



**US Army Corps  
of Engineers®**

# **Los Angeles River Channel at Glendale Narrows Reach 5C and Reach 6A Accumulated Material Removal Project**

## **Environmental Assessment**

**Prepared by:**  
U.S. Army Corps of Engineers  
Los Angeles District

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## **1.0 INTRODUCTION**

### **1.1 Location**

The Proposed Project Area is located in Glendale Narrows section of the Los Angeles River within the vicinity of the Fletcher Drive Bridge and the Glendale Freeway Bridge in the City of Los Angeles, Los Angeles County. The approximately 2,000 foot long Proposed Project Area starts downstream of the Fletcher Drive bridge and terminates approximately 900 feet downstream of the Glendale Freeway. See Figure 1.

### **1.2 Background**

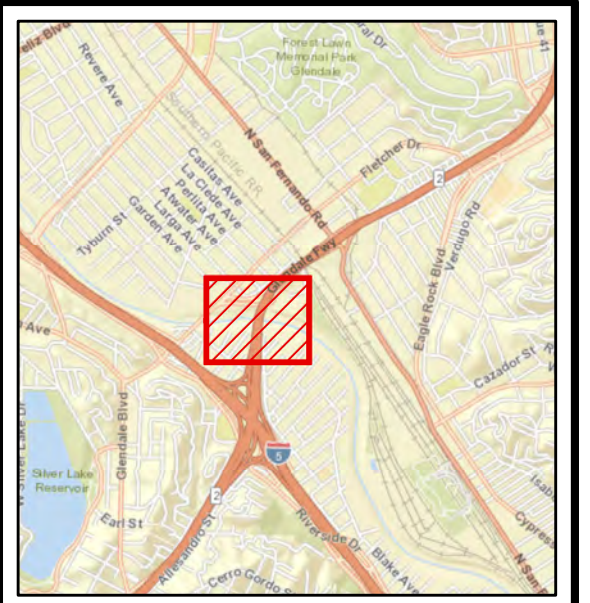
The Los Angeles District of the U.S. Army Corps of Engineers (Corps) conducted an engineering review of the Glendale Narrows section of the Los Angeles River (LAR) in 2016 to assess the flood conveyance capacity in anticipation of large rainfall associated with the predicted El Nino season.

The evaluation identified Reach 5A, 5B, 5C and 6A of the Glendale Narrows which extends from Los Feliz Blvd to 900 feet south of the Glendale 2 Freeway as critical areas for restoring conveyance capacity. The design capacity in these critical areas is a 51-year storm event or 78,000 cubic foot per second (cfs). The existing channel capacity due to vegetation and accumulated material is approximately a 7-year storm event (43,500 cfs). Of the three reaches, Reach 5C and the upstream section of Reach 6A has the largest deposit of accumulated material due to a bend in the river which causes sandbars to form against the left bank. In total, the sandbars contain approximately 40,000 cubic yards (cy) of material. The material consists of approximately 65% cobbles and boulders (rock sizes greater than 3 inches in diameter) and 33% sub-cobbles and fines. Removal of this sediment would increase conveyance to approximately a 15-year storm event capacity (54,000 cfs).

### **1.3 Purpose and Need**

The LAR channel is a flood risk minimization structure. The accumulated material reduces the flood risk minimization benefits of the LAR through Reaches 5C and 6A. The purposed of the Proposed Action is to partially restore lost conveyance capacity and restore flood risk minimization benefits.





**Legend**

- Sediment Removal Area

0 75 150 300 Feet

N



## 2.0 ALTERNATIVES

### 2.1 No Action Alternative

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. The accumulated material would continue to remain within the channel and the design conveyance capacity would not be partially restored.

### 2.1 Proposed Alternative

Under the Proposed Alternative, approximately 40,000 cubic yards (cy) of accumulated material from Reach 5C and a portion of Reach 6A would be removed to the design elevation of the channel invert to partially restore diminished flood conveyance capacity through this section of the LAR. The depth of sediment to be removed ranges from 2 to 8 feet. Clean excavated material would be disposed at a Corps-owned sediment placement site downstream of Lopez Dam. Contaminated fine sediment would be disposed at landfills appropriate for the level of contaminants present. There would be no structural alterations or modifications of structural elements of the engineered channel.

**Trucking Routes:** From San Fernando Road, trucks would proceed in a southwesterly direction via an unnamed access road into Taylor Yard. Once past the railway trestle bridge, vehicles would proceed in a northwesterly direction along a paved access road that is parallel to the railway track heading towards the Bowtie Parcel. From the Bowtie Parcel, trucks would transition onto the existing access road atop the left embankment then enter the channel via temporary access ramp. Loaded trucks would exit the channel using a second temporary access ramp and turn around in an open space area near the onramp to the Glendale Freeway off Fletcher Drive. Exiting trucks would proceed in the opposite direction via the same route through Bowtie Parcel and Taylor Yard onto San Fernando Road. Trucks would proceed northbound on San Fernando Road and proceed onto the Glendale Freeway. See Figure 2.

**Channel Access:** Two 120 foot long by 15 foot wide by 2 foot high temporary access ramp constructed from crushed miscellaneous base would be constructed into the channel on the left embankment. The ramps would be constructed from a combination of broken stone, crushed gravel, natural rough surfaced gravel, and sand (approximately 1,000 cy). To minimize turbidity, fiber rolls and or sand bags would be installed below the ramp during its construction and removal; furthermore, the downslope face would be armored with grout (approximately 10 cy). Approximately 50 cy of fill and 3.33 cy of grout would be temporarily discharged into Waters of the U.S. for each ramp.

**Dewatering:** Dewatering structures such as k-rails or rubber dams would be temporarily placed on the existing concrete sill at the upstream terminus just below Fletcher Drive crossing to redirect flows along the right embankment. Fill material required to seal dewatering structures would be either a grout material or visquin and sand bags

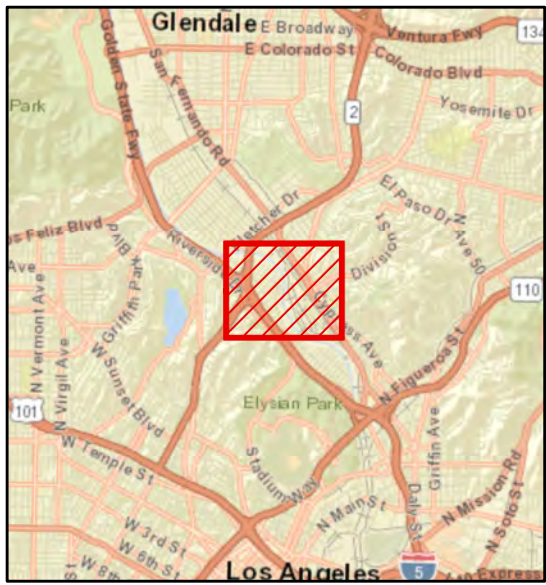
**Non-native Vegetation:** Non-native, invasive vegetation would be removed. A biological monitor will be on-site during all construction activities to insure vegetation removal proceeds accordingly. Species of non-native vegetation that are not considered invasive according to the California Invasive Plant Council (but potentially provide important on-site benefits) will be retained as appropriate.

**Riparian Zone Preservation Area:** Approximately 1.5 acres of contiguous native vegetation with complex vertical structure (i.e., a matrix of mature trees with understory of differing heights and densities) along the right bank would be excluded from the construction footprint. The vegetation would be protected by a 10-foot radius buffer. The outer edge of the earthen buffer would be stabilized with a 2:1 (horizontal:vertical) slope. See Figure 1.







**Native Species Preservation Area:** In-channel, native vegetation located adjacent to the left bank would be excluded from the construction footprint. See Figure 1.

**Upland Native Species Preservation Area:** Native vegetation atop the left embankment would be excluded from the construction footprint. See Figure 1.





**Legend**

-  Access Ramp
-  Route 3
-  LACDA Right of Way
-  20' Sewer Easement
-  Loading Area
-  Sediment Removal Area

0 212.5 425 850 Feet



LOS ANGELES RIVER

FIGURE 2: HAUL ROUTE MAP



## **3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **3.1 Aesthetics**

#### **Affected Environment**

The vista from within the channel is composed of linear lines, sharp angles and other geometric forms as well as varying hues of gray and textures associated with a grouted embankment. This linear, monolithic element frames the upstream and downstream views of the LAR. In the center of the vista, the accumulated sand and rocks form undulating lines and textured surface with varying hues of beige and brown. The view of the sandbar is interspersed with by non-linear forms, heterogeneous textures and a natural color palette associated with vegetation.

#### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Substantially alters the existing vista.
- Impairs or obstructs views of major visual elements

#### **Environmental Consequences**

##### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. The vegetation growing atop the sandbar would remain in place. The existing vista would remain unchanged.

##### **Proposed Alternative**

Removal of the accumulated materials under Proposed Alternative would require approximately three excavators, two loaders, and dump trucks to work within the channel invert. Thus, earthmoving equipment with highly visible paint schemes and colors would be temporarily present in the LAR for the duration of construction. Use of dewatering structures such as k-rails would temporarily result in introduction of bright linear forms into the construction footprint. These elements would be removed upon completion of construction. Removal of accumulated material would result in the removal of sparse vegetation presently growing atop of the sandbar. Thus, subsequent to construction, the construction footprint would be temporarily devoid of heterogeneous forms and textures as well as a natural color palette associated vegetation and replaced with a homogeneous earthen environment with various hues of beige and brown. However, vegetation is expected to naturally reestablish in the area due to the perennial flows and existing seed bank. Thus, impacts would be temporary since regrowth would restore visual heterogeneity associated with shrub vegetation. Furthermore,



approximately 1.5 acres of contiguous native vegetation with complex vertical structure (i.e., a matrix of mature trees with understory of differing heights and densities) would be excluded from the construction footprint. The vegetation would be protected by a 10 foot radius buffer. The outer edge of the earthen buffer would be stabilized with a 2:1 (horizontal:vertical) slope. Thus, most vegetation that dominate the vista of the channel invert would be retained and the existing vista would not be substantially altered. Large structures that could obstruct views of the major visual elements would not be constructed. Impacts would be less than significant.

## **3.2 Air Quality**

### **Affected Environment**

#### **National Ambient Air Quality Standards**

The Clean Air Act identified and established the National Ambient Air Quality Standards (NAAQS) for a number of criteria pollutants in order to protect the public health and welfare. The criteria pollutants include ozone (O<sub>3</sub>), carbon monoxide (CO), suspended particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead (Pb). PM emissions are regulated in two size classes: Particulates up to 10 microns in diameter (PM<sub>10</sub>) and particulates up to 2.5 microns in diameter (PM<sub>2.5</sub>).

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

#### **General Conformity Rule**

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

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.
- Delay the timely attainment of any standard, interim emission reduction, or other milestone.

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

<b>Pollutant</b>	<b>Attainment Status</b>	<b>General Conformity De Minimis Rates (tons/year)</b>
Ozone (VOC)	Nonattainment, extreme	10
CO	Attainment/Maintenance	100
NO <sub>2</sub>	Attainment/Maintenance	100
SO <sub>2</sub>	Attainment	100
PM <sub>10</sub>	Attainment/Maintenance	100
PM <sub>2.5</sub>	Nonattainment	100
Pb	Nonattainment	25

The SCAB is currently in extreme nonattainment for ozone (precursors: VOC or NO<sub>x</sub>); nonattainment for PM<sub>2.5</sub>; attainment/maintenance for PM<sub>10</sub>; attainment/maintenance for NO<sub>2</sub>; attainment/maintenance for CO; and nonattainment for lead. Based on the present attainment designation for the SCAB, a federal action would conform to the SIP if annual emissions are below 100 tons of CO, PM<sub>2.5</sub>, PM<sub>10</sub>, or NO<sub>2</sub>, 10 tons of VOC, or 25 tons of lead.

### Regional Significance Thresholds

The SCAQMD has developed Regional Significance Thresholds (RSTs) for mass daily emission rates of criteria pollutants for both construction and operational sources. RSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or state ambient air quality standard in the SCAB.

<b>Pollutant</b>	<b>Construction</b>
Nitrogen Oxide (NO <sub>x</sub> )	100 lbs/day
Reactive Organic Gas (ROG) (or VOC <sup>2</sup> )	75 lbs/day
Particle Pollution (PM <sub>10</sub> )	150 lbs/day
Particle Pollution (PM <sub>2.5</sub> )	55 lbs/day
Sulfur Oxides (SO <sub>x</sub> )	150 lbs/day
Carbon Monoxide (CO)	550 lbs/day
Lead	3 lbs/day

1. Source: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>  
2. Per CalEEMod Appendix A, ROG and VOC are used interchangeably for the purpose of comparing to significance thresholds.



## Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Currently, there are no Federal standards for GHG emissions and no Federal regulations have been set at this time, though the CEQ has issued draft guidance on the consideration of GHG emissions, entitled Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, dated December 24, 2014, and published at 79 Federal Register 77801. This draft guidance establishes a recommended reference point of 25,000 metric tons of annual CO<sub>2</sub> emissions as warranting further review.

## Emission Estimates Methodology

Emissions were estimated using CalEEMod.2016.3.2 emission modeling software.

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

Ozone (O<sub>3</sub>) formation is driven by two major classes of directly emitted precursors: nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC). The relation between O<sub>3</sub>, NO<sub>x</sub> and VOC is driven by complex nonlinear photochemistry. Due to the variability in rates of O<sub>3</sub> formation, CalEEMod does not provide estimates for the compound. Instead, the emission estimates for VOCs is used as a surrogate for reporting O<sub>3</sub> emissions per the General Conformity De Minimis Thresholds. Since the consumption of VOC in O<sub>3</sub> formation reaction is variable, actual O<sub>3</sub> levels are lower than those reported.

## Significance Threshold

Based on the existing conditions described above, impacts would be considered significant if the alternative:

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

## Environmental Consequences

### No Action Alternative

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no temporary emissions from the use of earthmoving equipment, and dump trucks.

### Proposed Alternative

Proposed Alternative entails excavating approximately 40,000 cy of accumulated sand, cobbles, and boulders from the LAR and transport of accumulated material for off-site disposal. In-channel construction operations to excavate, sort, and load the accumulated material would require approximately three excavators, one dozer, and two loaders. All off-road equipment would be operating 10 hours a day, six days a week, for a period of 90 work days. CalEEMod's default values for the number of hauling trips and distance required to dispose 40,000 cy of material were used to estimate on-road emission. CalEEMod's air quality emissions data are provided in Appendix A.

As shown in Table 3, estimated annual emissions would not exceed the Clean Air Act General Conformity de minimis thresholds. As a result, a General Conformity Analysis would not be required. As shown in Table 4, GHG emissions would not exceed CEQ recommended reference point of 25,000 metric tons of annual CO<sub>2</sub> emissions as warranting further review. As shown in Table 5 estimated emissions would not exceed daily SCAQMD emissions thresholds. Therefore, Proposed Alternative would entail less than significant impacts to air quality.

<b>Pollutants</b>	<b>General Conformity Rates (tons/year)</b>	<b>Estimated Emissions (tons/year)</b>
Ozone (VOC)	10	0.20
NO <sub>2</sub>	100	2.83
CO	100	1.26
Pb	25	-
PM <sub>10</sub>	100	0.49
PM <sub>2.5</sub>	100	0.29

<b>CEQ GHG Guidelines (tons/year)</b>	<b>Estimated Emissions (tons/year)</b>
25,000	394



<b>Pollutants</b>	<b>Regional Significance Thresholds (lbs/day)</b>	<b>Estimated Emissions (lbs/day)</b>
VOC	75	4.67
NOX	100	62.63
CO	550	28.15
SOX	150	0.09
PM10	150	11.04
PM2.5	55	6.53

### **3.3 Biological Resources**

The information presented in this section describes the biological resources that occur within the Proposed Project Area and its immediate vicinity. It includes descriptions of common plant communities and wildlife, including special-status species that have either been observed or have the potential to occur within this area.

#### **Affected Environment**

The Los Angeles River watershed is located in a Mediterranean climate region characterized by highly seasonal precipitation and temperature patterns that occur annually, with hot, dry summers, and cool, wet winters predominating. Inter-annual variability in precipitation is a key characteristic of the region.

Like most Mediterranean-climate streams, flows in the Los Angeles River often occur as a single annual flow peak in winter, although the frequency of these events can be highly episodic and variable inter-annually, with dramatic shifts between the two extremes of flow-flood and flow-cessation. Urban development (i.e., increase in impervious surface) coupled with flood risk-related modifications of the river channel have led to large-scale changes in the patterns of energy and matter distribution throughout the watershed, including evapotranspiration rates, surface runoff, discharge, nutrient availability (nitrogen and phosphorus), soil erosion, and sedimentation (He et al. 2000). As consequence of these changes, the volume and timing of streamflow in the Los Angeles River has been altered, both spatially and temporally, from that of a typical Mediterranean-climate river. This has substantially influenced the structure and composition of its natural communities (Miltner et al. 2004; Konrad and Booth 2005).

In its current state, the Proposed Project Area is a reach of the Los Angeles River between Fletcher Drive and the Glendale Freeway characterized as a concrete, trapezoidal channel with a cobblestone invert and 12 inch thick concrete banks. The banks are toed-down with sheet pile and derrick/quarry run stone. The cobblestone

invert is approximately seven (7) feet deep and the bottom of the channel is approximately 220 feet wide.

## Plant Communities

The Proposed Project Area is located at a bend in the Los Angeles River where the natural hydraulics, coupled with the existing channel roughness, promote the process of sedimentation. Sediment carried from upstream areas has accumulated over the existing cobblestone bed and vegetation has established on this accumulated sediment over time. As gravel, mud, and debris become trapped in the channel bed, vegetation has become rooted and contributes to additional gravel, mud, and debris collection. This process has resulted in sizeable areas of vegetation establishment within the Proposed Project Area, including the growth of native and non-native grasses, trees, and shrubs within the “soft bottom” channel bed. Structural conditions of the existing vegetation include: grass-forb, shrub, and tree layers along with constrained river channel and urban with various levels of impervious surfaces.

The functions of riparian systems for wildlife (e.g., to promote species diversity and recruitment) are optimized when its botanical structure is complex in 3-dimensional space, resulting in suitable habitat for multiple animal species. Much of the natural microbial, invertebrate, and vertebrate communities of wetlands and riparian areas are adjusted to the architectural forms, phenologies, detrital materials, and chemistry of the native vegetation. Furthermore, the physical form of any riparian habitat area is partly the result of interactions between plants and physical processes, especially hydrology. A sudden change in the dominant species, such as results from the spread of an aggressive invasive plant species, can have cascading effects on whole-system form, structure, and function (CWMW 2013).

Outside of the river channel, habitat is extremely limited. Urban land uses dominate the overbanks within the project reach and most vegetation is ruderal or ornamental. A small (>0.5 acre) area of marginal upland habitat, planted by a local non-profit agency, exists along the upper north bank of the river channel.

The most up-to-date inventory of vegetation conditions in the Los Angeles River corridor is based on the Combined Habitat Assessment Protocol (CHAP) conducted for the Los Angeles River Ecosystem Restoration Feasibility Study (USACE 2015). Based on this assessment, habitat types present within the Proposed Project Area include open water, valley foothill riparian, and urban. No other vegetation community types are identified within the project reach (USACE 2015).

Descriptions of the habitat classifications present in the Proposed Project Area are provided in the following paragraphs:

- **Open Water:** Intermittent or continually running water distinguishes river and stream communities. In the higher velocity stretches of natural streams, riffle/pool complexes are dominant and vegetation includes water moss and filamentous



algae that are attached to rocks. In slower moving waters, with increasing temperatures, decreasing velocities, and accumulating bed sediment, emergent freshwater marsh vegetation, such as rushes, sedges, and cattails is established along river banks (Mayer and Laudenslayer 1988). In the Proposed Project Area, emergent marsh vegetation is dominated by common cattail (*Typha latifolia*), narrow-leaved cattail (*Typha angustifolia*) California bulrush (*Schoenoplectus californicus*). Herbaceous species can be found on low elevation mats and large islands of southern willow scrub vegetation.

- **Valley foothill riparian:** This vegetation community occupies a large portion of the soft-bed channel within the Proposed Project Area, forming a semi-continuous strip of riparian habitat composed of native and non-native grasses, shrubs, and trees. Dominant native tree species in the Proposed Project Area include: black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), and arroyo willow (*Salix laevigata*). Native understory vegetation consists of shrubby willows and mule fat (*Baccharis salicifolia*) with herbaceous species including California mugwort (*Artemisia douglasiana*) and various native and non-native grasses. While scouring during high floods has at times cleared some of the understory vegetation within this reach, well-rooted black willows have persisted.
- **Urban:** This category includes landscapes dominated by urban structures, residential units, industrial areas, highways, and other such structures. It also includes urban uses such as parks, recreational fields, golf courses, and other such urban open space areas. Park areas may include alternately categorized vegetation such as ornamental or exotic hardwood mixture. Urban land uses dominate the overbanks within the Proposed Project Area and any vegetation tends to be ruderal or ornamental.

Various exotic (i.e., non-native) species can be found in riparian and urban areas within the Proposed Project Area. Some of these non-native species are considered invasive and have been targeted by removal efforts. “Invasive” species are non-native species that “(1) are not native to, yet can spread into, wildland ecosystems, and that also (2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes” (Cal-IPC 2018). Many non-native species are now naturalized in California, and may be widespread in occurrence.

The most prevalent non-native and invasive plant is giant reed (*Arundo donax*). It spreads quickly, has limited habitat value, and contributes to fire hazards through fuel loading. Other invasive species targeted by removal efforts include tree of heaven (*Ailanthus altissima*), Mexican fan palm (*Washingtonia robusta*), castor bean (*Ricinus communis*) and eucalyptus (*Eucalyptus* spp.) Other exotic/ornamental species found within the Proposed Project Area include white mulberry (*Morus alba*), edible fig (*Ficus carica*), and non-native species of ash (*Fraxinus* spp.).

## Wildlife

Because of the study area's urban setting and surrounding land uses, wildlife species (birds, amphibians, reptiles, and mammals) that are the most tolerant of human activity and the extremely modified landscapes inhabit the Proposed Project Area.

- **Herpetofauna:** The herpetofauna in the LAR Watershed consists of a variety of amphibians and reptiles. Four salamanders may occur within the Proposed Project Area: Pacific slender salamander (*Batrachoseps pacificus*), arboreal salamander (*Aneides lugubris*), ensatina (*Ensatinae schscholtzii*), and black-bellied slender salamander (*Batrachoseps nigriventris*). Three frogs may occur in the Proposed Project Area including western toad (*Bufo boreas*), Pacific tree frog (*Hyla regilla*), and the introduced American bullfrog (*Rana catesbeiana*). The most common lizards to occur within the study area are the western fence lizard (*Sceloporus occidentalis*) and the common side-blotched lizard (*Uta stansburiana*). Six species of native snakes are known to occur within the Los Angeles River basin (CDFW 1993). However, none of these are expected to occur in the Proposed Project Area. If present, the most probable snake species to occur would be the gopher snake (*Pituophis melanoleucus*). In addition, the
- **Mammals:** Common mammals potentially using or passing through the Proposed Project Area include opossum (*Didelphis virginiana*), black rat (*Rattus rattus*), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), fox squirrel (*Sciurus niger*), striped skunk (*Mephitis mephitis*), coyotes (*Canis latrans*), and several species of bats (CDFW 1993). Feral dog and cats may also utilize the area.
- **Fish:** No fish native to the Los Angeles River watershed are expected to occur in open water areas within the Proposed Project Area. Past surveys upstream of and within the Proposed Project Area (LADWP 2004; FoLAR 2008) have only collected non-native fish species including fathead minnow (*Pimephales promelas*), carp (*Cyprinus carpio*), black bullhead (*Ameiurus melas*), Amazon sailfin catfish (*Pteroplichthys pardalis*), green sunfish (*Lepomis cyanellus*), bluegill (*Lepomis macrochirus*), mosquito fish (*Gambusia affinis*), tilapia (*Oreochromis* spp.), and largemouth bass (*Micropterus salmoides*). Mosquitofish and tilapia were the most prevalent fish species captured within the Proposed Project Area.

Seven species of native fish historically occurred in the freshwaters of the Los Angeles River including the now endangered species of southern California Distinct Population Segment of steelhead (*Oncorhynchus mykiss*), the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), the threatened Santa Ana sucker (*Catostomus santaanae*) and arroyo chub (*Gila orcuttii*), the species of concern Pacific lamprey (*Lampetra tridentata*), and the non-listed species Pacific brook lamprey (*Lampetra pacifica*) and Santa Ana



speckled dace (*Rhinichthys osculus*) (CDFW 1993). However, it is highly unlikely any endangered fish species or species of special concern inhabit the Proposed Project Area. The timing of past fish surveys was ideal to determine the presence or absence of these native species and no native fishes have been collected in these surveys (LADWP 2004; FoLAR 2008).

Red swamp crayfish (*Procambarus clarkii*), a non-native, invasive aquatic invertebrate is known to inhabit slow moving water areas within the Los Angeles River watershed. However, they may be less common within the Proposed Project Area because fish predators like green sunfish, black bullhead, and carp are relatively abundant.

- **Birds:** Though abundance of native bird species is limited by habitat quantity and quality within the study area, diversity of native birds in the Proposed Project Area fluctuates with seasonal migration and can be relatively high. Resident birds use the existing small and intermittent pockets of vegetation along the waterway to nest, roost, as a base for feeding, and to take cover. Bird species commonly associated with urban areas are abundant within the study area including: rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and house finch (*Carpodacus mexicanus*). Migratory species include shorebirds, wading birds, and ducks of the Pacific Flyway. These species are primarily found roosting or feeding. Bird

**Table 6: Bird species observed or known to occur within the Proposed Project Area**

**Grebes and cormorants**

Double-crested cormorant (*Phalacrocorax auritus*)  
Western grebe (*Aechmophorus occidentalis*)

**Wading and shore birds**

Black-crowned night heron (*Nycticorax nycticorax*)  
Black necked stilt (*Himantopus mexicanus*)  
Great blue heron (*Ardea herodias*)  
Great egret (*Ardea alba*)  
Green heron (*Butorides virescens*)  
Killdeer (*Charadrius vociferous*)  
Lesser yellowlegs (*Tringa flavipes*)  
Snowy egret (*Egretta thula*)  
Western sandpiper (*Calidris mauri*)

**Gulls and terns**

Western Gull (*Larus occidentalis*)

**Diurnal raptors**

Peregrine Falcon (*Falco peregrinus*)  
Red-tailed hawk (*Buteo jamaicensis*)  
Turkey vulture (*Cathartes aura*)

**Geese, ducks, and swans**

American coot (*Fulicia Americana*)  
Canada goose (*Branta canadensis*)  
Mallard (*Anas platyrhynchos*)  
Ring Necked Duck *Aythya collaris*  
Muscovy duck (*Cairina moschata*)  
American Pekin (*Anas platyrhynchos*)\*

**Pigeon and doves**

Mourning dove (*Zenaida macroura*)  
Rock dove (*Columba livia*)  
Spotted dove (*Spilopelia chinensis*)

**Jays and crows (corvids)**

American crow (*Corvus brachyrhynchos*)  
Common raven (*Corvus corax*)

**Other species:**

American cliff swallow (*Petrochelidon pyrrhonota*)  
Anna's Hummingbird *Calypte anna*)  
Belted kingfisher (*Megaceryle alcyon*)  
Black phoebe (*Sayornis nigricans*)  
Brewer's blackbird (*Euphagus cyanocephalus*)  
Common yellowthroat (*Geothlypis trichas*)  
House finch (*Haemorhous mexicanus*)  
House sparrow (*Passer domesticus*)\*  
Northern mockingbird (*Mimus polyglottos*)

\*Non-native or domestic/hybrid species

## Special Status Species

Sensitive species include plants or wildlife listed as threatened or endangered under the Federal Endangered Species Act (ESA). In general, the study area is unlikely to contain federally listed endangered, threatened, or species of concern due to the degraded conditions. Based on the results of the Combined Habitat Assessment Protocol (CHAP) conducted for the Los Angeles River Ecosystem Restoration Feasibility Study (USACE 2015) and more recent survey data (USACE 2017; Carvel Bass, pers. comm.), no federally listed plant, wildlife, or fish species are known from or expected to occur within the Proposed Project Area.

Of the 28 special status wildlife species with the potential to occur in the greater Los Angeles Basin, only one incidental observation of an unpaired male least Bell's vireo (*Vireo bellii pusillus*), a federally and State endangered species, has been sighted near the Proposed Project Area in recent years. This incidental observation was documented in Reach 6 near Taylor Yard during a one-day nesting bird survey of the area in April 2013; however, this area is located outside of the Proposed Project Area. In addition, a similar one-day nesting survey of the area in May 2013 did not detect any least Bell's vireo (Cooper 2013a, 2013b). Least Bell's vireo are not known to nest in the Glendale narrows area of the Los Angeles River due to the marginal, linear and confined nature of existing habitat. Within the Proposed Project Area, marginal habitat for least Bell's vireo exists, but lacks suitable adjacent foraging habitat. It is therefore unlikely to support nesting least Bell's vireo. No breeding pairs were documented in the study area during the most recent surveys (USACE 2017; Carvel Bass, pers. comm.).

There is low potential for the southwestern willow flycatcher (*Empidonax trailliiextimus*) (federally endangered) and the coastal California gnatcatcher (*Polioptila californica*) (federally threatened) to use the study area. No flycatchers or gnatcatchers were found during these studies, and the most recent documented occurrence of the southwestern willow flycatcher was over 13 miles west of the Proposed Project Area in the Angeles National Forest. The gnatcatcher, which generally occupies coastal scrub habitat, is unlikely to occur since there is less than one (1) acre of this habitat type in the entire Los Angeles River Mainstem corridor.

## Wetlands

Riverine wetlands were the only wetland type found during the habitat assessments conducted for the CHAP (USACE 2015). Based on this analysis, riverine wetlands are only within the LAR channel and subject to modification for operation and maintenance of the flood risk management channel. Though no wetland delineation was performed, it is likely that all of the vegetated area within the channel bottom of the Proposed Project Area comprises riverine wetland based on the species present.

There are no other special aquatic sites in the Proposed Project Area as defined under the CWA.



## Wildlife Corridors

Due to the urbanized environment, wildlife movement through the study area is limited to urban adapted species and opportunities for passage are disconnected and/or limited by human presence and development. Bats and birds are less restricted by development, though human occupation may discourage passage through the study area. Ground dwelling animals that occur in the study area are migrating into the Proposed Project Area via the extremely limited pathways available. These pathways can be composed of narrow riparian strips, but more often are provided by culverts, paved pathways along the River, and concrete tunnels beneath highways. None of these features are located within the Proposed Project Area.

## Significance Threshold

Impacts would be considered significant if the alternative:

- Substantially alters the existing riparian structure and functional habitat benefits for wildlife

## Environmental Consequences

### No Action Alternative

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. The native and non-native riparian vegetation atop the accumulated material would remain intact and continue to inhibit the channel's capacity to convey floodwaters. Conversely, this vegetation would continue to minimize erosion of accumulated sediment from wind and water action. Invasive plant species within the Proposed Project Area would persist and potentially spread within the immediate area and to other downstream portions of the watershed.

### Proposed Alternative

Under the Proposed Alternative, approximately 40,000 cubic yards of accumulated material would be removed from Reach 5C and 6A. Consequently, some native and non-native riparian vegetation atop the accumulated material would be removed and no longer be available to provide habitat benefits such as nesting and foraging habitat that would promote greater wildlife diversity or enhanced hydrological functions such as rainfall interception, reduced evaporation from soils, and enhanced filtration of floodwaters (CWMW 2013). Furthermore, the temporary absence of riparian vegetation from the newly exposed surface is expected to increase wind and water erosion in the short term. However, any change is expected to be less than significant because the existing vegetation that will be targeted for removal atop the accumulated channel bed material tends to be sparse and dispersed within the Proposed Project Area. Furthermore, the riparian vegetation is expected to naturally reestablish in the area due to the perennial flows and existing seed bank. A biological monitor will be on-site during all construction activities to insure vegetation removal avoids or minimizes impacts to

biological resources. Clearing and grubbing would occur outside of bird nesting season (February 28 – August 15).

In addition, approximately 1.5 acres of contiguous native vegetation with complex vertical structure (i.e., a matrix of mature trees with understory of differing heights and densities) would be excluded from the construction footprint and designated as a “riparian zone avoidance area”. The vegetation would be protected by a 5-foot radius buffer from the drip line (outer canopy edge) of the tree or shrub. The outer edge of the earthen buffer would be stabilized with a 2:1 (horizontal:vertical) slope. The fringing riparian/emergent marsh vegetation along the south side of the river channel will be included in the avoidance area. The riparian zone avoidance area would retain as many of the key components of the riparian habitat (e.g., multiple plant layers comprised of predominantly native species, a high degree of overlap among plant layers) as possible within the Proposed Project Area. This would promote retention of related habitat benefits in the form of increased nesting and foraging habitat for greater wildlife diversity and enhanced hydrological functions as described above. Based on this analysis, the Preferred Alternative would mostly retain the existing riparian structure and functional habitat benefits for wildlife. Impacts would be less than significant.

### **3.4 Cultural Resources**

#### **Affected Environment**

Cultural resources are artifacts of human activity, occupation, or use. They include expressions of human culture and history in the physical environment, such as archaeological sites, historic buildings and structures, or other culturally significant places.

Archaeologists have placed the earliest occupations of southern California at roughly 12,000 to 10,000 years before present (BP). The local Tongva or Gabrielino oral traditions speak of the importance and use of the rivers in the inland valleys, and named settlements have been documented at locations along nearly every river and ephemeral stream. At the time of contact, the Spanish encountered native populations who were organized in villages with social elites, well-established trade networks and elaborate mortuary customs. Missionization, disease, and colonization decimated the organized Tongva villages along the LAR, but some Native American use of the river continued throughout the nineteenth century.

Use of the area surrounding the project transitioned from livestock grazing to agricultural use as control of the area transitioned from Spain to Mexico and, eventually, to the United States. Beginning in the 1880s, residential and industrial development along the LAR grew rapidly. The Corps began to channelize the LAR with concrete in 1938 to reduce flood risk to the rapidly developing communities, but construction wasn't completed until 1959, when the LAR had been contained in a series of channels, flood risk management reservoirs, and debris basins. Freeway construction further increased the industrial nature of adjacent land use near the project area.

The proposed action would occur within Reach 5C and the upstream section of Reach 6A of the LAR. Both reaches are trapezoidal channel with a soft bottom comprised of a cobblestone bed. The banks are toed-down with steel sheet piling and grouted derrick stone. The banks were initially constructed in 1938, but the cobblestone invert was repaired in 1956. While the LAR flood control system as a whole may be viewed as historically important, most individual segments likely lack significance or otherwise fail to meet one of the four criteria necessary to be eligible for the National Register of Historic Places (NRHP). The LAR within the project area has not been formally evaluated for the NRHP, although a segment of Reach 4 has been previously determined ineligible.

As the Los Angeles area developed economically and rail traffic increased, it was necessary to construct a number of rail yards along the LAR north of downtown Los Angeles. In 1925, the Southern Pacific Railroad shifted management of its entire Los Angeles freight handling operations to a new freight facility constructed at Taylor Yard, located adjacent to the River on the east side in the southern part of Reach 6. Improvements and updates were continually made to yard facilities until 1973, when it was superseded by more modern yard in the City of Colton. The Southern Pacific Railroad closed the yard in 1985, and the land was eventually cleared (California Department of Parks and Recreation. (2005a. Rio De Los Angeles State Park (Taylor Yard), Preliminary General Plan and Final Environmental Impact Report. May 2005).

The Fletcher Drive Bridge also crosses over the proposed project. This is a concrete bridge built in 1927. It has been recorded as site number P-19-73432 and has been determined eligible for the NRHP. It has also been given Caltrans Bridge Number 53C0096 and Los Angeles Historical-Cultural Monument number 332.

### **Significance Threshold**

The impacts of federal undertakings on cultural resources are formally assessed through a process mandated by the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. Section 300101 et seq), and its implementing regulation, Protection of Historic Properties (36 CFR 800). For the purposes of this analysis, the NHPA “criteria of adverse effect” was identified as the significance threshold for NEPA. The criteria of adverse effects are defined in 36 CFR 800.5a as follows:

*“An adverse effect is found when an action may alter the characteristics of a historic property that qualify it for inclusion in NRHP in a manner that would diminish the integrity of the property’s location, design, setting, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative”.*

Based on the above, impacts would be considered significant if the alternative:

- Results in an adverse effect on an historic property.



## **Environmental Consequences**

### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. Since no ground disturbing activities would be conducted, there would be no potential for effects to historic properties.

### **Proposed Alternative**

The Proposed Alternative entails excavation of accumulated alluvial deposits from the channel to partially restore the original design capacity. However, no material would be excavated below the top of the cobblestone invert repaired in 1956. Two temporary access ramps would be constructed of crushed base to provide access to the channel invert. These ramps would be removed at the end of the project, so there would be no permanent alteration of the channel wall. Thus, no alterations or modifications will be made to any surviving portions of the historic constructed channel. Further, no alteration would be made to Fletcher Drive Bridge by the proposed project.

The access road is an existing road with a built up DG roadbed constructed to provide access along the channel. Vehicular use of this road is a regular and routine activity and would be restricted to the existing constructed roadbed.

All ground disturbing activities would be limited to recent alluvium or imported and disturbed soils. No native soil would be disturbed. No actions are proposed that would alter the historic channel or Fletcher Bridge. Thus, the project would have no potential to result in changes to the character or use of an historic property, nor diminish the integrity of the location, design, setting, materials, workmanship, feeling, or association.

## **3.5 Hazardous and Toxic Wastes**

### **Affected Environment**

The Proposed Project Area is adjacent to industrial land uses. Adjacent to the south bank are permitted industrial operations that use hazardous materials. Adjacent to the north bank is Taylor Yard, a brown field that was formerly the site of a rail yard. Taylor Yard was historically used for rail maintenance and fueling operations from 1930s through 2006. A number of soil and groundwater investigations have identified chemicals in the soil including petroleum products, metals, and organic compounds such as polycyclic aromatic hydrocarbons and polychlorinated biphenyls. Volatile organic chemicals are also present in the groundwater beneath the site.

An on-going source of contaminants are nuisance flows and storm flows that enter the LAR through major storm outfalls. These flows convey pollutants associated with the urban environment into the water column: fecal coliform bacteria, pesticides; metals

(e.g., copper, chromium, lead); nutrients (nitrogenous and phosphorus compounds); petroleum based oils and solvents; and trash. These compounds are expected to present within the soils and the water column at various concentrations.

Chemical analysis of soils from the interstitial spaces on the sandbar detected metals, organic chemicals, pesticides, and petroleum based products at concentrations below applicable regulatory limits for hazardous wastes. However, concentrations of lead at three sample locations exceeded reporting limits for molecular forms of lead that could migrate into the aqueous environment.

### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Long-term exposure of humans and wildlife to hazardous materials.

### **Environmental Consequences**

#### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. Existing contaminants within sediment phase of the accumulated material would remain. However, erosion and sedimentation processes during storm flows could change the concentration and location of contaminants. Nuisance flows and storm flows that enter the LAR through major storm outfalls would continue to convey pollutants associated with the urban environment into the water column. These compounds are expected to present within the soils and the water column at various concentrations.

#### **Proposed Alternative**

Proposed Alternative entails excavation of accumulated sand, cobbles, and boulders from the LAR. Material to be excavated includes fine sediment where contaminants are found. However, the amount of fine sediment within the construction footprint is limited; approximately 2.5% to 7.3% of the accumulated material. Excavated materials would be tested for presence of contaminants at recommended volume intervals. Based on the results, clean excavated material would be disposed at Corps-owned sediment placement site downstream of Lopez Dam. Contaminated fine sediment would be disposed at landfills appropriate for the level of contaminants present. Based on the limited range of fine sediment within the accumulated material, the volume of contaminated fine sediment to be removed would be minimal. With disposal of contaminated material at suitable landfills, there would be no long-term exposure of humans and wildlife to hazardous materials as a result of the Proposed Alternative.

Continued presence of contaminants in the soil remaining onsite is possible. Furthermore, nuisance flows and storm flows that enter the LAR through major storm

outfalls would continue to convey pollutants associated with the urban environment into the water column. These compounds are expected to be present within the soils and the water column at various concentrations.

Removal of the accumulated materials would require approximately three excavators, two loaders, and dump trucks to work within the channel invert. Use of construction vehicles increases the potential for accidental release of fuels, solvents, or other petroleum-based contaminants. However, the possibility of contaminants coming into contact with the water column is unlikely since the work area would be fully isolated from surrounding flows.

### 3.6 Noise

#### Affected Environment

Noise is defined as unwanted sound. The effects of noise on human receptors can range from annoyance to permanent hearing loss. Sound travels from a source in the form of wave, which exerts a pressure on a receptor, such as those found in the human ear. The pressure level associated by a sound wave is commonly measured in decibels (dB), which is used to equally weight all frequencies of sound. However, the human ear is not equally sensitive to sounds at all frequencies. Therefore, the dBA scale, which primarily weighs frequencies within the human range of hearing, is used to assess the impact of noise on human hearing.

<b>Noise level (dBA)</b>	<b>Examples</b>	<b>Human Receptor Response</b>
0	recording studio	hearing threshold
20	rustling leaves	
40	conversational speech	quiet
60	freeway at 50 feet	
70	freight train at 100 feet	moderately loud
90	heavy truck at 50 feet	
110	ambulance siren at 100 feet	very loud
120	jet engine at 200 feet	threshold of pain

#### Ambient Noise at the Proposed Project Area

A dense, fully developed urban environment surrounds the Proposed Project Area. Industrial land uses are immediately adjacent to the right embankment with residential land uses located approximately 1,000 feet landward from the construction area. Land along the left embankment at Reach 5C are corridors for utilities and freeway access ramps. The closest residential development is located approximately 400 feet landward of the construction area.



The transportation corridors traversing the area, especially the Glendale Freeway, dominate the source of ambient noise. Sound level measurements within the immediate vicinity of the freeway bridge is approximately 68 dBA. The sound level incrementally decreases with increasing distance from the freeway bridge, decreasing to approximately 58 dBA midway between the Fletcher Drive and Glendale Freeway. The sound level approximately midway between the Fletcher Drive and Glendale Freeway along the left embankment is approximately 55 dBA. Sound level near the Glendale Freeway onramp off Fletcher Drive is approximately 60 dBA.

Other contributing noise sources are the industrial land uses that are immediately adjacent to the right embankment as well as residential areas on both embankments. Land use along the north bank of Reach 6A consists of an approximately 8 acre industrial complex, and a state-owned brownfield, the "Bowtie Parcel." Sound level measurements near this location is approximately 55 dBA. Further downstream, the sound level along Taylor Yard is approximately 46 dBA.

Sound levels throughout the soft bottom channel invert is approximately 4 to 8 dBA lower than corresponding locations on top of the embankments ranging from 52 dBA at approximately 500 feet downstream of the Glendale Freeway to 60 dBA near the freeway.

### **Ambient Noise Adjacent to Haul Routes**

The sound level within residential areas adjacent to haul routes is approximately 54 dBA. Sound levels along major surface arteries range from 63 dBA to 72 dBA.

### **Noise Associated with Haul Trucks and Off-Road Construction Equipment**

Noise levels associated with haul trucks at 50 feet is approximately 76 dBA. Noise levels associated with loaders and excavators at 50 feet is approximately 80 dBA.

### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Creates a long term increase in noise levels above ambient noise levels by 5 dBA.

### **Environmental Consequences**

#### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no noise associated with earthmoving equipment and haul trucks. Ambient noise levels would remain unchanged.

## Proposed Alternative

### Noise Associated In-Channel Construction Operations

Under Proposed Alternative, earthmoving equipment such as loaders and excavators would operate within the channel invert. Furthermore, haul trucks would enter and exit the channel to remove excavated material. Noise associated with earthmoving equipment and haul trucks in the channel would primarily be located near the left embankment.

Sound levels associated with earthmoving equipment and haul trucks at a distance of 50 feet are approximately 80 dBA and 76 dBA, respectively. The rate atmospheric sound attenuation is approximately 6 dBA for every doubling of distance from a noise source. For residential areas on the south bank located approximately 1,000 feet away, sound levels based solely on atmospheric attenuation would be approximately 52 dBA and 60 dBA for respectively for haul trucks and earthmoving equipment within the channel. Likewise, for residential areas on the north bank located approximately 400 feet away, sound levels based solely on atmospheric attenuation would be approximately 58 dBA and 66 dBA for respectively for haul trucks and earthmoving equipment within the channel. In addition to atmospheric attenuation, the embankments would function as a sound barrier for equipment working within the channel invert, further reducing levels. Furthermore, sound levels for residential areas are influenced by traffic on Fletcher Drive, the Glendale Freeway, a freeway off-ramp, and operations from industrial land uses. Thus, noise from in-channel construction activities may not be distinguishable from ambient noise levels.

### Noise Associated with Hauling Operations

Under Proposed Alternative, loaded haul trucks would proceed downstream atop the left embankment after exiting the channel invert. Land use along the north bank of Reach 6A consists of an approximately 8 acre industrial complex, and a state-owned brownfield, the "Bowtie Parcel." Sound level measurements near this location is approximately 55 dBA. Further downstream along the embankment is Taylor Yard where the ambient noise is approximately 46 dBA. Sound levels associated with haul trucks at a distance of 50 feet is approximately 76 dBA. The rate atmospheric sound attenuation is approximately 6 dBA for every doubling of distance from a noise source. With ambient sound levels being substantially lower than the sound levels associated with haul trucks, noise from haul trucks would be perceptible for a distance of approximately 800 feet. Thus, sound levels along these land uses would temporarily increase with the passing of each haul truck. However, there are no residential receptors within 800 feet of the noise source. Land uses between San Fernando Road and the left embankment are primarily composed of industrial and

open spaces such as brown fields or sports fields. Thus, there would be no noise impacts to residential noise receptors.

A high school is located approximately 500 to 800 feet from the left embankment within the industrial/open space corridor. Students and staff outside of enclosed spaces could experience noise levels of 58 dBA (at 400 feet) to 52 dBA (at 800 feet). These levels would not be substantially different from traffic noise from San Fernando Road and noise from adjacent industrial and commercial facilities.

### **3.7 Land Use**

#### **Affected Environment**

A dense, fully developed urban environment surrounds the Proposed Project Area. Industrial land uses are immediately adjacent to the right embankment with residential land uses located approximately 1,000 feet landward from the Proposed Project Area. Land along the left embankment at Reach 5C are corridors for utilities and freeway access ramps. The closest residential development is located approximately 400 feet landward of the construction area. Land uses further downstream along the left embankment of Reach 6A include an approximately 8 acre industrial complex, a state-owned brownfield (i.e., "Bowtie Parcel"), and Taylor Yard, a former rail yard. Land uses further landward of Bowtie Parcel and Taylor Yard include industrial, commercial, recreational, and institutional land uses.

#### **Significance Threshold**

Impacts would be considered significant if the alternative:

- Permanently conflicts with existing land uses or with adjacent, offsite land uses.

#### **Environmental Consequences**

##### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no impacts to land use.

##### **Proposed Alternative**

Removal of accumulated debris under Proposed Alternative would be limited to invert of the Los Angeles River Channel. There would be no changes to the use and function of the Los Angeles River channel for water conveyance. Haul trucks would use existing access roads along the left embankment and existing roadways. All adjacent land uses would remain unchanged. A staging area would be temporarily established atop the left embankment along Reach 5C. The staging area would be demobilized upon completion of work. There would be no impacts to land use.



## **3.8 Recreation**

### **Affected Environment**

Two recreational facilities are located within general area where construction would occur. A bicycle/pedestrian path is located atop the right embankment. In-channel construction would be located towards the left embankment. The Rio de Los Angeles State Park is located between Taylor Yard and San Fernando Road. There are no recreational facilities within the channel invert where earthmoving activities will occur or along haul routes.

### **Significance Threshold**

- Impacts would be considered significant if the alternative:
- Permanently disrupts or limits access or use of existing recreational uses.

### **Environmental Consequences**

#### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no impacts to recreation.

#### **Proposed Alternative**

Approximately 40,000 cy of accumulated material would be removed from Reach 5C and 6A. There are no recreational facilities within the channel invert where earthmoving activities will occur or along haul routes.

Two recreational facilities are located within general area where construction would occur. A bicycle/pedestrian path is located atop the right embankment. In-channel construction would be located towards the left embankment. There would be no need to temporarily close or reroute users of the bicycle/pedestrian path. The Rio de Los Angeles State Park is located landward of Taylor Yard. Haul trucks would pass by the park. However, there would be no disruption of recreational activities or modifications of recreational facilities at the park. There would be no impact to recreation.

## **3.9 Socioeconomics and Environmental Justice**

Each federal agency is required, by Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations . . ."

For purposes of Executive Order 12898, the term minority means "individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian

or Pacific Islander; Black, not of Hispanic origin; or Hispanic.” For the purpose of this analysis, the population below poverty level as defined by the U.S. Census serves as surrogate for low-income populations.

### Affected Environment

The Proposed Project Area is located in the Glassell Park neighborhood of the City of Los Angeles. Demographics for the City of Los Angeles County serve as a reference for comparison.

	<b>City of Los Angeles<sup>1</sup></b>	<b>Glassell Park<sup>2</sup></b>
White	28.2%	13.7%
Asian	11.5%	17.4%
Black	8.5%	1.4%
Hispanic	49.0%	66.1%
Other	2.6%	1.4%
Median Income	\$49,840	\$50,098
Population below poverty level	20.5% <sup>3</sup>	20.4% <sup>3</sup>
Source: 1. <a href="https://www.scag.ca.gov/Documents/LosAngeles.pdf">https://www.scag.ca.gov/Documents/LosAngeles.pdf</a> 2. <a href="http://maps.latimes.com/neighborhoods/neighborhood/glassell-park/">http://maps.latimes.com/neighborhoods/neighborhood/glassell-park/</a> 3. <a href="http://www.city-data.com/neighborhood/Glassell-Park-Los-Angeles-CA.html">http://www.city-data.com/neighborhood/Glassell-Park-Los-Angeles-CA.html</a>		

In comparison to the city of Los Angeles, the Glassell Park neighborhood has notably more Hispanics and notably less Blacks. Likewise, the percentage of Whites is notably less. With respect to low-income populations, the Glassell Park neighborhood has approximately the same percentage as the city of Los Angeles. According to the US EPA environmental justice profile, minorities make up approximately 79% of the population in the neighborhood and the percentage of low income population is approximately 42% (see Appendix E).

The Glassell Park neighborhood, similar to the larger city of Los Angeles, is a dense, fully developed urban environment. The Glendale Freeway traverses the area. Major arteries such as Eagle Rock Boulevard, York Boulevard, and San Fernando Road also traverse the area. Industrial and commercial land uses are primarily adjacent to these major arteries. The neighborhood also encompasses Taylor Yard. Thus, residents live in close proximity to traffic and industrial processes. Moreover, characteristic of a fully developed urban environment, residents are exposed to conditions that affect respiratory health such as particulate matter.

### Significance Threshold

Impacts would be considered significant if the alternative results in:

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

## **Environmental Consequences**

### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no short term economic benefits associated with temporary construction work. There would be no temporary emissions from the use of earthmoving equipment and dump trucks.

### **Proposed Alternative**

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

Off-site transport of accumulated material would result in a temporary increase in truck traffic along San Fernando Road. There would be temporary increase in emission of particulate matter PM2.5. However, the estimated PM2.5 emission of 6.53 lbs./day would not exceed the SCAQMD's threshold of 55 lbs./day. Levels of PM2.5 emissions along San Fernando Road would return to pre-project levels upon completion of construction. Furthermore, the work would not entail the construction of infrastructure or utilities that would result in growth of the surrounding area, nor would the work increase capacity of existing infrastructure that would induce growth. In addition the Proposed Action would not result in changes to land uses that could increase exposure to environmental conditions that may affect respiratory health. Last, neighborhoods and cities adjacent to Glassell Park are also highly urbanized and share the approximately the same demographic characteristics. Thus, the temporary increase in truck traffic and emission would not disproportionately affect minority or low-income populations. Impacts would be less than significant.

## **3.10 Soils and Substrate**

### **Affected Environment**

Reach 5C and the beginning Reach 6A are located at a bend in the river which causes materials to accumulate against the north bank. In total, the sandbar contains approximately 40,000 cubic yards accumulated material. Cobbles and boulders make up a substantial portion of the material and ranged from 55 to 90% (by volume) of the material. The largest of the boulders exceeded approximately 3 feet in diameter and

typical clast size was estimated as a large cobble on the order of 9 inches in diameter. The remaining soil matrix in the interstitial space consists primarily of granular material ranging from poorly graded sand with silt and gravel to poorly graded gravel with sand. The percentage of fines (particles smaller than 0.075mm) varies between 2.5 and 7.3 with more silt than clay particles. The specific gravity of the soils tested varies between 2.65 and 2.69.

### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Increases wind or water erosion of soils or loss of topsoil.

### **Environmental Consequences**

#### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. The accumulated material would continue to remain exposed to wind and water. Boulders and cobbles would not be subject to movement from wind action. Movement of top soils composed of fines and sand is expected. However, wind erosion potential is minimal due to consolidation and compaction. The vegetation atop the accumulated material would further minimize erosion. Some water erosion during storm flows is possible but sedimentation is more likely. The hydraulics, in addition to channel roughness, at the bend at Reach 5C and 6A promote sedimentation. Sediment equilibrium within the water column would determine sedimentation or erosion rates. Wind and water erosion would be minimal.

#### **Proposed Alternative**

Approximately 40,000 cy of accumulated material would be removed from Reach 5C and 6A. 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. The exposed surface would continue to remain exposed to wind and water. Boulders and cobbles would not be subject to movement from wind action. Movement of top soils composed of fines and sand is expected. However, 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 vegetation atop the accumulated material is sparse. Furthermore, vegetation is expected to naturally reestablish in the area due to the perennial flows and existing seed bank.

Some water erosion during storm flows is possible but sedimentation is more likely. The hydraulics, in addition to channel roughness, at the bend at Reach 5C and 6A

promote sedimentation. Some water erosion during storm flows is possible but sedimentation is more likely. Sediment equilibrium within the water column would determine sedimentation or erosion rates. Wind and water erosion would be minimal.

### **3.11 Traffic**

#### **Affected Environment**

The Proposed Project Area is close to two freeways and major roadways. Interstate 5 is located approximately 1,000 to 3,000 feet west of the right embankment. State Highway 2 (i.e., the Glendale Freeway) bisects the Proposed Project Area. San Fernando Road, a major roadway is located approximately 1,000 to 2,500 feet east of the left embankment. Fletcher Drive is located at the upstream terminus of the Proposed Project Area. Average daily traffic (ADT) counts for these freeways and roadways near the Proposed Project Area are shown below.

#### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Substantially increases traffic levels in the long term.
- Caused closure of a major roadway to through traffic with no suitable route available for traffic.
- Decreased safety for vehicular traffic or transit operations in the long term.

#### **Environmental Consequences**

##### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no additional traffic on roadways and freeways associated with hauling operations.

##### **Proposed Alternative**

Proposed Alternative entails excavating approximately 40,000 cy of accumulated sand, cobbles, and boulders from the LAR and transport of accumulated material for off-site disposal. Using 12 cy to 14 cy haul trucks, approximately 6,667 round trips in total would be required to remove the accumulated material resulting in approximately 75 round trips per day for a period of 90 days. The 75 daily round trips would add 150 one way trips per day to local roadways and freeways. In addition, approximately 10 construction workers would commute daily to the site, resulting in 20 one way trips per day to local roadways and freeways. In total approximately 170 one way trips per day would be added to local roadways and freeways during construction. Traffic levels would return to baseline levels upon completion of construction.



Haul trucks would primarily use San Fernando Road and Glendale Freeway. There would be no changes to road alignment, elevation, lane striping, or signal operations that would decrease safety for vehicular traffic or transit operations. Impacts would be less than significant.

<b>Roadway</b>	<b>ADT</b>	<b>Daily Trips</b>	<b>% Increase</b>
San Fernando Road	39,546 <sup>1</sup>	150	0.38
Fletcher Drive	46,259 <sup>2</sup>	150	0.32
Glendale Freeway	155,000 <sup>3</sup>	150	0.10
Interstate 5	282000 <sup>3</sup>	150	0.05

1. City of Los Angeles, 2010 to 2011 traffic counts (<http://ladot.lacity.org/node/576>)  
2. City of Los Angeles, 2000 to 2010 traffic counts (<http://ladot.lacity.org/node/576>)  
3. CalTrans 2015 Traffic Volume ([http://www.dot.ca.gov/trafficops/census/docs/2015\\_aadt\\_volumes.pdf](http://www.dot.ca.gov/trafficops/census/docs/2015_aadt_volumes.pdf))

### **3.12 Water Quality**

#### **Affected Environment**

The Proposed Project Area is located within the Glendale Narrows section of the LAR, an approximately 6.2-mile-long, soft bottom section of the LAR between Griffith Park and downtown Los Angeles. This reach of the LAR is a water of the U.S. Thus, discharges of fill are subject to Sections 401 and 404 of the Clean Water Act.

The major sources of water at Glendale Narrows are storm flows and nuisance flows from urban areas that enter the LAR through major storm outfalls and treated wastewater from the Tillman Water Reclamation Plant and the Glendale Water Reclamation Plant. The flow through this reach is perennial due to the discharge of approximately 30 million gallons per day from the two water reclamation plants.

Water from the water reclamation plants is treated to Title 22 (California Code of Regulations) Reclaimed Water standards. The water receives full secondary treatment, including the addition of a coagulant and chlorination to kill pathogens. Treated water is then de-chlorinated before discharged into the LAR. Water discharged from the treatment plants is suitable for industrial, and landscape uses. However, nuisance flows and storm flows that enter the LAR through major storm outfalls convey pollutants associated with the urban environment into the water column: fecal coliform bacteria, pesticides; metals (e.g., copper, chromium, lead); nutrients (nitrogenous and phosphorus compounds); petroleum based oils and solves; and trash. Thus, the project reach is listed as an impaired water pursuant to Section 303(d) of the Clean Water Act.

#### **Significance Threshold**

Based on the existing conditions described above, impacts would be considered significant if the alternative:

- Caused a long term violation of state water quality standards or otherwise substantially degrades water quality

## **Environmental Consequences**

### **No Action Alternative**

Under the No Action Alternative, accumulated material from the Proposed Project Area would not be removed. There would be no temporary discharge of fill material such as k-rails or earthen access ramps within the channel. Earthmoving equipment would not temporarily operate within the channel invert atop the sandbar.

### **Proposed Alternative**

Proposed Alternative entails excavation of accumulated sand, cobbles, and boulders from the LAR. Material to be excavated includes approximately [insert number] cy of contaminated soils.

Prior to the sediment removal work, work areas would be isolated from flows with water diversion structures such as k-rails or rubber dams. Movement of vehicles across earthen substrate during the placement and removal of dewatering structures would temporarily elevate turbidity in the water column. When fully isolated from surrounding flows, work within the LAR would not increase turbidity. Likewise, a temporary increase in turbidity is expected during storm flows when unconsolidated fine sediment would enter the water column. However, the amount of fine sediment within the construction footprint is limited. Approximately 2% of the accumulated material is composed of fine sediment. Furthermore, any increase in turbidity would not be notable since storm flows are highly turbid. Subsequent to storm flows, exposed soils are expected to reconsolidate due to the absorption of water.

Removal of the accumulated materials would require approximately three excavators, two loaders, and dump trucks to work within the channel invert. Use of construction vehicles increases the potential for accidental release of fuels, solvents, or other petroleum-based contaminants. However, the possibility of contaminants coming into contact with the water column is unlikely since the work area would be fully isolated from surrounding flows.

Construction would not entail discharge of permanent fill material within waters of the U.S. However, temporary discharge of dewatering structures such as k-rails or rubber dams would be required. Both types of dewatering structures would be chemically inert and would not leach contaminants into the water column. In addition, two earthen access ramps would be placed within Waters of the U.S. during construction. Potential for turbidity from the construction and use of these ramps is unlikely since the work area would be fully isolated from surrounding flows. All temporary fill would be removed upon completion of construction.

The temporary discharge of dewatering structures and access ramps are subject to Sections 401 and 404 of the Clean Water Act. The temporary discharge of dewatering structures is 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. The Section 401 WQC is found in Appendix B.

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 waters of the U.S. by applying all applicable substantive legal requirements. 33 C.F.R. § 336.1. The discharge of dewatering structures qualifies for Nationwide Permit (NWP) 33 (Temporary Construction, Access and Dewatering) based on compliance with the specific terms of NWP 33, the applicable Regional Conditions, and the applicable General Conditions of the Nationwide Permit Program. The NWP 33 compliance document is found in Appendix C.

#### **4.0 CUMULATIVE IMPACTS**

**Past:** The Glendale Narrows reach of the LAR is an approximately 6-mile long, soft-bottom, trapezoidal channel that traverses Elysian Valley. Subsequent to its construction in 1939 and the completion of the Los Angeles County Drainage Area project in 1959, the adjacent area became highly urbanized with residential, commercial, and industrial land uses currently abutting the structure.

**Present:** Originally devoid of vegetation subsequent to completion of construction, the Corps periodically trimmed and removed vegetation from the project reach until the 1980s. The Corps also undertook limited trimming operations during the latter half of the 1990s. No large-scale vegetation maintenance activities took place within the project reach thereafter due to funding limitations. As a result, Glendale Narrows currently supports approximately 63 acres of vegetation composed of native and non-native trees, shrubs, and tall grasses, making it a regional destination for recreational enthusiasts and birdwatchers. The vegetation and sediment in the river has also diminished flood conveyance capacity within the Glendale Narrows reach.

The increase of urbanization in areas adjacent to Glendale Narrows has also affected water quality. Glendale Narrows is a Clean Water Act section 303(d)-listed water body. Wet weather and dry weather flows from numerous storm water outfalls have resulted in high concentrations of nutrients including nitrate, nitrite, ammonia, and total phosphate within the discharged effluent. High concentrations of bacteria are associated with nuisance flow discharged from the storm water outfalls.

Development has also changed the flow regime of Glendale Narrows from ephemeral to perennial. The 6.2-mile-long reach is now a perennial water body that conveys approximately 30 million gallons per day discharged from the Tillman Water Reclamation Plant, and the Glendale Water Reclamation Plant.

The Corps has conducted maintenance activities required for maintenance of designed flows and capacities within the LAR. Maintenance activities include removal of trash and debris, graffiti abatement, removal of sediment from concrete structures and associated vegetation, removal of non-native vegetation, and like-for-like structural repairs. In addition to operating and maintaining the engineered structures of the LAR within the project reach, the Corps has also issued permits pursuant to Section 404 of the Clean Water Act for discharges of dredged or fill material within waters of the U.S., and Section 408 of the Rivers and Harbors Act for modifications to federally-constructed structures.

**Future:** Existing maintenance practices within the LAR are expected to remain unchanged for the foreseeable future. In addition to operating and maintaining the engineered structures of the LAR within the project reach, the Corps also issues permits pursuant to Section 404 of the Clean Water Act for discharges of dredged or fill material within waters of the U.S., and Section 408 of the Rivers and Harbors Act for modifications to federally-constructed structures. Continued receipt of Section 404 and Section 408 permits for the construction, modifications, and maintenance of existing and future infrastructure such as bridges and utilities are anticipated. These non-Corps projects may require issuances of Section 404 and Section 408 permits. With few exceptions, most projects are expected to be small in scope and limited to like-for-like repairs.

Furthermore, there is an increasing awareness of the recreational, economic and environmental importance of the LAR to the social milieu of the city. To that end, the city of Los Angeles may implement projects designed to create access and facilitate interaction with the LAR per the Los Angeles River Master Revitalization Plan. Revitalization of the LAR is intended to spur renewed investments including job growth and economic development. Furthermore, with the exception of the 2.4-mile-long reach transecting the Sepulveda Basin, Glendale Narrows is the only substantial segment of the LAR resembling a natural river system. Therefore, many of the projects identified in the Revitalization Plan including parks, recreation trails, and pedestrian bridges are focused on the Glendale Narrows area. Furthermore, the Corps and the city of Los Angeles have completed a feasibility study evaluating restoration of the riparian ecosystem within Glendale Narrows and restoring more natural hydrologic and hydraulic processes. Full implementation of projects identified in the Los Angeles River Master Revitalization Plan and the Los Angeles River Ecosystem Restoration Study could result in beneficial but significant cumulative impacts. An Environmental Impact Statement/Environmental Impact Report (EIS/EIR) was prepared for the Master Revitalization Plan. Likewise, the city of Los Angeles and the Corps jointly prepared an EIS/EIR for the LAR Ecosystem Restoration Project.

With a renewed public interest in the revitalized LAR, additional projects are likely. Future projects by non-Federal entities in the next five years within Reach 4D include the Atwater Pedestrian-Equestrian Bridge. Construction would temporarily affect water

quality. However, land uses are expected to remain urban. Thus, the existing water quality impairments are unlikely to change substantially.

The proposed action would primarily result in temporary impacts to air quality, noise, and traffic. However, these impacts would be minor relative to existing impacts associated with the urban environment surrounding the proposed project area. Furthermore, the affected environmental resources would return to pre-project conditions upon completion of work. As such, implementation of the proposed action would result in incremental impacts to the environment, but would not result in significant environmental impacts.

## **5.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS**

### **Clean Air Act**

The Proposed Action would not violate any Federal air quality standards, exceed the U.S. EPA's general conformity applicability rates, or hinder the attainment of air quality objectives in the local air basin.

### **Clean Water Act**

The Proposed Action would result in discharge of dewatering structures such as k-rails or rubber dams would be required. In addition, two earthen access ramps would be placed within Waters of the U.S. during construction.

The temporary discharge of dewatering structures and access ramps are subject to Sections 401 and 404 of the Clean Water Act. The temporary discharge of dewatering structures is 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. The Section 401 WQC is found in Appendix B.

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 waters of the U.S. by applying all applicable substantive legal requirements. 33 C.F.R. § 336.1. The discharge of dewatering structures qualifies for Nationwide Permit (NWP) 33 (Temporary Construction, Access and Dewatering) based on compliance with the specific terms of NWP 33, the applicable Regional Conditions, and the applicable General Conditions of the Nationwide Permit Program. The NWP 33 compliance document is found in Appendix C.

### **Endangered Species Act**

The Proposed Action would be in compliance with the Endangered Species Act as it will not affect federally-listed species (least Bell's vireo, Santa Ana sucker and California gnatcatcher) or designated critical habitat for these species. Proposed vegetation clearing will mostly target removal of non-native vegetation whenever possible. In areas



where marginal habitat for the least Bell's vireo exists within the Proposed Project Area, key areas of mature, contiguous riparian habitat will be avoided during vegetation removal activities and all other vegetation will be removed outside of the breeding season. Potential impacts nesting habitat would thereby be avoided

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

The Proposed Action would not result in long-term environmental impacts that would result in disproportionately high and adverse impacts to minority and low income communities.

### **Executive Order 13112, Invasive Species**

The Proposed Project Area will be monitored and managed after vegetation/sediment removal operations cease to minimize re-infestation by invasive plant species.

### **Migratory Bird Treaty Act (MBTA)**

The MBTA prohibits persons, except as permitted by regulations, "to pursue, take, or kill...any migratory bird, or any part, nest, or egg of any such bird, included in the terms of conventions" with certain other countries (16 USC 703). Direct and indirect acts are prohibited under this definition, although harassment and habitat modification are not included unless they result in the direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Removal of vegetation for the proposed project would occur outside of the migratory bird nesting season. Therefore the project remains in compliance with this Act.

### **National Environmental Policy Act**

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

### **National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) 18**

The proposed project would be located in a highly disturbed area and would occur entirely within imported soils. The undertaking does not have the potential to cause effects or alter the current setting or integrity of any known historic properties within the APE (36 CFR 800.4(a)(1)). This satisfies Corps responsibilities to take into account the effects of this undertaking on historic properties and the Corps has no further obligations under Section 106 of the NHPA (36 CFR 800.3(a)(1)). See Appendix D.

## 6.0 LIST OF PREPARERS

Travis Bone  
Archaeologist  
Environmental Resources Branch

Chris Solek, Ph.D.  
Biologist  
Environmental Resources Branch

Kenneth Wong  
Environmental Coordinator  
Environmental Resources Branch

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