Gabriel Fiver Flood Control System (SGRFCS), the removal of accumulated sediment and vegetation would not alter in any substantive way the qualities and characteristics of a historic property, nor pose measurable visual effects to the larger resource. Coordination and consultation with the California State Historic Preservation Office and consulting parties is in progress and concurrence is expected by June 14, 2021.

Water Resources: The Proposed Action will require the removal of approximately 127,000 cy of accumulated sediment, placement of 2,000 cy of fill for access and the removal of 11.2 acres of vegetation within the San Gabriel River channel resulting the discharge of dredge or fill material within Waters of the United States (WOTUS). The temporary discharges of dredged or fill material into WOTUS associated with the access ramps, sediment removal, and stream diversion/dewatering are subject to Sections 401 and 404 of the Clean Water Act. These discharges are authorized by the Clean Water Act Section 401 Technically Conditioned Water Quality Certification (WQC) for the U.S. Army Corps of Engineers Los Angeles District, Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) Activities Associated with the Los Angeles County Drainage Area (LACDA) Project System, Los Angeles County, a copy of which can be found in the EA. Although the Corps does not process and issue Section 404 permits for its own activities, the Corps authorizes its own discharges of dredged and fill material into WOTUS by applying all applicable substantive legal requirements, which have been considered in the 404(b)(1) evaluation also provided in this EA.

Per 33 CFR 337.1(b), any person who has an interest which may be affected by the disposal of this dredged material may request a public hearing. The request must be submitted in writing to the district engineer within the comment period of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

SUBMITTING COMMENTS: The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; and other interested parties. Comments will be accepted from June 9, 2021 to July 9, 2021.

Comments should be sent electronically to: emily.a.lester@usace.army.mil

Alternatively, comments may be mailed to:

U.S. Army Corps of Engineers
Los Angeles District
Planning Division
Attn: Emily Lester
915 Wilshire Blvd., Suite 930
Los Angeles, CA 90017

U.S. ARMY CORPS OF ENGINEERS – LOS ANGELES DISTRICT