PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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VERDUGO CHANNEL SUB-DRAIN COVER REPLACEMENT PROJECT

The U.S. Army Corps of Engineers, Los Angeles District (Corps) has completed a draft Environmental Assessment (EA) for the Verdugo Channel Sub-drain Cover Replacement Project pursuant to the National Environmental Policy Act. The project entails the in situ repair of damaged sub-drains covers within Verdugo Channel between Verdugo Debris Basin and the confluence of the Verdugo Channel and Los Angeles River.

The Corps is authorized under PL 84-99, Flood Control and Coastal Emergencies Act to restore storm-damaged flood risk minimization infrastructure to pre-damage status.

The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; and other interested parties on the attached draft EA.

Comments will be accepted from August 15, 2013 to September 15, 2013.

Comments should be mailed to:

U.S. Army Corps of Engineers
Kenneth Wong, Planning Division
915 Wilshire Blvd., 14th Floor
Los Angeles, CA 90017

Alternatively, comments can be sent electronically to: kenneth.wong@usace.army.mil

US Army Corps of Engineers®

VERDUGO CHANNEL

SUB-DRAIN COVER REPAIR PROJECT

LOS ANGELES, CALIFORNIA

DRAFT ENVIRONMENTAL ASSESSMENT

Prepared by

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Los Angeles District
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August 2013

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1.0 INTRODUCTION

This EA has been prepared by the U.S. Army Corps of Engineers (Corps) for the repair of subdrains within the Verdugo Channel, Los Angeles County, California in compliance with the National Environmental Policy Act (NEPA) (42 USC 4321 et seq.) and the Council on Environmental Quality (CEQ) regulations published at 42 CFR part 1500.

This EA has been prepared based on conceptual alternatives. Thus, evaluations of environmental impacts are preliminary, and subject to adjustments pending additional studies and detailed designs.

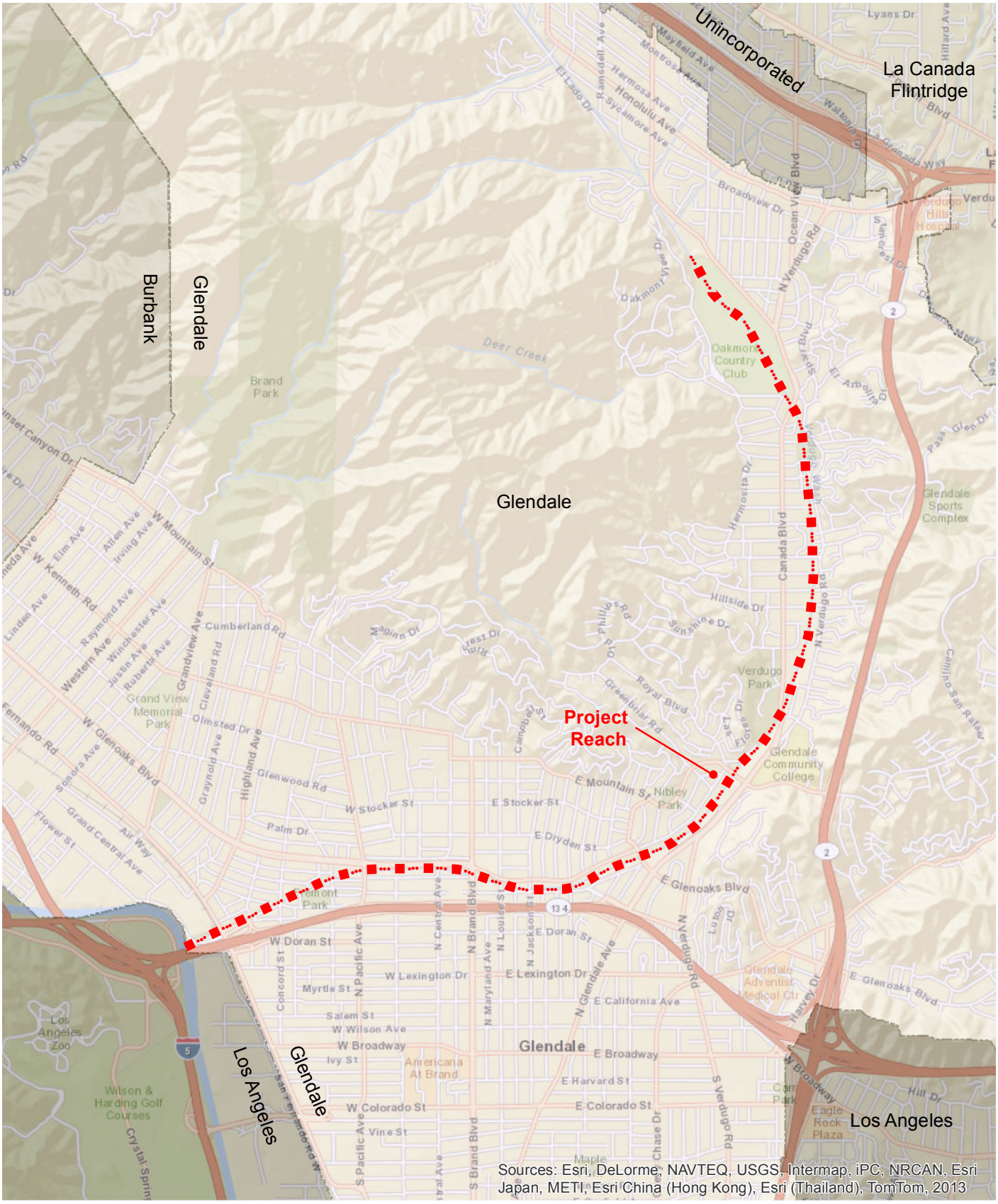
1.1 Location

The Verdugo Channel is located in Glendale, Los Angeles County, California, about 5 miles north of downtown Los Angeles, California. The project is located in Verdugo Channel starting at the Verdugo Debris Basin at the upstream end, terminating at the confluence of the Verdugo Channel and Los Angeles River.

1.2 Background

Verdugo Wash is an approximately 9 mile-long, rectangular concrete channel constructed by the Corps in 1938. Verdugo Wash begins in a small canyon in the San Gabriel Mountains that collects the discharges of several canyons on the southeastern slopes of the San Gabriel Mountains. The drainage areas of these tributary canyons are mountainous terrain, covered with grasses and dense brush. The materials forming the floor and slopes of the canyons erode readily; therefore the drainage area has a relatively high debris potential. High-intensity rainfall in combination with steep gradients of the canyon slopes results in debris-laden flood waters discharging from the mouth of the canyon. Discharges for these canyons are collected in debris basins located at the mouths of these tributary canyons and are then conveyed to the Verdugo Wash via concrete channels. The confluences of the tributary channels with the Verdugo Wash are all located upstream of the Verdugo Debris Basin.

High flows in the Verdugo Channel were produced by unusually high rainfall during the period of November 13, 2009, to February 11, 2010. These high flows in the channel damaged more than half of the sub-drain outlet covers located between the Verdugo Debris Basin and confluence with the Los Angeles River. In addition to the high flows, there was a greatly increased debris load caused from the recent wildfire within the tributary watershed. This increased debris load over-topped the upstream debris basin allowing large amounts of debris into the segment of the Verdugo Channel downstream of the Verdugo Debris Basin and contributing to the damages. The damages were primarily limited to the sub-drain covers.



U.S. Army Corps of Engineers
Los Angeles District

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U.S. Army Corps of Engineers, 2013

Verdugo Wash Subdrain Cover Repair Project

Vicinity Map

1.3 Authority

The Corps is authorized under PL 84-99, Flood Control and Coastal Emergencies Act to restore storm-damaged flood risk minimization infrastructure to pre-damage status. All flood infrastructure considered eligible for PL 84-99 rehabilitation assistance have to be in the Rehabilitation and Inspection Program prior to the flood event. Acceptable operation and maintenance by the public levee sponsor are verified by levee inspections conducted by the Corps on a regular basis.

1.4 Purpose and Need

Statement of Need

The debris from high rainfall between November 13, 2009, to February 11, 2010 damaged 18 of the 36 sub-drain outlets as well as right and left bank damage as well as right bank erosion. Inefficiency of the channel sub-drain system could result in the excessive pressure build up against the channel bottom and walls. The excessive pressure could affect the integrity of the channel. The project reach transects an urban landscape and is immediately adjacent to residential and commercial properties. Thus, maintaining the integrity of Verdugo Channel is critical to protecting life and property.

Statement of Purpose

The purpose of the proposed project is to restore the structural integrity of Verdugo Channel to that which existed prior to the 2009 storm season.

2.0 ALTERNATIVES

No Federal Action Alternative

The No Federal Action alternative would result in no federal repair of Verdugo Channel. In the absence of federal assistance, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. The scope of work would likely be similar to Alternative 1 due to the reduced cost associated with the alternative.

Alternative 1: In Situ Repair

Under Alternative 1, the Corps would conduct in situ repair of approximately 18 of the 36 sub-drains along Verdugo Channel and resurface the concrete to repair minor storm related damages. This alternative will restore the channel to its pre-storm damage conditions. The existing metal sub-drain covers would be unbolted from concrete anchors. Approximately one cubic yard (cy) of concrete around each damaged sub-drain cover would be excavated to expose the sub-drain pipe. Damaged anchors, flap gates, and pipe elbow would be removed and new ones installed.

Alternative 2: Relocate Sub-drains

Alternative 2 involves complete removal of each sub-drain outlet within the channel invert and placing the outlets within the channel sidewalls (as is typical with new channel construction). The sidewalls and invert would be saw cut and opened to allow for the relocation of the sub-drains system.

Alternative Analysis

The National Environmental Policy Act requires an evaluation of reasonable alternatives including the No Federal Action Alternative where there are potential resource conflicts.[1]

Because of the limited or the absence of sensitive environmental resources from the project area, the alternatives would entail similar environmental impacts. Alternative 2 would result in a longer duration of noise impact. However, Alternative 2 would entail additional logistical challenges since relocation of the sub-drains from the invert to channel sidewalls would require structural modifications. This alternative would require removal of large quantities of invert and wall reinforcement at critical structural locations. Both alternatives meet the purpose and need and are logistically feasible. Therefore, both alternatives are carried forward for analysis.

Table 1: Comparison of Alternatives

	Alt. 1- In Situ Repair	Alt. 2 - Relocate
Meets Purpose and Need?	Yes	Yes
Significant Environmental Impacts?	No	No
Logistical challenges?	No	Yes
Construction Cost	$75,708	$203,768

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 LAND USE

Affected Environment:

The 5.5 mile-long project reach is a rectangular concrete channel adjacent to single and multi-family residences, schools, sports parks, and commercial buildings. Approximately 2 miles of the channel (river left) are adjacent to commercial uses. Approximately 1 mile of the channel (river left and river right combined) are adjacent to recreational uses, such as golf courses, tennis courts, parks, and basketball courts.

[1] 40 CFR 1502.14

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

- Permanent changes to the existing land uses.

Environmental Consequences:

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

In situ repair of the sub-drains and damaged portions of Verdugo Channel would be limited to the channel itself. No staging areas outside of the channel will be required since replacement components are small and can be easily transported to the project site. Furthermore, no earthmoving equipment is required. Therefore, there would be no impacts to land use.

Alternative 2: Relocate Sub-drains

Work area for the relocation of sub-drains in Verdugo Channel would be limited to the channel itself. Temporary staging and storage areas outside of the channel may be required. Staging areas would likely be located within a portion of parking areas at local parks or recreational areas. The areas would be restored and returned to their original uses upon completion of construction. Therefore, there would be no impacts to land use.

3.2 SOILS AND SUBSTRATE

Affected Environment:

The Verdugo Channel is a rectangular concrete channel. The underlying substrate is most likely compacted alluvium.

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

- Long term loss of substrate from the project reach due to erosion.

Environmental Consequences:

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would entail a like-for-like replacement of damaged sub-drain components. Each sub-drain would require excavation of approximately one cy of concrete. Concrete would be re-poured upon completion of repairs. Therefore, there would be no erosion of substrate from the project area. Therefore, Alternative 1 would not impact substrate.

Alternative 2: Relocate Sub-drain

Alternative 2 would require excavation of approximately 20 linear feet of concrete of the channel invert at each sub-drain location, and modification to the channel walls. Concrete would be re-poured upon completion of repairs. Therefore, there would be no erosion of substrate from the project area. Therefore, Alternative 2 would not impact substrate.

3.3 WATER QUALITY

Affected Environment:

Verdugo Channel is a 9.4-mile-long tributary of the Los Angeles River. It is the main drainage serving the city of Glendale. Verdugo Channel transects an urban landscape for most of its length draining storm runoff during the storm season and nuisance runoff during the dry season. As a result, Verdugo Channel is listed as impaired under Section 303(d) of the CWA for algae, high coliform count and trash.

Significance Threshold

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

- Creates long-term violations of RWQCB water quality standards or objectives, or causes impairments of beneficial uses of water.

Environmental Consequences:

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Under Alternative 1, a medium flatbed truck mounted with an air compressor hitched with a portable concrete mixer (1 cy capacity) trailer would be driven onto the concrete channel through an existing access ramp at the terminus of San Gabriel Avenue. The work would be done in the dry season when the wash is conveying nuisance flows confined to the low-flow channel. Thus, the work area, located outside of the low-flow channel, would be dry. A concrete saw and jack hammer would be used to excavate 2-foot-by-3-foot rectangular area. The existing concrete anchors would be replaced, and the excavated area would be backfilled with concrete. The work area, located outside of the low-flow channel, would be dry, and the repair work would not come into contact with flowing water. All materials used during construction will be protected from entering the low-flow channel. All materials, other than native soils, removed during construction repairs will be properly disposed of at an appropriate off-site location. Therefore, there would be no impacts to water quality.

Alternative 2: Relocate Sub-drain

Alternative 2 would require excavation of approximately 20 linear feet of concrete of the channel invert at each sub-drain location, and modification to the channel walls. Concrete would be re-poured upon completion of repairs. The work would be done in the dry season when the wash is conveying nuisance flows confined to the low-flow channel. The work area, located outside of the low-flow channel, would be dry, and the repair work would not come into contact with flowing water. All materials used during construction will be protected from entering the low-flow channel. All materials, other than native soils, removed during construction repairs will be properly disposed of at an appropriate off-site location. Therefore, there would be no impacts to water quality.

3.4 AIR QUALITY

Affected Environment:

Climate

The climate of the project area is typical of the Mediterranean climate of coastal California, which is characterized by cool, dry summers and mild, wet winters. The hottest month is August with an average maximum temperature of 74˚F and December is the coldest month with an average minimum temperature of 64˚F. Precipitation averages 10.69 inches annually, with February as the wettest month.

Air Quality

The project area is within the South Coast Air Basin which includes Los Angeles, Orange, and portions of Riverside, and San Bernardino Counties. Air quality within the project area is governed by the South Coast Air Quality Management District (AQMD). The attainment status of the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) are shown below:

Table 2: 2011 South Coast Air Basin Attainment Status

Pollutant	National AAQS	California AAQS
Carbon Monoxide (CO)	Attainment	Attainment
Ozone (O3) (1-hour standard)	Nonattainment	Nonattainment
Ozone (O3) (8-hour standard)	Nonattainment	Nonattainment
Nitrogen Dioxide (NO2)	Attainment	Nonattainment
Sulfur Dioxide (SO2)	Attainment	Attainment
Particulate Matter (PM10)	Nonattainment	Nonattainment
Particulate (PM2.5)	Nonattainment	Nonattainment
Lead	Attainment	Attainment
Source: http://www.arb.ca.gov/desig/adm/adm.htm		

Significance Threshold

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

- Exceeds any AQMD daily construction significance thresholds.
- Exceeds General Conformity Rule de minimis thresholds.

Environmental Consequences:

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Under Alternative 1, a medium flatbed truck mounted with an air compressor hitched with a portable concrete mixer (1 cy capacity) trailer would be driven onto the concrete channel through an existing access ramp at the terminus of San Gabriel Avenue. The on-road emissions would entail emissions from the flatbed truck. Off-road emissions would entail emissions from the concrete mixer, compressor, or concrete saw.

- On-road emissions were calculated using the AQMD's 2013 On-Road Emissions Factors in combination with the following assumptions:
    - 1 medium-duty truck
    - 50 road miles per day

- Off-road emissions were calculated using the AQMD's 2013 Off-Road Emissions Factors in combination with the following assumptions:
    - One 250 hp compressor operating 4 hours per day
    - One 50 hp concrete mixer operating 4 hours per day
    - One 120 hp concrete saw operating 4 hours per day

Daily estimated emissions based on the assumptions are provided below and compared to the AQMD's daily significance threshold.

Table 3: Comparison of Daily Estimated Emissions to AQMD Daily Thresholds

Pollutant	On Road Emissions (lb/day)	Off Road Emissions (lb/day)	Total Emissions (lb/day)	AQMD Threshold (lb/day)
CO	1	1	2	550
NOx	1	11	12	55
ROG	0	2	2	55
Sox	0	0	0	150
PM10	0	1	1	150
PM2.5	0	1	1	55

Annual estimated emissions based on the assumptions are provided below and compared to the Clean Air Act (CCA) General Conformity de minimis thresholds.

Table 4: Comparison of Annual Estimate Emissions to CAA de minimis Thresholds

Pollutant	Estimated Emissions (tons/year)	CAA de minimis Thresholds (tons/year)
VOC	2	10
NO2	2	10
PM10	5	70
PM2.5	2	100
CO	18	100

Based on the above, air quality impacts associated with Alternative 1 would not exceed daily AQMD emissions thresholds or the CAA annual General Conformity thresholds. Therefore, Alternative 1 would entail less than significant impacts to air quality.

Alternative 2: Relocate Sub-drain

Alternative 2 would entails air quality impacts similar to impacts characterized for Alternative 1. Therefore, Alternative 2 would entail less than significant impacts to air quality.

3.5 NOISE

Affected Environment:

Verdugo Channel transects a built-out urban environment. Therefore, the ambient noise level at the project site is primarily characterized by noise levels associated with the urban environment. In particular, the project site is parallel to North Verdugo Road. The rectangular concrete channel at this site is immediately adjacent to single family residences, schools, a sports park, and commercial buildings. According to the noise element of the city of Glendale's general plan, the 24-hour ambient noise level near the project site is approximately 70dB. The work would take place in the channel invert approximately 25 feet below ground level.

Significance Threshold

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

- Violates the city of Glendale's noise ordinance.
- Permanently elevates noise levels above 70dBA within the vicinity of the project.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Under the Proposed Alternative, a medium flatbed truck mounted with an air compressor hitched with a portable concrete mixer (1 cy capacity) trailer would be driven onto the concrete channel through an existing access ramp at the terminus of San Gabriel Avenue. A pneumatic jack hammer (approximately 100 dB at 3 ft.) and concrete saw (approximately 113 dB at source) would be used to excavate each 2'x3' rectangular area. In addition, diesel engines (approximately 90 dB at 5 ft.) would be in use. The work area would be located 25 to 75 feet away from private residences.

Because the work would be located within the channel invert, the approximately 25-foot-high walls of the rectangular concrete channel would attenuate noise impacts by functioning as a sound barrier. Furthermore, spherically radiating point sources for noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of the distance. Therefore, the distance of 25-75 feet would further attenuate noise impacts. Furthermore, the work would entail the intermittent use of pneumatic jackhammers and concrete saws followed by the installation of anchors and pouring of concrete. Therefore, the use of pneumatic jackhammers and concrete saws will not be required continuously for an 8-hour duration. Moreover, the nature of the proposed work requires the relocation of equipment from one sub-drain cover to another. Therefore, the work would function as a mobile noise source, not remaining within a particular area for more than one day. Based on the above, the proposed work could exceed the ambient noise levels by more than 10 dB near sensitive receptors, but would not do so for more than eight hours continuously. Furthermore, noise will be attenuated by the vertical concrete walls, and distance from receptors. Based on the above, the proposed alternative would entail less than significant noise impacts.

Alternative 2: Relocate Sub-drain

Alternative 2 would entails noise impacts similar to impacts characterized for Alternative 1. Therefore, Alternative 2 would entail less than significant noise impacts.

3.6 BIOLOGICAL RESOURCES

Affected Environment:

Verdugo Channel is a concrete lined rectangular channel that transects a fully built out urban environment. Reconnaissance level surveys indicate that the project work areas did not contain suitable habitat characteristics or support endangered, threatened, or species of special concern. Critical habitat for threatened or endangered species does not occur in the project or adjacent areas.

Significance Threshold

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

- Substantially reduces the population of an endangered or threatened species.
- Permanently and or substantially affects designated critical habitat.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would require in-channel work within a concrete-lined rectangular channel. The channel will be accessed using existing entrances, and will not require a staging area, grading, work in the water, or removal of vegetation. The project would not change habitat components used by federally or state listed threatened and endangered species, or species of special concern. No threatened, endangered, or species of special concern are anticipated in the project area. Therefore, there would be no impacts to these species. Based on the above, Alternative 1 would not impact biological resources.

Alternative 2: Relocate Sub-drain

Alternative 2 would entail impacts similar to those characterized for Alternative 1 with the exception of staging areas. Temporary staging and storage areas outside of the channel may be required. Staging areas would likely be located within a portion of parking areas at local parks or recreational areas. Since Alternative 2 would utilize existing parking lots, it would not impact biological resources.

3.7 CULTURAL RESOURCES

Affected Environment:

No cultural resources listed on or eligible for the National Register of Historic Places are present within the project area. The area of potential effects (APE) is within the concrete-lined Verdugo Channel from Wabasso Way downstream to Estelle Ave. There is no part of the APE that is soil.

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

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

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would require in-channel work within a concrete-lined rectangular channel. The channel will be accessed using existing entrances, and will not require a staging area, or grading. The existing metal sub-drain covers would be unbolted from concrete anchors. Approximately one cubic yard (cy) of concrete around each damaged sub-drain cover would be excavated to expose the sub-drain pipe. The excavated area would be backfilled with concrete. Based on the above, Alternative 1 would not impact cultural resources.

Alternative 2: Relocate Sub-drain

Alternative 2 would entail impacts similar to those characterized for Alternative 1 with the exception of staging areas. Temporary staging and storage areas outside of the channel may be required. Staging areas would likely be located within a portion of parking areas at local parks or recreational areas avoiding the need to grade or prepare the site. Based on the above, Alternative 2 would not impact cultural resources.

3.8 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Affected Environment:

The project area is located in the city of Glendale, Los Angeles County, California. The demographic for Los Angeles County and the city of Glendale are shown below. In general, the city's median household income is equivalent to Los Angeles County. The city has a lower percentage of persons below poverty and substantially lower percentage of Black and Hispanic/Latino population compared to Los Angeles County.

Table 5: Socioeconomic Demographics for Los Angeles County and City of Glendale

Parameters	Los Angeles County	City of Glendale
Total population	9,818,605	191,719
White	71.8%	71.1%
Black	9.3%	1.3%
Hispanic/Latino	48%	17.4%
Asian	14.2%	16.4%
Median Household Income	$55,476	$54,677
Persons below poverty	15.7%	13%

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

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

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

The construction work is limited in scope and duration, and would temporarily provide a limited number of construction jobs. The repair of an existing flood control channel would not increase development in the area or affect the socioeconomic profile of the project area. The scope of construction would not alter regional economic trends. Furthermore, the city of Glendale has less low income or minority populations than Los Angeles County. Therefore, it is unlikely that

environmental impacts associated with this alternative would be disproportionately borne by low income or minority populations. As a result, there would be less than significant impacts on socioeconomics and environmental justice.

Alternative 2: Relocate Sub-drain

Alternative 2 would entails noise impacts similar to impacts characterized for Alternative 1. Therefore, Alternative 2 would entail less than significant impacts on socioeconomics and environmental justice.

3.9 RECREATION

Affected Environment

Verdugo Channel is an approximately 90-foot-wide, rectangular concrete flood control channel. Verdugo Channel does not support recreational activities nor are recreational facilities located within the wash. However, the channel does abut many recreation facilities, including golf courses, baseball fields, tennis courts, and basketball courts.

Significance Threshold

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

- Permanently limits the use of and access of a recreational area or facility.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would not impede access to or affect the use of recreational facilities. The proposed work would not require the establishment of staging areas. Existing access ramps would be used. The work would entail the use of pneumatic jackhammers as well as diesel powered engines. Therefore, noise impacts could temporarily affect the use of adjacent recreational facilities. However, noise levels will return to baseline levels upon completion of work. Therefore, the proposed alternative would not entail significant impacts to recreation.

Alternative 2: Relocate Sub-drain

Alternative 2 would entail impacts similar to those characterized for Alternative 1 with the exception of staging areas. Temporary staging and storage areas outside of the channel may be required. Staging areas would likely be located within a portion of parking areas at local parks or recreational areas. Therefore, Alternative 2 could temporarily limit parking access during construction. However, the temporary staging areas will be returned to their pre-project uses upon completion of construction. Based on above, Alternative 2 would result in less than significant impacts to recreation.

3.10 AESTHETICS

Affected Environment

Verdugo Channel is an approximately 90-foot-wide, rectangular concrete flood control channel. The channel is approximately 25-foot-deep and abuts a built-out urban environment composed of private residences, schools, baseball fields, and commercial properties.

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

- A substantial modification of the scenic vista.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

The scenic vista associated with Verdugo Channel is that of a rectangular concrete channel. Under Alternative 1, a medium flatbed truck mounted with an air compressor hitched with a portable concrete mixer (1 cy capacity) trailer would be driven onto the concrete channel through an existing access ramp at the terminus of San Gabriel Avenue. Approximately one cy of concrete would be removed from each area. After installation of new concrete anchors for the sub-drain covers, concrete would be poured and the work area would be resurfaced to match the channel invert. Based on the above, there would be no impact to aesthetics.

Alternative 2: Relocate Sub-drain

Alternative 2 would entail impacts similar to those characterized for Alternative 1 with the exception of staging areas. Temporary staging and storage areas outside of the channel may be required. Staging areas would likely be located within a portion of parking areas at local parks or recreational areas, temporarily modifying the visual character of the parking areas. However, the temporary staging areas will be returned to their pre-project uses upon completion of construction. Based on above, Alternative 2 would result in less than significant impacts to aesthetics.

3.11 TRAFFIC

Affected Environment

The project area would likely be accessed using State Route 2 (Glendale Freeway), Verdugo Road, and North Verdugo Road. The average daily trips (ADTs) for the primary arteries are indicated below.

Artery	Average Daily Trips
State Route 2 (Glendale Freeway)	112,000
Verdugo Road	34,400
North Verdugo Road	10,200

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

- A substantial increase in ADTs of main arteries used to access the site.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would require a medium flatbed truck. One or two additional support vehicles may occasionally be required. Therefore, no more than three vehicles will be required under

Alternative 1. Relative to the ADTs, the temporary addition of three vehicles to the nearby major arteries would entail de minimis impacts to traffic.

Alternative 2: Relocate Sub-drain

Alternative 2 would entails noise impacts similar to impacts characterized for Alternative 1. Therefore, Alternative 2 would entail less than significant impacts on socioeconomics and environmental justice.

3.12 PUBLIC HEALTH AND SAFETY

Affected Environment

The 5.5 mile-long project reach is a rectangular concrete channel adjacent to single and multi-family residences, schools, sports parks, and commercial buildings. Approximately 2 miles of the channel (river left) are adjacent to commercial uses. Approximately 1 mile of the channel (river left and river right combined) are adjacent to recreational uses, such as golf courses, tennis courts, parks, and basketball courts.
[

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

- Substantially increasing the risk of flooding above the designed flood risk minimization level.

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would entail repairs to the sub-drain system, and damaged sections of channel. Repairing these elements would minimize the potential for excessive pressure build up against the channel bottom and walls, and maintain the integrity of the channel. As a result, Alternative 1 would decrease the risk of flooding.

Alternative 2: Relocate Sub-drain

Alternative 2 would entails impacts similar to impacts characterized for Alternative 1. Therefore, Alternative 2 would not increase the risk of flooding.

3.13 HAZARDOUS AND TOXIC WASTES

Affected Environment

There are no known hazardous waste sites in the vicinity of the project area. The 5.5 mile-long project reach is rectangular concrete channel adjacent to single and multi- family residences, schools, sports parks, and commercial buildings. Approximately 2 miles of the channel (river left) are adjacent to commercial uses. Approximately 1 mile of the channel (river left and river right combined) are adjacent to recreational uses, such as golf courses, tennis courts, parks, and basketball courts.

Significance Threshold

Based on the existing conditions discussed above, impacts would be considered significant if the alternative results in:

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

Environmental Consequences

No Federal Action Alternative

The No Federal Action alternative would result in no contribution of federal funds towards the repair of Verdugo Channel. In the absence of federal funds, the Los Angeles County Department of Public Works would likely fund and undertake the repairs. Environmental impacts would likely be similar to Alternative 1.

Alternative 1: In Situ Repair

Alternative 1 would entail a like-for-like replacement of damaged sub-drain components. Each sub-drain would require excavation of approximately one cy of concrete. Concrete would be re-poured upon completion of repairs. The components are chemically inert and would result in long-term exposure of humans, wildlife, wildlife habitat, and the general environment to hazardous materials

Alternative 2: Relocate Sub-drain

Alternative 2 would entail impacts similar to those characterized for Alternative 1.

3.14 CUMULATIVE IMPACTS

Past

Verdugo Channel was constructed in 1937 and the responsibility for operations and maintenance was transferred to the Los Angeles County Department of Public Works in the same year. As development increased, it is likely that the channel was modified for bridge crossings, utility crossings, and construction of storm drain outfalls. The Los Angeles County Department of Public Works most likely undertook like-for-like repairs as needed to maintain the channel. There is no record of major modifications channel subsequent to construction.

Present

The channel is currently surrounded by a developed urban landscape consisting of commercial and residential uses in adjacent areas. Current maintenance practices entail repair of damaged sections of the channel as needed. Repair and maintenance of bridges, utility lines, and storm drains may require occasional and limited work with the channel.

Future

Since the landscape is fully developed, with residential and commercial uses abutting the channel, it is unlikely that future projects would entail major modifications of the channel. The existing maintenance practices are expected to remain.

Based on the limited or the absence of sensitive environmental resources such as wildlife and habitat from the channel, the proposed project would entail less than significant impacts individually and cumulatively.

4.0 CONSULTATION AND COORDINATION WITH OTHER AGENCIES

Based on the limited or the absence of sensitive environmental resources on site and the limited environmental impacts associated with the project, consultation with resource agencies such as the US Fish and Wildlife Service or the State Historic Preservation Office was not warranted. Upon receipt of full authorization to undertake the proposed federal action, the Corps would coordinate with and obtain permits from the following agencies:

- Los Angeles Regional Water Quality Control Board for a Water Quality Certification pursuant to Section 401 of the Clean Water Act. Although the discharge of fill associated with the proposed project is exempt from Section 404 of the Clean Water Act (See Appendix A), the discharge may remain subject to Section 401 of the Clean Water Act which regulates discharges into waters of the United States.

5.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS

- **Clean Air Act of 1972, as amended, 42 U.S.C. 7401, et seq.** *Full compliance.* The project is not expected to violate any Federal air quality standards, exceed the U.S. EPA's general conformity de minimis threshold, or hinder the attainment of air quality objectives in the local air basin.

- **Clean Water Act of 1972, as amended, 33 U.S.C. 1251, et seq.** *Full compliance.* The project would entail a discharge fill into waters of the United States. The discharge qualifies for exemption from Section 404 of the Clean Water Act pursuant to exemptions provided at Section 404(f)(1)(B). Attachment A documents compliance with Section 404(f)(1)(B).

- **Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et seq.** *Full compliance.* The project would not affect any species or habitats protected under the Endangered Species Act.

- **National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321, et seq**. *Full compliance*. This EA has evaluated a reasonable range of alternatives and associated environmental impacts..

- **National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq**. *Full Compliance.* The project area was extremely disturbed by the construction of the concrete channel. No cultural resources listed on or eligible for the National Register of Historic Places are present within the permit area/area of potential effects. Project activities will occur in previously disturbed areas. The environment and setting for proposed activities is disturbed and man-made to such a degree that no significant cultural resources could remain. Therefore, in accordance with 36 CFR 800.3(a)(1), the proposed project does not have the potential to cause effects.

- **Executive Order 11988: Floodplain Management.** *Full Compliance.* Executive Order 11988, signed by President Jimmy Carter on 24 May 1977, and published in 42 FR 26351. Its purpose is to "…avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." The project entails repair of an existing channel. There is no practical alternative to on-site repair. Furthermore, the repair work would not support further development of the adjacent floodplain since the floodplain is already developed.

- **Executive Order 12898, Environmental Justice Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994.** *Full Compliance.* Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations) was signed on February 11, 1994. This order directs Federal agencies to make achieving environmental justice part of its mission by identifying and addressing disproportionately high and

adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the U.S. Based on the evaluation above, the project would not result in disproportionate environmental impacts on low income and minority populations.

6.0 CONCLUSION

This EA has evaluated a reasonable range of alternatives and associated environmental impacts. The Corps determines that the proposed project would result in less than significant environmental impacts. Therefore, an EA appears to be sufficient for compliance with NEPA. A Finding of No Significant Impact will be prepared upon full authorization to undertake the proposed federal action.

7.0 LIST OF PREPARERS

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Appendix A

Clean Water Act
Section 404

Site Name: Verdugo Channel

Project Description: Work would entail replacement of 20 damaged sub-drain covers (each approximately 2'x3' in size) located throughout a one-mile reach of Verdugo Channel, a fully lined concrete channel. The sub-drain covers are located between stations 212+29 and 126+12 on the concrete invert outside of the low-flow channel. The existing metal sub-drain covers would be unbolted from concrete anchors. Approximately 1 cubic yard (yd.^{3}) of concrete around each damaged sub-drain cover would be excavated to remove existing anchors. New concrete anchors would then be installed, and each excavated area would be backfilled with approximately 1 yd.^{3} of concrete. New metal drain covers would be secured to the new anchors. Work would not require grading of habitat for access and staging areas. The work area would be accessed through an existing access ramp at the terminus of San Gabriel Avenue.

Section 404 Clean Water Act Analysis:

The proposed work would result in the discharge of approximately 20 yd.^{3} of fill within Verdugo Channel, permanently impacting approximately 120 ft.^{2} of Verdugo Channel, a water of the United States.

Section 404(f)(1)(B) of the CWA exempts from Section 404 permit requirements discharges of fill undertaken "for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures." The Environmental Protection Agency (Region IX) and the U.S. Army Corps of Engineers (South Pacific Division) has promulgated guidance dated December 4, 1998 concerning the application of the Section 404(f)(1)(B) exemption.

In order to qualify for a 404(f)(1)(B) exemption, the discharge of fill must:

- Entail maintenance (including emergency reconstruction) of serviceable structures to the original fill design;
- Not contain any toxic pollutants governed by Section 307 CWA;
- Not convert an area of water of the U.S. to a new use, and either impairs the flow or circulation of waters, or reduces the reach of the waters (a.k.a., "the recapture clause")

The proposed work qualifies for the 404(f)(1)(B) exemption as detailed below:

- Entail maintenance (including emergency reconstruction) of serviceable structures to the original fill design;

The proposed work entails maintenance of an existing, serviceable concrete channel. With respect to the discharge of fill, approximately 1 yd.³ of concrete around each damaged sub-drain cover would be excavated to remove existing anchors. New concrete anchors would then be installed, and each excavated area would be backfilled with approximately 1 yd.³ of concrete. The poured concrete would be flush with the channel invert, maintaining the original fill design.

- Not contain any toxic pollutants governed by Section 307 CWA;

  The material proposed for discharge is concrete. The material does not contain toxic pollutants governed by Section 307 CWA.

- Not convert an area of water of the U.S. to a new use, and either impair the flow or circulation of waters, or reduce the reach of the waters (a.k.a., "the recapture clause").

  The proposed work entails maintenance of an existing flood control channel. The work would not convert the waterway to a new use. Because the fill would be discharged to match the original fill design, the fill would not impair flow or circulation, or reduce the reach of waters.

Conclusion:

Based on the above analysis, the discharge associated with the proposed work meets all 404(f)(1)(B) exemption criteria. Therefore, the proposed work is exempt from Section 404 of the Clean Water Act.

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