

**APPENDIX A-1**  
*Channel and Ditch FMPs*





# Facility Maintenance Plan

## Green Valley Creek - Pomerado Facility Group

### Segment Names (Facility numbers):

Pomerado 1 (1-04-030)

Pomerado 2 (1-04-033)

# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Dieguito River
<b>Watershed (Number)</b>	San Dieguito River (1)
<b>Hydrologic Subarea</b>	905.22
<b>Drainage Name (Number)</b>	Green Valley Creek (04)
<b>Facility Group Name</b>	Green Valley Creek - Pomerado
<b>Segment Name (Facility Number)</b>	Pomerado 1 (1-04-030) Pomerado 2 (1-04-033)
<b>Substrate</b>	Pomerado 1 / Concrete Pomerado 2 / Concrete
<b>Location</b>	About 1200 feet northwest of Pomerado Road and 800 feet south of Rancho Bernardo Road
<b>MMP Map No(s).</b>	2, 3
<b>Facility Inspection No.</b>	2, 3
<b>Other Former Names</b>	Rancho Bernardo



Figure 1: Vicinity Map of Green Valley Creek - Pomerado Facility Group

# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### San Dieguito River Watershed Management Area; Hydrologic Subarea 905.22

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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#### Green Valley Creek - Pomerado

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Municipal and Domestic Supply (MUN)</li> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Industrial Process Supply (PROC)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Chloride, Manganese, Pentachlorophenol (PCP), Pesticides, Sulfates, Total Nitrogen as N

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#### Lake Hodges (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Municipal and Domestic Supply (MUN)</li> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Industrial Process Supply (PROC)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Cold Freshwater Habitat (COLD)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Color, Manganese, Mercury, Nitrogen, Phosphorus, Turbidity, pH

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# Green Valley Creek - Pomerado Facility Group

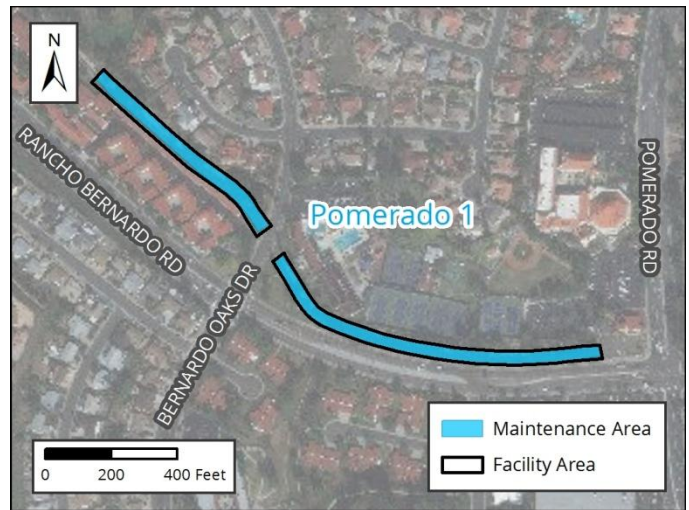
## Facility Maintenance Plan

### Pomerado Segment 1 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Green Valley Creek, upstream of Lake Hodges
<b>Tributaries (listed from downstream to upstream)</b>	Green Valley Creek
<b>Facility Length</b>	Approximately 1,884 feet
<b>Top-of-Bank Width</b>	Approximately 16–43 feet
<b>Bottom Facility Width</b>	Approximately 10–21 feet
<b>Facility Depth</b>	Approximately 7–11 feet
<b>Adjacent Land Use</b>	Commercial, Parks, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	10556-D
<b>Coastal Zone</b>	No



**Figure 1: May 2017, looking downstream at double box culvert**



**Figure 2: Vicinity Map of Pomerado Segment 1**





# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed wetland (concrete-lined)</li> <li>• Riparian forest (southern riparian forest; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	P-37-000580
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	Prehistoric scatter

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Health and Safety/Hazards (HAZ)</b>	MM-HR-1
EP-HAZ-1	MM-HR-2
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Solid Waste (SW)</b>	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Green Valley Creek - Pomerado
<b>Segment Name</b>	Pomerado 1
<b>Facility No.</b>	1-04-030
<b>Facility Location</b>	From outlet of culvert beneath the intersection of Pomerado Road and Rancho Bernardo Road to 700 feet downstream of outlet of culvert beneath Bernardo Oaks Drive
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 198 to Station 888, and Station 987 to Station 2082. Remove accumulated sediment and debris in the culvert from Station 888 to Station 987.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 10556-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Green Valley Creek - Pomerado Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,884 feet Top width: 16–43 feet Bottom width: 10–21 feet Depth: 7–11 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,785 feet; Culvert: 99 feet Width: 16–43 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Crane, boom truck, Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, fuel-powered hand tools, sweeper, mower
<b>Schedule</b>	Up to approximately 61 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<p>Palm Removal Methodology:</p> <ol style="list-style-type: none"> <li>1. Man in boom truck or use of crane cuts section of the palm tree from top to bottom.</li> <li>2. Crane lowers cut material in the channel.</li> <li>3. Bobcat/skid-steer in channel pushes cut material to loading point.</li> <li>4. Gradall/excavator scoops material from channel at loading area.</li> <li>5. Gradall/excavator dumps material on stockpile area or directly into dump truck.</li> <li>6. If stockpiled, gradall/excavator scoops material from stockpile to dump truck.</li> </ol> <p>Routine Maintenance:</p> <ol style="list-style-type: none"> <li>1. Two Bobcat/skid-steers enter or are lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steers push material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>

## Green Valley Creek - Pomerado Facility Group Facility Maintenance Plan

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<b>Biology</b>	Suitable habitat for sensitive species <sup>3</sup> : 1. Within maintenance area: No 2. Adjacent to maintenance area: No Activities to be conducted under authority of a qualified biologist: 1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15
<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	None

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<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





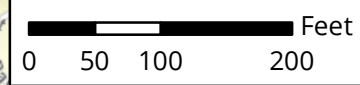
198 (Start of Maintenance)

Pomerado 1

Culvert (Station 888 to 987)

2082 (End of Maintenance)

Culvert (Station 2082 to 2510)



Culvert	Access/Loading/Staging /Stockpiling Area
Station	Maintenance Area
Facility Area	



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Green Valley Creek - Pomerado**  
**Segment Name: Pomerado 1**  
**Facility No: 1-04-030**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Green Valley Creek – Pomerado Facility Group

## Facility Maintenance Plan

### Pomerado Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Green Valley Creek, immediately upstream of Green Valley Creek (Pomerado Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 2,972 feet
<b>Top-of-Bank Width</b>	Approximately 17-50 feet
<b>Bottom Facility Width</b>	Approximately 7-17 feet
<b>Facility Depth</b>	Approximately 6-14 feet
<b>Adjacent Land Use</b>	Commercial, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	13623-D, 10784-D, & 10566-D
<b>Coastal Zone</b>	No



Figure 1: May 2017, looking upstream at upstream end of segment

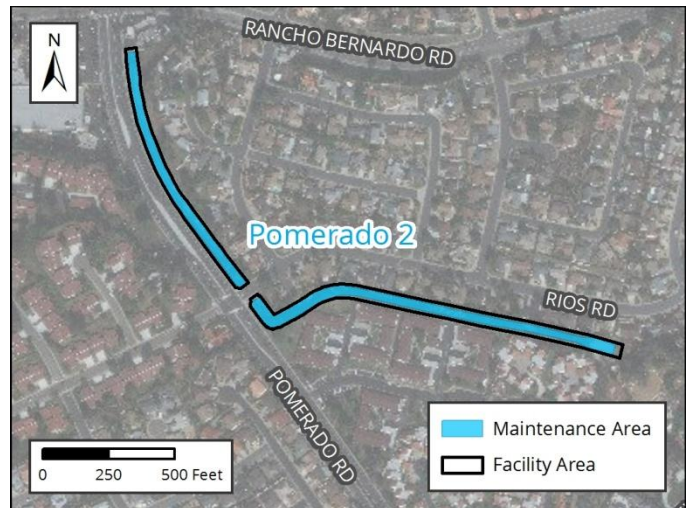


Figure 2: Vicinity Map of Pomerado Segment 2



# Green Valley Creek – Pomerado Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |  |
|----------------------------|--|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed wetland (concrete-lined)</li> <li>• Freshwater marsh (concrete-lined)</li> <li>• Ornamental plantings (concrete-lined)</li> </ul> |
|----------------------------|--|

- |                            |   |
|----------------------------|---|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> </ul> |
|----------------------------|---|

<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present adjacent to the facility for nesting and roosting.
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<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
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<b>Mitigation Within Facility</b>	None
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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	P-37-000581
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	Prehistoric scatter

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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; c. 1963 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

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# Green Valley Creek – Pomerado Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Solid Waste (SW)</b>	MM-HR-1
EP-SW-2	MM-HR-2
EP-SW-3	<b>Noise (NOI)</b>
EP-SW-4	MM-NOI-1
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Green Valley Creek – Pomerado Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Green Valley Creek - Pomerado
<b>Segment Name</b>	Pomerado 2
<b>Facility No.</b>	1-04-033
<b>Facility Location</b>	From edge of jurisdictional boundary to inlet of culvert beneath the intersection of Pomerado Road and Rancho Bernardo Road
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 2510 to Station 3510, and Station 3581 to Station 5037. Remove accumulated sediment and debris in the culvert from Station 2082 to Station 2510, and Station 3510 to Station 3581.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Built?</b>	Yes; 13623-D, 10784-D, & 10566-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Green Valley Creek – Pomerado Facility Group Facility Maintenance Plan

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<b>Facility Dimensions (Approximate)</b>	Length: 2,972 feet Top width: 17-50 feet Bottom width: 7-17 feet Depth: 6-14 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 2,456 feet; Culvert: 499 feet Width: 17-50 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Downstream Reach: Crane, boom truck, Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper Upstream Reach: Crane, boom truck, Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump truck,
<b>Schedule</b>	Up to approximately 32 working days
<b>Maintenance Crew</b>	Approximately 8-12 people

## Green Valley Creek – Pomerado Facility Group

### Facility Maintenance Plan

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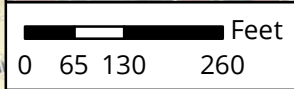
<p><b>Routine Maintenance Procedures</b></p>	<p>Palm Removal Methodology:</p> <ol style="list-style-type: none"> <li>1. Man in boom truck or use of crane cuts section of the palm tree from top to bottom.</li> <li>2. Crane lowers cut material in the channel.</li> <li>3. Bobcat/skid-steer in channel pushes cut material to loading point.</li> <li>4. Gradall/excavator scoops material from channel at loading area.</li> <li>5. Gradall/excavator dumps material on stockpile area or directly into dump truck.</li> <li>6. If stockpiled, gradall/excavator scoops material from stockpile to dump truck.</li> </ol> <p>Downstream reach:</p> <ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol> <p>Upstream reach:</p> <ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and loader enter or are lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator and loader at access/loading area</li> <li>3. Gradall/excavator and loader scoop material from channel and load dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<p><b>Traffic Control</b></p>	<p>Yes; coordinate with the City of San Diego and the City of Poway</p>

## Green Valley Creek – Pomerado Facility Group Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
City Boundary	Maintenance Area
Facility Area	



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Green Valley Creek - Pomerado**  
**Segment Name: Pomerado 2**  
**Facility No: 1-04-033**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.





# Facility Maintenance Plan

## Los Peñasquitos Lagoon - Industrial Facility Group

### Segment Names (Facility numbers):

Industrial 1 (2-01-120)

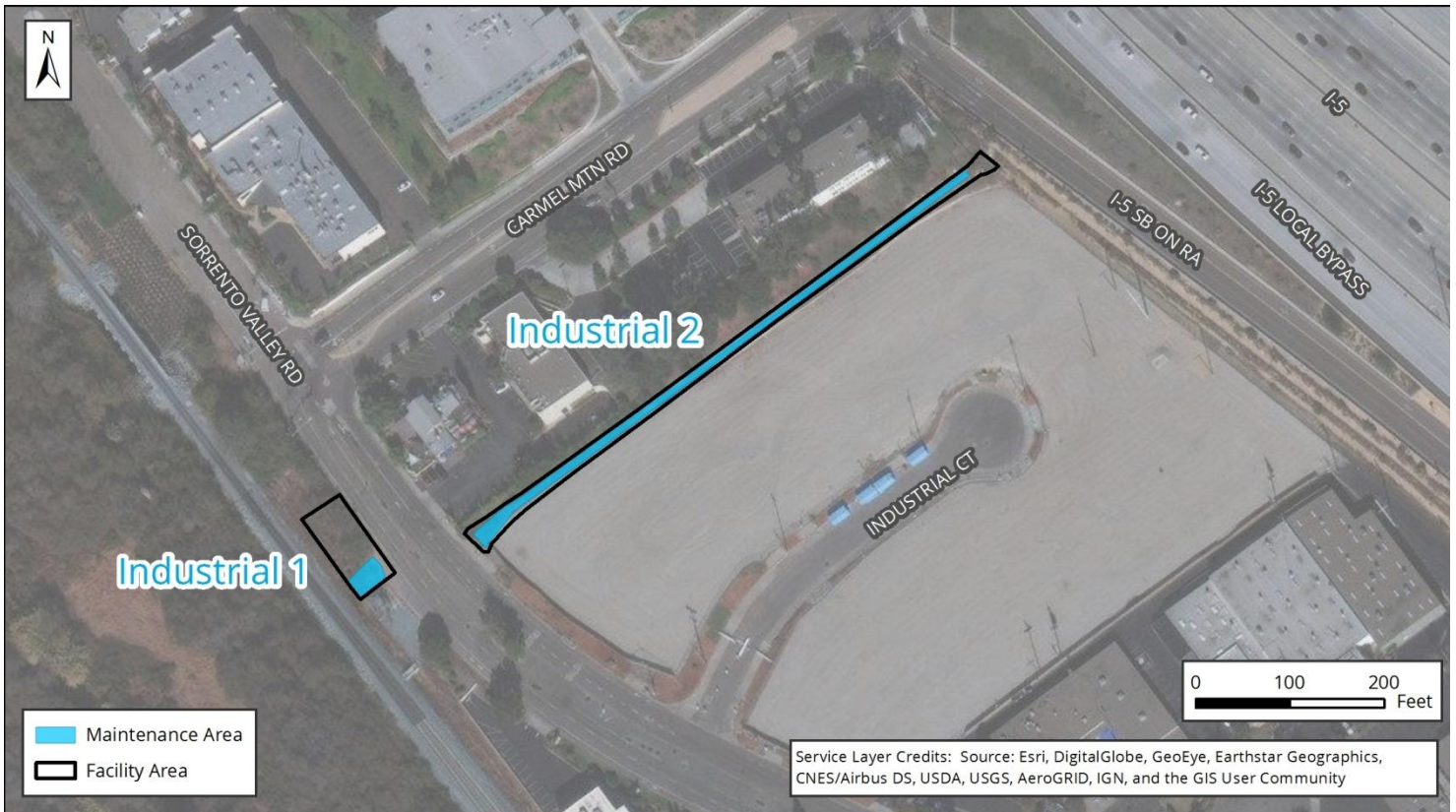
Industrial 2 (2-01-122)

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Los Peñasquitos Unnamed Tributary (01)
<b>Facility Group Name</b>	Los Peñasquitos Lagoon - Industrial
<b>Segment Name (Facility Number)</b>	Industrial 1 (2-01-120) Industrial 2 (2-01-122)
<b>Substrate</b>	Industrial 1 / Earthen Industrial 2 / Concrete
<b>Location</b>	About 150 feet west of the Interstate 5 (I-5) Local Bypass and 150 feet south of Carmel Mountain Road
<b>MMP Map No(s).</b>	6a
<b>Facility Inspection No.</b>	6a
<b>Other Former Names</b>	3000 Industrial Court Channel



**Figure 1: Vicinity Map of Los Peñasquitos Lagoon - Industrial Facility Group**



# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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#### Los Peñasquitos Lagoon - Industrial

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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#### Los Peñasquitos Lagoon (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> <li>• Spawning, Reproduction, and/or Early Development (SPWN)</li> <li>• Estuarine (EST)</li> <li>• Marine (MAR)</li> <li>• Migration of Aquatic Organisms (MIGR)</li> <li>• Shellfish Harvesting (SHELL)</li> </ul>
<b>303(d) listed Impairments</b>	Sedimentation/Siltation, Toxicity

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# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Industrial Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Lower reach of Los Peñasquitos unnamed tributary, immediately upstream of Los Peñasquitos Creek
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 285 feet
<b>Top-of-Bank Width</b>	Approximately 50 feet
<b>Bottom Facility Width</b>	Approximately 35 feet
<b>Facility Depth</b>	Approximately 4-5 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Open Space, Transportation
<b>As-Built Drawing Number</b>	10338-D
<b>Coastal Zone</b>	CST-PMT, N-APP-1



Figure 1: June 2018, looking downstream from the outlet headwall

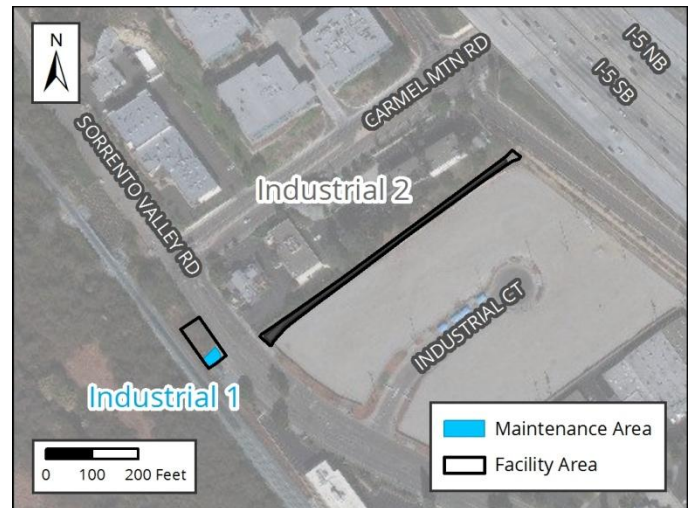


Figure 2: Vicinity Map of Industrial Segment 1

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2007: Unknown 2007 and 2009: Culvert inlet cleared 2010: Emergency excavation of sediment and vegetation January 2011 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** Emergency CDP No. 784126

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 43 (Non-Notification, No USACE File # Assigned)

**401** RWQCB 401 Cert No. 10C-052 (one-time maintenance authorization)

**1602** LSA Emergency Notification No. 1600-2010-0193R5

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<b>Mitigation for Previous Impacts</b>	None required due to maintenance conducted
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# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity** In March 2010, the vegetation was dense at the downstream end. Sediment deposition was estimated to be 1.2 feet. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	143	182	213	252	277	295

#### Hydraulic Capacity of Facility

**Current Capacity** 277 cfs

**Proposed MWMP Maintained Capacity** 295 cfs

**Maintenance Recommendation** Remove accumulated sediment, debris and vegetation for a 25-foot length at the box culvert outlet (Station 595 to Station 620) within San Diego Metropolitan Transit Development Board (SDMTDB) right-of-way

**In-Stream Post-Maintenance Erosion Control Recommendation** None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Riparian forest (southern willow forest)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Disturbed land</li> <li>Freshwater marsh</li> <li>Ornamental plantings</li> <li>Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	Due to its adjacency to the Multi Habitat Planning Area (MHPA) and presence of limited suitable habitat, the channel has potential to support sensitive wildlife and bird species (e.g., least Bell's vireo, southern willow flycatcher, Ridgway's rail)
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The western section of the channel is located directly east of the nearest MHPA boundary (approximately 15 feet).
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1963 earthen channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-5
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Land Use (LU)</b>	MM-CR-1
EP-LU-1	MM-CR-2
<b>Paleontological Resources (PAL)</b>	MM-CR-3
EP-PAL-1	MM-CR-4
<b>Solid Waste (SW)</b>	MM-HR-1
EP-SW-2	MM-HR-2
EP-SW-3	<b>Noise (NOI)</b>
EP-SW-4	MM-NOI-1
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Los Peñasquitos Lagoon - Industrial
<b>Segment Name</b>	Industrial 1
<b>Facility No.</b>	2-01-120
<b>Facility Location</b>	From outlet of culvert 200 feet southeast of the intersection of Carmel Mountain Road and Sorrento Valley Road to underneath the SDMTDB bridge
<b>Coastal Zone</b>	CST-PMT, N-APP-1
<b>MWMP Proposed Maintenance</b>	Maintenance of channel, per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris and vegetation for a 25-foot length at the box culvert outlet (Station 595 to Station 620) within San Diego Metropolitan Transit Development Board (SDMTDB) right-of-way
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 10338-D
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 285 feet Top width: 50 feet Bottom width: 35 feet Depth: 4-5 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Los Peñasquitos Lagoon - Industrial Facility Group Facility Maintenance Plan

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<b>Authorized Facility Maintenance Area</b>	Length: Channel: 25 feet Width: 39 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<p>Outside of Channel:</p> <ol style="list-style-type: none"> <li>1. Gradall/excavator moves along channel bank within access/loading area</li> <li>2. Gradall/excavator scoops material from channel and loads dump truck</li> <li>3. Dump truck hauls material to legal disposal site</li> </ol> <p>Inside of Channel:</p> <ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> <li>5. Vactor used to power wash channel in accordance with Flow Management section (below) and Water Pollution Control Plan</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego and the North County Transit District



# Los Peñasquitos Lagoon - Industrial Facility Group

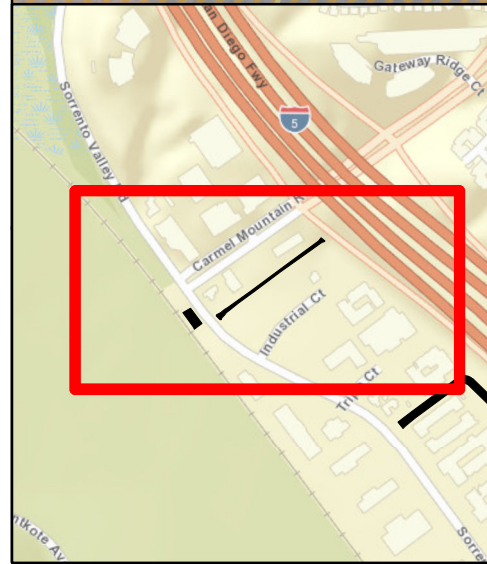
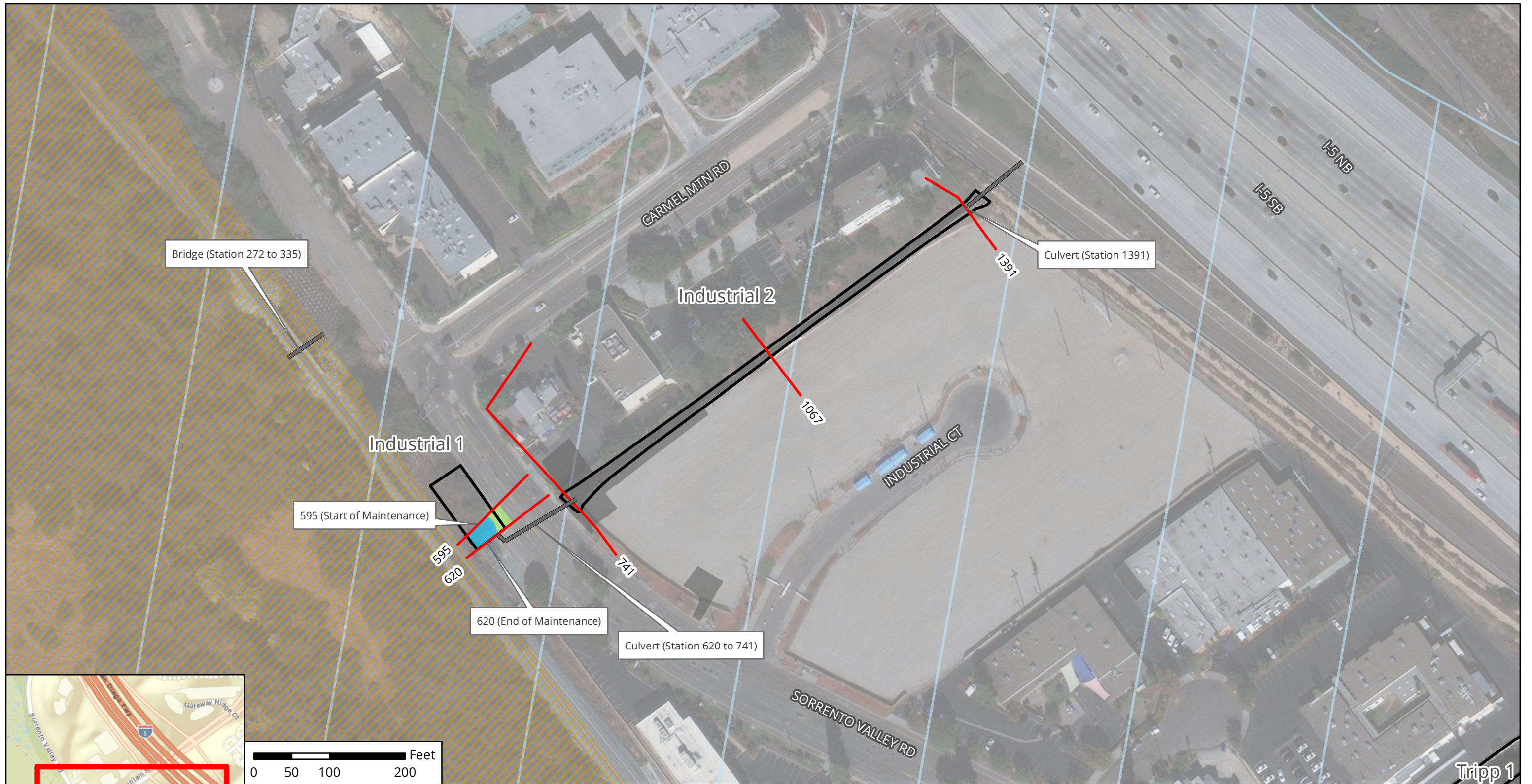
## Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors







0 50 100 200 Feet

Bridge/Culvert	Multi-Habitat Planning Area
Station	Adjacent Facility Activity Areas
Facility Area	Access/Loading/Staging /Stockpiling Area
Coastal Zone	Maintenance Area

**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

N

The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Lagoon - Industrial**  
**Segment Name: Industrial 1**  
**Facility No: 2-01-120**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Industrial Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bed and banks
<b>Location Within Watershed</b>	Lower reach of Los Peñasquitos unnamed tributary, immediately upstream of Los Peñasquitos Creek
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 786 feet
<b>Top-of-Bank Width</b>	Approximately 9–20 feet
<b>Bottom Facility Width</b>	Approximately 2–13 feet
<b>Facility Depth</b>	Approximately 2–5 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Open Space, Transportation
<b>As-Built Drawing Number</b>	10338-D
<b>Coastal Zone</b>	CST-PMT, N-APP-1



Figure 1: October 2009, looking downstream at concrete segment

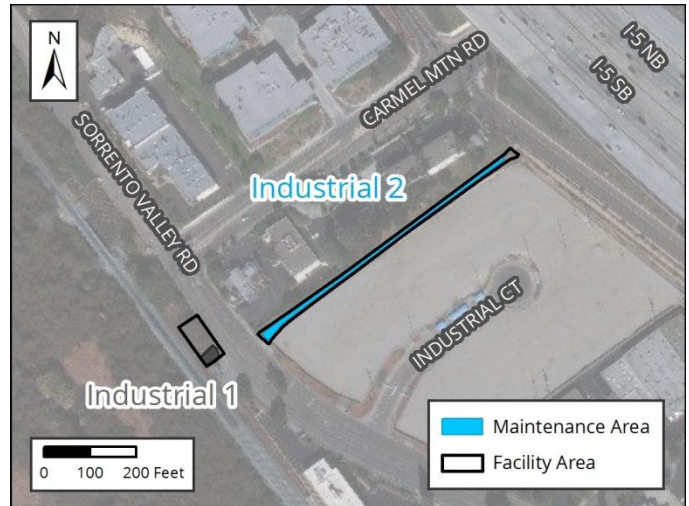


Figure 2: Vicinity Map of Industrial Segment 2

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2007: Unknown 2007 and 2009: Culvert inlet cleared 2010: Emergency excavation of sediment and vegetation January 2011 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** Emergency CDP No. 784126

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 43 (Non-Notification, No USACE File # Assigned)

**401** RWQCB 401 Cert No. 10C-052 (one-time maintenance authorization)

**1602** LSA Emergency Notification No. 1600-2010-0193R5

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<b>Mitigation for Previous Impacts</b>	El Cuervo del Sur HMMP (0.004 acre) Los Peñasquitos WEP (0.012 acre)
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# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

#### Current Conditions Affecting Facility Capacity

In March 2010, the vegetation varied from mostly clean channel to dense vegetation at the downstream end. Sediment deposition was estimated to be 1.2 feet. The concrete lining in the upstream portions of the channel were noted to be in poor condition. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	143	182	213	252	277	295

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	143 cfs
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<b>Proposed MWMP Maintained Capacity</b>	143 cfs
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<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris and vegetation from Station 741 to Station 1391. Remove accumulated sediment and debris in culvert from Station 620 to Station 741. Maintain/repair existing debris fence as needed.
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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
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<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Freshwater marsh (concrete-lined)</li> <li>• Riparian forest (southern willow forest)</li> <li>• Riparian forest (southern willow forest; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Freshwater marsh</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	Due to its adjacency to the Multi Habitat Planning Area (MHPA) and presence of limited suitable habitat, the channel has potential to support sensitive wildlife and bird species (e.g., least Bell's vireo, southern willow flycatcher, Ridgway's rail)
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The western section of the channel is located directly east of the nearest MHPA boundary (approximately 15 feet).
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1963 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-CR-1
<b>Land Use (LU)</b>	MM-CR-2
EP-LU-1	MM-CR-3
<b>Solid Waste (SW)</b>	MM-CR-4
EP-SW-2	<b>Noise (NOI)</b>
EP-SW-3	MM-NOI-1
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Los Peñasquitos Lagoon - Industrial
<b>Segment Name</b>	Industrial 2
<b>Facility No.</b>	2-01-122
<b>Facility Location</b>	From 150 feet west of Interstate 5 (I-5) Local Bypass to inlet of culvert 200 feet southeast of the intersection of Carmel Mountain Road and Sorrento Valley Road
<b>Coastal Zone</b>	CST-PMT, N-APP-1
<b>MWMP Proposed Maintenance</b>	Maintenance of channel, per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris and vegetation from Station 741 to Station 1391. Remove accumulated sediment and debris in culvert from Station 620 to Station 741. Maintain/repair existing debris fence as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 10338-D
<b>Substrate Detail</b>	Concrete bed and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Lagoon - Industrial Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 786 feet Top width: 9–20 feet Bottom width: 2–13 feet Depth: 2–5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 650 feet; Culvert: 121 feet Width: 9–20 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> <li>5. Vactor used to power wash channel in accordance with Flow Management section (below) and Water Pollution Control Plan</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego and the North County Transit District
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

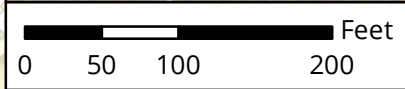
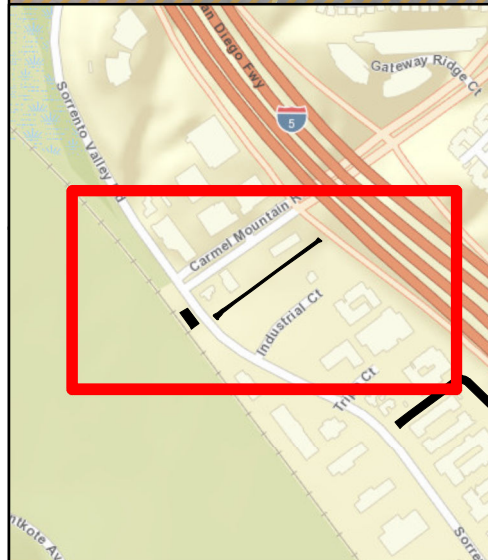
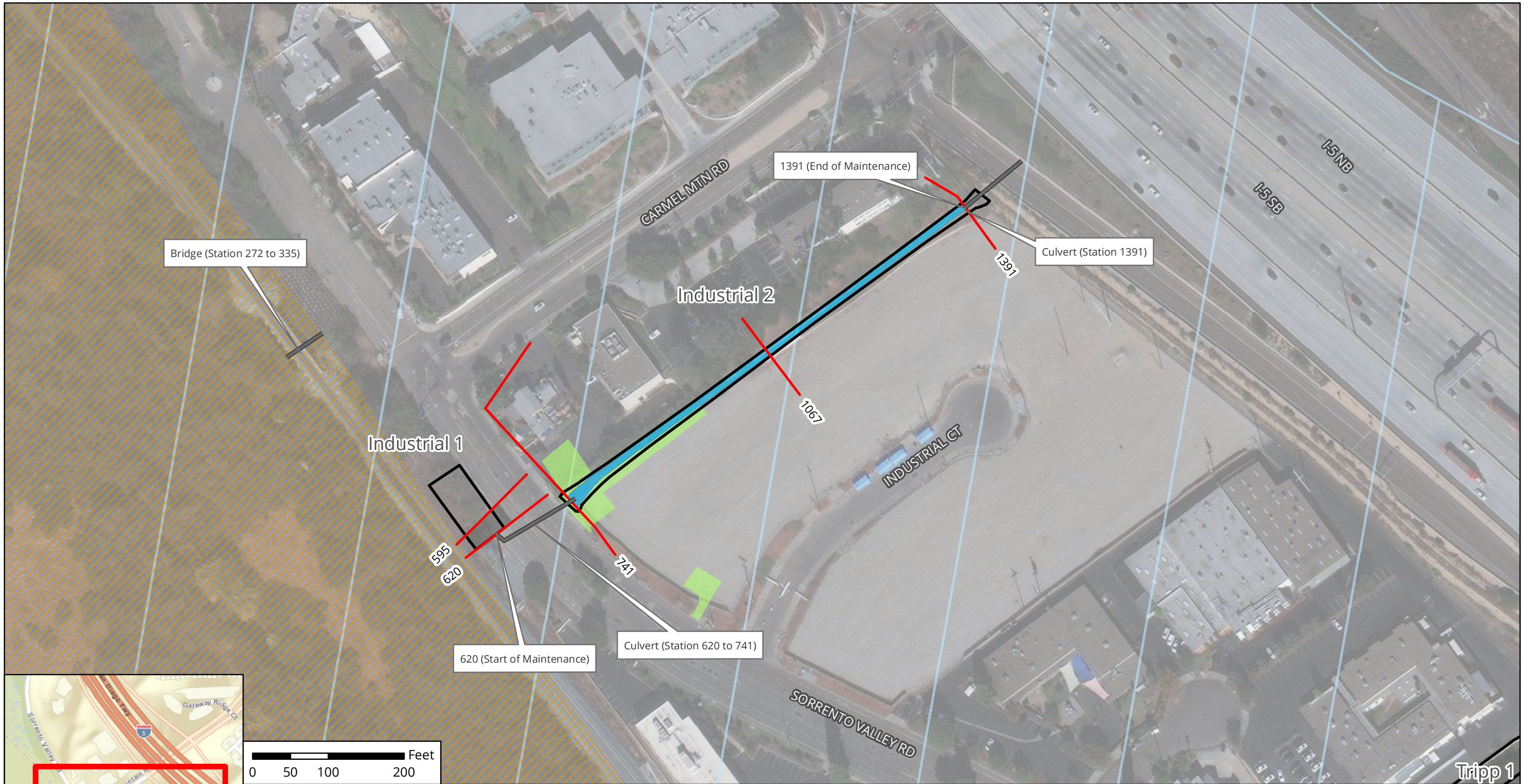
## Los Peñasquitos Lagoon - Industrial Facility Group

### Facility Maintenance Plan

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<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	None





Bridge/Culvert	Multi-Habitat Planning Area
Station	Adjacent Facility Activity Area
Facility Area	Access/Loading/Staging/Stockpiling Area
Coastal Zone	Maintenance Area

**Notes:**  
 1. Concrete repair may occur within this facility area.  
 2. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 3. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Lagoon - Industrial**  
**Segment Name: Industrial 2**  
**Facility No: 2-01-122**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Tripp 1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# Los Peñasquitos Lagoon - Tripp Facility Group

Segment Name (Facility number):

Tripp 1 (2-01-130)



# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Los Peñasquitos Unnamed Tributary (01)
<b>Facility Group Name</b>	Los Peñasquitos Lagoon - Tripp
<b>Segment Name (Facility Number)</b>	Tripp 1 (2-01-130)
<b>Substrate</b>	Tripp 1 / Concrete
<b>Location</b>	West of Interstate 5 (I-5), east of Sorrento Valley Road, and about 200 feet south of Tripp Court
<b>MMP Map No(s).</b>	6
<b>Facility Inspection No.</b>	6
<b>Other Former Names</b>	Tripp Court Channel, 11689 Sorrento Valley Rd



Figure 1: Vicinity Map of Los Peñasquitos Lagoon - Tripp Facility Group



# Los Peñasquitos Lagoon - Tripp Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Los Peñasquitos Lagoon - Tripp

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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### Los Peñasquitos Lagoon (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> <li>• Spawning, Reproduction, and/or Early Development (SPWN)</li> <li>• Estaurine (EST)</li> <li>• Marine (MAR)</li> <li>• Migration of Aquatic Organisms (MIGR)</li> <li>• Shellfish Harvesting (SHELL)</li> </ul>
<b>303(d) listed Impairments</b>	Sedimentation/Siltation, Toxicity

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# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

### Tripp Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Los Peñasquitos unnamed tributary, immediately upstream of Los Peñasquitos Creek
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,835 feet
<b>Top-of-Bank Width</b>	Approximately 22 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 2-5 feet
<b>Adjacent Land Use</b>	Industrial, Transportation
<b>As-Built Drawing Number</b>	11935-D, 11935-6-D, 11935-7-D, & 11530-1-D
<b>Coastal Zone</b>	N-APP-1



Figure 1: August 2014, looking downstream at double-barrel 57-inch RCP culvert entrance; downstream end of facility group

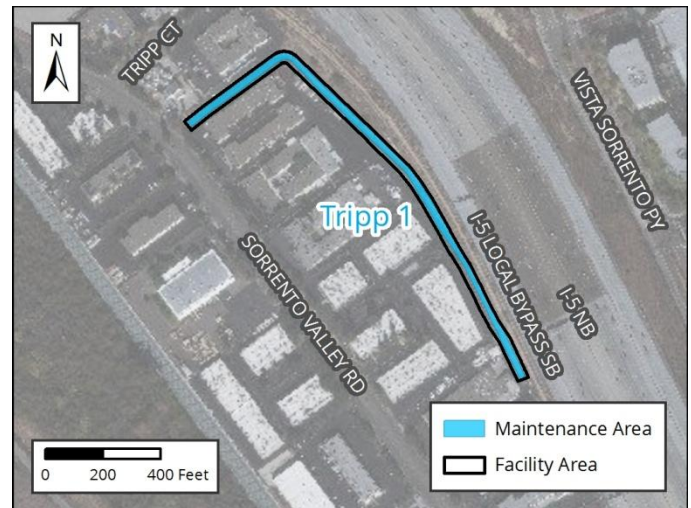


Figure 2: Vicinity Map of Tripp Segment 1

# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2007: Unknown 2007: Routine maintenance conducted 2010: Emergency maintenance excavation of sediment and vegetation January 2011 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** Emergency CDP No. 784126

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 43 (Non-Notification, No USACE File # Assigned)

**401** RWQCB 401 Cert No. 10C-052 (one-time maintenance authorization)

**1602** LSA Emergency Notification No. 1600-2010-0193R5

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<b>Mitigation for Previous Impacts</b>	El Cuervo del Sur HMMP (0.046 acre) Los Peñasquitos WEP (0.138 acre)
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# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity** In August 2014, the segment was observed to have light to moderate vegetation with dense vegetation at the downstream end. Sediment deposition at the downstream end was estimated to be 3 feet. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	269	325	408	447	500	534
Hydraulic Capacity of Facility						
<b>Current Capacity</b>				267 cfs		
<b>Proposed MWMP Maintained Capacity</b>				267 cfs		
<b>Maintenance Recommendation</b>		Remove accumulated sediment, debris, and vegetation from Station 658 to Station 2493. Remove accumulated sediment, debris, and vegetation from culvert at Station 658. Maintain/repair existing debris fence as needed.				
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>				None		

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Freshwater marsh (concrete-lined)</li> <li>• Riparian scrub (southern willow scrub; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	Although this ditch does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo), the channel extents and area of vegetation present are limited such that it is unlikely for wildlife to use the channel for nesting or foraging
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The ditch is located approximately 590 feet east of the nearest MHPA boundary.
<b>Mitigation Within Facility</b>	None

### Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-37-036415
<b>Resource Type</b>	Distribution line

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Los Peñasquitos Lagoon - Tripp Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-5
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-1	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-CR-1
<b>Solid Waste (SW)</b>	MM-CR-2
EP-SW-2	MM-CR-3
EP-SW-3	MM-CR-4
EP-SW-4	<b>Noise (NOI)</b>
EP-SW-5	MM-NOI-1
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Los Peñasquitos Lagoon - Tripp
<b>Segment Name</b>	Tripp 1
<b>Facility No.</b>	2-01-130
<b>Facility Location</b>	From 1,700 feet south east of Tripp Court cul-de-sac to a pipe which conveys flow under Sorrento Valley Road
<b>Coastal Zone</b>	N-APP-1
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 658 to Station 2493. Remove accumulated sediment, debris, and vegetation from culvert at Station 658. Maintain/repair existing debris fence as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Built?</b>	Yes; 11935-D, 11935-6-D, 11935-7-D, & 11530-1-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Lagoon - Tripp Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,835 feet Top width: 22 feet Bottom width: 4 feet Depth: 2-5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 1,835 feet Width: 22 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator, which scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> <li>5. Vactor used to flush pipes in accordance with Flow Management section (below) and Water Pollution Control Plan</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes, limited suitable habitat present</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

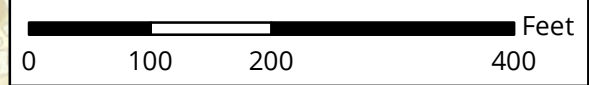
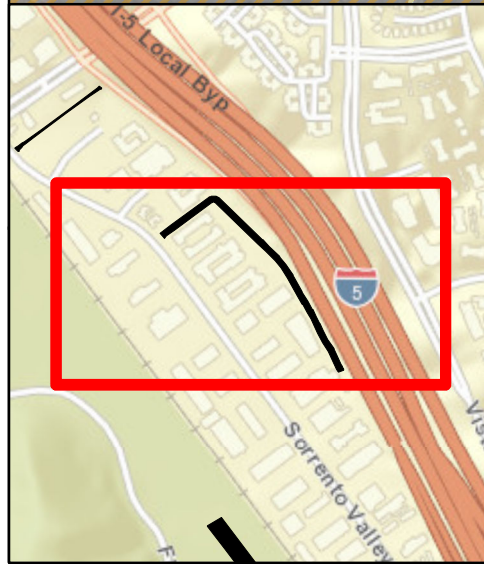
## Los Peñasquitos Lagoon - Tripp Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	Coastal Zone



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Lagoon - Tripp**  
**Segment Name: Tripp 1**  
**Facility No: 2-01-130**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## Los Peñasquitos Canyon Creek - Black Mountain Facility Group

### Segment Names (Facility numbers):

Black Mountain 1 (2-01-200)

Black Mountain 2 (2-01-210)



# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Los Peñasquitos Canyon Creek Unnamed Tributary (01)
<b>Facility Group Name</b>	Los Peñasquitos Canyon Creek - Black Mountain
<b>Segment Name (Facility Number)</b>	Black Mountain 1 (2-01-200) Black Mountain 2 (2-01-210)
<b>Substrate</b>	Black Mountain 1 / Earthen Black Mountain 2 / Earthen
<b>Location</b>	About 200 feet south of Truman Street and north of Mercy Road
<b>MMP Map No(s).</b>	5a, 5b
<b>Facility Inspection No.</b>	5a, 5b
<b>Other Former Names</b>	None



Figure 1: Vicinity Map of Los Peñasquitos Canyon Creek - Black Mountain Facility Group

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Los Peñasquitos Canyon Creek - Black Mountain

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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### Los Peñasquitos Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Indicator Bacteria, Nitrogen, Pesticides, Phosphate, Total Dissolved Solids, Toxicity

---

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

### Black Mountain Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and riprap banks
<b>Location Within Watershed</b>	Lower reach of Los Peñasquitos Canyon Creek (unnamed tributary), immediately upstream of Los Peñasquitos Canyon Creek
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,027 feet
<b>Top-of-Bank Width</b>	Approximately 36–45 feet
<b>Bottom Facility Width</b>	Approximately 8–26 feet
<b>Facility Depth</b>	Approximately 5–11 feet
<b>Adjacent Land Use</b>	Open Space, Parks, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	20575-D
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream at segment



Figure 2: Vicinity Map of Black Mountain Segment 1





# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |   |
|----------------------------|---|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"> <li>• Disturbed wetland (palm-dominated)</li> <li>• Freshwater marsh</li> <li>• Natural flood channel</li> <li>• Riparian scrub (mulefat scrub)</li> </ul> |
|----------------------------|---|

- |                            |   |
|----------------------------|---|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul> |
|----------------------------|---|

<b>Habitat and Wildlife</b>	The channel itself has limited potential to support sensitive species or other wildlife since it does not contain sensitive habitat. However, eucalyptus woodland and riparian forest (southern willow forest) adjacent to the channel could support raptors and other migratory bird species. Coastal sage scrub is also present adjacent to the channel and has potential to support coastal California gnatcatcher.
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<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The channel is located directly north (approximately 40 feet) of the nearest MHPA boundary, which is within Los Peñasquitos Creek.
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<b>Mitigation Within Facility</b>	None
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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

#### Historical Resources

<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-3	MM-BIO-6
<b>Hydrology (HYD)</b>	MM-BIO-7
EP-HYD-1	<b>Noise (NOI)</b>
<b>Land Use (LU)</b>	MM-NOI-1
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Los Peñasquitos Canyon Creek - Black Mountain
<b>Segment Name</b>	Black Mountain 1
<b>Facility No.</b>	2-01-200
<b>Facility Location</b>	From outlet of culvert 200 feet southwest of the intersection of Black Mountain Road and Truman Street to north side of Canyonside Park Driveway
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of existing earthen channel with rip-rap side banks per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from the energy dissipator at Station 1000 to Station 1092, from the drop structures at Station 827 to Station 869 and Station 960 to Station 1000. Remove accumulated sediment and debris in the culvert between Station 93 and Station 168. Trim the vegetation from the earthen channel bottom from Station 168 to Station 1120.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Riprap replacement
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 20575-D

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

<b>Substrate Detail</b>	Earthen bottom and riprap banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,027 feet Top width: 36-45 feet Bottom width: 8-26 feet Depth: 5-11 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 952 feet; Culvert: 75 feet Width: 12-30 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, long reach excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 30-45 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes (If access on Canyonside Community Park driveway is used); coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

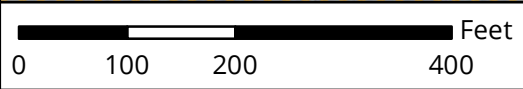
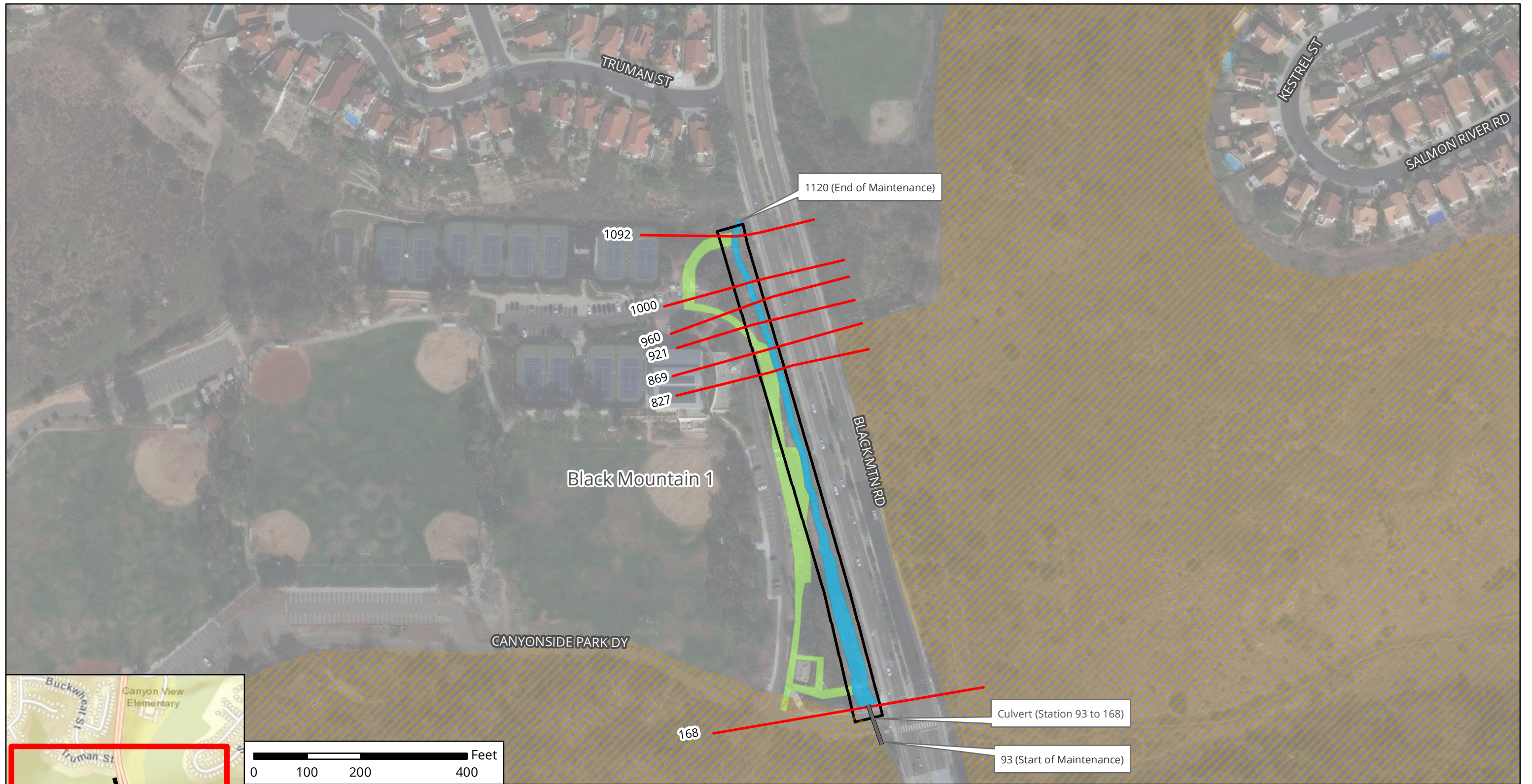
# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station to be determined
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	None





Culvert	Access/Loading/Staging /Stockpiling Area
Station	Maintenance Area
Facility Area	Multi-Habitat Planning Area



- Notes:
1. In-stream post-maintenance erosion control measures may occur within this facility area.
  2. Concrete repair may occur within this facility area.
  3. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  4. Access/Loading/Staging/Stockpiling may be modified during implementation.
  5. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Canyon**  
**Creek - Black Mountain**  
**Segment Name: Black Mountain 1**  
**Facility No: 2-01-200**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

### Black Mountain Segment 2 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Lower reach of Los Peñasquitos Canyon Creek (unnamed tributary), immediately upstream of Los Peñasquitos Canyon Creek
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,931 feet
Top-of-Bank Width	Approximately 24-136 feet
Bottom Facility Width	Approximately 16.5-90 feet
Facility Depth	Approximately 5-13 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Transportation
As-Built Drawing Number	16065-1-D
Coastal Zone	No



Figure 1: April 2017, looking upstream at quadruple-barrel 6-foot-diameter RCP storm drain outlet at Mercy Road

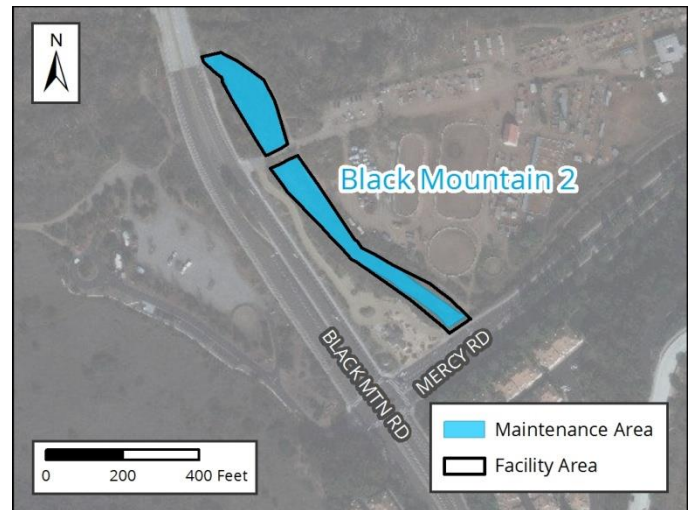


Figure 2: Vicinity Map of Black Mountain Segment 2



# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Freshwater marsh</li> <li>• Natural flood channel</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Chamise chaparral</li> <li>• Developed land</li> <li>• Disturbed coastal sage scrub (Baccharis-dominated)</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	The channel has a high potential to support sensitive and migratory bird species, such as least Bell's vireo, due to the presence of extensive suitable habitat (e.g., riparian forest [southern willow forest]) both within and adjacent to the facility. Coastal sage scrub is also present adjacent to the channel, which could support coastal California gnatcatcher.
<b>MHPA</b>	The northern section of the facility is located within the Multi Habitat Planning Area (MHPA) which is connected to Los Penasquitos Creek
<b>Mitigation Within Facility</b>	None

### Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-1	MM-BIO-6
EP-HAZ-3	MM-BIO-7
<b>Hydrology (HYD)</b>	<b>Noise (NOI)</b>
EP-HYD-1	MM-NOI-1
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

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### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Los Peñasquitos Canyon Creek - Black Mountain
<b>Segment Name</b>	Black Mountain 2
<b>Facility No.</b>	2-01-210
<b>Facility Location</b>	From storm drain system outlet north of Mercy Road to beneath the Los Peñasquitos Canyon trail which discharges to Los Peñasquitos Creek
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of the earthen segment from Station 87 to Station 422, and from Station 433 to Station 1057. Trim vegetation on banks from Station 87 to Station 422 and Station 433 to Station 1057. Remove accumulated sediment and debris in culverts from Station 78 to Station 87, and from Station 422 to Station 433.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Built?</b>	Yes; 16065-1-D
<b>Substrate Detail</b>	Earthen bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Los Peñasquitos Canyon Creek - Black Mountain Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,931 feet Top width: 24–136 feet Bottom width: 16.5–90 feet Depth: 5–13 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 959 feet; Culvert: 20 feet Width: 19– <del>43</del> <u>96</u> feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 30–45 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

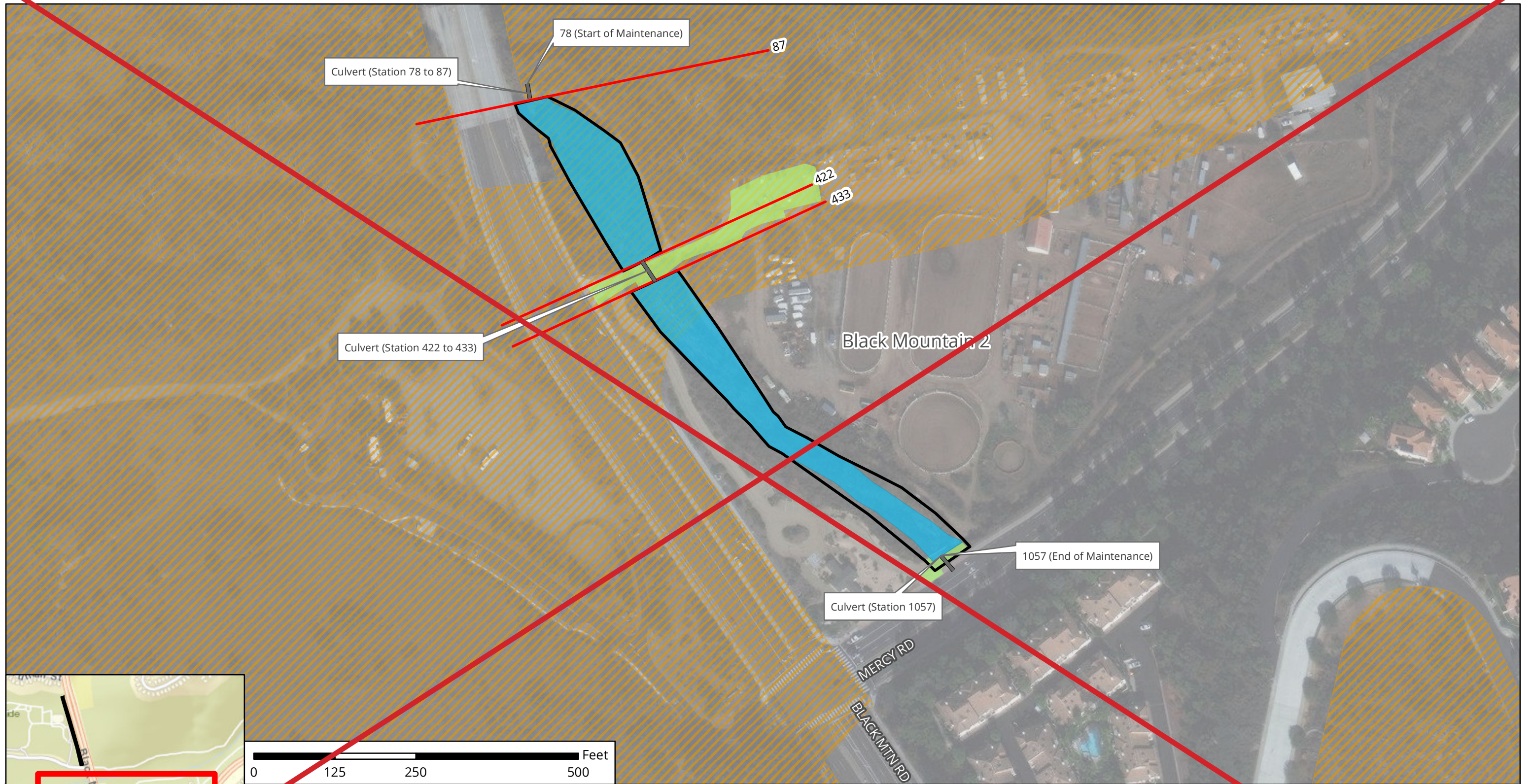
## Los Peñasquitos Canyon Creek - Black Mountain Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station to be determined
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Access/Loading/Staging/Stockpiling Area
Station	Maintenance Area
Facility Area	Multi-Habitat Planning Area



- Notes:**
1. In-stream post-maintenance erosion control measures may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

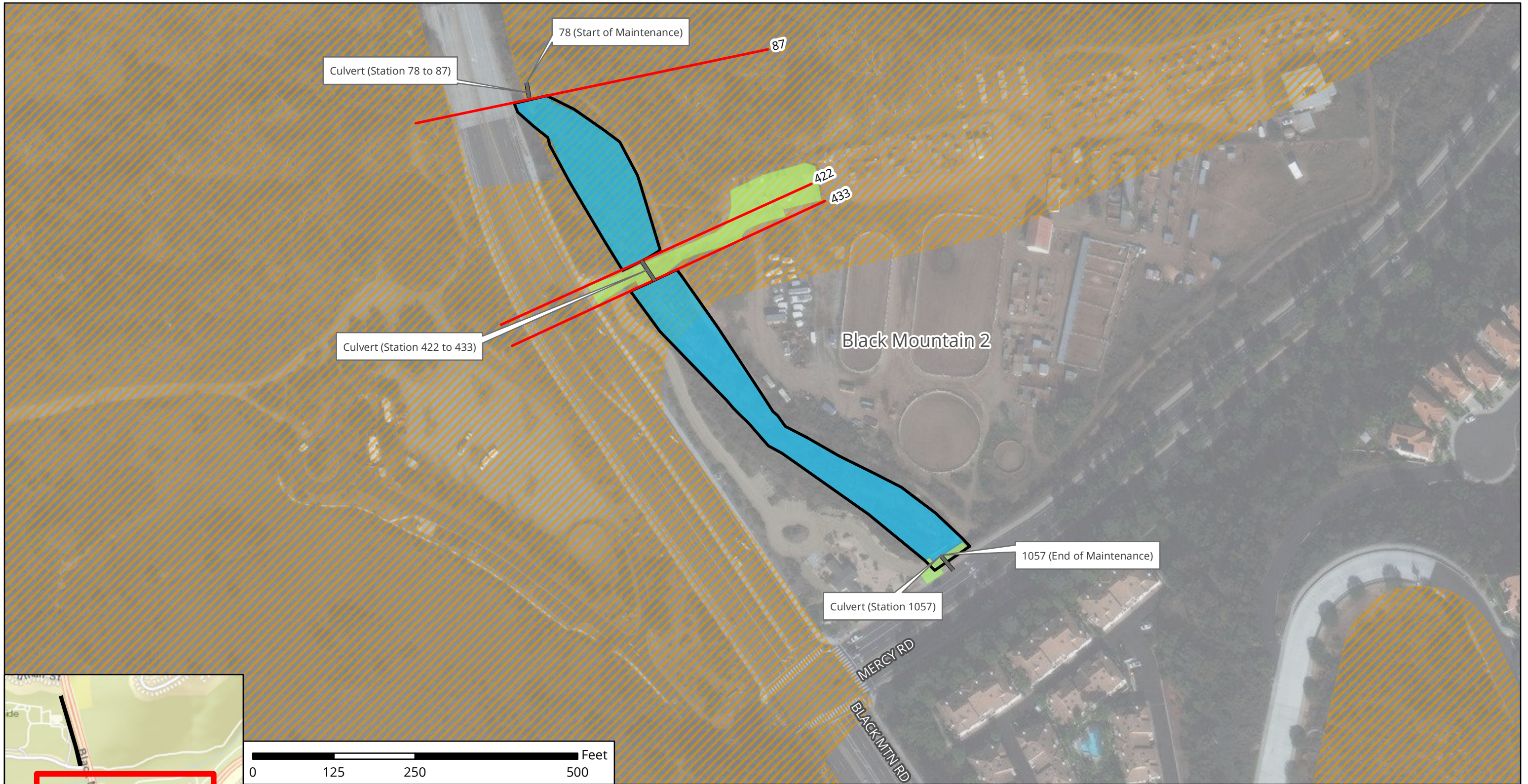
November 2019

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Canyon**  
**Creek - Black Mountain**  
**Segment Name: Black Mountain 2**  
**Facility No: 2-01-210**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Culvert	Access/Loading/Staging /Stockpiling Area
Station	Maintenance Area
Facility Area	Multi-Habitat Planning Area



- Notes:**
1. In-stream post-maintenance erosion control measures may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

March 2020

**Map A: General Site Plan**  
**Facility Group Name: Los Peñasquitos Canyon**  
**Creek - Black Mountain**  
**Segment Name: Black Mountain 2**  
**Facility No: 2-01-210**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.



# Facility Maintenance Plan

## Soledad Canyon Creek - Sorrento Facility Group

### Segment Names (Facility numbers):

Roselle 1 (2-03-000)

Roselle 2 (2-03-002)

SorValRd 1 (2-03-004) (See  
Appendix A-5)

SorValRd 2 (2-03-006) (See  
Appendix A-5)

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

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### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Soledad Canyon Creek (03)
<b>Facility Group Name</b>	Soledad Canyon Creek - Sorrento
<b>Segment Name (Facility Number)</b>	Roselle 1 (2-03-000) Roselle 2 (2-03-002) SorValRd 1 (2-03-004) (See Appendix A-5) SorValRd 2 (2-03-006) (See Appendix A-5)
<b>Substrate</b>	Roselle 1 / Earthen Roselle 2 / Concrete SorValRd 1 / Earthen SorValRd 2 / Earthen
<b>Location</b>	Bordered by Carroll Canyon Road, Sorrento Valley Road, and Roselle Street
<b>MMP Map No(s).</b>	11, 12, 13, 14, 15
<b>Facility Inspection No.</b>	11, 12, 13, 14
<b>Other Former Names</b>	Sorrento Creek Segment 1 - Reach 2 Segment 2 - Reach 3 Segment 2 - Reach 3, Soledad Creek Channel

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# Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

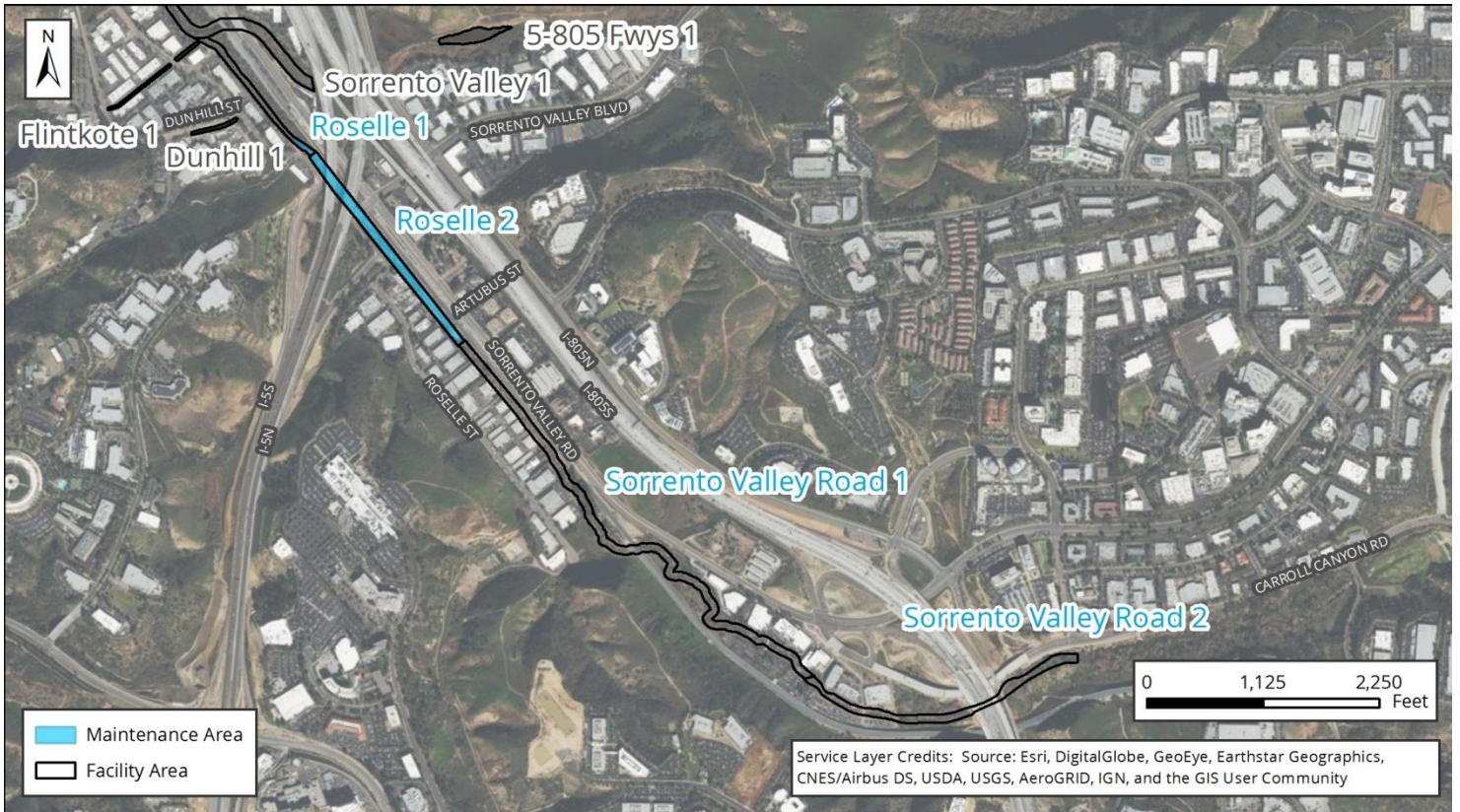


Figure 1: Vicinity Map of Soledad Canyon Creek - Sorrento Facility Group

# Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Soledad Canyon Creek - Sorrento

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>Agricultural Supply (AGR)</li> <li>Industrial Service Supply (IND)</li> <li>Non-contact Water Recreation (REC-2)</li> <li>Warm Freshwater Habitat (WARM)</li> <li>Cold Freshwater Habitat (COLD)</li> <li>Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Sediment Toxicity, Selenium
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### Los Peñasquitos Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>Agricultural Supply (AGR)</li> <li>Industrial Service Supply (IND)</li> <li>Non-contact Water Recreation (REC-2)</li> <li>Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>Warm Freshwater Habitat (WARM)</li> <li>Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Benthic Community Effects, Indicator Bacteria, Nitrogen, Pesticides, Phosphate, Total Dissolved Solids, Toxicity
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# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Roselle Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom, earthen and partial riprap banks
<b>Location Within Watershed</b>	Lower reach of Soledad Canyon Creek, immediately upstream of Los Peñasquitos Lagoon
<b>Tributaries (listed from downstream to upstream)</b>	Soledad Canyon Creek Unnamed Tributary, Carroll Canyon Creek Soledad Canyon Creek – Flintkote Soledad Canyon Creek – Dunhill
<b>Facility Length</b>	Approximately 1,554 feet
<b>Top-of-Bank Width</b>	Approximately 10–60 feet
<b>Bottom Facility Width</b>	Approximately 10–20 feet
<b>Facility Depth</b>	Approximately 5–10 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Office, Open Space, Transportation
<b>As-Built Drawing Number</b>	Doc No. A0000128 (Caltrans)
<b>Coastal Zone</b>	CST-APP, N-APP-1



Figure 1: January 2016, looking downstream at the upstream end

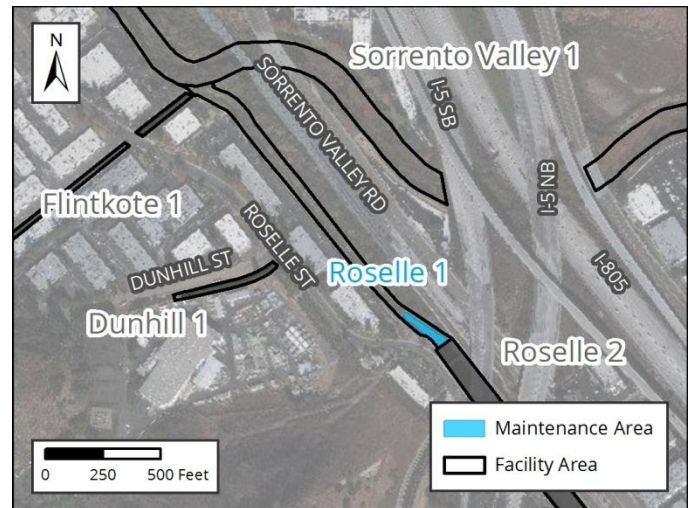


Figure 2: Vicinity Map of Roselle Segment 1

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	1998: Excavation of sediment and vegetation conducted throughout segment 2011: Emergency excavation of sediment and vegetation in downstream section of channel 2016: Emergency excavation of vegetation and sediment in upstream section of channel January 2017 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** CDP No. 6-99-101 (expired November 2017)

**SDP** SDP No. 2034245 (2017 Addendum)

**404** RGP 63 USACE File #SPL-2016-00198-RAG (expired July 2016)

**401** WDR Order No. 96-32 401 Cert No. 995007000-BAH (covered under ACOE RGP 63 SPL-2010-01177-MBS permit); & R9-2013-0116 (expired March 2017)

**1602** CDFW SAA No. 5-265-97 (expired October 2002) & 1600-2006-0183-R5 (expires August 2026)

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<b>Mitigation for Previous Impacts</b>	El Cuervo Wetland Area WMMP (2000) (6.6 acres) Famosa Slough Off-Site Salt Marsh Mitigation (0.1 acre)
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# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity** In January 2016, the channel was observed to have moderate to dense vegetation with a sediment and debris depth of up to 18 inches deep. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	220	730	1,500	3,100	4,500	6,700

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	1,500 cfs
<b>Proposed MWMP Maintained Capacity</b>	1,500 cfs
<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from the 215-foot transition zone (Station 3716 to Station 3931)
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Freshwater marsh</li> <li>• Riparian forest (southern willow forest)</li> <li>• Riparian scrub (southern willow scrub)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	The vegetation contained within the facility provides potential nesting and/or foraging habitat for raptors, migratory bird species, and sensitive bird species (e.g., least Bell's vireo, southern willow flycatcher, and Ridgeway's rail)
<b>MHPA</b>	The downstream portion of facility is contained within Multi Habitat Planning Area (MHPA) however proposed maintenance is not within or adjacent to the MHPA.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-001010
<b>Resource Type</b>	Destroyed Prehistoric artifact scatter

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963-1974 earthen channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-CR-1
<b>Solid Waste (SW)</b>	MM-CR-2
EP-SW-2	MM-CR-3
EP-SW-3	MM-CR-4
EP-SW-4	<b>Noise (NOI)</b>
EP-SW-5	MM-NOI-1
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Soledad Canyon Creek - Sorrento
<b>Segment Name</b>	Roselle 1
<b>Facility No.</b>	2-03-000
<b>Facility Location</b>	From the downstream end of Roselle 2 segment to 900 feet northeast of the intersection of Dunhill Street and Roselle Street
<b>Coastal Zone</b>	CST-APP, N-APP-1
<b>MWMP Proposed Maintenance</b>	Maintenance of channel per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from the 215-foot transition zone (Station 3716 to Station 3931)
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	Yes; Doc No. A0000128 (Caltrans)
<b>Substrate Detail</b>	Earthen bottom, earthen and partial riprap banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,554 feet Top width: 10–60 feet Bottom width: 10–20 feet Depth: 5–10 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 215 feet Width: 23–48 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, long reach excavator, loader, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 20–30 working days
<b>Maintenance Crew</b>	Approximately 10–18 people
<b>Routine Maintenance Procedures</b>	<p>Outside of Channel:</p> <ol style="list-style-type: none"> <li>1. Gradall/excavator and long reach excavator move along channel bank within access/loading area</li> <li>2. Excavators scoop material from channel and load dump truck</li> <li>3. Dump truck hauls material to legal disposal site</li> </ol> <p>Inside of Channel:</p> <ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator and long reach excavator at access/loading area stationed above channel bank</li> <li>3. Excavators scoop material from channel and load dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with Metropolitan Transit System (MTS) and the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

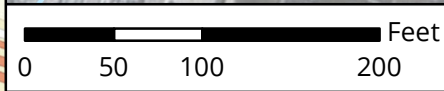
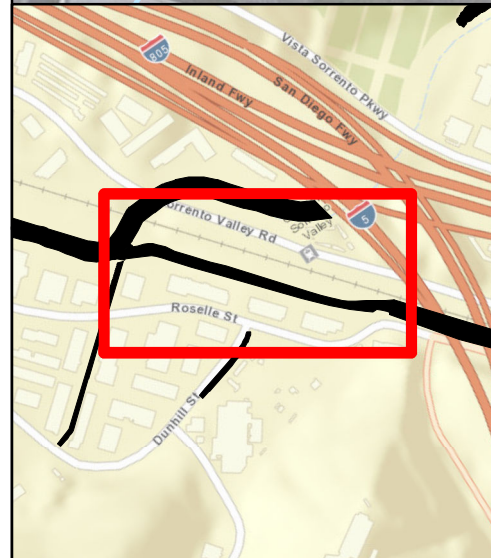
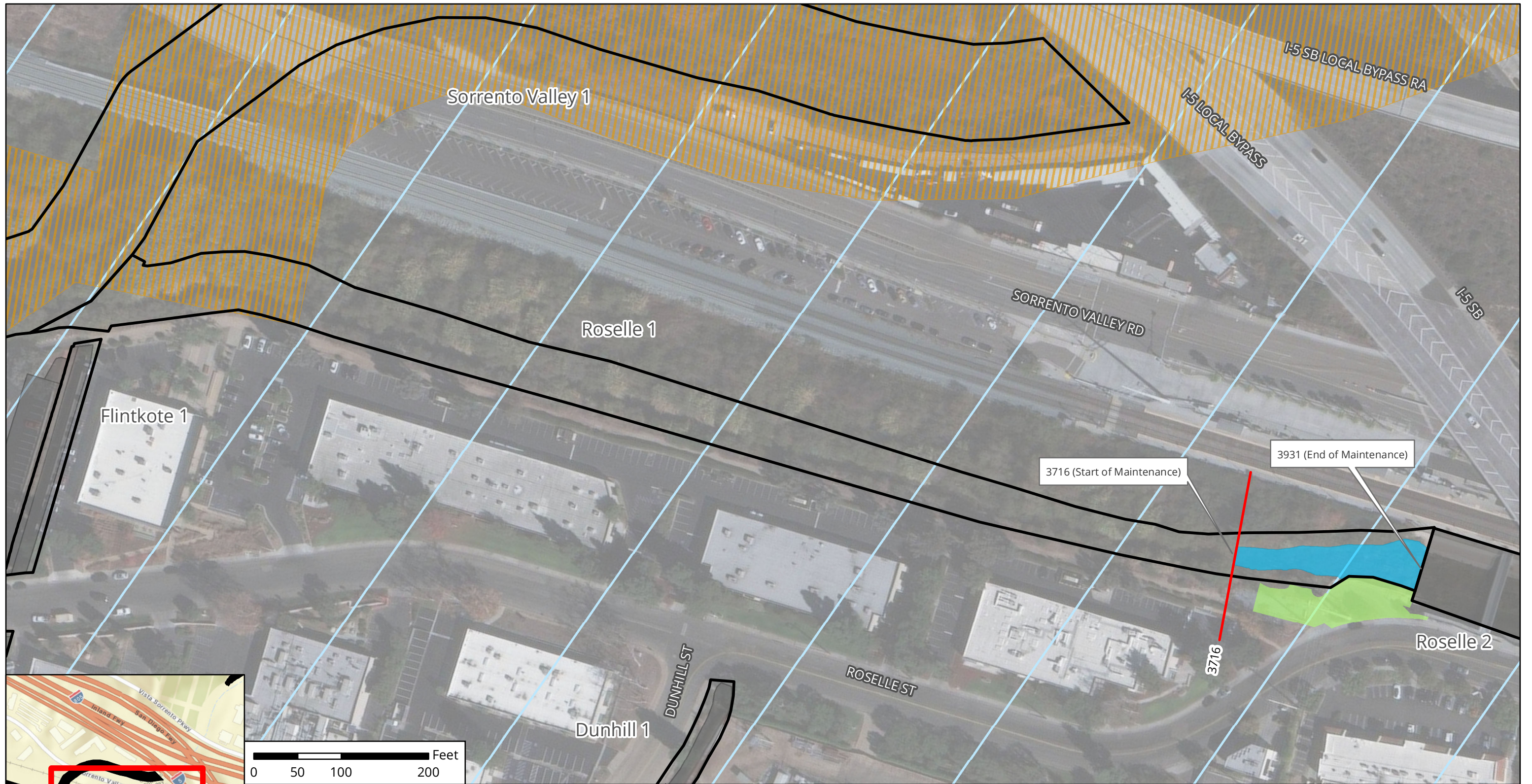
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

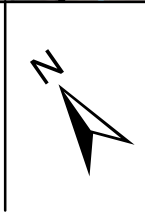
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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Station	Adjacent Facility
Facility Area	Activity Area
Coastal Zone	Access/Loading/Staging/Stockpiling Area
Multi-Habitat Planning Area	Maintenance Area



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Soledad Canyon Creek - Sorrento**  
**Segment Name: Roselle 1**  
**Facility No: 2-03-000**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**









# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Roselle Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Soledad Canyon Creek, immediately upstream of Soledad Canyon Creek (Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	Carroll Canyon Creek
<b>Facility Length</b>	Approximately 2,314 feet
<b>Top-of-Bank Width</b>	Approximately 93 feet
<b>Bottom Facility Width</b>	Approximately 63 feet
<b>Facility Depth</b>	Approximately 5-10 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Office, Open Space, Parks, Public Facilities and Utilities, Transportation
<b>As-Built Drawing Number</b>	Doc No. A0000128 (Caltrans)
<b>Coastal Zone</b>	CST-APP



Figure 1: January 2016, looking upstream from the northwest side of the I-5 overpass



Figure 2: Vicinity Map of Roselle Segment 2

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2014 – 2017: Routine maintenance conducted December 2015 – March 2016: Emergency concrete replacement of upstream 397 feet March 2017 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	City issued Emergency CDP No. 818358 (expired April 2011) & 2012 Master CDP No. A-6-NOC11-086 (expires November 2019)
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	RGP 63 USACE File #SPL-2016-00198-RAG (expired July 2016); NWP 33 USACE File #SPL-2013-00432-MBS (expired March 2017)
<b>401</b>	RWQCB 401 Cert No. R9-2013-0116 (expired March 2017); 401 Cert. No. R9-069C-062 (one-time event); & 401 Cert. File No. 995007000-BAH (covered under ACOE RGP 63 SPL-2010-01177-MBS permit)
<b>1602</b>	CDFW SAA No. 1600-2013-0120-R5 (expired July 2018); CDFW Notification 2011-0002-R5 (OpLaw); CDFW SAA No. 1600-2006-0183-R5 (expires August 2026)

<b>Mitigation for Previous Impacts</b>	El Cuervo del Sur HMMP (1.85 acres) Los Peñasquitos WEP (5.35 acres)
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# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**

In January 2016, the channel was observed to have vegetation vary from dense at the downstream end to relatively clean concrete at the upstream end. Sediment deposition was estimated to be 1.5 feet at the downstream end to 0.5 feet in the upstream portion. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	220	730	1,500	3,100	4,500	6,700
Hydraulic Capacity of Facility						
<b>Current Capacity</b>				1,500 cfs		
<b>Proposed MWMP Maintained Capacity</b>				1,900 cfs		
<b>Maintenance Recommendation</b>				Remove accumulated sediment, debris, and vegetation from Station 3931 to Station 6245		
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>				None		

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Freshwater marsh (concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, potential nesting and/or foraging habitat for raptors, migratory bird species, and sensitive bird species (e.g., least Bell's vireo, southern willow flycatcher, and Ridgeway's Rail) is present upstream and downstream of the channel section.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundaries are located approximately 580 feet to the west and 590 feet to the east. The MHPA is also downstream within Los Peñasquitos Creek.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-001010
<b>Resource Type</b>	Destroyed Prehistoric artifact scatter

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963–1974 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-CR-1
<b>Solid Waste (SW)</b>	MM-CR-2
EP-SW-2	MM-CR-3
EP-SW-3	MM-CR-4
EP-SW-4	<b>Noise (NOI)</b>
EP-SW-5	MM-NOI-1
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Soledad Canyon Creek - Sorrento
<b>Segment Name</b>	Roselle 2
<b>Facility No.</b>	2-03-002
<b>Facility Location</b>	From the downstream end of Soledad Canyon Creek - Sorrento Valley Road 1 segment to the upstream end of Roselle 1 segment, bordered by Sorrento Valley Road
<b>Coastal Zone</b>	CST-APP
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 3931 to Station 6245
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; Doc No. A0000128 (Caltrans)
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Soledad Canyon Creek - Sorrento Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 2,314 feet Top width: 93 feet Bottom width: 63 feet Depth: 5-10 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 2,314 feet Width: 93 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 20-30 working days
<b>Maintenance Crew</b>	Approximately 10-18 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer, loader, and dump truck enter or are lowered into channel at access/loading area</li> <li>2. Gradall/excavator is stationed on pad within channel and/or at access/loading area</li> <li>3. Bobcat/skid-steer makes piles for loader</li> <li>4. Gradall/excavator makes piles for loader and/or loads dump truck</li> <li>5. Loader loads dump truck</li> <li>6. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with Metropolitan Transit System (MTS) and the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

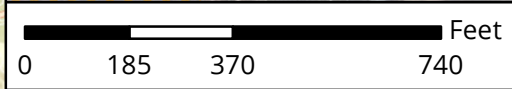
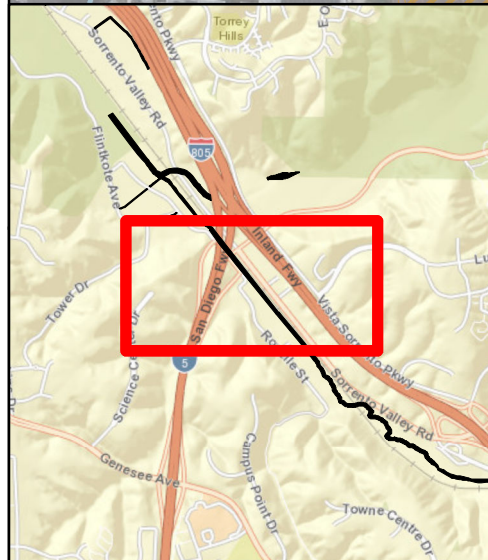
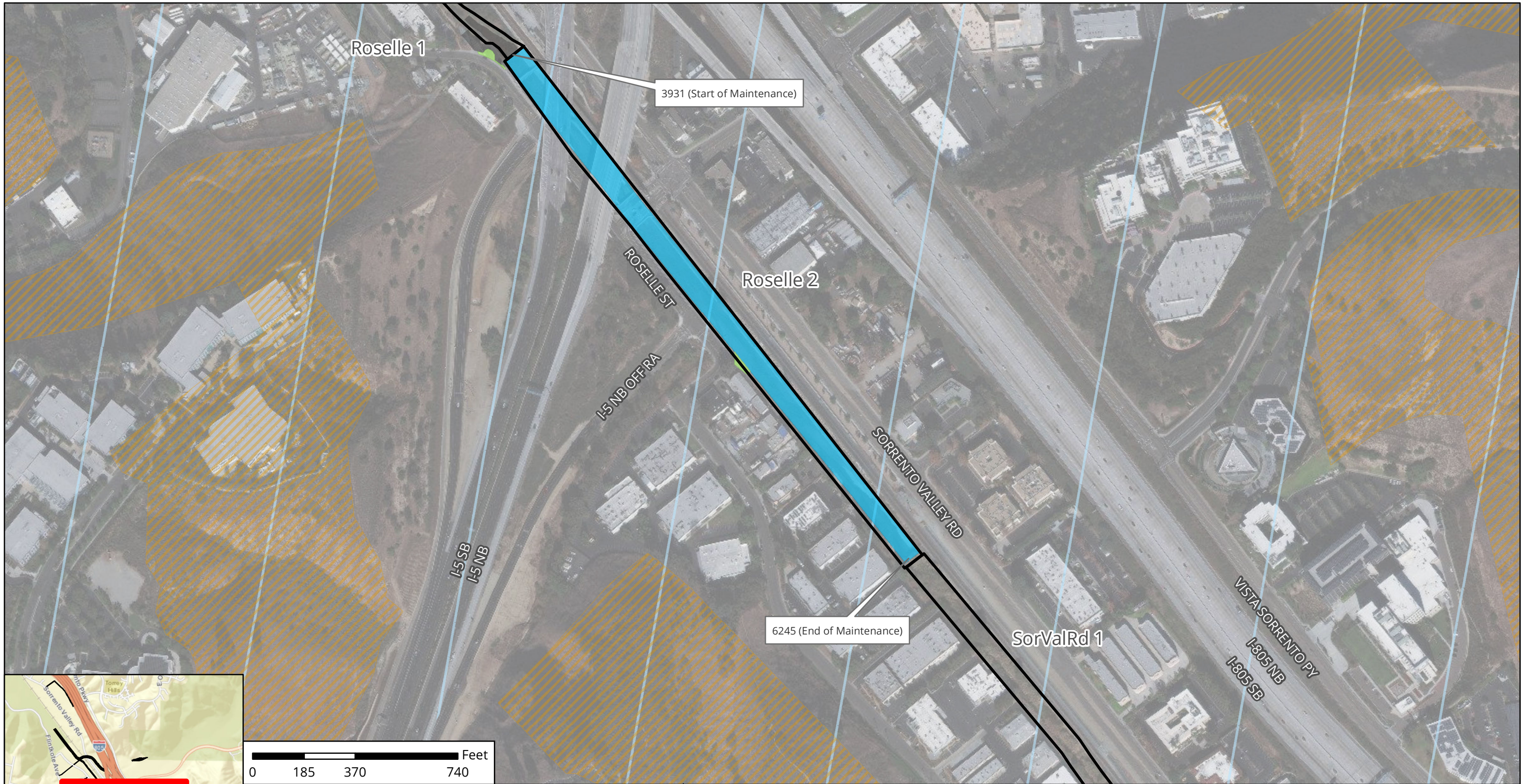
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Soledad Canyon Creek - Sorrento Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Facility Area	Adjacent Facility Activity Area
Multi-Habitat Planning Area	Access/Loading/Staging/Stockpiling Area
Coastal Zone	Maintenance Area



The City of  
**SAN DIEGO**

- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Soledad Canyon Creek - Sorrento**  
**Segment Name: Roselle 2**  
**Facility No: 2-03-002**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# Carroll Canyon Creek - Carroll Facility Group

Segment Name (Facility number):  
Carroll Canyon 1 (2-03-012)



# Carroll Canyon Creek - Carroll Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Carroll Canyon Creek (03)
<b>Facility Group Name</b>	Carroll Canyon Creek - Carroll
<b>Segment Name (Facility Number)</b>	Carroll Canyon 1 (2-03-012)
<b>Substrate</b>	Carroll Canyon 1 / Earthen and concrete
<b>Location</b>	Runs parallel to Carroll Canyon Road with El Camino Memorial Park located to the north and a parking lot located to the south
<b>MMP Map No(s).</b>	17
<b>Facility Inspection No.</b>	17
<b>Other Former Names</b>	Soledad Creek Channel

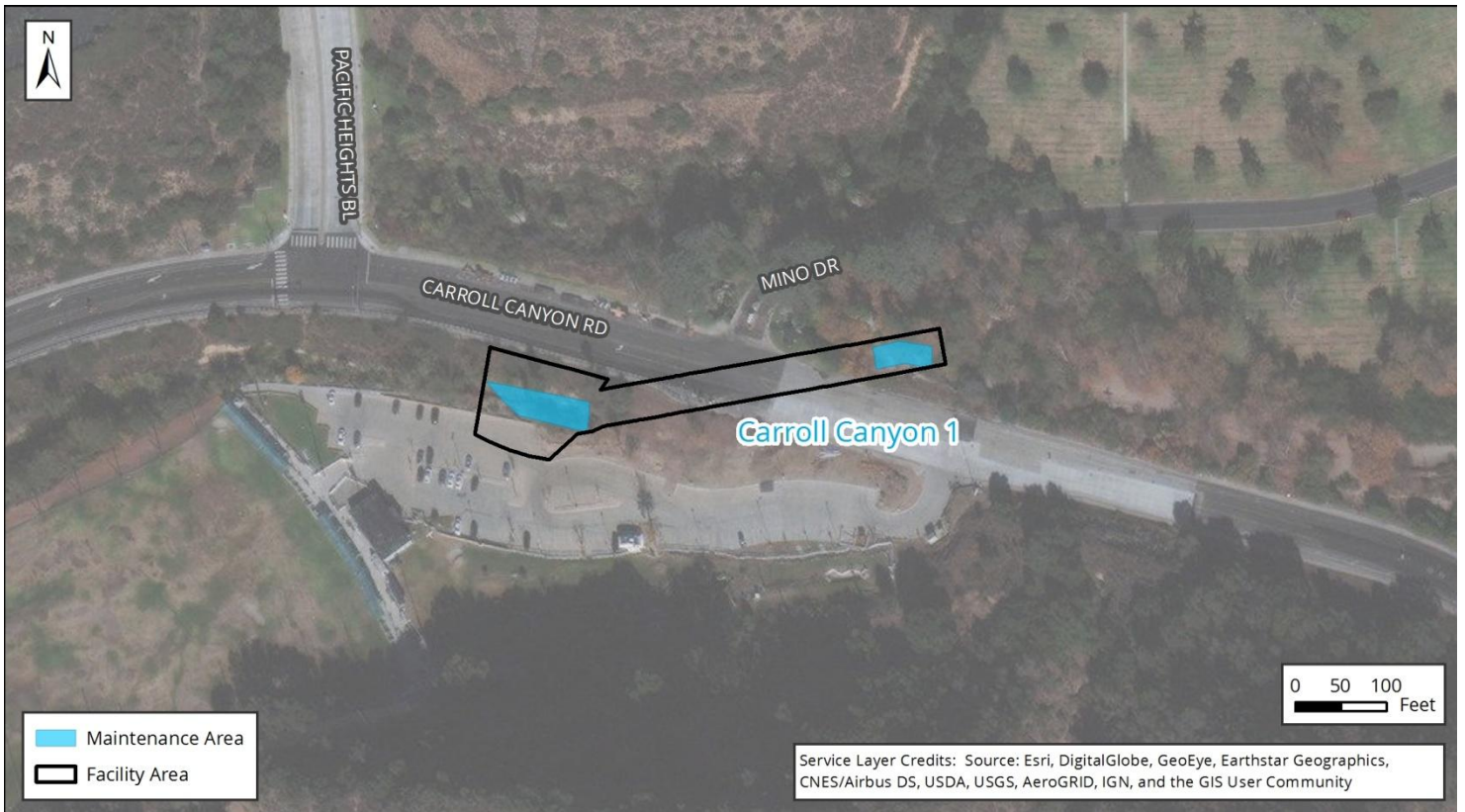


Figure 1: Vicinity Map of Carroll Canyon Creek - Carroll Facility Group



# Carroll Canyon Creek - Carroll Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Carroll Canyon Creek - Carroll

#### Beneficial Uses

<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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### Carroll Canyon (First downstream water body)

#### Beneficial Uses

- Agricultural Supply (AGR)
- Industrial Service Supply (IND)
- Non-contact Water Recreation (REC-2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)

<b>303(d) listed Impairments</b>	Benthic Community Effects, Toxicity
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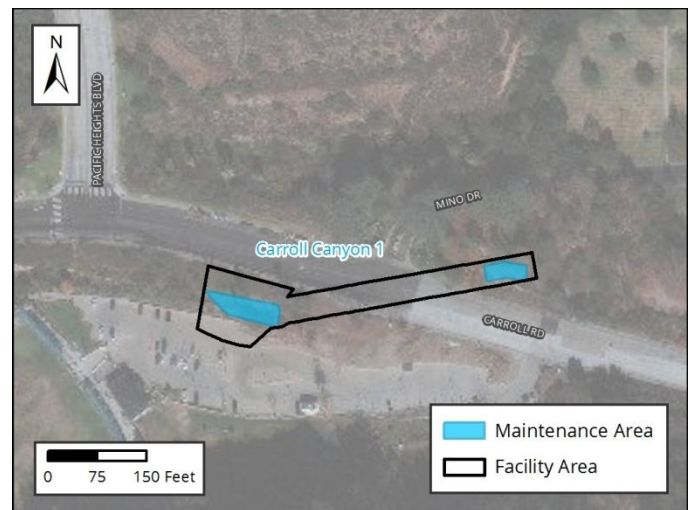
# Carroll Canyon Creek - Carroll Facility Group Facility Maintenance Plan

## Carroll Canyon Segment 1 Detail

<b>Facility Type</b>	Earthen and concrete channel
<b>Substrate Detail<sup>1</sup></b>	Stations 17-98: Earthen bottom and banks Stations 98-178: Earthen bottom and riprap banks Stations 178-497: Culvert Stations 497-537: Concrete bottom and earthen banks Stations 537-577: Earthen bottom and banks
<b>Location Within Watershed</b>	Lower reach of Carroll Canyon Creek (unnamed tributary), immediately upstream of Carroll Canyon Creek (unnamed tributary)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 560 feet
<b>Top-of-Bank Width</b>	Approximately 45 feet
<b>Bottom Facility Width</b>	Approximately 14–28 feet
<b>Facility Depth</b>	Approximately 5 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Open Space, Parks, Transportation
<b>As-Built Drawing Number</b>	21569-D & 26930-D
<b>Coastal Zone</b>	No



**Figure 1: May 2017, sediment and cobbles accumulated on concrete inlet apron upstream of the culvert**



**Figure 2: Vicinity Map of Carroll Canyon Segment 1**

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Carroll Canyon Creek - Carroll Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |   |
|----------------------------|---|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Natural flood channel</li> <li>• Ornamental plantings</li> </ul> |
|----------------------------|---|

- |                            |   |
|----------------------------|---|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed coastal sage scrub</li> <li>• Disturbed freshwater marsh</li> <li>• Disturbed land</li> <li>• Disturbed riparian forest (southern riparian forest)</li> <li>• Natural flood channel</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> <li>• Riparian scrub</li> </ul> |
|----------------------------|---|

<b>Habitat and Wildlife</b>	The channel area itself does not contain suitable vegetation for sensitive wildlife. However, suitable habitat (e.g., riparian scrub [southern willow scrub] and coastal sage scrub) is present in the areas surrounding the facility and may support sensitive bird species such as least Bell's vireo and coastal California gnatcatcher.
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<b>MHPA</b>	Nearly the entire facility on both sides of Carroll Canyon Road is located within the Multi Habitat Planning Area (MHPA)
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<b>Mitigation Within Facility</b>	None
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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
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<b>Resource Identified Adjacent to APE</b>	None
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<b>Resource Type</b>	N/A
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#### Historical Resources

<b>Resource Identified in APE</b>	None
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<b>Potential Historical Resources</b>	None
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<b>Constraint Identified</b>	
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# Carroll Canyon Creek - Carroll Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-3	MM-BIO-6
<b>Land Use (LU)</b>	MM-BIO-7
EP-LU-1	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Solid Waste (SW)</b>	MM-CR-1
EP-SW-2	MM-CR-2
EP-SW-3	MM-CR-3
EP-SW-4	MM-CR-4
EP-SW-5	<b>Noise (NOI)</b>
EP-SW-6	MM-NOI-1
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Carroll Canyon Creek - Carroll Facility Group

## Facility Maintenance Plan

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### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Carroll Canyon Creek - Carroll
<b>Segment Name</b>	Carroll Canyon 1
<b>Facility No.</b>	2-03-012
<b>Facility Location</b>	From the north side of Carroll Canyon Rd, approximately 315 feet east of Pacific Heights Boulevard, to the south side of Carroll Canyon Rd, approximately 715 feet east of Pacific Heights Boulevard
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of Carroll Canyon Road culvert and portion of channel per previous emergency maintenance approvals and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>3</sup></b>	Remove accumulated sediment, debris, and overgrown vegetation from channel bottom and temporary diversion berm from Station 58 to 178 and from Station 497 to Station 561. Remove sediment and debris in culvert from Station 178 to Station 497.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen and concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 21569-D & 26930-D

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<sup>3</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Carroll Canyon Creek - Carroll Facility Group Facility Maintenance Plan

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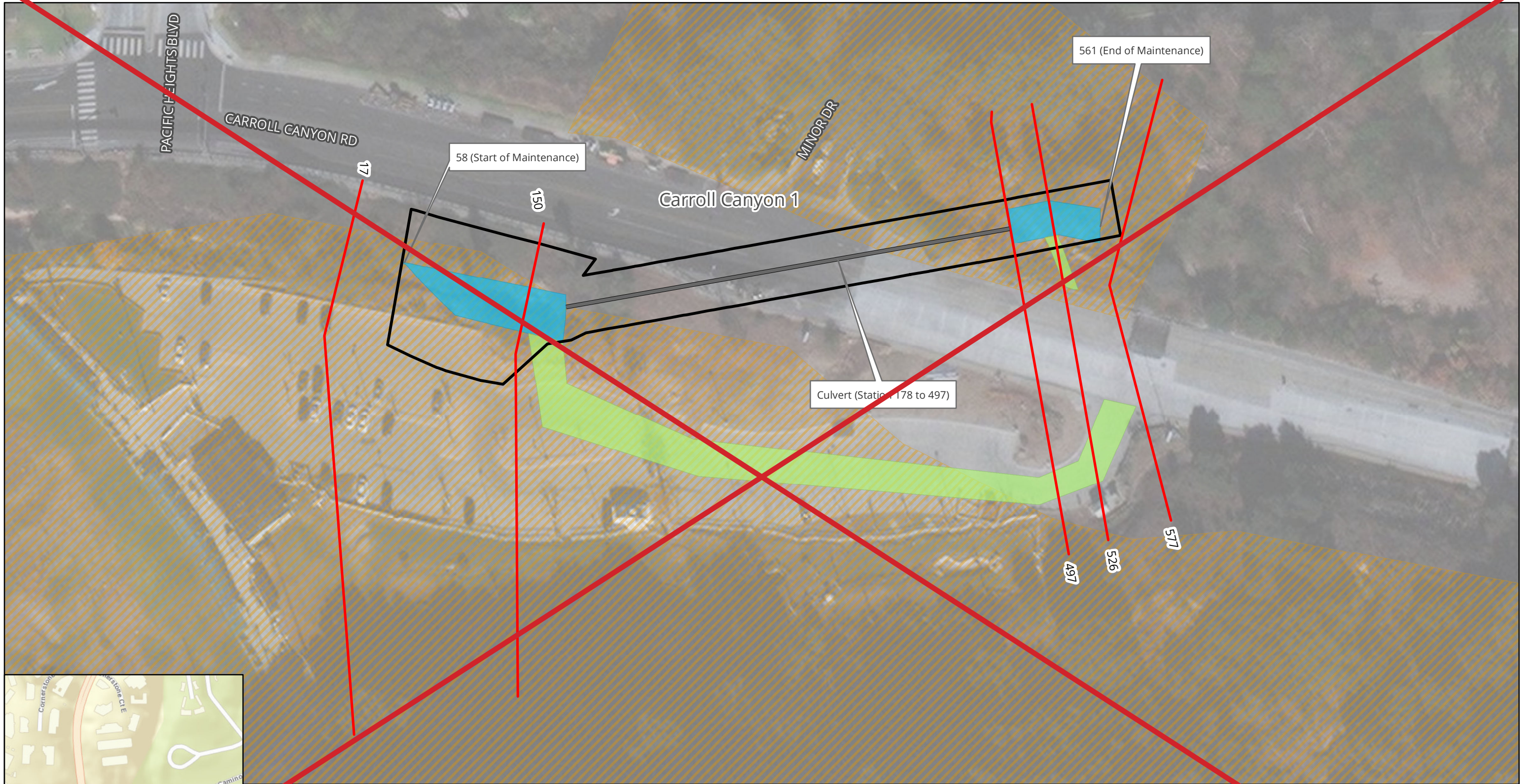
<b>Substrate Detail<sup>3</sup></b>	Stations 17-98: Earthen bottom and banks Stations 98-178: Earthen bottom and riprap banks Stations 178-497: Culvert Stations 497-537: Concrete bottom and earthen banks Stations 537-577: Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 560 feet Top width: 45 feet Bottom width: 14-28 feet Depth: 5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 184 feet; Culvert: 319 feet Width: 25-32 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Kubota tractor (or similar style tractor), bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	Upstream Reach: <ol style="list-style-type: none"> <li>1. Tractor enters channel at access/loading area</li> <li>2. Tractor scoops material from culverts and make piles for loader</li> <li>3. Loader scoops material from channel and loads dump truck at access/loading area</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol> Downstream Reach: <ol style="list-style-type: none"> <li>1. Tractor enters channel at access/loading area</li> <li>2. Tractor scoops material from culverts and make piles for bulldozer/track-steer</li> <li>3. Bulldozer/track-steer pushes material to Gradall/excavator</li> <li>4. Gradall/excavator loads dump trucks</li> <li>5. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No

## Carroll Canyon Creek - Carroll Facility Group Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>4</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





Culvert	Access/Loading/Staging/Stockpiling Area
Station	Maintenance Area
Facility Area	
Multi-Habitat Planning Area	

**Notes:**

1. Concrete repair may occur within this facility.
2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
3. Access/Loading/Staging/Stockpiling may be modified during implementation.
4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

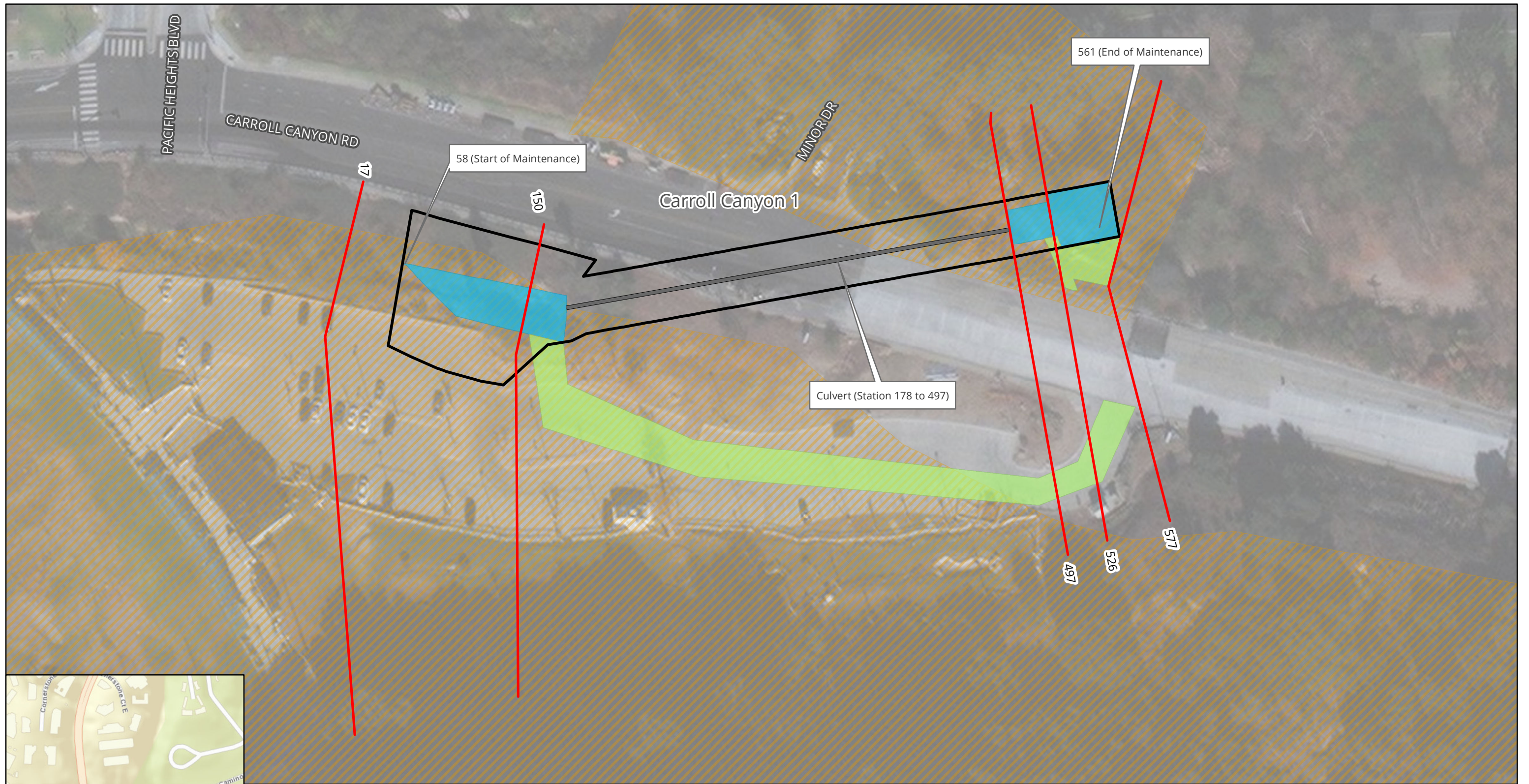


November 2019

**Map A: General Site Plan**  
**Facility Group Name: Carroll Canyon Creek - Carroll**  
**Segment Name: Carroll Canyon 1**  
**Facility No: 2-03-012**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**







- Culvert
- Station
- Facility Area
- Multi-Habitat Planning Area
- Access/Loading/Staging /Stockpiling Area
- Maintenance Area

**Notes:**

1. Concrete repair may occur within this facility.
2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
3. Access/Loading/Staging/Stockpiling may be modified during implementation.
4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



March 2020

**Map A: General Site Plan**  
**Facility Group Name: Carroll Canyon Creek - Carroll**  
**Segment Name: Carroll Canyon 1**  
**Facility No: 2-03-012**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.



Facility Maintenance Plan

# Soledad Canyon Creek - Flintkote Facility Group

Segment Name (Facility number):  
Flintkote 1 (2-03-100)

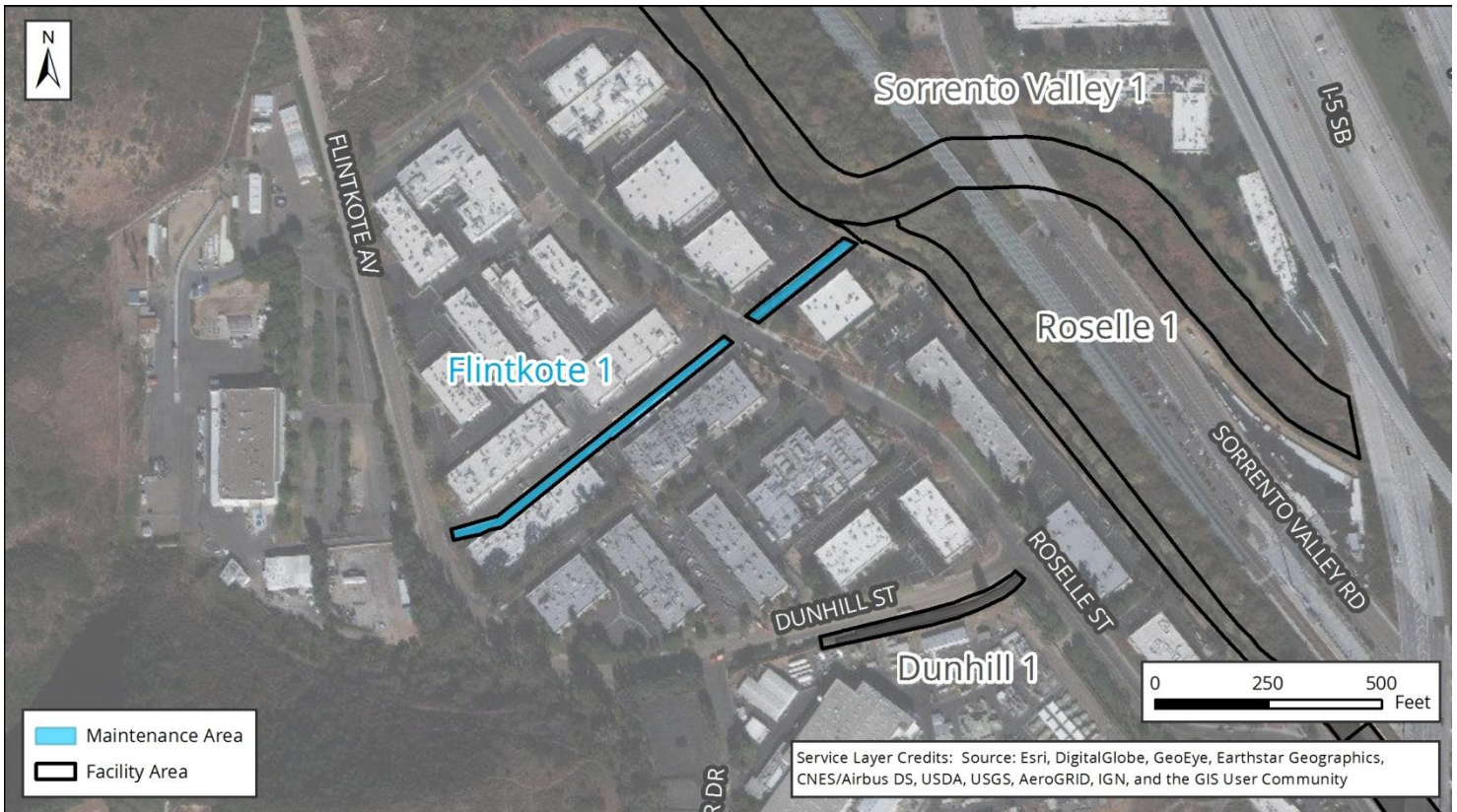


# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Soledad Canyon Creek Unnamed Tributary (03)
<b>Facility Group Name</b>	Soledad Canyon Creek - Flintkote
<b>Segment Name (Facility Number)</b>	Flintkote 1 (2-03-100)
<b>Substrate</b>	Flintkote 1 / Concrete
<b>Location</b>	About 700 feet northwest of the intersection of Tower Road and Flintkote Avenue and south of Soledad Canyon Creek
<b>MMP Map No(s).</b>	9
<b>Facility Inspection No.</b>	9
<b>Other Former Names</b>	Sorrento/Soledad Canyon - Reach 7



**Figure 1: Vicinity Map of Soledad Canyon Creek - Flintkote Facility Group**



# Soledad Canyon Creek - Flintkote Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Soledad Canyon Creek - Flintkote

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Cold Freshwater Habitat (COLD)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Sediment Toxicity, Selenium
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### Los Peñasquitos Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Benthic Community Effects, Indicator Bacteria, Nitrogen, Pesticides, Phosphate, Total Dissolved Solids, Toxicity
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# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

### Flintkote Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Soledad Canyon Creek unnamed tributary, immediately upstream of Soledad Canyon Creek (Roselle Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,075 feet
<b>Top-of-Bank Width</b>	Approximately 16-25 feet
<b>Bottom Facility Width</b>	Approximately 8 feet
<b>Facility Depth</b>	Approximately 4 feet
<b>Adjacent Land Use</b>	Industrial, Open Space, Transportation
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	N-APP-1



Figure 1: June 2018, taken from Roselle Street looking southwest

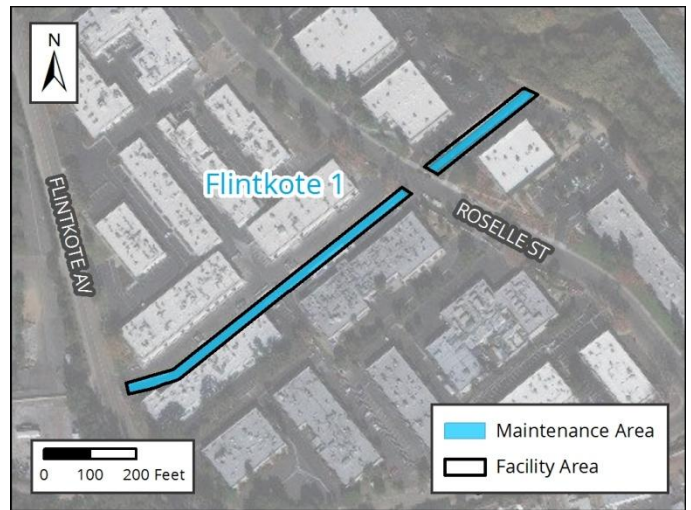


Figure 2: Vicinity Map of Flintkote Segment 1

# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2013: No maintenance conducted 2014 – 2017: Routine maintenance conducted April 2017 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	2012 Master CDP No. A-6-NOC11-086-A1 (expires November 2019)
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	NWP 33 USACE File #SPL-2013-00432-MBS (expired March 2017)
<b>401</b>	RWQCB 401 Cert No. R9-2013-0116 (expired March 2017)
<b>1602</b>	CDFW SAA No. 1600-2013-0120-R5 (expired 2018)

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<b>Mitigation for Previous Impacts</b>	El Cuervo del Sur HMMP (0.06 acre) Los Peñasquitos WEP (0.18 acre)
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# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**      In April 2013, the ditch was observed to have vegetation varying from clear to dense and the sediment deposition was estimated to be 1.25 feet. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	76	97	112	133	145	155

#### Hydraulic Capacity of Facility

**Current Capacity**      60 cfs

**Proposed MWMP Maintained Capacity**      80 cfs

**Maintenance Recommendation**      Remove accumulated sediment, debris, and vegetation from Station 50 to Station 300 and Station 383 to Station 1125.  
Remove accumulated sediment and debris in culvert from Station 300 to Station 383.

**In-Stream Post-Maintenance Erosion Control Recommendation**      None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Freshwater marsh</li> <li>Riparian forest (southern willow forest)</li> <li>Riparian scrub (southern willow scrub)</li> </ul>
<b>Habitat and Wildlife</b>	The ditch itself is concrete-lined and has a low potential to support habitat for nesting birds or special-status species. However, Ridgway's rail has been known to occur in the area, and daily surveys should be conducted during maintenance to ensure no rails have entered the ditch. Additionally, within 500 feet of the ditch boundary, raptor nesting habitat and coastal sage scrub suitable for coastal California gnatcatcher (within the Multi Habitat Planning Area [MHPA]) is present.
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The downstream portion of the ditch is approximately 70 feet west of the MHPA boundary and the upstream portion is approximately 430 feet north of the MHPA boundary.
<b>Mitigation Within Facility</b>	None

### Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963-1974 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Soledad Canyon Creek - Flintkote Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-7
EP-HAZ-3	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Land Use (LU)</b>	MM-CR-1
EP-LU-1	MM-CR-2
<b>Solid Waste (SW)</b>	MM-CR-3
EP-SW-2	MM-CR-4
EP-SW-3	<b>Noise (NOI)</b>
EP-SW-4	MM-NOI-1
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Soledad Canyon Creek - Flintkote Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Soledad Canyon Creek - Flintkote
<b>Segment Name</b>	Flintkote 1
<b>Facility No.</b>	2-03-100
<b>Facility Location</b>	From Flintkote Avenue to outlet of culvert 100 feet east of Roselle Street
<b>Coastal Zone</b>	N-APP-1
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 50 to Station 300 and Station 383 to Station 1125. Remove accumulated sediment and debris in culvert from Station 300 to Station 383.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Soledad Canyon Creek - Flintkote Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,075 feet Top width: 16–25 feet Bottom width: 8 feet Depth: 4 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 992 feet; Culvert: 83 feet Width: 16–25 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 6–8 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall//Excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> <li>5. Vactor used to power wash concrete ditch in accordance with Flow Management section (below) and Water Pollution Control Plan</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Soledad Canyon Creek - Flintkote Facility Group Facility Maintenance Plan

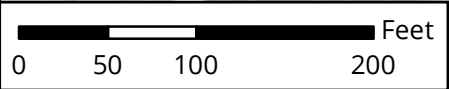
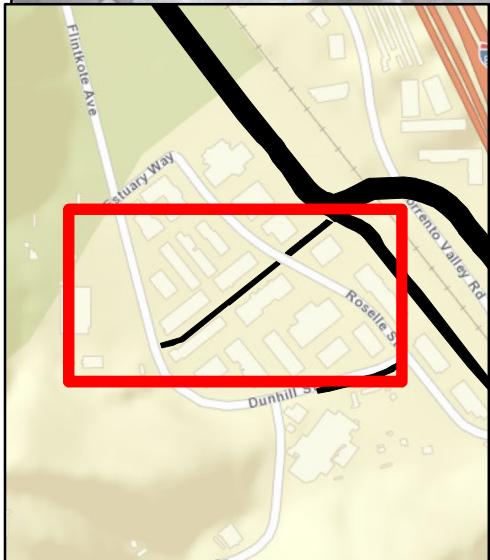
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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None









Bridge/Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	Coastal Zone

- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Soledad Canyon Creek - Flintkote**  
**Segment Name: Flintkote 1**  
**Facility No: 2-03-100**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# Soledad Canyon Creek - Dunhill Facility Group

Segment Name (Facility number):  
Dunhill 1 (2-03-150)





# Soledad Canyon Creek - Dunhill Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.10
<b>Drainage Name (Number)</b>	Soledad Canyon Creek Unnamed Tributary (03)
<b>Facility Group Name</b>	Soledad Canyon Creek - Dunhill
<b>Segment Name (Facility Number)</b>	Dunhill 1 (2-03-150)
<b>Substrate</b>	Dunhill 1 / Earthen
<b>Location</b>	About 300 feet east of the intersection of Tower Road and Dunhill Street, and west of the intersection of Roselle Street and Dunhill Street
<b>MMP Map No(s).</b>	10
<b>Facility Inspection No.</b>	10
<b>Other Former Names</b>	Sorrento/Soledad Canyon - Reach 8 and Soledad/Sorrento Creek Channel



Figure 1: Vicinity Map of Soledad Canyon Creek - Dunhill Facility Group

# Soledad Canyon Creek - Dunhill Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.10

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Soledad Canyon Creek - Dunhill

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Cold Freshwater Habitat (COLD)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Sediment Toxicity, Selenium
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### Los Peñasquitos Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
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<b>303(d) listed Impairments</b>	Benthic Community Effects, Indicator Bacteria, Nitrogen, Pesticides, Phosphate, Total Dissolved Solids, Toxicity
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# Soledad Canyon Creek - Dunhill Facility Group

## Facility Maintenance Plan

### Dunhill Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Lower reach of Soledad Canyon Creek unnamed tributary, immediately upstream of Soledad Canyon Creek (Roselle Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 430 feet
<b>Top-of-Bank Width</b>	Approximately 30 feet
<b>Bottom Facility Width</b>	Approximately 10 feet
<b>Facility Depth</b>	Approximately 5 feet
<b>Adjacent Land Use</b>	Industrial, Open Space, Transportation
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	CST-APP



Figure 1: May 2017, looking downstream at vegetation and sediment in Dunhill segment

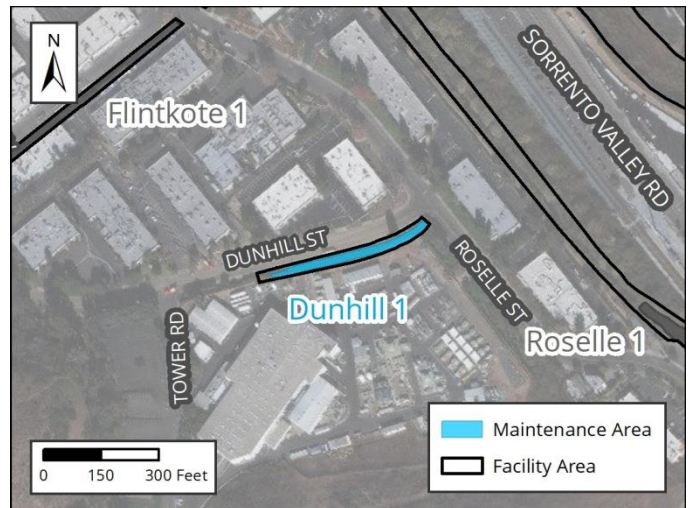


Figure 2: Vicinity Map of Dunhill Segment 1





# Soledad Canyon Creek - Dunhill Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Disturbed wetland</li> <li>• Freshwater marsh</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility, but there is some potential for Ridgway's rail to occur in the channel due to adjacency to historic observation locations
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 570 feet southwest of the channel location.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1962 earthen channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Soledad Canyon Creek - Dunhill Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Geologic Resources (GEO)</b>	MM-BIO-5
EP-GEO-1	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-CR-1
<b>Hydrology (HYD)</b>	MM-CR-2
EP-HYD-1	MM-CR-3
<b>Solid Waste (SW)</b>	MM-CR-4
EP-SW-2	<b>Noise (NOI)</b>
EP-SW-3	MM-NOI-1
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Soledad Canyon Creek - Dunhill Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Soledad Canyon Creek - Dunhill
<b>Segment Name</b>	Dunhill 1
<b>Facility No.</b>	2-03-150
<b>Facility Location</b>	From a storm drain outfall just east of the intersection of Tower Road and Dunhill Street to inlet of culvert that passes under Roselle Street
<b>Coastal Zone</b>	CST-APP
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen channel per estimated original designs and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of the facility from Station 329 to Station 759. Repair bank at approximately from Station 715 to Station 759 on the north (street) side. Maintain/repair existing debris fence as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Bank repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary diversions Vegetation trimming Hand removal of vegetation <u>Bank grading and stabilization</u>
<b>Bank Repair</b>	Yes (multiple options); see Appendix A-4
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Earthen bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Soledad Canyon Creek - Dunhill Facility Group Facility Maintenance Plan

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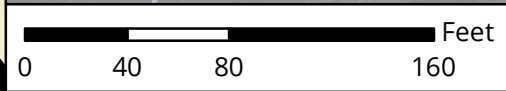
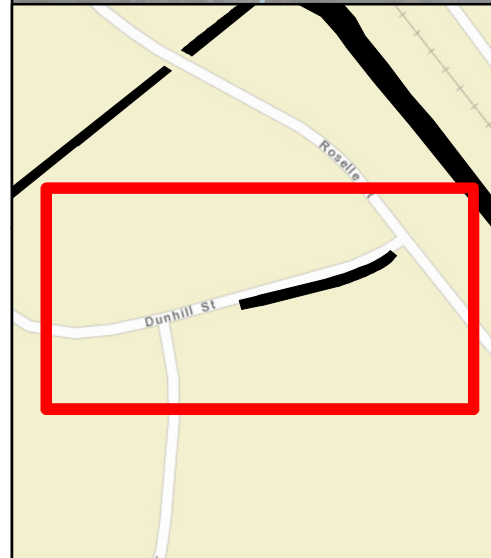
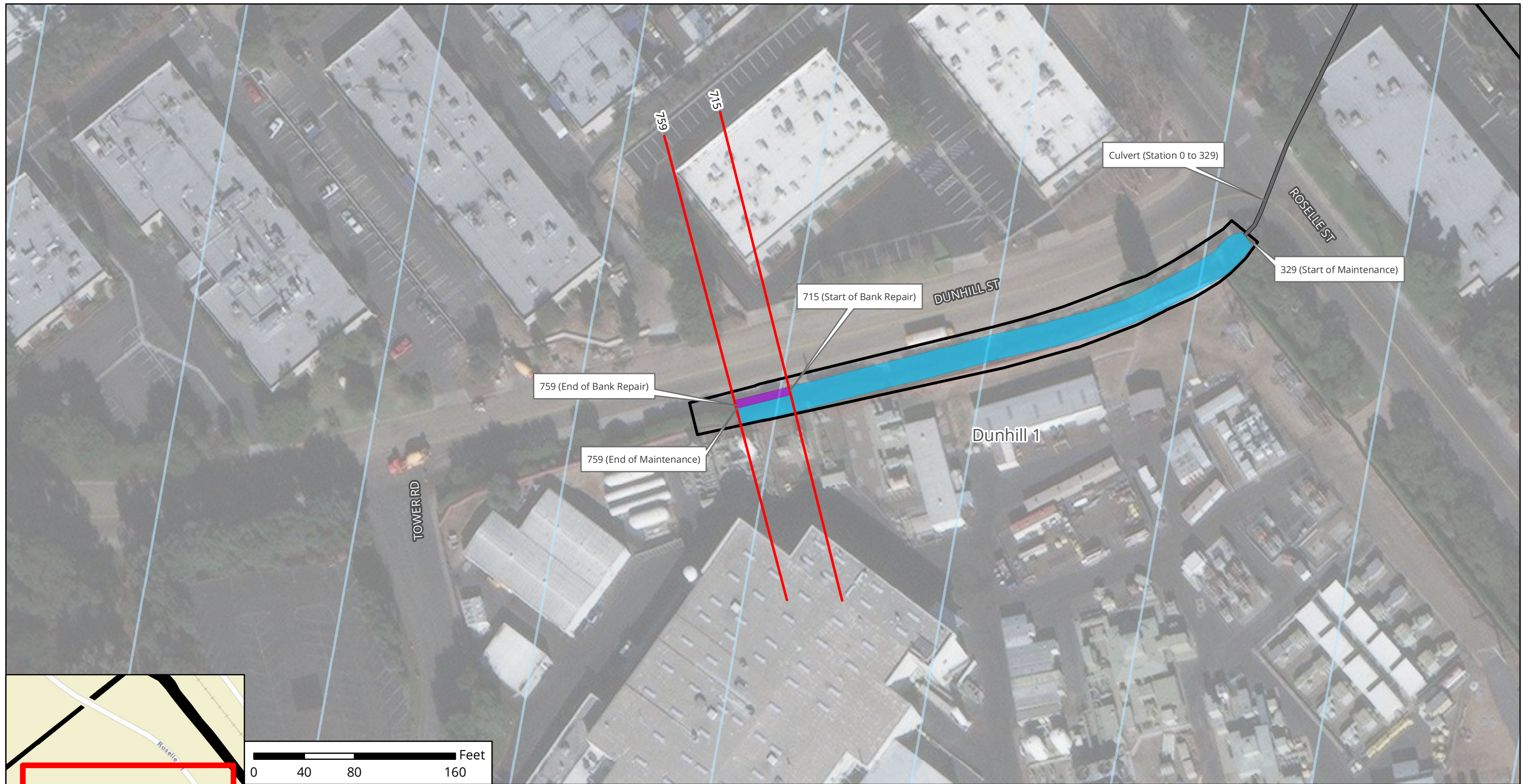
<b>Facility Dimensions (Approximate)</b>	Length: 430 feet Top width: 30 feet Bottom width: 10 feet Depth: 5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 430 feet Width: 20 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 14 working days
<b>Maintenance Crew</b>	Approximately 8-10 people
<b>Routine Maintenance Procedures</b>	<p>Outside of Channel:</p> <ol style="list-style-type: none"> <li>1. Gradall/excavator moves along channel bank within access/loading area</li> <li>2. Gradall/excavator scoops material from channel and loads dump truck</li> <li>3. Dump truck hauls material to legal disposal site</li> </ol> <p>Inside of Channel:</p> <ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego

## Soledad Canyon Creek - Dunhill Facility Group Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	<p>Yes; see Appendix A-4</p> <p>Location: Station to be determined</p>
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





Culvert	Bank Repair
Station	Maintenance Area
Facility Area	
Coastal Zone	



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Soledad Canyon Creek - Dunhill**  
**Segment Name: Dunhill 1**  
**Facility No: 2-03-150**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**







Facility Maintenance Plan

# Chicarita Creek - Via San Marco Facility Group

Segment Name (Facility number):  
Via San Marco 1 (2-05-140)



# Chicarita Creek - Via San Marco Facility Group Facility Maintenance Plan

## Overview

<b>Watershed Management Area (WMA)</b>	Los Peñasquitos
<b>Watershed (Number)</b>	Los Peñasquitos (2)
<b>Hydrologic Subarea</b>	906.20
<b>Drainage Name (Number)</b>	Chicarita Creek Unnamed Tributary (05)
<b>Facility Group Name</b>	Chicarita Creek - Via San Marco
<b>Segment Name (Facility Number)</b>	Via San Marco 1 (2-05-140)
<b>Substrate</b>	Via San Marco 1 / Concrete
<b>Location</b>	Bordered by Carmel Mountain Road to the west, residential development to the north and south, and Interstate 15 (I-15) to the east
<b>MMP Map No(s).</b>	4
<b>Facility Inspection No.</b>	4
<b>Other Former Names</b>	None



**Figure 1: Vicinity Map of Chicarita Creek - Via San Marco Facility Group**



# Chicarita Creek - Via San Marco Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Los Peñasquitos Watershed Management Area; Hydrologic Subarea 906.20

<b>Adopted TMDLs</b>	Los Peñasquitos Lagoon sedimentation and siltation, Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria, sediment (wet weather), freshwater discharges (dry weather)

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### Chicarita Creek - Via San Marco

#### Beneficial Uses

<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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### Chicarita Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"><li>• Agricultural Supply (AGR)</li><li>• Contact Water Recreation (REC-1)</li><li>• Non-contact Water Recreation (REC-2)</li><li>• Warm Freshwater Habitat (WARM)</li><li>• Wildlife Habitat (WILD)</li></ul>
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<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) list
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# Chicarita Creek - Via San Marco Facility Group

## Facility Maintenance Plan

### Via San Marco Segment 1 Detail

Facility Type	Concrete ditch
Substrate Detail	Gunite bottom and banks
Location Within Watershed	Unnamed tributary to Chicarita Creek, upstream of Chicarita Creek
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 797 feet
Top-of-Bank Width	Approximately 7-12 feet
Bottom Facility Width	Approximately 3-6 feet
Facility Depth	Approximately 2-3 feet
Adjacent Land Use	Multi-Family Residential, Public Facilities and Utilities, Transportation
As-Built Drawing Number	11668-7-D
Coastal Zone	No



Figure 1: July 2017, photo depicts failure of gunite bottom of ditch, looking upstream



Figure 2: Vicinity Map of Via San Marco Segment 1



# Chicarita Creek - Via San Marco Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Disturbed land</li> <li>Eucalyptus woodland</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	The ditch does not contain suitable vegetation for sensitive species. However, raptors could use the ornamental vegetation and eucalyptus woodland present adjacent to the facility for nesting/roosting.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 900 feet south west of the ditch.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1972 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Chicarita Creek - Via San Marco Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-6
EP-BIO-6	<b>Noise (NOI)</b>
<b>Health and Safety/Hazards (HAZ)</b>	MM-NOI-1
EP-HAZ-3	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Chicarita Creek - Via San Marco Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Chicarita Creek - Via San Marco
<b>Segment Name</b>	Via San Marco 1
<b>Facility No.</b>	2-05-140
<b>Facility Location</b>	From south side of Carmel Mountain Road northeast of the intersection with Via San Marco to north of the Caminito Quevedo cul-de-sac
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 179 to Station 481, and Station 501 to Station 896. Remove accumulated sediment and debris in the culverts at Station 179, and from Station 481 to Station 501. Repair failed gunite ditch bottom lining from Station 209 to Station 451 and 531 to Station 896.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 11668-7-D
<b>Substrate Detail</b>	Gunite bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Chicarita Creek - Via San Marco Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 797 feet Top width: 7-12 feet Bottom width: 3-6 feet Depth: 2-3 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 697 feet; Culvert: 20 feet Width: 7-12 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area. Note: where Bobcat/skid-steer cannot access, work will be completed by hand.</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

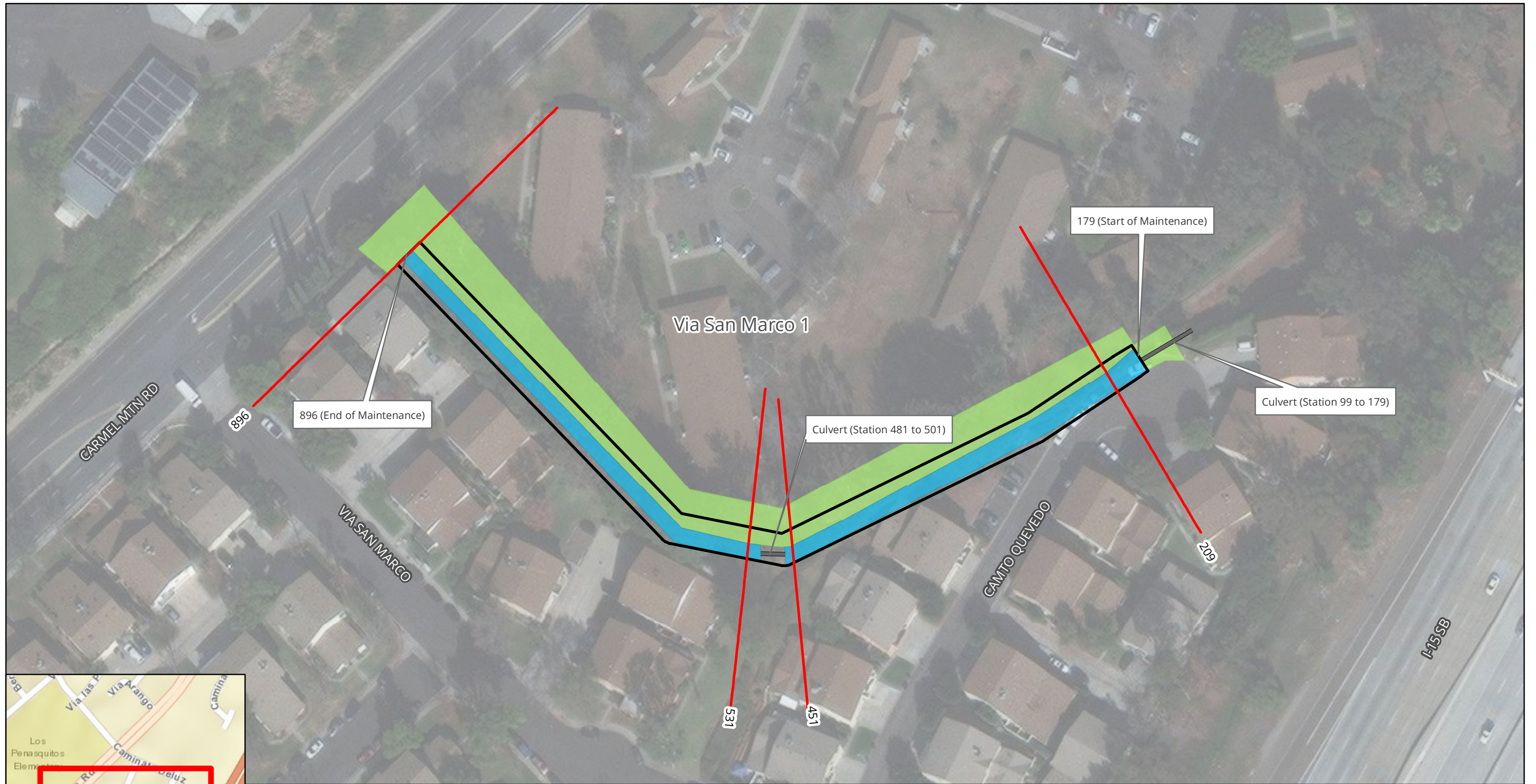
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors


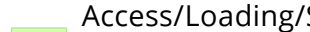



## Chicarita Creek - Via San Marco Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	No
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	None





	Culvert		Access/Loading/Staging /Stockpiling Area
	Station		Maintenance Area
	Facility Area		



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Chicarita Creek - Via San Marco**  
**Segment Name: Via San Marco 1**  
**Facility No: 2-05-140**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# Torrey Pines - Torrey Facility Group

Segment Name (Facility number):  
Torrey Pines 1 (3-00-120)

# Torrey Pines - Torrey Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.30
<b>Drainage Name (Number)</b>	Scripps (00)
<b>Facility Group Name</b>	Torrey Pines - Torrey
<b>Segment Name (Facility Number)</b>	Torrey Pines 1 (3-00-120)
<b>Substrate</b>	Torrey Pines 1 / Earthen
<b>Location</b>	About 700 feet west of La Jolla Scenic Drive North, and east of the intersection of Torrey Pines Road and Pottery Park Driveway
<b>MMP Map No(s).</b>	N/A
<b>Facility Inspection No.</b>	304
<b>Other Former Names</b>	Pottery Canyon



Figure 1: Vicinity Map of Torrey Pines - Torrey Facility Group



# Torrey Pines - Torrey Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### Mission Bay Watershed Management Area; Hydrologic Subarea 906.30

<b>Adopted TMDLs</b>	None, but drains to La Jolla ASBS, so ASBS special protections apply
<b>Highest Priority Water Quality Condition</b>	Bacteria

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#### Torrey Pines - Torrey

<b>Beneficial Uses</b>	<ul style="list-style-type: none"><li>• Non-contact Water Recreation (REC-2)</li><li>• Warm Freshwater Habitat (WARM)</li><li>• Wildlife Habitat (WILD)</li></ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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#### NA (First downstream water body)

<b>Beneficial Uses</b>	
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) list

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# Torrey Pines - Torrey Facility Group

## Facility Maintenance Plan

### Torrey Pines Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Upper reach of Scripps Channel
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,185 feet
<b>Top-of-Bank Width</b>	Approximately 12-40 feet
<b>Bottom Facility Width</b>	Approximately 10-20 feet
<b>Facility Depth</b>	Approximately 0.3-5 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	No



Figure 1: April 2017, representative of light weeds in the channel segment

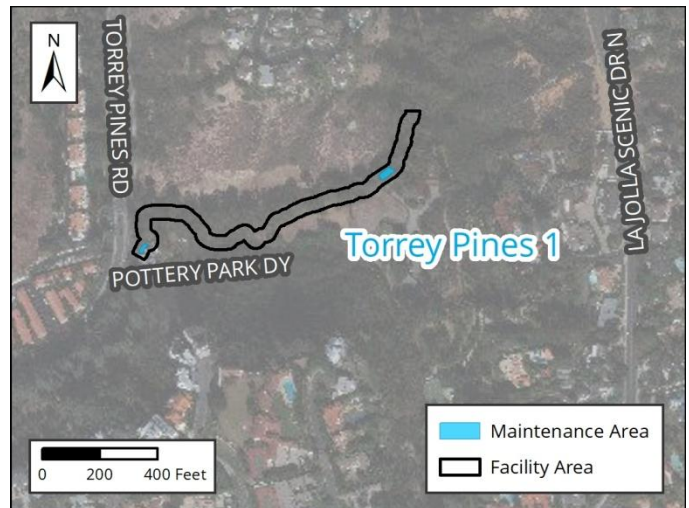


Figure 2: Vicinity Map of Torrey Pines Segment 1



# Torrey Pines - Torrey Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Coastal sage scrub</li> <li>Developed land</li> <li>Disturbed land</li> <li>Eucalyptus woodland</li> <li>Natural flood channel</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present within and adjacent to the facility for nesting/roosting. Other sensitive bird species could occur in sage scrub habitat adjacent to the channel (e.g. coastal California gnatcatcher).
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located more than 1,000 feet west of the channel.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-37-031737; P-37-034756
<b>Resource Type</b>	Historic trash dump; pottery kiln
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; P-37-034756; 2725 Torrey Pines Rd; Pre-1953 earthen channel; pottery kiln; building more than 45 years old (not previously evaluated)
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	



# Torrey Pines - Torrey Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-1	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-HR-1
<b>Paleontological Resources (PAL)</b>	MM-HR-2
EP-PAL-1	<b>Noise (NOI)</b>
<b>Solid Waste (SW)</b>	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Torrey Pines - Torrey Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Torrey Pines - Torrey
<b>Segment Name</b>	Torrey Pines 1
<b>Facility No.</b>	3-00-120
<b>Facility Location</b>	From an undeveloped canyon to a drop inlet adjacent to Torrey Pines Road at Pottery Park Driveway
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of existing check dams and transition to drop inlet of Torrey Pines Road culvert per Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment and debris from directly upstream of each existing check dam located between Station 1282 to Station 1334. Remove accumulated sediment, debris, and overgrown vegetation from Station 153 to Station 193. Remove accumulated sediment, debris, and overgrown vegetation at the drop inlet at Station 153. Maintain/repair existing debris fences as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Earthen bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Torrey Pines - Torrey Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,185 feet Top width: 12–40 feet Bottom width: 10–20 feet Depth: 0.3–5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 92 feet Width: 12–22 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Gradall/excavator, backhoe, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 7–14 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	1. Gradall/excavator at access/loading area scoops material from channel and loads dump truck 2. Dump truck hauls material to legal disposal site
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site: 1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate 2. Conduct appropriate training 3. Review Best Management Practices (BMP) installation 4. If needed, review pre- and during-maintenance pumping procedure 5. Conduct pre-maintenance site photo documentation
<b>Biology</b>	Suitable habitat for sensitive species <sup>3</sup> : 1. Within maintenance area: Yes, limited suitable habitat present 2. Adjacent to maintenance area: Yes Activities to be conducted under authority of a qualified biologist: 1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15
<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	No

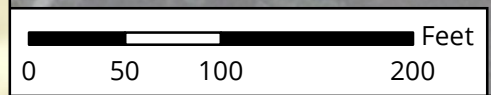
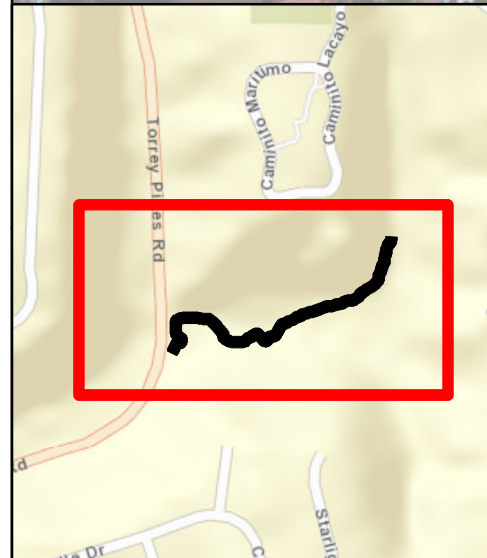
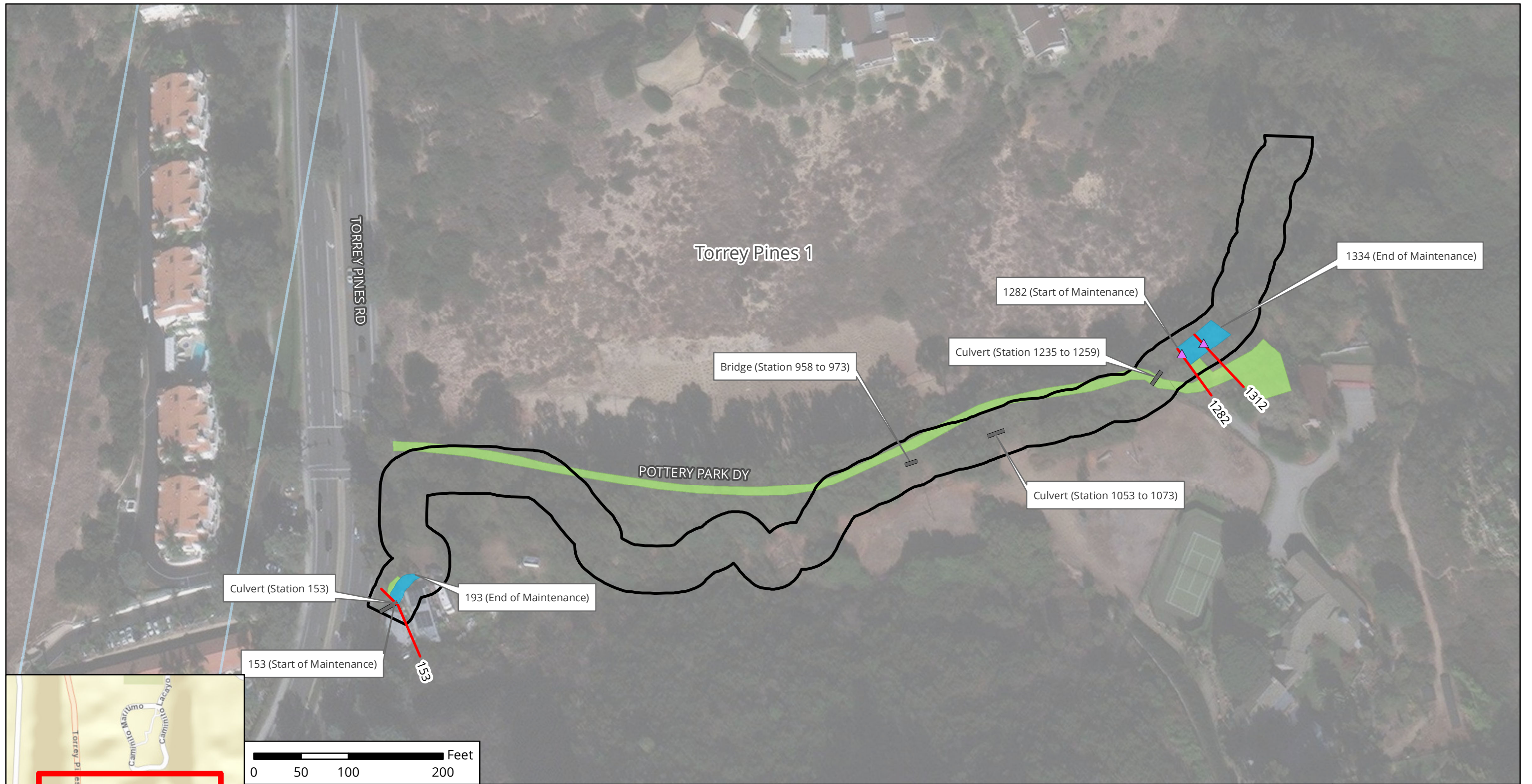
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Torrey Pines - Torrey Facility Group Facility Maintenance Plan

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<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	Possible need for check dam repair





Check Dam	Coastal Zone
Bridge/Culvert	Access/Loading/Staging /Stockpiling Area
Station	Maintenance Area
Facility Area	



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Torrey Pines - Torrey**  
**Segment Name: Torrey Pines 1**  
**Facility No: 3-00-120**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## Mission Bay - MBHS Facility Group

### Segment Names (Facility numbers):

PB-Olney 1 (3-02-101)

MBHS 1 (3-02-103)

# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.40
<b>Drainage Name (Number)</b>	Mission Bay Unnamed Tributary (02)
<b>Facility Group Name</b>	Mission Bay - MBHS
<b>Segment Name (Facility Number)</b>	PB-Olney 1 (3-02-101) MBHS 1 (3-02-103)
<b>Substrate</b>	PB-Olney 1 / Earthen MBHS 1 / Concrete
<b>Location</b>	About 200 feet south of Grand Avenue, east of Mission Bay High School, and north of Pacific Beach Drive
<b>MMP Map No(s).</b>	36, 37
<b>Facility Inspection No.</b>	36, 37
<b>Other Former Names</b>	None



Figure 1: Vicinity Map of Mission Bay - MBHS Facility Group



# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### Mission Bay Watershed Management Area; Hydrologic Subarea 906.40

<b>Adopted TMDLs</b>	None
<b>Highest Priority Water Quality Condition</b>	No Highest Priority has been identified for this part of the Watershed Management Area

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#### Mission Bay - MBHS

##### Beneficial Uses

<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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#### Mission Bay (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"><li>• Industrial Service Supply (IND)</li><li>• Wildlife Habitat (WILD)</li><li>• Rare, Threatened, or Endangered Species (RARE)</li><li>• Spawning, Reproduction, and/or Early Development (SPWN)</li><li>• Commercial and Sport Fishing (COMM)</li><li>• Estuarine (EST)</li><li>• Marine (MAR)</li><li>• Migration of Aquatic Organisms (MIGR)</li><li>• Shellfish Harvesting (SHELL)</li></ul>
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<b>303(d) listed Impairments</b>	Eutrophic, Lead
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# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### PB-Olney Segment 1 Detail

<b>Facility Type</b>	Earthen ditch
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Unnamed tributary to Mission Bay, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 910 feet
<b>Top-of-Bank Width</b>	Approximately 20-26 feet
<b>Bottom Facility Width</b>	Approximately 3-5 feet
<b>Facility Depth</b>	Approximately 5-6 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	CST-PMT



Figure 1: September 2013, downstream end looking east. High vegetation density and growth were observed

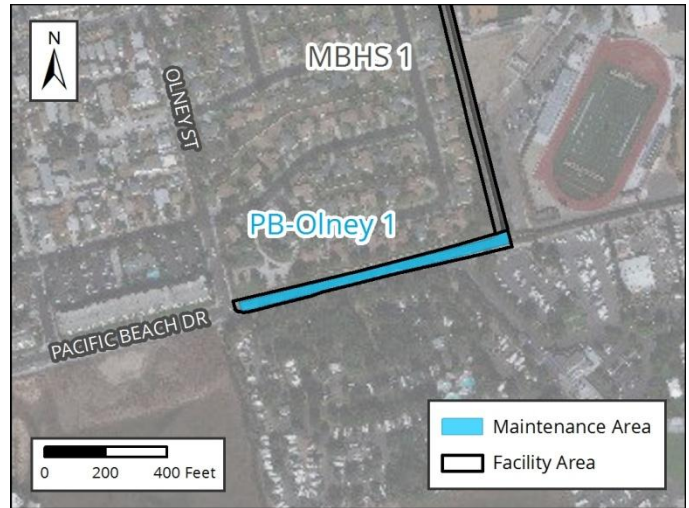


Figure 2: Vicinity Map of PB-Olney Segment 1

# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2014: No maintenance conducted 2015 – 2016: Routine maintenance conducted January 2017 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** 2012 Master CDP No. A-6-NOC11-086-A1 (expires November 2019)

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 33 USACE File #SPL-2014-00417-MBS (expired March 2017)

**401** RWQCB 401 Cert No. R9-2014-0077 (expires March 2020)

**1602** CDFW did not respond to application in time, so it was automatically approved as described

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<b>Mitigation for Previous Impacts</b>	Combined with mitigation for MBHS segment: El Cuervo del Sur HMMP (0.34 acre); Los Peñasquitos WEP (0.96 acre)
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# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity** In September 2013, dense vegetation and accumulated sediment throughout the earthen ditch, with a greater density of vegetation observed in the upstream section. Sediment deposition of 6 to 8 inches was observed. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	59	80	96	110	130	143
Hydraulic Capacity of Facility						
<b>Current Capacity</b>					59 cfs	
<b>Proposed MWMP Maintained Capacity</b>					59 cfs	
<b>Maintenance Recommendation</b>			Remove accumulated sediment, debris, and vegetation from bottom of ditch from Station 1 to Station 8. Remove accumulated sediment, debris, and vegetation from the culvert opening at Station 1.			
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>					None	

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Mission Bay - MBHS Facility Group Facility Maintenance Plan

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## Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed concrete-lined channel</li> <li>Developed land</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility, but there is potential for Ridgway's rail to occur in the ditch due to adjacency to suitable coastal habitat and historic observation locations
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 50 feet north of the ditch.
<b>Mitigation Within Facility</b>	None

## Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-37-005017
<b>Resource Type</b>	Prehistoric habitation
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1961, 1963 earthen channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Mission Bay - MBHS Facility Group Facility Maintenance Plan

## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-5
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Land Use (LU)</b>	MM-NOI-1
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Mission Bay - MBHS
<b>Segment Name</b>	PB-Olney 1
<b>Facility No.</b>	3-02-101
<b>Facility Location</b>	From downstream end of MBHS 1 segment to inlet of culvert underneath the intersection of Pacific Beach Drive and Olney Street
<b>Coastal Zone</b>	CST-PMT
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen ditch per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of ditch from Station 1 to Station 8. Remove accumulated sediment, debris, and vegetation from the culvert opening at Station 1.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside of facility Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen ditch
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Earthen bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Mission Bay - MBHS Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 910 feet Top width: 20–26 feet Bottom width: 3–5 feet Depth: 5–6 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 910 feet Width: 20–26 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 7–14 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



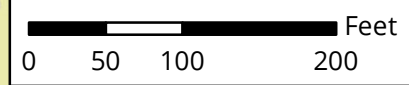
## Mission Bay - MBHS Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







- Culvert
- Facility Area
- Multi-Habitat Planning Area
- Coastal Zone
- Adjacent Facility Activity Area
- Maintenance Area

**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Mission Bay - MBHS**  
**Segment Name: PB-Olney 1**  
**Facility No: 3-02-101**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**









# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### MBHS Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Unnamed tributary to Mission Bay, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,058 feet
<b>Top-of-Bank Width</b>	Approximately 10 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 2 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	CST-APP, CST-PMT



Figure 1: September 2013, at upstream end of segment, just downstream of 27-inch-diameter RCP and headwall. High density of vegetation observed, and concrete ditch is not visible.



Figure 2: Vicinity Map of MBHS Segment 1

# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2014: No maintenance conducted 2015 – 2016: Routine maintenance conducted January 2017 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** 2012 Master CDP No. A-6-NOC11-086-A1 (expires November 2019)

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 33 USACE File #SPL-2014-00417-MBS (expired March 2017)

**401** RWQCB 401 Cert No. RS-2014-0077 (expires March 2020)

**1602** CDFW did not respond to application in time, so it was automatically approved as described

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<b>Mitigation for Previous Impacts</b>	Combined with mitigation for PB-Olney segment: El Cuervo del Sur HMMP (0.34 acre); Los Peñasquitos WEP (0.96 acre)
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# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity** In September 2013, dense vegetation and sediment deposition of 3 to 4 inches was observed. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	43	58	70	80	95	104

**Hydraulic Capacity of Facility**

<b>Current Capacity</b>	10 cfs
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<b>Proposed MWMP Maintained Capacity</b>	43 cfs
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<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from Station 8 to Station 17. Removed accumulated sediment, debris, and vegetation from the culvert opening at Station 17. Maintain/repair existing debris fence as needed.
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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
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<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Mission Bay - MBHS Facility Group Facility Maintenance Plan

## Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Natural flood channel</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility, but there is potential for Ridgway's rail to occur in the ditch due to adjacency to suitable coastal habitat and historic observation locations
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 870 feet to the southwest of the ditch.
<b>Mitigation Within Facility</b>	None

## Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-37-005017
<b>Resource Type</b>	Prehistoric habitation
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1961, 1963 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Environmental Protocols and Mitigation Measures

This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Mission Bay - MBHS Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Mission Bay - MBHS
<b>Segment Name</b>	MBHS 1
<b>Facility No.</b>	3-02-103
<b>Facility Location</b>	From outlet of culvert located at southwest corner of Mission Bay High School bus loading/unloading zone to upstream end of PB-Olney 1 segment
<b>Coastal Zone</b>	CST-APP, CST-PMT
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete ditch per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 8 to Station 17. Removed accumulated sediment, debris, and vegetation from the culvert opening at Station 17. Maintain/repair existing debris fence as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside of ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Mission Bay - MBHS Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,058 feet Top width: 10 feet Bottom width: 4 feet Depth: 2 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 1,058 feet Width: 10 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 7–14 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> <li>5. Vactor power washes concrete portion of ditch in accordance with Flow Management section (below) and Water Pollution Control Plan</li> </ol>
<b>Traffic Control</b>	Yes; Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

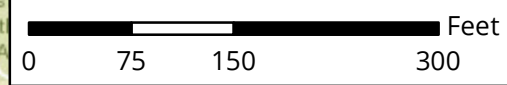
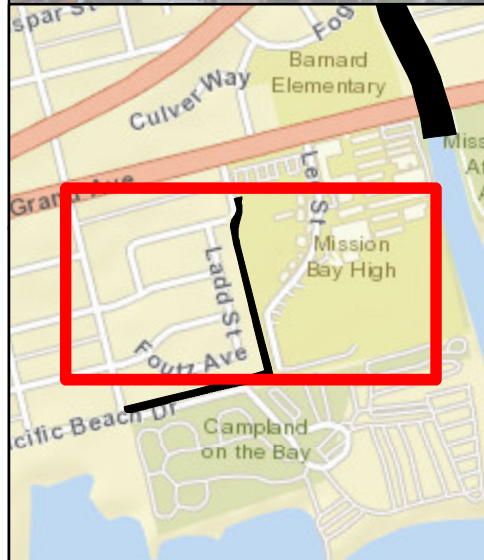
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Mission Bay - MBHS Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Adjacent Facility Activity Area
Facility Area	Access/Loading/Staging/Stockpiling Area
Coastal Zone	Maintenance Area



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Mission Bay - MBHS**  
**Segment Name: MBHS 1**  
**Facility No: 3-02-103**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.





Facility Maintenance Plan

# Mission Bay - Mission Bay Drive Facility Group

Segment Name (Facility number):  
Mission Bay Drive 1 (3-02-130)



# Mission Bay - Mission Bay Drive Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.40
<b>Drainage Name (Number)</b>	Mission Bay Unnamed Tributary (02)
<b>Facility Group Name</b>	Mission Bay - Mission Bay Drive
<b>Segment Name (Facility Number)</b>	Mission Bay Drive 1 (3-02-130)
<b>Substrate</b>	Mission Bay Drive 1 / Earthen
<b>Location</b>	Bordered by Mission Bay Golf Course and Practice Center on the southwest and by Grand Avenue and Mission Bay Drive to the northeast
<b>MMP Map No(s).</b>	N/A
<b>Facility Inspection No.</b>	303
<b>Other Former Names</b>	None



Figure 1: Vicinity Map of Mission Bay - Mission Bay Drive Facility Group



# Mission Bay - Mission Bay Drive Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Mission Bay Watershed Management Area; Hydrologic Subarea 906.40

<b>Adopted TMDLs</b>	None
<b>Highest Priority Water Quality Condition</b>	Bacteria

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### Mission Bay - Mission Bay Drive

#### Beneficial Uses

<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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### Mission Bay (First downstream water body)

#### Beneficial Uses

- Industrial Service Supply (IND)
- Contact Water Recreation (REC-1)
- Non-contact Water Recreation (REC-2)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Commercial and Sport Fishing (COMM)
- Estuarine (EST)
- Marine (MAR)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)

<b>303(d) listed Impairments</b>	Eutrophic, Lead
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# Mission Bay - Mission Bay Drive Facility Group

## Facility Maintenance Plan

### Mission Bay Drive Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Unnamed tributary to Mission Bay, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,085 feet
<b>Top-of-Bank Width</b>	Approximately 38–41 feet
<b>Bottom Facility Width</b>	Approximately 20 feet
<b>Facility Depth</b>	Approximately 6–7 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Parks, Single-Family Residential, Transportation, Undeveloped
<b>As-Built Drawing Number</b>	2319-D
<b>Coastal Zone</b>	DEF-CER



Figure 1: July 2017, representative downstream channel segment with dense vegetation

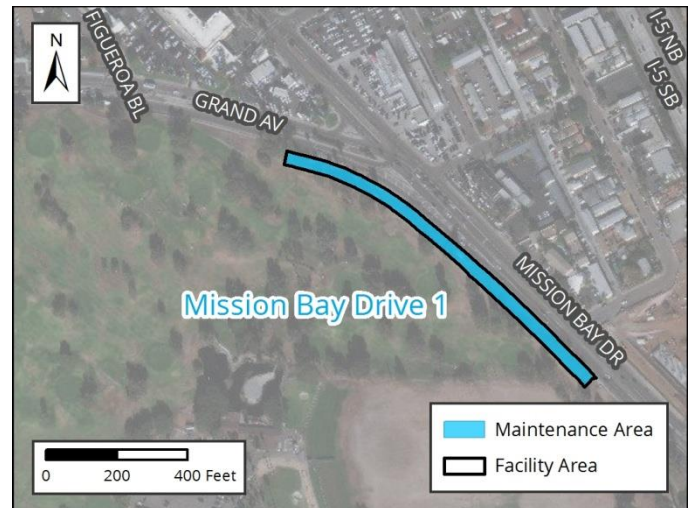


Figure 2: Vicinity Map of Mission Bay Drive Segment 1



# Mission Bay - Mission Bay Drive Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Disturbed freshwater marsh</li> <li>• Disturbed wetland</li> <li>• Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., Ridgeway's rail), the channel extents and area of vegetation present are limited such that it is unlikely for wildlife to use the channel for nesting or foraging
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	P-37-005017
<b>Resource Type</b>	Prehistoric habitation

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<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1956 earthen channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Mission Bay - Mission Bay Drive Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-5
<b>Geologic Resources (GEO)</b>	<b>Noise (NOI)</b>
EP-GEO-1	MM-NOI-1
<b>Health and Safety/Hazards (HAZ)</b>	
EP-HAZ-1	
EP-HAZ-3	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

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# Mission Bay - Mission Bay Drive Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Mission Bay - Mission Bay Drive
<b>Segment Name</b>	Mission Bay Drive 1
<b>Facility No.</b>	3-02-130
<b>Facility Location</b>	From outlet of culvert underneath Grand Avenue to 500 feet southeast of intersection of Figueroa Boulevard and Grand Avenue
<b>Coastal Zone</b>	DEF-CER
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen roadside channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and overgrown vegetation within bed and bank from Station 245 to Station 1330. Maintain/repair existing trash rack as needed.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Bank repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Vegetation trimming Hand removal of vegetation <u>Bank grading and stabilization</u>
<b>Bank Repair</b>	Yes (multiple options); see Appendix A-4
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 2319-D
<b>Substrate Detail</b>	Earthen bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Mission Bay - Mission Bay Drive Facility Group Facility Maintenance Plan

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<b>Facility Dimensions (Approximate)</b>	Length: 1,085 feet Top width: 38–41 feet Bottom width: 20 feet Depth: 6–7 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,085 feet Width: 38–41 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Crane, bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 18–20 people
<b>Routine Maintenance Procedures</b>	<p>Outside of Channel:</p> <ol style="list-style-type: none"> <li>1. Gradall/excavator moves along channel bank within access/loading area</li> <li>2. Gradall/excavator scoops material from channel and loads dump truck</li> <li>3. Dump truck hauls material to legal disposal site</li> </ol> <p>Inside of Channel:</p> <ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego. Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>

## Mission Bay - Mission Bay Drive Facility Group Facility Maintenance Plan

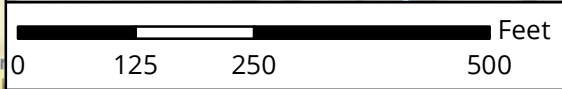
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<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes, limited suitable habitat present</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

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<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





Culvert	Access/Loading/Staging /Stockpiling Area
Facility Area	Maintenance Area
Coastal Zone	



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Mission Bay - Mission Bay Drive**  
**Segment Name: Mission Bay Drive 1**  
**Facility No: 3-02-130**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# Miramar - Engineer Facility Group

Segment Name (Facility number):  
Engineer 1 (3-03-901)



# Miramar - Engineer Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.40
<b>Drainage Name (Number)</b>	Miramar Unnamed Tributary (03)
<b>Facility Group Name</b>	Miramar - Engineer
<b>Segment Name (Facility Number)</b>	Engineer 1 (3-03-901)
<b>Substrate</b>	Engineer 1 / Concrete
<b>Location</b>	Runs parallel to Engineer Road, west of Mercury Road and is about 200 feet east of Brinell Street
<b>MMP Map No(s).</b>	47
<b>Facility Inspection No.</b>	47
<b>Other Former Names</b>	None



Figure 1: Vicinity Map of Miramar - Engineer Facility Group



# Miramar - Engineer Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### Mission Bay Watershed Management Area; Hydrologic Subarea 906.40

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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### Miramar - Engineer

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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# Miramar - Engineer Facility Group

## Facility Maintenance Plan

### Engineer Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail<sup>1</sup></b>	Stations 11-293: Concrete bottom and banks Stations 293-1137: Asphalt/concrete bottom and banks Stations 1137-1232: Concrete bottom and banks
<b>Location Within Watershed</b>	Unnamed tributary to Mission Bay, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,220 feet
<b>Top-of-Bank Width</b>	Approximately 5-16.5 feet
<b>Bottom Facility Width</b>	Approximately 2-3 feet
<b>Facility Depth</b>	Approximately 1-4 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Office, Transportation
<b>As-Built Drawing Number</b>	9603-D, 9606-D, & 9601-1,2-D
<b>Coastal Zone</b>	No



Figure 1: November 2015, upstream portion of reach facing west, showing sediment and vegetation in ditch

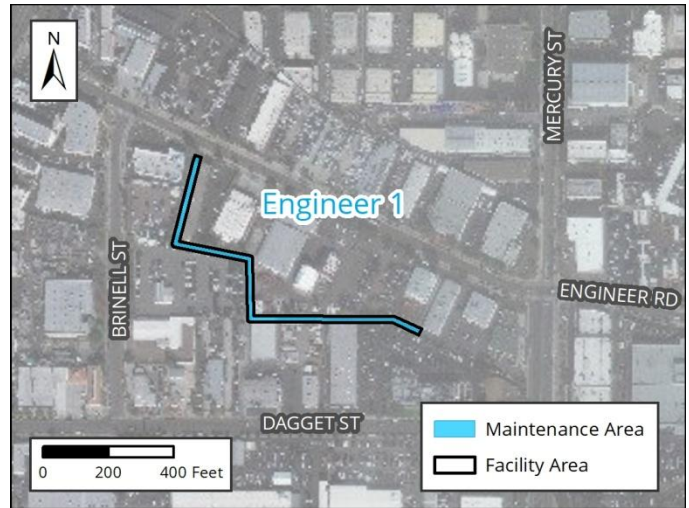


Figure 2: Vicinity Map of Engineer Segment 1

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Miramar - Engineer Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Disturbed wetland (concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> </ul>
<b>Habitat and Wildlife</b>	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 7969 Engineer Rd.; 7988 Engineer Rd.; 8025 Engineer Rd.; 8123 Engineer Rd.; 8133-8141 Engineer Rd.; 8159 Engineer Rd; 1962 concrete channel; seven buildings more than 45 years old (not previously evaluated)
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	



# Miramar - Engineer Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-BIO-5	MM-HR-1
EP-BIO-6	MM-HR-2
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-1	MM-NOI-1
EP-HAZ-3	
<b>Paleontological Resources (PAL)</b>	
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

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# Miramar - Engineer Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Miramar - Engineer
<b>Segment Name</b>	Engineer 1
<b>Facility No.</b>	3-03-901
<b>Facility Location</b>	From outlet of a pipe located behind 8141 Engineer Road to inlet of pipe crossing beneath Engineer Road and into a storm drain system
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>3</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 12 to Station 1232. Remove accumulated sediment, debris, and vegetation from culverts at Station 12 and Station 1232.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment outside the ditch Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 9603-D, 9606-D, & 9601-1,2-D
<b>Substrate Detail<sup>3</sup></b>	Stations 11-293: Concrete bottom and banks Stations 293-1137: Asphalt/concrete bottom and banks Stations 1137-1232: Concrete bottom and banks

<sup>3</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Miramar - Engineer Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,220 feet Top width: 5-16.5 feet Bottom width: 2-3 feet Depth: 1-4 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 1,220 feet Width: 16.5 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Crane, boom truck, Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump, vactor, fuel-powered hand tools, wheelbarrow, sweeper
<b>Schedule</b>	Up to approximately 60 working days
<b>Maintenance Crew</b>	Approximately 10-14 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Hand tools and wheelbarrow used in ditch to move material to Gradall/excavator at access/loading area</li> <li>2. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>3. Bobcat/skid-steer enters or is lowered into ditch at access/loading area with Gradall/excavator assistance</li> <li>4. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>5. Gradall/excavator/loader/crane scoops material from ditch and loads dump truck</li> <li>6. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with private property owner and the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: No</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

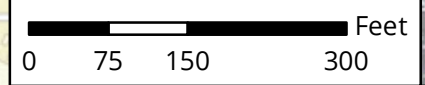
<sup>4</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Miramar - Engineer Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Access/Loading/Staging/Stockpiling Area
Station	Maintenance Area
Facility Area	



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Miramar - Engineer**  
**Segment Name: Engineer 1**  
**Facility No: 3-03-901**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## Tecolote Creek - Chateau Facility Group

### Segment Names (Facility numbers):

Chateau 1 (3-04-055)

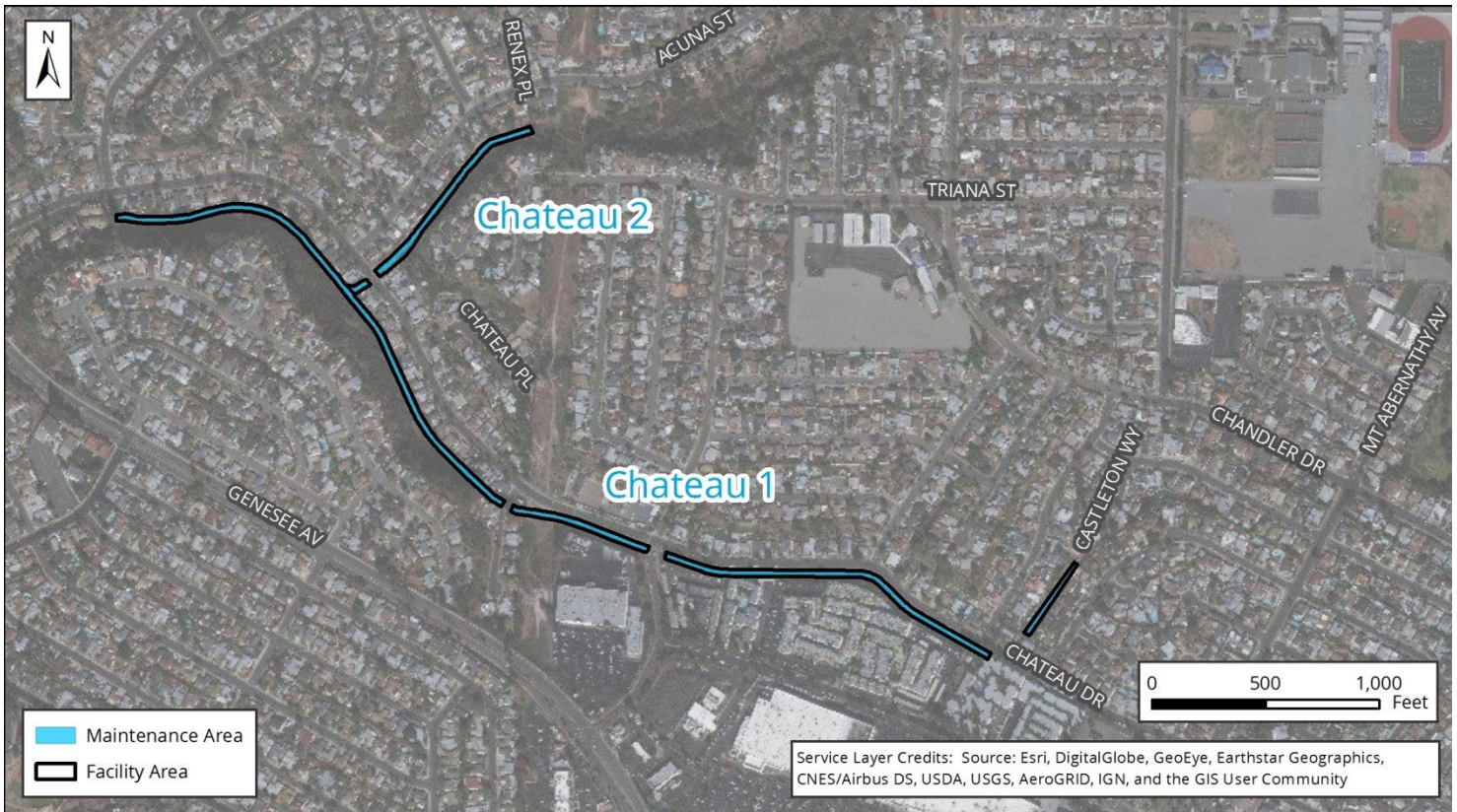
Chateau 2 (3-04-250)

# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.50
<b>Drainage Name (Number)</b>	Tecolote Creek (04)
<b>Facility Group Name</b>	Tecolote Creek - Chateau
<b>Segment Name (Facility Number)</b>	Chateau 1 (3-04-055)
<b>Substrate</b>	Chateau 1 / Concrete
<b>Location</b>	About 200 feet south of Renex Place, parallel to Chateau Drive, and south of Castleton Way
<b>MMP Map No(s).</b>	40, 41, 42, 314
<b>Facility Inspection No.</b>	40, 41, 42, 314
<b>Other Former Names</b>	None



**Figure 1: Vicinity Map of Tecolote Creek - Chateau Facility Group**



# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### Mission Bay Watershed Management Area; Hydrologic Subarea 906.50

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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#### Tecolote Creek - Chateau

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Selenium, Toxicity, Turbidity, Zinc

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#### Mission Bay (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> <li>• Spawning, Reproduction, and/or Early Development (SPWN)</li> <li>• Commercial and Sport Fishing (COMM)</li> <li>• Estuarine (EST)</li> <li>• Marine (MAR)</li> <li>• Migration of Aquatic Organisms (MIGR)</li> <li>• Shellfish Harvesting (SHELL)</li> </ul>
<b>303(d) listed Impairments</b>	Eutrophic, Lead

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# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

### Chateau Segment 1 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete/gunite bottom and banks
<b>Location Within Watershed</b>	Upper reach of Tecolote Creek, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 5,270 feet
<b>Top-of-Bank Width</b>	Approximately 19-23 feet
<b>Bottom Facility Width</b>	Approximately 3-10.5 feet
<b>Facility Depth</b>	Approximately 4.5-5.5 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	10208-6A-D, 10208-7A-D, 11473-2-D, 10476-D, 19248-3-D & 4295-D
<b>Coastal Zone</b>	No



Figure 1: May 2017, upstream of double 5-foot-wide by 4-foot-high RCB culvert beneath Derrick Drive



Figure 2: Vicinity Map of Chateau Segment 1



# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Disturbed coastal sage scrub</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	The channel area itself does not contain suitable vegetation for sensitive wildlife, but sage scrub habitat suitable for sensitive species, including coastal California gnatcatcher, is present in areas adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 850 feet to the west of the ditch within Tecolote Canyon.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963–1969 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Tecolote Creek - Chateau
<b>Segment Name</b>	Chateau 1
<b>Facility No.</b>	3-04-055
<b>Facility Location</b>	From storm drain system outlet southwest of the Castelton Way cul-de-sac to inlet of culvert that crosses beneath Genesee Avenue
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 959 to Station 3301, Station 3351 to Station 3970, Station 4064 to Station 5607, and Station 5851 to Station 6229. Remove accumulated sediment and debris in culverts from Station 3301 to 3351, Station 3970 to Station 4064, and Station 5607 to Station 5851.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Built?</b>	Yes; 10208-6A-D, 10208-7A-D, 11473-2-D, 10476-D, 19248-3-D & 4295-D
<b>Substrate Detail</b>	Concrete/gunite bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Tecolote Creek - Chateau Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 5,270 feet Top width: 19–23 feet Bottom width: 3–10.5 feet Depth: 4.5–5.5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 4,882 feet; Culvert: 388 feet Width: 19–23 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 21 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

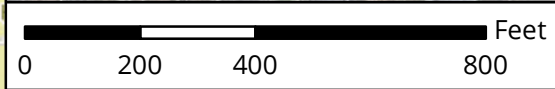
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Tecolote Creek - Chateau Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging /Stockpiling Area
Facility Area	Maintenance Area



**Notes:**

1. Concrete repair may occur within this facility.
2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
3. Access/Loading/Staging/Stockpiling may be modified during implementation.
4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Tecolote Creek - Chateau**  
**Segment Name: Chateau 1**  
**Facility No: 3-04-055**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

### Chateau Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Tecolote Creek, upstream of Tecolote Creek (Chateau Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,117 feet
<b>Top-of-Bank Width</b>	Approximately 15.5–23 feet
<b>Bottom Facility Width</b>	Approximately 4–10 feet
<b>Facility Depth</b>	Approximately 4.5 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	10208-6A-D, 10208-7A-D, 11473-2-D, 19248-3-D, 4295-D, 10476-10-D, & 10476-11-D
<b>Coastal Zone</b>	No



**Figure 1: May 2017, downstream of 10-foot-wide by 3-foot-high RCB culvert beneath Chateau Drive**



**Figure 2: Vicinity Map of Chateau Segment 2**





# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Disturbed coastal sage scrub</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	The channel area itself does not contain suitable vegetation for sensitive wildlife, but sage scrub habitat suitable for sensitive species, including coastal California gnatcatcher, is present in areas adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 850 feet to the west of the ditch within Tecolote Canyon.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963–1969 concrete channel
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Tecolote Creek - Chateau Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Tecolote Creek - Chateau
<b>Segment Name</b>	Chateau 2
<b>Facility No.</b>	3-04-250
<b>Facility Location</b>	From 200 feet north of the intersection of Triana Street and Almayo Avenue to the center of Chateau segment 1
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 0 to Station 105 and Station 165 to Station 1117. Remove accumulated sediment and debris in culverts from Station 105 to 165.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 10208-6A-D, 10208-7A-D, 11473-2-D, 19248-3-D, 4295-D, 10476-10-D, & 10476-11-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Tecolote Creek - Chateau Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,117 feet Top width: 15.5–23 feet Bottom width: 4–10 feet Depth: 4.5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,057 feet; Culvert: 60 feet Width: 15.5–23 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 45–60 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



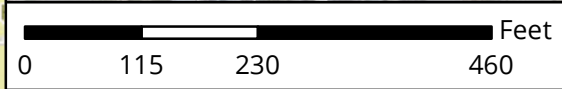
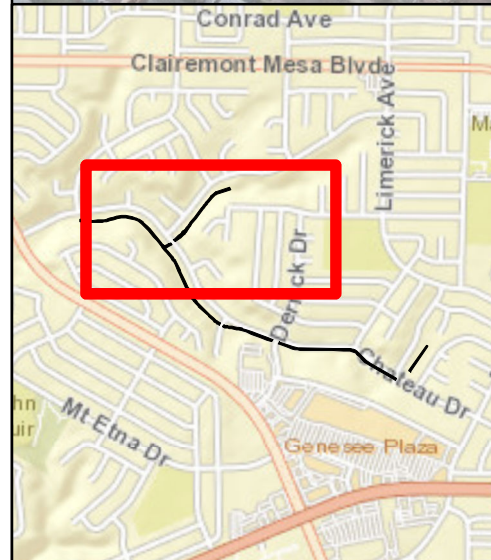
## Tecolote Creek - Chateau Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Tecolote Creek - Chateau**  
**Segment Name: Chateau 2**  
**Facility No: 3-04-250**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







Facility Maintenance Plan

# Tecolote Creek - Genesee Facility Group

Segment Name (Facility number):  
Genesee 1 (3-04-160)



# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	Mission Bay
<b>Watershed (Number)</b>	Mission Bay (3)
<b>Hydrologic Subarea</b>	906.50
<b>Drainage Name (Number)</b>	Tecolote Creek Unnamed Tributary (04)
<b>Facility Group Name</b>	Tecolote Creek - Genesee
<b>Segment Name (Facility Number)</b>	Genesee 1 (3-04-160)
<b>Substrate</b>	Genesee 1 / Earthen
<b>Location</b>	Bordered by an apartment complex to the north, Genesee Avenue to the west, and residential areas to the south and east
<b>MMP Map No(s).</b>	N/A
<b>Facility Inspection No.</b>	300
<b>Other Former Names</b>	None



Figure 1: Vicinity Map of Tecolote Creek - Genesee Facility Group

# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### Mission Bay Watershed Management Area; Hydrologic Subarea 906.50

<b>Adopted TMDLs</b>	Bacteria Project I
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<b>Highest Priority Water</b>	Bacteria
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<b>Quality Condition</b>	
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#### Tecolote Creek - Genesee

##### Beneficial Uses

<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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#### Tecolote Creek (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"><li>• Non-contact Water Recreation (REC-2)</li><li>• Warm Freshwater Habitat (WARM)</li><li>• Wildlife Habitat (WILD)</li></ul>
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<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Selenium, Toxicity, Turbidity, Zinc
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# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

### Genesee Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen and riprap bottom, earthen and riprap banks
<b>Location Within Watershed</b>	Upper reach of Tecolote Creek unnamed tributary, upstream of Mission Bay
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,129 feet
<b>Top-of-Bank Width</b>	Approximately 25-175 feet
<b>Bottom Facility Width</b>	Approximately 25-50 feet
<b>Facility Depth</b>	Approximately 8-15 feet
<b>Adjacent Land Use</b>	Multi-Family Residential, Open Space, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream at sediment, debris, and vegetation



Figure 2: Vicinity Map of Genesee Segment 1





# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |  |
|----------------------------|--|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"><li>• Disturbed freshwater marsh</li><li>• Disturbed wetland</li><li>• Eucalyptus woodland</li><li>• Riparian forest (coast live oak)</li><li>• Riparian forest (southern riparian forest)</li></ul> |
|----------------------------|--|

- |                            |  |
|----------------------------|--|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"><li>• Coastal sage scrub</li><li>• Developed land</li><li>• Disturbed coastal sage scrub</li><li>• Disturbed land</li><li>• Disturbed wetland</li><li>• Ornamental plantings</li><li>• Riparian forest (coast live oak)</li><li>• Riparian forest (southern riparian forest)</li></ul> |
|----------------------------|--|

<b>Habitat and Wildlife</b>	The habitat contained within the facility primarily provides habitat for nesting and/or foraging raptor species. Other sensitive bird species (e.g. coastal California gnatcatcher) could occur in sage scrub habitat adjacent to the channel.
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<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The channel is situated in close proximity to the MHPA boundary, which is located approximately 50 feet to the west.
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<b>Mitigation Within Facility</b>	None
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# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

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#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
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<b>Resource Identified Adjacent to APE</b>	None
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<b>Resource Type</b>	N/A
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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; 3406 Aveley Place; c. 1964 earthen channel; building more than 45 years old (not previously evaluated)
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<b>Potential Historical Resources</b>	Yes
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<b>Constraint Identified</b>	
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# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Hydrology (HYD)</b>	MM-HR-1
EP-HYD-1	MM-HR-2
<b>Land Use (LU)</b>	<b>Noise (NOI)</b>
EP-LU-1	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Tecolote Creek - Genesee Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Tecolote Creek - Genesee
<b>Segment Name</b>	Genesee 1
<b>Facility No.</b>	3-04-160
<b>Facility Location</b>	From outlet of culvert near an apartment complex to culvert under Marlesta Drive
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen channel per estimated original design dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of the channel from Station 1592 to Station 2359. Stabilize bank erosion on west bank at Station 1592.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Vegetation trimming Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Earthen and riprap bottom, earthen and riprap banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Tecolote Creek - Genesee Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,129 feet Top width: 25–175 feet Bottom width: 25–50 feet Depth: 8–15 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 767 feet Width: 20.5–60 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 20–25 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bulldozer/track-steer enters or is lowered into channel at access/loading area</li> <li>2. Bulldozer/track-steer pushes material to Gradall/excavator and loader at access/loading area</li> <li>3. Gradall/excavator and loader scoop material from channel and load dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

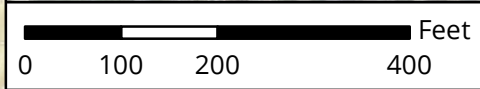
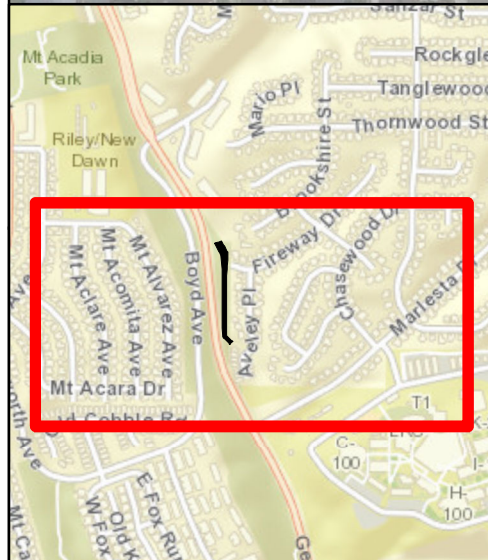
## Tecolote Creek - Genesee Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station to be determined
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







- Culvert
- Station
- Facility Area
- Multi-Habitat Planning Area
- Access/Loading/Staging/Stockpiling Area
- Maintenance Area



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Tecolote Creek - Genesee**  
**Segment Name: Genesee 1**  
**Facility No: 3-04-160**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. In-stream post-maintenance erosion control measures may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.





# Facility Maintenance Plan

## San Diego River - Nimitz Facility Group

### Segment Names (Facility numbers):

Nimitz 1 (4-01-103)

Nimitz 2 (4-01-105)

Nimitz 3 (4-01-107)

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	San Diego River Unnamed Tributary (01)
<b>Facility Group Name</b>	San Diego River - Nimitz
<b>Segment Name (Facility Number)</b>	Nimitz 1 (4-01-103) Nimitz 2 (4-01-105) Nimitz 3 (4-01-107)
<b>Substrate</b>	Nimitz 1 / Earthen Nimitz 2 / Concrete Nimitz 3 / Earthen
<b>Location</b>	About 200 feet south of the intersection of W Point Loma Boulevard and Nimitz Boulevard, and north of Bill Cleator Community Park
<b>MMP Map No(s).</b>	82
<b>Facility Inspection No.</b>	82
<b>Other Former Names</b>	Nimitz Channel



**Figure 1: Vicinity Map of San Diego River - Nimitz Facility Group**



# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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#### San Diego River - Nimitz

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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#### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

---

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Nimitz Segment 1 Detail

Facility Type	Earthen ditch
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Middle reach of San Diego River unnamed tributary, upstream of the San Diego River
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 116 feet
Top-of-Bank Width	Approximately 35 feet
Bottom Facility Width	Approximately 7 feet
Facility Depth	Approximately 7 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Single-Family Residential, Transportation
As-Built Drawing Number	32750-D
Coastal Zone	No



Figure 1: April 2017, looking downstream at dual 54-inch diameter RCP culvert inlet



Figure 2: Vicinity Map of Nimitz Segment 1



# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Disturbed land</li> <li>Eucalyptus woodland</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present within the facility for nesting/roosting.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Paleontological Resources (PAL)</b>	MM-NOI-1
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Nimitz
<b>Segment Name</b>	Nimitz 1
<b>Facility No.</b>	4-01-103
<b>Facility Location</b>	From the downstream end of Nimitz 2 segment to 200 feet south of the intersection of W Point Loma Boulevard and Nimitz Boulevard
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of earthen ditch near entrance of culvert from Station 118 to Station 234
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Sediment removal Invasive plant species treatment and removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 32750-D
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 116 feet Top width: 35 feet Bottom width: 7 feet Depth: 7 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## San Diego River - Nimitz Facility Group Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 116 feet Width: 11 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and/or bulldozer/track-steer enter or are lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer and/or bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan

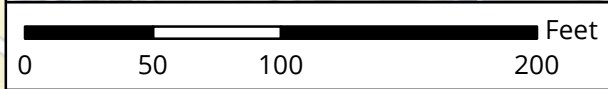
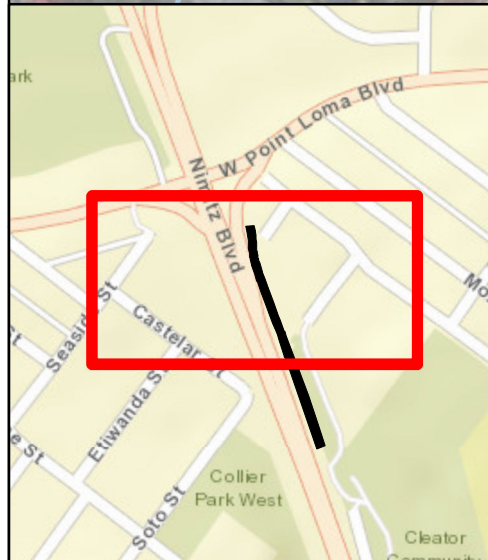
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## San Diego River - Nimitz Facility Group Facility Maintenance Plan

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<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None





Culvert	Adjacent Facility Activity Area
Facility Area	Access/Loading/Staging/Stockpiling Area
Coastal Zone	Maintenance Area



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: San Diego River - Nimitz**  
**Segment Name: Nimitz 1**  
**Facility No: 4-01-103**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Nimitz Segment 2 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Middle reach of San Diego River unnamed tributary, immediately upstream of San Diego River unnamed tributary (Nimitz Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 291 feet
<b>Top-of-Bank Width</b>	Approximately 7 feet
<b>Bottom Facility Width</b>	Approximately 7 feet
<b>Facility Depth</b>	Approximately 4 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Parks, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	14958-D
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream at sediment and debris at upstream end of concrete ditch



Figure 2: Vicinity Map of Nimitz Segment 2

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

**History of Maintenance**                      Prior to 2011: Unknown  
 January 2011 – March 2019: No maintenance conducted, except hand removal of non-native vegetation, trash, and debris

Past Regulatory Approvals	
<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	None
<b>401</b>	None
<b>1602</b>	None

**Mitigation for Previous Impacts**                      None

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**                      The segment was observed to be mostly clean with sediment, debris accumulation occurring at the transition to Nimitz 1

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
<b>Q (cubic feet per second [cfs])</b>	227	290	339	407	456	505

Hydraulic Capacity of Facility	
<b>Current Capacity</b>	15 cfs
<b>Proposed MWMP Maintained Capacity</b>	80 cfs
<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from Station 234 to Station 525
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present within and adjacent to the facility for nesting/roosting.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Nimitz
<b>Segment Name</b>	Nimitz 2
<b>Facility No.</b>	4-01-105
<b>Facility Location</b>	From the downstream end of Nimitz 3 segment to the upstream end of Nimitz 1 segment
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch, per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 234 to Station 525
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 14958-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 291 feet Top width: 7 feet Bottom width: 7 feet Depth: 4 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## San Diego River - Nimitz Facility Group Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 291 feet Width: 7 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



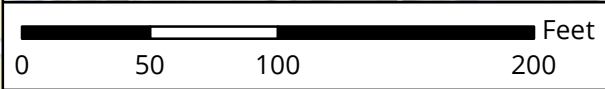
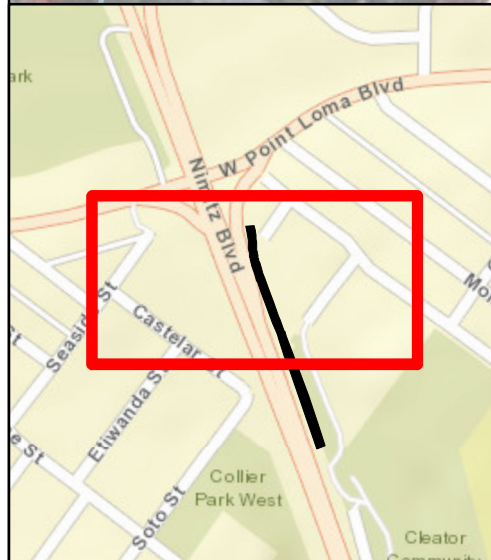
## San Diego River - Nimitz Facility Group Facility Maintenance Plan

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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







Culvert	Adjacent Facility Activity Area
Facility Area	Access/Loading/Staging/Stockpiling Area
Coastal Zone	Maintenance Area



November 2019

**Map A: General Site Plan**  
**Facility Group Name: San Diego River - Nimitz**  
**Segment Name: Nimitz 2**  
**Facility No: 4-01-105**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.







# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Nimitz Segment 3 Detail

<b>Facility Type</b>	Earthen ditch
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Middle reach of San Diego River unnamed tributary, immediately upstream of San Diego River unnamed tributary (Nimitz Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 476 feet
<b>Top-of-Bank Width</b>	Approximately 100 feet
<b>Bottom Facility Width</b>	Approximately 7 feet
<b>Facility Depth</b>	Approximately 6.5 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Parks, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	None
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream near upstream end of facility



Figure 2: Vicinity Map of Nimitz Segment 3

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

**History of Maintenance**                      Prior to 2011: Unknown  
 January 2011 – March 2019: No maintenance conducted, except hand removal of non-native vegetation, trash, and debris

Past Regulatory Approvals	
<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	None
<b>401</b>	None
<b>1602</b>	None

**Mitigation for Previous Impacts**                      None

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**                      In March 2016, the vegetation was observed to range from moderate to dense with little evidence of sediment deposition

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
<b>Q (cubic feet per second [cfs])</b>	227	290	339	407	456	505

Hydraulic Capacity of Facility	
<b>Current Capacity</b>	227 cfs
<b>Proposed MWMP Maintained Capacity</b>	290 cfs
<b>Maintenance Recommendation</b>	Trim vegetation from the bottom of the earthen ditch from Station 525 to Station 1001
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Disturbed land</li> <li>Eucalyptus woodland</li> <li>Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present within and adjacent to the facility for nesting/roosting.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Paleontological Resources (PAL)</b>	MM-NOI-1
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# San Diego River - Nimitz Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Nimitz
<b>Segment Name</b>	Nimitz 3
<b>Facility No.</b>	4-01-107
<b>Facility Location</b>	From 1,500 feet north of the intersection of Famosa Boulevard and Nimitz Boulevard to the upstream end of Nimitz 2 segment
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen ditch per estimated original design dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Trim vegetation from the bottom of the earthen ditch from Station 525 to Station 1001
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen ditch
<b>Existing Plans and/or As-Builts?</b>	None
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 476 feet Top width: 100 feet Bottom width: 7 feet Depth: 6.5 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## San Diego River - Nimitz Facility Group Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 476 feet Width: 11 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and/or bulldozer/track-steer enter or are lowered into ditch at access/loading area</li> <li>2. Fuel powered hand tools used to trim vegetation</li> <li>3. Bobcat/skid-steer and/or bulldozer/track-steer transports material to Gradall/excavator or dump truck at access/loading area</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

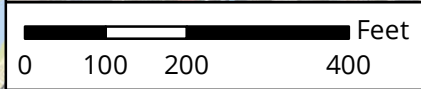
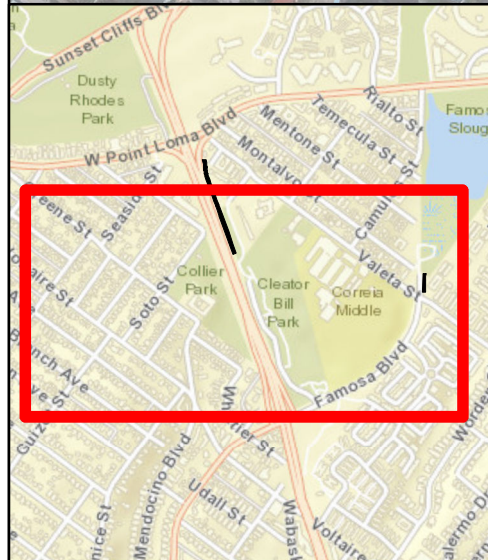
## San Diego River - Nimitz Facility Group Facility Maintenance Plan

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<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







Facility Area	Adjacent Facility Activity Area
Coastal Zone	Access/Loading/Staging/Stockpiling Area
Multi-Habitat Planning Area	Maintenance Area



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: San Diego River - Nimitz**  
**Segment Name: Nimitz 3**  
**Facility No: 4-01-107**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





Facility Maintenance Plan

# San Diego River - Valeta Facility Group

Segment Name (Facility number):  
Valeta 1 (4-01-120)



# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	San Diego River Unnamed Tributary (01)
<b>Facility Group Name</b>	San Diego River - Valeta
<b>Segment Name (Facility Number)</b>	Valeta 1 (4-01-120)
<b>Substrate</b>	Valeta 1 / Concrete
<b>Location</b>	Northeast of the intersection of Valeta Street and Famosa Boulevard
<b>MMP Map No(s).</b>	83
<b>Facility Inspection No.</b>	83
<b>Other Former Names</b>	Famosa Channel



Figure 1: Vicinity Map of San Diego River - Valeta Facility Group



# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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#### San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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#### San Diego River - Valeta

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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#### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

### Valeta Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of San Diego River unnamed tributary, upstream of the San Diego River
<b>Tributaries (listed from downstream to upstream)</b>	San Diego River Unnamed Tributary
<b>Facility Length</b>	Approximately 161 feet
<b>Top-of-Bank Width</b>	Approximately 19–23.9 feet
<b>Bottom Facility Width</b>	Approximately 2.5–7.4 feet
<b>Facility Depth</b>	Approximately 5.5 feet
<b>Adjacent Land Use</b>	Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	13550-D
<b>Coastal Zone</b>	CST-APP, DEF-CER



Figure 1: April 2017, looking downstream over headwall and 48-inch-diameter and 30-inch-diameter diameter RCP culvert outlet



Figure 2: Vicinity Map of Valeta Segment 1



# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Freshwater marsh (concrete-lined)</li> <li>Riparian scrub (southern willow scrub; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Coastal sage scrub</li> <li>Developed land</li> <li>Disturbed land</li> <li>Freshwater marsh</li> <li>Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	The habitat contained within and adjacent to the facility provides potential for nesting and/or foraging of raptor and sensitive bird species, including least Bell's vireo and Ridgway's rail
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is directly downstream of the ditch within Famosa Slough.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; 1969 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

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# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-1	MM-BIO-6
EP-HAZ-3	MM-BIO-7
<b>Land Use (LU)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-LU-1	MM-HR-1
<b>Solid Waste (SW)</b>	MM-HR-2
EP-SW-2	<b>Noise (NOI)</b>
EP-SW-3	MM-NOI-1
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# San Diego River - Valeta Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Valeta
<b>Segment Name</b>	Valeta 1
<b>Facility No.</b>	4-01-120
<b>Facility Location</b>	From northeast of the intersection of Valeta Street and Famosa Boulevard to privately maintained detention basins of Famosa Slough
<b>Coastal Zone</b>	CST-APP, DEF-CER
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions, Hydrology and Hydraulics recommendations, and implementation of future maintenance phasing
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 254 to Station 415
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	Yes; see Appendix A-4
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Built?</b>	Yes; 13550-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 161 feet Top width: 19–23.9 feet Bottom width: 2.5–7.4 feet Depth: 5.5 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## San Diego River - Valeta Facility Group Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 161 feet Width: 23.9 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Gradall/excavator moves along ditch bank within access/loading area</li> <li>2. If feasible, Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>3. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>4. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>5. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>

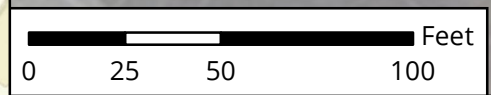
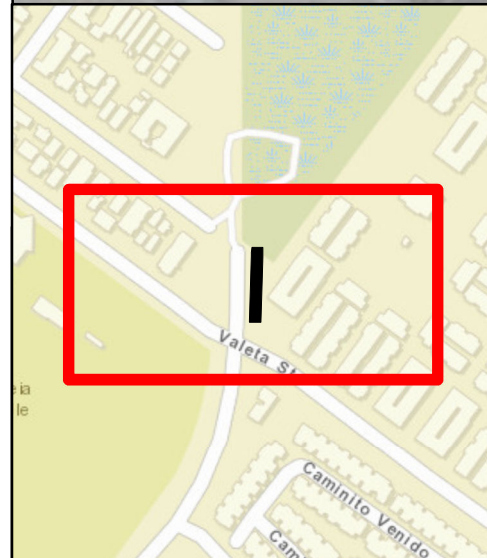
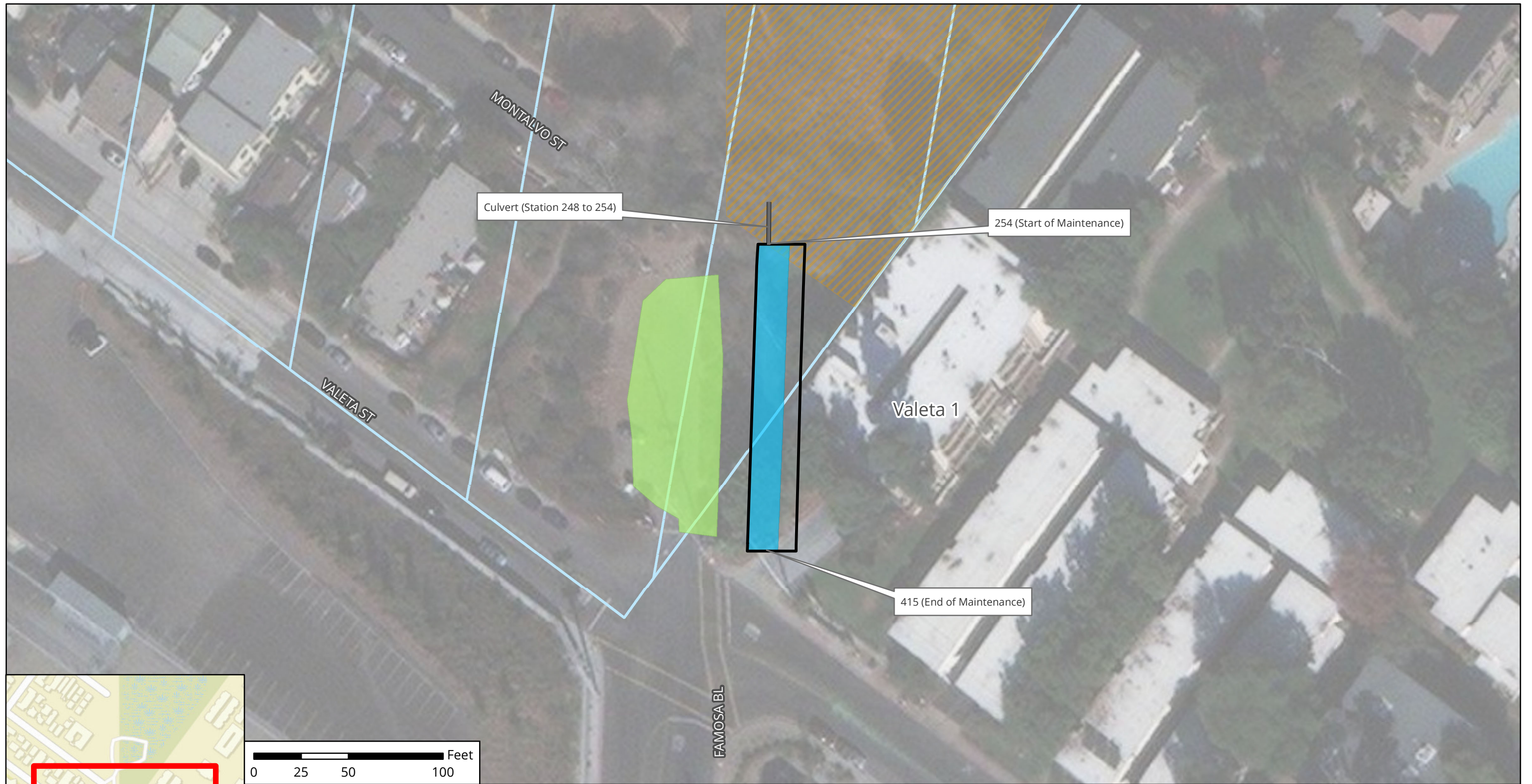
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## San Diego River - Valeta Facility Group Facility Maintenance Plan

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<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	Gradall/excavator shall avoid impacts to coastal sage scrub vegetation between parking lot and ditch





Culvert	Access/Loading/Staging /Stockpiling Area
Facility Area	Maintenance Area
Coastal Zone	Multi-Habitat Planning Area



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Map**  
**Facility Group Name: San Diego River - Valeta**  
**Segment Name: Valeta 1**  
**Facility No: 4-01-120**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## San Diego River - Camino del Rio Facility Group

### Segment Names (Facility numbers):

Camino del Arroyo 1 (4-03-101)

Camino del Rio 1 (4-03-103)

# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	San Diego River Unnamed Tributary (03)
<b>Facility Group Name</b>	San Diego River - Camino del Rio
<b>Segment Name (Facility Number)</b>	Camino del Arroyo 1 (4-03-101) Camino del Rio 1 (4-03-103)
<b>Substrate</b>	Camino del Arroyo 1 / Concrete Camino del Rio 1 / Concrete
<b>Location</b>	South of Camino de la Reina, north of Interstate 8 (I-8), east of Camino del Arroyo, and west of Mission Center Road
<b>MMP Map No(s).</b>	81, 81a
<b>Facility Inspection No.</b>	81, 81a
<b>Other Former Names</b>	Camino de la Reina and Camino del Arroyo



**Figure 1: Vicinity Map of San Diego River - Camino del Rio Facility Group**



# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

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### Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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**San Diego River Watershed Management Area; Hydrologic Subarea 907.11**

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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**San Diego River - Camino del Rio**

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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**San Diego River (First downstream water body)**

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Camino del Arroyo Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of San Diego River unnamed tributary immediately upstream of the San Diego River
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 642 feet
<b>Top-of-Bank Width</b>	Approximately 25 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 7 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Transportation
<b>As-Built Drawing Number</b>	12289-D, 24613-D, 7339-D & 11-133204-34 (Caltrans)
<b>Coastal Zone</b>	No



Figure 1: July 2017, looking downstream



Figure 2: Vicinity Map of Camino del Arroyo Segment 1



# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.

<b>Facility Vegetation</b>	<ul style="list-style-type: none"><li>• Developed concrete-lined channel</li><li>• Riparian scrub (southern willow scrub; concrete-lined)</li></ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"><li>• Developed concrete-lined channel</li><li>• Developed land</li><li>• Disturbed land</li><li>• Ornamental plantings</li><li>• Riparian scrub (southern willow scrub; concrete-lined)</li></ul>
<b>Habitat and Wildlife</b>	Although this ditch does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo), the ditch extents and area of vegetation present are limited such that it is unlikely for wildlife to use the ditch for nesting or foraging
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 450 feet north of the ditch.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

#### Historical Resources

<b>Resource Identified in APE</b>	Channel; Pre-1964 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	



# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-5
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-1	MM-HR-1
EP-HAZ-3	MM-HR-2
<b>Solid Waste (SW)</b>	<b>Noise (NOI)</b>
EP-SW-2	MM-NOI-1
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Camino del Rio
<b>Segment Name</b>	Camino del Arroyo 1
<b>Facility No.</b>	4-03-101
<b>Facility Location</b>	From the downstream end of Camino del Rio 1 segment to inlet of a culvert underneath the intersection of Camino del Arroyo and Camino de la Reina
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 581 to Station 1223
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 12289-D, 24613-D, 7339-D & 11-133204-34 (Caltrans)
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 642 feet Top width: 25 feet Bottom width: 4 feet Depth: 7 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 642 feet Width: 25 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, trash pump, sweeper
<b>Schedule</b>	Up to approximately 21 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area.</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes, limited suitable habitat present</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

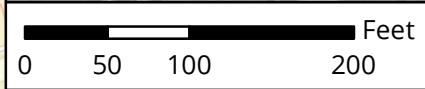
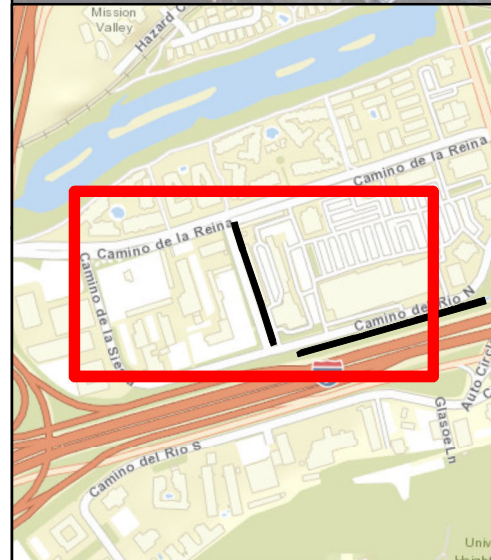
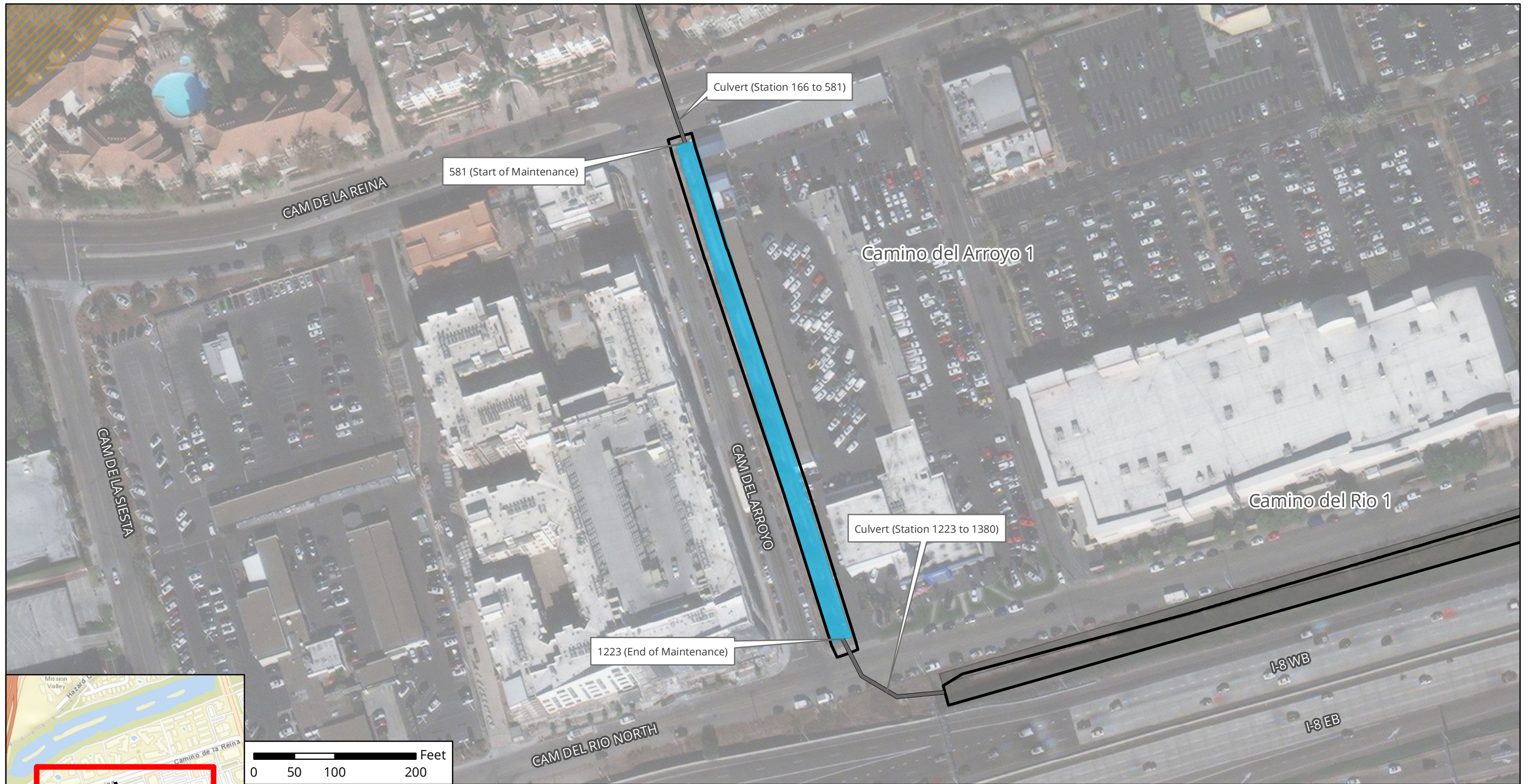
# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None





Culvert	Adjacent Facility Activity Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	



The City of  
**SAN DIEGO**

November 2019

- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

**Map A: General Site Plan**  
**Facility Group Name: San Diego River - Camino del Rio**  
**Segment Name: Camino del Arroyo 1**  
**Facility No: 4-03-101**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Camino del Rio Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of San Diego River unnamed tributary, immediately upstream of San Diego River unnamed tributary (Camino del Arroyo)
<b>Tributaries (listed from downstream to upstream)</b>	San Diego River Unnamed Tributary
<b>Facility Length</b>	Approximately 1,176 feet
<b>Top-of-Bank Width</b>	Approximately 25 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 7 feet
<b>Adjacent Land Use</b>	Commercial, Transportation
<b>As-Built Drawing Number</b>	7340-D, 7339-D, 7345-D, & 11-133204-34 (Caltrans)
<b>Coastal Zone</b>	No

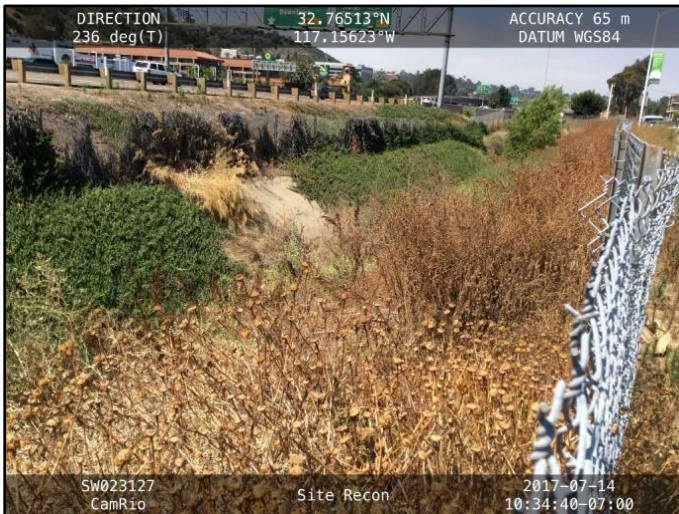


Figure 1: July 2017, looking downstream

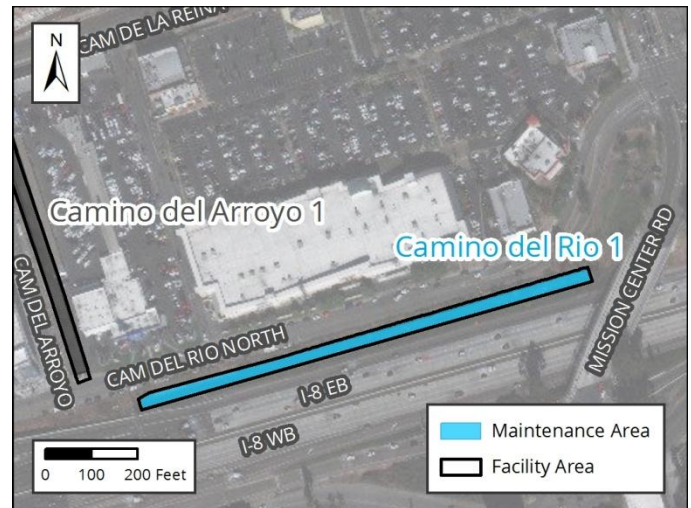


Figure 2: Vicinity Map of Camino del Rio Segment 1





# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Riparian scrub (southern willow scrub; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> <li>• Riparian scrub (southern willow scrub; concrete-lined)</li> </ul>
<b>Habitat and Wildlife</b>	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo), the ditch extents and area of vegetation present are limited such that it is unlikely for wildlife to use the ditch for nesting or foraging
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located more than 1,000 feet south of the ditch.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; 1961, 1966 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

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# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-3	MM-BIO-6
<b>Solid Waste (SW)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-SW-2	MM-HR-1
EP-SW-3	MM-HR-2
EP-SW-4	<b>Noise (NOI)</b>
EP-SW-5	MM-NOI-1
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	San Diego River - Camino del Rio
<b>Segment Name</b>	Camino del Rio 1
<b>Facility No.</b>	4-03-103
<b>Facility Location</b>	From east of Mission Center Road to the upstream end of Camino del Arroyo 1 segment
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and overgrown vegetation from Station 1380 to Station 2399. Remove accumulated sediment and debris in culvert from Station 1223 to Station 1380.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Built?</b>	Yes; 7340-D, 7339-D, 7345-D, & 11-133204-34 (Caltrans)
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# San Diego River - Camino del Rio Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,176 feet Top width: 25 feet Bottom width: 4 feet Depth: 7 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 1,019 feet; Culvert: 157 feet Width: 25 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 10 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes, limited suitable habitat present</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



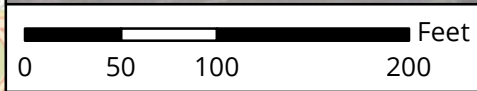
## San Diego River - Camino del Rio Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area



November 2019

- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

**Map A: General Site Plan**  
**Facility Group Name: San Diego River - Camino del Rio**  
**Segment Name: Camino del Rio 1**  
**Facility No: 4-03-103**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Facility Maintenance Plan

## Murphy Canyon Creek - ~~Stadium~~ Murphy Canyon Facility Group

### Segment Names (Facility numbers):

~~Stadium 1 (4-04-000)~~

~~Stadium 2 (4-04-002)~~

Murphy Canyon 1 (4-04-006)

Murphy Canyon 2 (4-04-008) (See  
Appendix A-5)

# Murphy Canyon Creek - ~~Stadium~~ Murphy Canyon Facility Group Facility Maintenance Plan

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## Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	Murphy Canyon Creek (04)
<b>Facility Group Name</b>	Murphy Canyon Creek - Stadium
<b>Segment Name (Facility Number)</b>	<del>Stadium 1 (4-04-000)</del> <del>Stadium 2 (4-04-002)</del> Murphy Canyon 1 (4-04-006) Murphy Canyon 2 (4-04-008) (See Appendix A-5)
<b>Substrate</b>	<del>Stadium 1 / Earthen</del> <del>Stadium 2 / Concrete</del> Murphy Canyon 1 / Concrete Murphy Canyon 2 / Earthen
<b>Location</b>	About 1,500 feet south of Stonecrest Boulevard and 850 feet north of Interstate 8 (I-8)
<b>MMP Map No(s).</b>	58, 58a
<b>Facility Inspection No.</b>	58, 58a, 300x
<b>Other Former Names</b>	Murphy Canyon Channel, Stadium, Tank Farms

# Murphy Canyon Creek - Stadium-Murphy Canyon Facility Group Facility Maintenance Plan



Figure 1: Vicinity Map of Murphy Canyon Creek - Stadium Facility Group

## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

### Murphy Canyon Creek - Stadium

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
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<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List
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# Murphy Canyon Creek - ~~Stadium~~ Murphy Canyon Facility Group Facility Maintenance Plan

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## San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"><li>• Agricultural Supply (AGR)</li><li>• Industrial Service Supply (IND)</li><li>• Contact Water Recreation (REC-1)</li><li>• Non-contact Water Recreation (REC-2)</li><li>• Preservation of Biological Habitats of Special Significance (BIOL)</li><li>• Warm Freshwater Habitat (WARM)</li><li>• Wildlife Habitat (WILD)</li><li>• Rare, Threatened, or Endangered Species (RARE)</li></ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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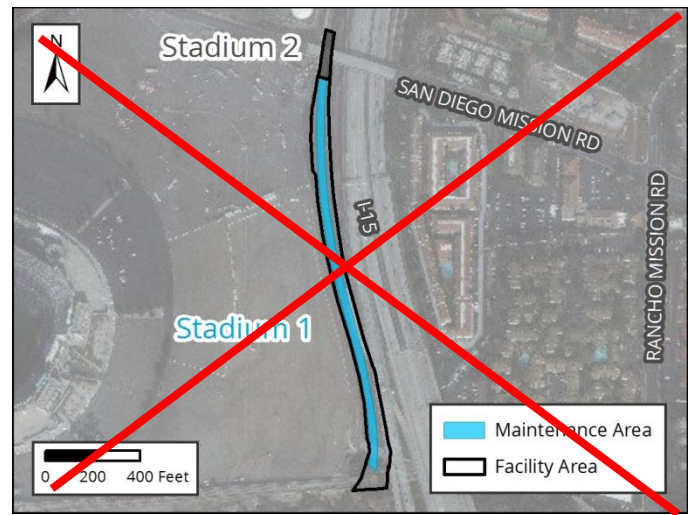
# Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

## Stadium Segment 1 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Lower reach of Murphy Canyon Creek, immediately upstream of the San Diego River
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,661 feet
<b>Top-of-Bank Width</b>	Approximately 50 feet
<b>Bottom Facility Width</b>	Approximately 20 feet
<b>Facility Depth</b>	Approximately 10-12 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Other Residential, Recreation, Transportation
<b>As-Built Drawing Number</b>	14684-L
<b>Coastal Zone</b>	No



**Figure 1: March 2013, heavily vegetated channel bottom near the downstream end of the facility group**



**Figure 2: Vicinity Map of Stadium Segment 1**

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2014: No maintenance conducted 2014/15: Routine maintenance conducted January 2015 – March 2019: Invasive vegetation removal conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** N/A

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 31 USACE File #SPL-2013-00494-MBS (expired March 2017)

**401** RWQCB 401 Cert No. R9-2013-0124 (expired March 2017)

**1602** CDFW SAA No. 1600-2010-0269-R5 (expires 10/31/2019)

**Mitigation for Previous Impacts** Stadium (4.28 acres)

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# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>†</sup>*

**Current Conditions Affecting Facility Capacity**

Sediment deposition of 1 to 3 feet was found through a majority of the channel, however in one location, the sediment depths were estimated to be as high as 6 to 7 feet. Vegetation ranged from dense to moderately dense throughout the segment length. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second {cfs})	510	1,050	1,500	2,000	2,700	3,500
Hydraulic Capacity of Facility						
<b>Current Capacity</b>				<510 cfs		
<b>Proposed MWMP Maintained Capacity</b>				1,050 cfs		
<b>Maintenance Recommendation</b>			Remove accumulated sediment, debris, and vegetation from Station 119 to Station 1780			
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>				None		

<sup>†</sup>Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

## Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Disturbed wetland</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland</li> <li>• Ornamental plantings</li> <li>• Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	The channel has potential to support sensitive species and other migratory birds, such as least Bell's vireo and Ridgway's rail. This potential is especially high in the southern section due to the presence of large expanses of sensitive habitat (e.g., riparian forest [southern willow forest]) both within and downstream of the facility.
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 25 feet south of the channel within the San Diego River.
<b>Mitigation Within Facility</b>	None

## Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	



# Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Murphy Canyon Creek - Stadium
<b>Segment Name</b>	Stadium 1
<b>Facility No.</b>	4-04-000
<b>Facility Location</b>	From north of San Diego Mission Road bridge to 40 feet south of the Stadium Road bridge at the property line
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 119 to Station 1780
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Temporary stockpiling Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 14684-L
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,661 feet Top width: 50 feet Bottom width: 20 feet Depth: 10-12 feet

<sup>2</sup>-Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

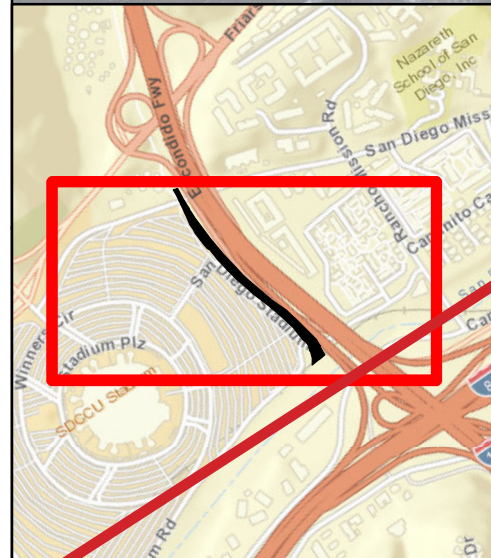
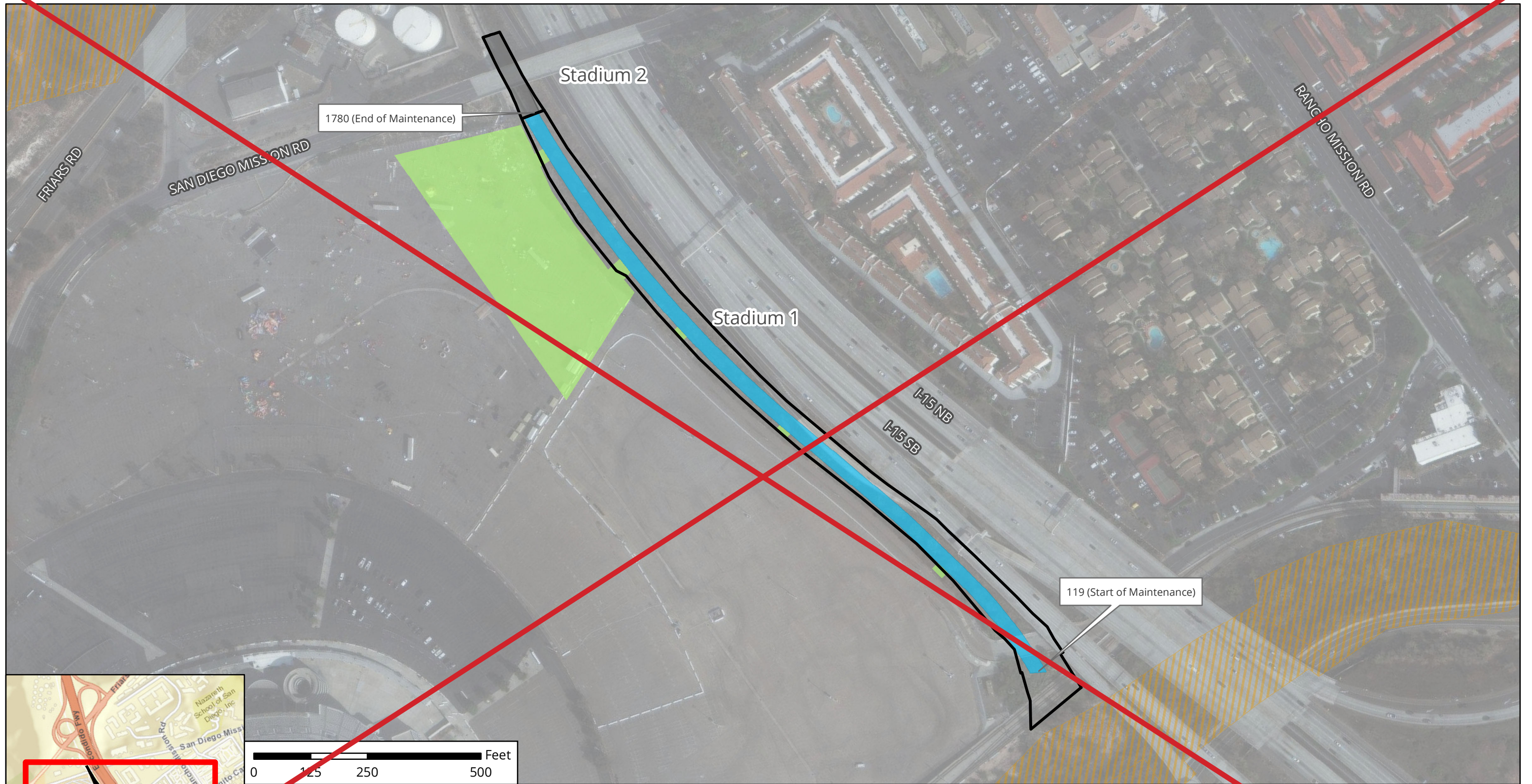
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,661 feet Width: 24-32 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 90 working days
<b>Maintenance Crew</b>	Approximately 12-18 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bulldozer/track-steer and loader enter channel at access/loading area.</li> <li>2. Bulldozer/track-steer and loader push material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck short-hauls material to stockpile area</li> <li>5. At staging area: loader manages stockpiles and loads dump truck</li> <li>6. Dump truck hauls material to appropriate disposal facility</li> </ol>
<b>Traffic Control</b>	Yes; Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup>Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

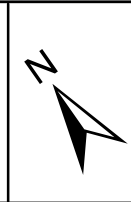
## Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	Determine location of Miramar gas line in vicinity of maintenance area





Facility Area	Access/Loading/Staging/Stockpiling Area
Multi-Habitat Planning Area	Maintenance Area
Adjacent Facility Activity Area	



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Murphy Canyon - Stadium**  
**Segment Name: Stadium 1**  
**Facility No: 4-04-000**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Stadium Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Murphy Canyon Creek, immediately upstream of Murphy Canyon Creek (Stadium Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 207 feet
<b>Top-of-Bank Width</b>	Approximately 40 feet
<b>Bottom Facility Width</b>	Approximately 20 feet
<b>Facility Depth</b>	Approximately 10-12 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Other Residential, Recreation, Transportation
<b>As-Built Drawing Number</b>	14684-L
<b>Coastal Zone</b>	No



**Figure 1: March 2013, looking upstream near area of recommended maintenance**



**Figure 2: Vicinity Map of Stadium Segment 2**

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2014: No maintenance conducted 2014/15: Routine maintenance conducted January 2015 – March 2019: No maintenance conducted
<b>Past Regulatory Approvals</b>	
<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	NWP 31 USACE File #SPL-2013-00494-MBS (expired March 2017)
<b>401</b>	RWQCB 401 Cert No. R9-2013-0124 (expired March 2017)
<b>1602</b>	CDFW SAA No. 1600-2010-0269-R5 (expires 10/31/2019)
<b>Mitigation for Previous Impacts</b>	Stadium (4.28 acres)

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

<b>Current Conditions Affecting Facility Capacity</b>	Fairly dense vegetation was observed and sediment deposition was estimated to be 1 foot. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.
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<b>Hydrologic Peak Flows</b>						
<b>Storm Event</b>	<b>2-year</b>	<b>5-year</b>	<b>10-year</b>	<b>25-year</b>	<b>50-year</b>	<b>100-year</b>
<b>Q (cubic feet per second [cfs])</b>	510	1,050	1,500	2,000	2,700	3,500
<b>Hydraulic Capacity of Facility</b>						
<b>Current Capacity</b>				<510 cfs		
<b>Proposed MWMP Maintained Capacity</b>				2,700 cfs		
<b>Maintenance Recommendation</b>				Remove accumulated sediment, debris, and vegetation from Station 1780 to Station 1987		
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>				None		

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility. However, there is potential for sensitive species, such as least Bell's vireo and Ridgway's rail, to occur in suitable habitat downstream of the channel.
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located more than 1,000 feet south of the channel within the San Diego River.
<b>Mitigation Within Facility</b>	None

### Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1963–1974 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-5
EP-BIO-5	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-BIO-6	MM-HR-1
<b>Health and Safety/Hazards (HAZ)</b>	MM-HR-2
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Solid Waste (SW)</b>	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Murphy Canyon Creek - Stadium
<b>Segment Name</b>	Stadium 2
<b>Facility No.</b>	4-04-002
<b>Facility Location</b>	From south of San Diego Mission Road to the upstream end of Stadium 1 segment
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 1780 to Station 1987
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 14684-L
<b>Substrate Detail<sup>3</sup></b>	Concrete bottom and banks

<sup>2</sup>Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 207 feet Top width: 40 feet Bottom width: 20 feet Depth: 10-12 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 207 feet Width: 40 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 12-18 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and loader enter channel at access/loading area</li> <li>2. Bobcat/skid-steer and loader push material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck short-hauls material to stockpile area</li> <li>5. At staging area, loader manages stockpiles and loads dump truck</li> <li>6. Dump truck hauls material to appropriate disposal facility</li> </ol>
<b>Traffic Control</b>	Yes; Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>



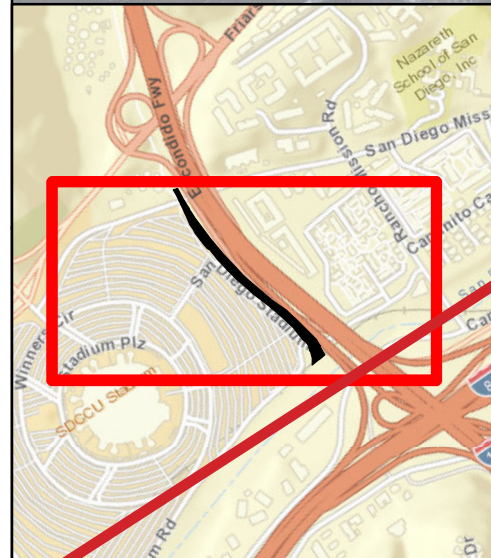
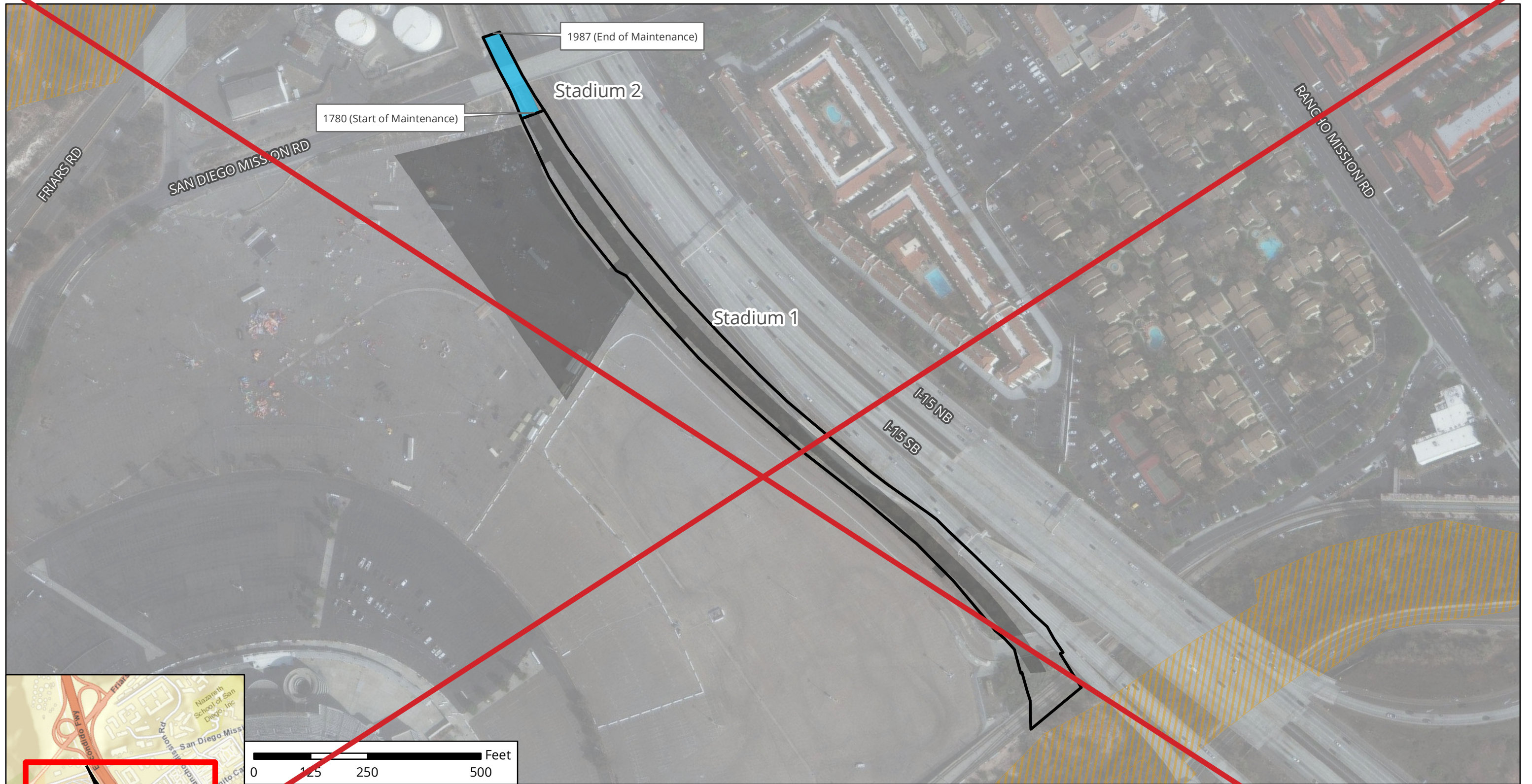
## Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	Miramar gas line in vicinity of maintenance area

<sup>3</sup>-Species covered under the Multiple Species Conservation Program, other special-status species, including raptors







Facility Area	Adjacent Facility Activity Area
Multi-Habitat Planning Area	Maintenance Area



- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Murphy Canyon Creek - Stadium**  
**Segment Name: Stadium 2**  
**Facility No: 4-04-002**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Murphy Canyon Segment 1 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Murphy Canyon Creek, upstream of Murphy Canyon Creek (Stadium Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	Murphy Canyon Creek
<b>Facility Length</b>	Approximately 532 feet
<b>Top-of-Bank Width</b>	Approximately 31-56 feet
<b>Bottom Facility Width</b>	Approximately 10-29 feet
<b>Facility Depth</b>	Approximately 8-12 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Transportation
<b>As-Built Drawing Number</b>	14684-19-L
<b>Coastal Zone</b>	No



Figure 1: March 2013, looking downstream towards access road bridge near the upstream limit of concrete channel lining

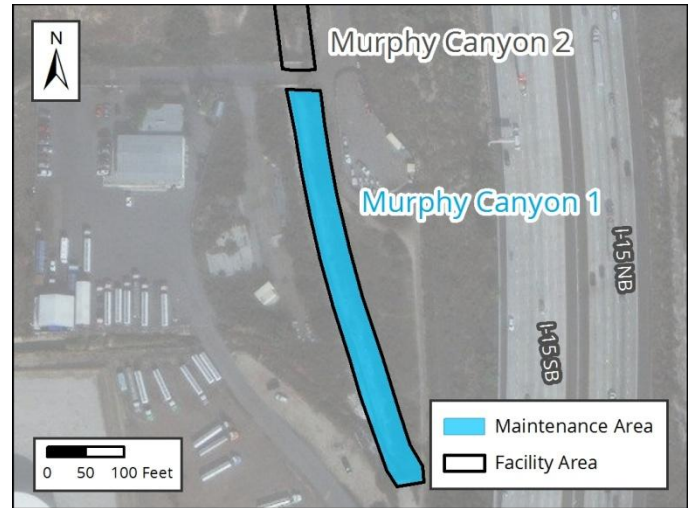


Figure 2: Vicinity Map of Murphy Canyon Segment 1



# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |   |
|----------------------------|---|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed wetland (concrete-lined)</li> <li>• Freshwater marsh (concrete-lined)</li> </ul> |
|----------------------------|---|

- |                            |   |
|----------------------------|---|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Disturbed coastal sage scrub</li> <li>• Disturbed land</li> <li>• Eucalyptus woodland</li> <li>• Ornamental plantings</li> <li>• Riparian scrub (southern willow scrub)</li> </ul> |
|----------------------------|---|

<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility itself. However, there is potential for sensitive species, such as least Bell's vireo and coastal California gnatcatcher, to occur in suitable habitat upstream or adjacent to the channel.
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<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 700 feet to the east of the channel.
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<b>Mitigation Within Facility</b>	None
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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-7
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Murphy Canyon Creek - Stadium
<b>Segment Name</b>	Murphy Canyon 1
<b>Facility No.</b>	4-04-006
<b>Facility Location</b>	From downstream end of Murphy Canyon 2 segment to inlet of culvert to the northeast of the Kinder-Morgan facility
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel, per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 14684-19-L
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 532 feet Top width: 31–56 feet Bottom width: 10–29 feet Depth: 8–12 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murphy Canyon Creek - Stadium Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Channel: 532 feet Width: 31–56 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; Bicycle and pedestrian path may be closed during maintenance activities. A detour and signage will be provided as-needed.
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

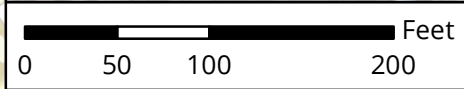
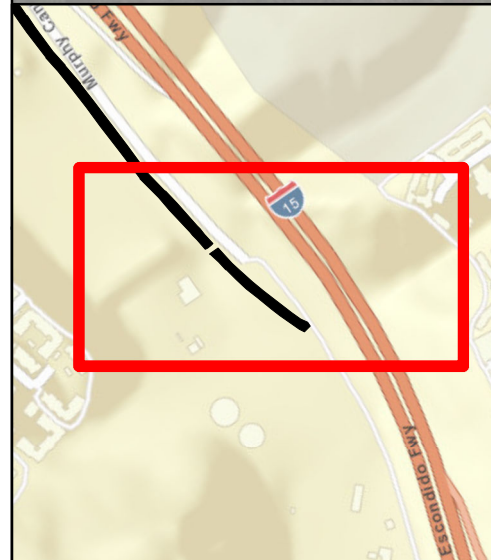
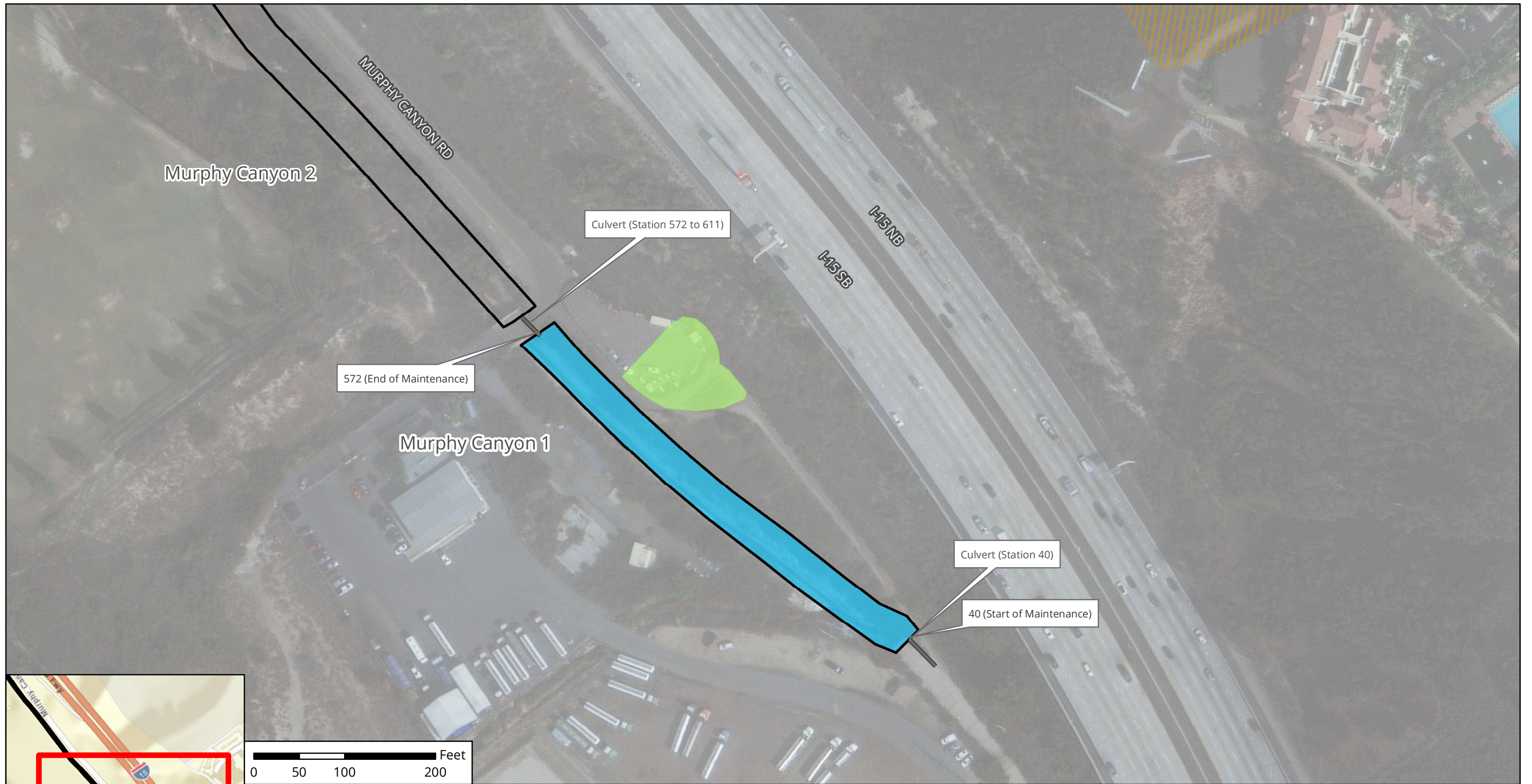
## Murphy Canyon Creek - Stadium Facility Group Facility Maintenance Plan

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<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	Miramar gas line in vicinity of maintenance area







Culvert	Access/Loading/Staging /Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Murphy Canyon Creek - Stadium**  
**Segment Name: Murphy Canyon 1**  
**Facility No: 4-04-006**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur in this area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## Alvarado Canyon Creek - Mission Gorge Facility Group

### Segment Names (Facility numbers):

Mission Gorge 1 (4-07-002)

Mission Gorge 2 (4-07-004)

Mission Gorge 3 (4-07-009)

Mission Gorge 4 (4-07-011)

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	Alvarado Canyon Creek (07)
<b>Facility Group Name</b>	Alvarado Canyon Creek - Mission Gorge
<b>Segment Name (Facility Number)</b>	Mission Gorge 1 (4-07-002) Mission Gorge 2 (4-07-004) Mission Gorge 3 (4-07-009) Mission Gorge 4 (4-07-011)
<b>Substrate</b>	Mission Gorge 1 / Earthen and concrete Mission Gorge 2 / Concrete Mission Gorge 3 / Earthen and concrete Mission Gorge 4 / Concrete
<b>Location</b>	Starts east of Waring Road along Zephyr Lane, extends west along the north side of Interstate 8 (I-8) past Fairmount Avenue
<b>MMP Map No(s).</b>	59, 60, 61, 62
<b>Facility Inspection No.</b>	59, 60, 61, 62
<b>Other Former Names</b>	Alvarado Channel, Lower Alvarado, Mission Gorge Place



# Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan



Figure 1: Vicinity Map of Alvarado Canyon Creek - Mission Gorge Facility Group

# Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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### Alvarado Canyon Creek - Mission Gorge

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
<b>303(d) listed Impairments</b>	Nitrogen, Selenium

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### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Mission Gorge Segment 1 Detail

<b>Facility Type</b>	Earthen and concrete channel
<b>Substrate Detail</b>	Concrete/earthen bottom, concrete and riprap banks
<b>Location Within Watershed</b>	Lower reach of Alvarado Canyon Creek, immediately upstream of the San Diego River
<b>Tributaries (listed from downstream to upstream)</b>	Alvarado Canyon Creek
<b>Facility Length</b>	Approximately 1,013 feet
<b>Top-of-Bank Width</b>	Approximately 46–59.7 feet
<b>Bottom Facility Width</b>	Approximately 30 feet
<b>Facility Depth</b>	Approximately 8–12 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Open Space, Transportation
<b>As-Built Drawing Number</b>	21772-D, 21647-D, & I-172 (12) (Caltrans)
<b>Coastal Zone</b>	No



Figure 1: August 2014, looking upstream at the triple 12-foot-wide by 8-foot-tall RCB culvert beneath Fairmount Avenue



Figure 2: Vicinity Map of Mission Gorge Segment 1

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2010: Unknown 2010 – 2011: Emergency maintenance conducted 2011 – 2014: No maintenance conducted 2015 – 2017: Routine maintenance and concrete repair conducted January 2018 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** N/A

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 31/33 USACE File #SPL-2015-00423-MBT (expired March 2018)

**401** RWQCB 401 Cert No. R9-2015-0102 (expired March 2017)

**1602** CDFW SAA No. 1600-2015-0107-R5 (expires September 2020)

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**Mitigation for Previous Impacts** Stadium (3.91 acres)

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# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**      Moderate to dense vegetation was observed in the channel bottom with sediment deposition ranging from 0.2 to 0.9 feet. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	1,180	2,050	2,700	3,800	4,500	5,100

#### Hydraulic Capacity of Facility

**Current Capacity**      1,250 cfs

**Proposed MWMP Maintained Capacity**      1,800 cfs

**Maintenance Recommendation**      Remove accumulated sediment, debris, and overgrown vegetation from Station 819 to Station 1156 and Station 1305 to Station 1686.  
Remove accumulated sediment and debris in culvert from Station 1156 to Station 1305.

**In-Stream Post-Maintenance Erosion Control Recommendation**      None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

- |                            |   |
|----------------------------|---|
| <b>Facility Vegetation</b> | <ul style="list-style-type: none"><li>• Developed concrete-lined channel</li><li>• Freshwater marsh</li><li>• Natural flood channel</li></ul> |
|----------------------------|---|

- |                            |  |
|----------------------------|--|
| <b>Adjacent Vegetation</b> | <ul style="list-style-type: none"><li>• Disturbed land</li><li>• Disturbed wetland</li><li>• Disturbed wetland (Arundo-dominated; concrete-lined)</li><li>• Developed land</li><li>• Eucalyptus woodland</li><li>• Ornamental plantings</li><li>• Riparian forest (southern willow forest)</li><li>• Riparian scrub (mulefat scrub)</li><li>• Riparian scrub (southern willow scrub)</li></ul> |
|----------------------------|--|

<b>Habitat and Wildlife</b>	There are limited biological resources suitable for sensitive species use within the facility itself. However, there is extensive suitable habitat directly west of the western section of the channel that has high potential to support sensitive and migratory bird species, such as least Bell's vireo.
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<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 250 feet west of the channel within the San Diego River.
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<b>Mitigation Within Facility</b>	None
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# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

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#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Mission Gorge
<b>Segment Name</b>	Mission Gorge 1
<b>Facility No.</b>	4-07-002
<b>Facility Location</b>	From 400 feet east of Fairmount Avenue to 300 feet downstream of outlet of culvert beneath Fairmount Avenue
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and overgrown vegetation from Station 819 to Station 1156 and Station 1305 to Station 1686. Remove accumulated sediment and debris in culvert from Station 1156 to Station 1305.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen and concrete channel
<b>Existing Plans and/or As-Built?</b>	Yes; 21772-D, 21647-D, & I-172 (12) (Caltrans)
<b>Substrate Detail</b>	Concrete/earthen bottom, concrete and riprap banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,013 feet Top width: 46–59.7 feet Bottom width: 30 feet Depth: 8–12 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 718 feet; Culvert: 149 feet Width: 46–59.7 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 14 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer, loader, and bulldozer/track-steer enter or are lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer and bulldozer/track-steer push material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck. Backhoe may also be used.</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

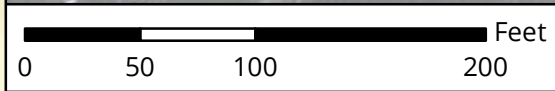
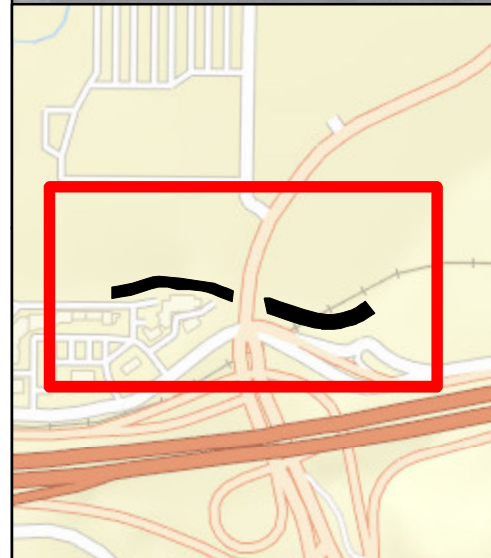
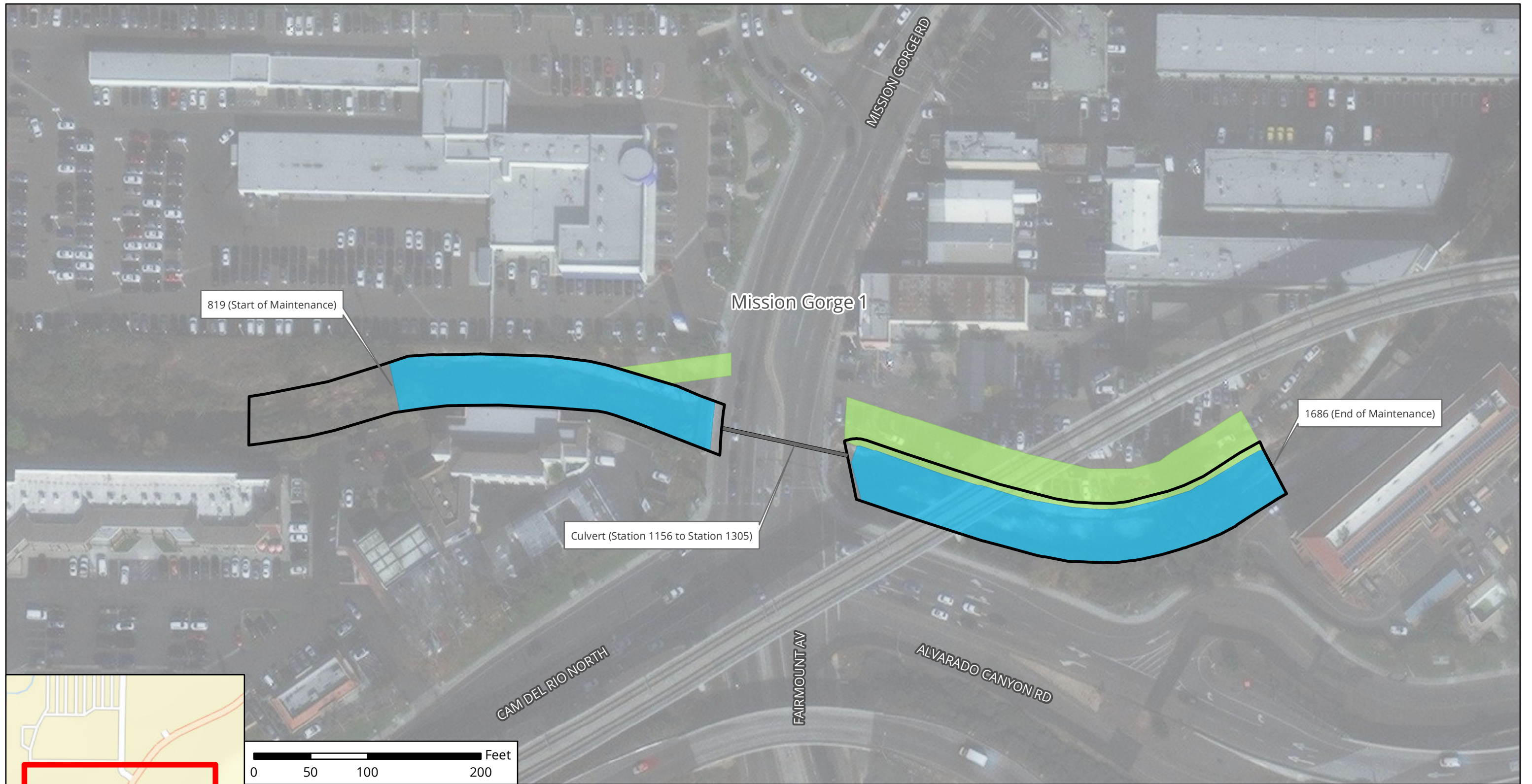
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area



**Notes:**  
 1. Concrete repair may occur within this facility area.  
 2. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 3. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Mission Gorge**  
**Segment Name: Mission Gorge 1**  
**Facility No: 4-07-002**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Mission Gorge Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Alvarado Canyon Creek, immediately upstream of Alvarado Canyon Creek (Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	Alvarado Canyon Creek
<b>Facility Length</b>	Approximately 521 feet
<b>Top-of-Bank Width</b>	Approximately 49 feet
<b>Bottom Facility Width</b>	Approximately 25 feet
<b>Facility Depth</b>	Approximately 8 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Transportation
<b>As-Built Drawing Number</b>	16540-D
<b>Coastal Zone</b>	No



Figure 1: August 2014, looking downstream from the south side

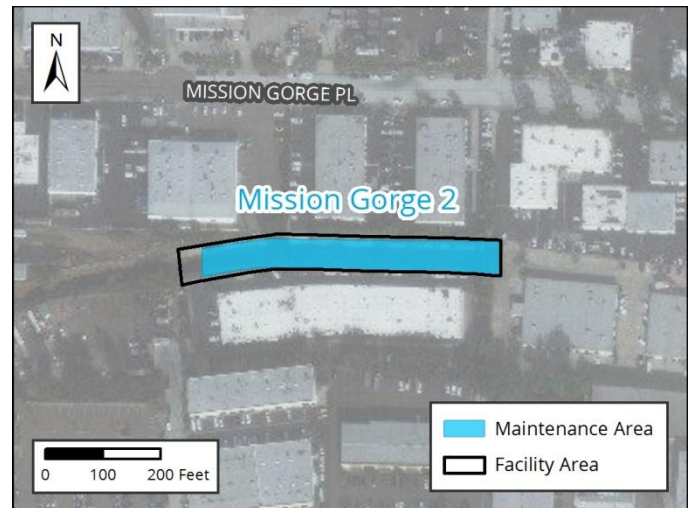


Figure 2: Vicinity Map of Mission Gorge Segment 2



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed wetland (Arundo-dominated)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 940 feet south of the channel within the San Diego River.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	<b>Noise (NOI)</b>
EP-BIO-5	MM-NOI-1
EP-BIO-6	
<b>Health and Safety/Hazards (HAZ)</b>	
EP-HAZ-3	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Mission Gorge
<b>Segment Name</b>	Mission Gorge 2
<b>Facility No.</b>	4-07-004
<b>Facility Location</b>	From outlet of culvert beneath the Mission Gorge Place commercial area 300 feet south of Mission Gorge Place to upstream end of segment owned by San Diego Metropolitan Transit Development Board
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and overgrown vegetation from Station 3006 to Station 3527
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Built?</b>	Yes; 16540-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 521 feet Top width: 49 feet Bottom width: 25 feet Depth: 8 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Channel: 521 feet Width: 49 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 14 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and loader enter or are lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer and loader push material to Gradall/excavator at access/ loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: No</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan

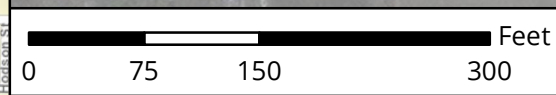
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors




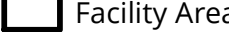
## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

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<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None





-  Culvert
-  Access/Loading/Staging /Stockpiling Area
-  Maintenance Area
-  Facility Area



November 2019

**Map A: General Site Map**  
**Facility Group Name: Alvarado Canyon Creek - Mission Gorge**  
**Segment Name: Mission Gorge 2**  
**Facility No: 4-07-004**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Mission Gorge Segment 3 Detail

<b>Facility Type</b>	Earthen and concrete channel
<b>Substrate Detail</b>	Concrete/earthen bottom and concrete banks
<b>Location Within Watershed</b>	Lower reach of Alvarado Canyon Creek, immediately upstream of Alvarado Canyon Creek (Mission Gorge)
<b>Tributaries (listed from downstream to upstream)</b>	Alvarado Canyon Creek
<b>Facility Length</b>	Approximately 935 feet
<b>Top-of-Bank Width</b>	Approximately 28–68 feet
<b>Bottom Facility Width</b>	Approximately 28–44.5 feet
<b>Facility Depth</b>	Approximately 7–8.5 feet
<b>Adjacent Land Use</b>	Commercial, Industrial, Public Facilities and Utilities, Transportation, Vacant
<b>As-Built Drawing Number</b>	19862-D, Caltrans Contract No. 59-11VC12, Caltrans Contract No. 11-169664
<b>Coastal Zone</b>	No



**Figure 1: May 2017, looking at the downstream end of segment, towards the triple 9-foot wide by 8-foot high RCB culvert beneath Mission Gorge Place**



**Figure 2: Vicinity Map of Mission Gorge Segment 3**



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

**Recommendation**

Location: Station to be determined

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed riparian forest (southern willow forest)</li> <li>• Disturbed wetland</li> <li>• Disturbed wetland (Arundo-dominated; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Disturbed wetland (Arundo-dominated)</li> <li>• Ornamental plantings</li> <li>• Riparian scrub</li> </ul>
<b>Habitat and Wildlife</b>	Although this channel does contain suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo), the channel extents and vegetation present are limited, and several of the roadways adjacent to the channel are elevated to be even with the canopy height such that it is unlikely that wildlife would use the channel for nesting or foraging
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 500 feet south of the channel across Interstate 8.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

#### Historical Resources

<b>Resource Identified in APE</b>	Channel; c. 1965 concrete channel (segment under Waring Road)
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-5
EP-HAZ-3	MM-BIO-6
<b>Hydrology (HYD)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HYD-1	MM-HR-1
<b>Solid Waste (SW)</b>	MM-HR-2
EP-SW-2	<b>Noise (NOI)</b>
EP-SW-3	MM-NOI-1
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Mission Gorge
<b>Segment Name</b>	Mission Gorge 3
<b>Facility No.</b>	4-07-009
<b>Facility Location</b>	From outlet of culvert beneath Waring Road just north of Interstate 8 (I-8) to inlet of culvert beneath the Mission Gorge Place commercial area
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen and concrete channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris and overgrown vegetation from Station 4160 to Station 4860 within the City owned portion of the segment. <del>4345 Trim overgrown vegetation from Station 4345 to Station 4860 within the City owned portion of the segment.</del> The remainder of Mission Gorge 3 is recommended to be maintained by Caltrans to remove accumulated sediment, debris and overgrown vegetation, trim overgrown vegetation, and to remove accumulated sediment and debris in the culvert.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen and concrete channel

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

<b>Existing Plans and/or As-Builts?</b>	Yes; 19862-D, Caltrans Contract No. 59-11VC12, Caltrans Contract No. 11-169664
<b>Substrate Detail</b>	Concrete/earthen bottom and concrete banks
<b>Facility Dimensions (Approximate)</b>	Length: 935 feet Top width: 28-68 feet Bottom width: 28-44.5 feet Depth: 7-8.5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 700 feet Width: 28-68 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Crane, Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump, vactor, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 60 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer, bulldozer/track-steer, and two loaders enter or are lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer, bulldozer/track-steer, and loaders push/scoop material and transport to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoop material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes, limited suitable habitat present</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

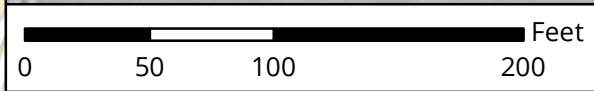
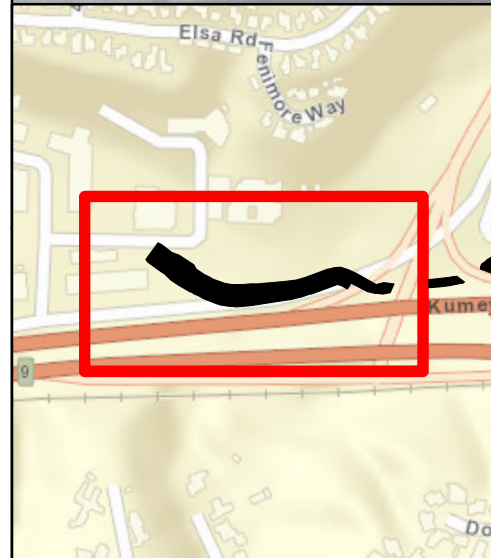
<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station to be determined
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Access/Loading/Staging /Stockpiling Area
Station	Maintenance Area
Facility Area	



- Notes:**
1. Concrete repair may occur within this facility.
  2. In-stream post-maintenance erosion control measures may occur within this facility area.
  3. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  4. Access/Loading/Staging/Stockpiling may be modified during implementation.
  5. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Mission Gorge**  
**Segment Name: Mission Gorge 3**  
**Facility No: 4-07-009**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Mission Gorge Segment 4 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Lower reach of Alvarado Canyon Creek, immediately upstream of Alvarado Canyon Creek (Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	Alvarado Canyon Creek
<b>Facility Length</b>	Approximately 1,501 feet
<b>Top-of-Bank Width</b>	Approximately 28–46 feet
<b>Bottom Facility Width</b>	Approximately 10–33 feet
<b>Facility Depth</b>	Approximately 5.5–10 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	12840-D, 14592-D, Caltrans Contract No. 59-11VC12, Caltrans Contract No. 11-169664
<b>Coastal Zone</b>	No



Figure 1: May 2017, looking downstream from the upstream end

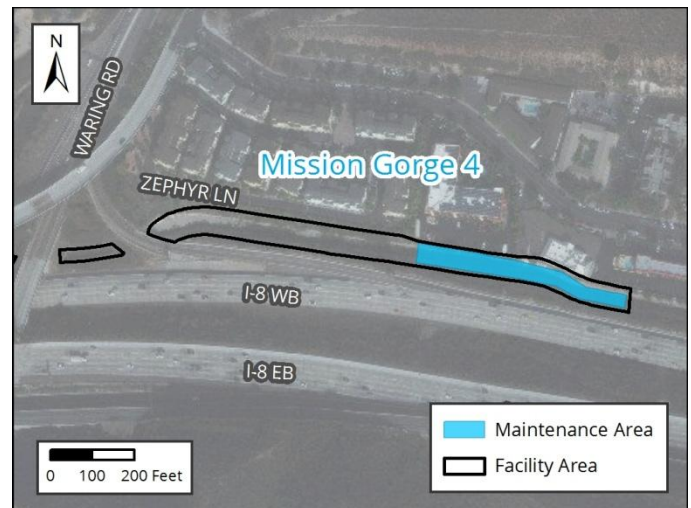


Figure 2: Vicinity Map of Mission Gorge Segment 4



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	The channel area itself does not contain suitable vegetation for sensitive wildlife; however, coastal sage scrub habitat, suitable for coastal California gnatcatcher, is present in areas adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 350 feet north of the channel.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1965 concrete channel (segment under Waring Road)
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-BIO-6	MM-HR-1
<b>Health and Safety/Hazards (HAZ)</b>	MM-HR-2
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Solid Waste (SW)</b>	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Mission Gorge
<b>Segment Name</b>	Mission Gorge 4
<b>Facility No.</b>	4-07-011
<b>Facility Location</b>	From 1300 feet east of Waring Road, along Zephyr Lane and the north side of Interstate 8 (I-8), to inlet of culvert beneath Waring Road just north of Interstate 8 (I-8)
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris and overgrown vegetation from Station 6081 to Station 6596. The remainder of Mission Gorge 4 is recommended to be maintained by the private property owners and Caltrans to remove accumulated sediment, debris and overgrown vegetation from the channel and culverts.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 12840-D, 14592-D, Caltrans Contract No. 59-11VC12, Caltrans Contract No. 11-169664
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Mission Gorge Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,501 feet Top width: 28–46 feet Bottom width: 10–33 feet Depth: 5.5–10 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 515 feet Width: 28–46 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area with Gradall/excavator assistance</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Alvarado Canyon Creek - Mission Gorge Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None





Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Mission Gorge**  
**Segment Name: Mission Gorge 4**  
**Facility No: 4-07-011**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



# Facility Maintenance Plan

## Alvarado Canyon Creek - Alvarado Facility Group

### Segment Names (Facility numbers):

Alvarado 1 (4-07-021)

Alvarado 2 (4-07-023)

Alvarado 3 (4-07-250)

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	Alvarado Canyon Creek (07)
<b>Facility Group Name</b>	Alvarado Canyon Creek - Alvarado
<b>Segment Name (Facility Number)</b>	Alvarado 1 (4-07-021) Alvarado 2 (4-07-023) Alvarado 3 (4-07-250)
<b>Substrate</b>	Alvarado 1 / Earthen and concrete Alvarado 2 / Concrete Alvarado 3 / Concrete
<b>Location</b>	Located south of Alvarado Road, north of Cleo Street, west of Reservoir Drive, and east of Brockbank Place
<b>MMP Map No(s).</b>	64
<b>Facility Inspection No.</b>	63, 64
<b>Other Former Names</b>	Upper Alvarado Channel



**Figure 1: Vicinity Map of Alvarado Canyon Creek - Alvarado Facility Group**

# Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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### Alvarado Canyon Creek - Alvarado

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> </ul>
<b>303(d) listed Impairments</b>	Nitrogen, Selenium

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### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved, Phosphorus, Total Dissolved Solids, Toxicity

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# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Alvarado Segment 1 Detail

<b>Facility Type</b>	Earthen and concrete channel
<b>Substrate Detail<sup>1</sup></b>	Stations 2335-3419: Earthen bottom, concrete right bank, and earthen left bank
<b>Location Within Watershed</b>	Upper reach of Alvarado Canyon Creek, upstream of Alvarado Canyon Creek (Mission Gorge Segment 4)
<b>Tributaries (listed from downstream to upstream)</b>	Murray Reservoir Unnamed Tributary
<b>Facility Length</b>	Approximately 1,102 feet
<b>Top-of-Bank Width</b>	Approximately 37 feet
<b>Bottom Facility Width</b>	Approximately 19 feet
<b>Facility Depth</b>	Approximately 9 feet
<b>Adjacent Land Use</b>	Commercial, Open Space, Other Residential, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	13526-D
<b>Coastal Zone</b>	No



**Figure 1: August 2014, from east side of channel, directly upstream of State of California maintenance boundary, looking downstream**



**Figure 2: Vicinity Map of Alvarado Segment 1**

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2014: No maintenance conducted 2015 – 2016: Routine maintenance conducted January 2017 – March 2019: No maintenance conducted, except removal of debris fence
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** N/A

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 18/31/33 USACE File #SPL-2015-00423-MBT (expired March 2018)

**401** RWQCB 401 Cert No. R9-2015-0102 (expired March 2018)

**1602** CDFW SAA No. 1600-2015-0107-R5 (expires 2020)

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<b>Mitigation for Previous Impacts</b>	Stadium (3.91 acres)
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# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>2</sup>*

**Current Conditions Affecting Facility Capacity** In August 2014, the amount of vegetation was observed to range from light to moderate, and sediment deposition was estimated to range from 0.2 to 1.7 feet. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2018 and documented in the current conditions assessment memorandum in Appendix A of the Hydrology and Hydraulics Technical Report.

Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	1,000	1,700	2,100	2,558	3,400	3,900

Hydraulic Capacity of Facility	
<b>Current Capacity</b>	1,700 cfs
<b>Proposed MWMP Maintained Capacity</b>	<3,400 cfs
<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from channel bottom from Station 2317 to Station 3419. Previously designed post-maintenance erosion control measure at Station 2335 to be installed and maintained as necessary.
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station 2537

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Natural flood channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Developed land</li> <li>Disturbed land</li> <li>Ornamental plantings</li> <li>Riparian forest (southern willow forest)</li> </ul>
<b>Habitat and Wildlife</b>	Although the channel is intersected by the Multi Habitat Planning Area (MHPA), there are limited biological resources suitable for sensitive species use within the facility itself. Upstream of the facility there is suitable habitat (e.g., riparian forest [southern willow forest]) for least Bell's vireo.
<b>MHPA</b>	The Multi Habitat Planning Area (MHPA) boundary intersects the channel limits and extends south of the channel.
<b>Mitigation Within Facility</b>	None

### Historical, Archeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

#### Historical Resources

<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-4
EP-BIO-5	MM-BIO-5
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Hydrology (HYD)</b>	
EP-HYD-1	
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Paleontological Resources (PAL)</b>	
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Alvarado
<b>Segment Name</b>	Alvarado 1
<b>Facility No.</b>	4-07-021
<b>Facility Location</b>	From downstream end of Alvarado 2 segment to 15 feet north of sewer lateral over the channel on the 6300 block of Alvarado Court
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of channel immediately upstream of State of California property per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>3</sup></b>	Remove accumulated sediment, debris, and vegetation from channel bottom from Station 2317 to Station 3419. Previously designed post-maintenance erosion control measure at Station 2335 to be installed and maintained as necessary.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen and concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 13526-D
<b>Substrate Detail<sup>3</sup></b>	Stations 2335-3419: Earthen bottom, concrete right bank, and earthen left bank

<sup>3</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,102 feet Top width: 37 feet Bottom width: 19 feet Depth: 9 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,102 feet Width: 29 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 20 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer, bulldozer/track-steer and/or loader enter or are lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer and/or bulldozer/track-steer pushes material to loader. Loader scoops up materials from channel and loads onto dump truck.</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>4</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

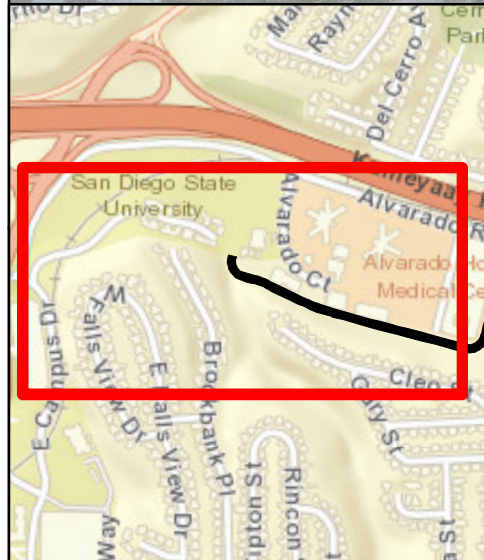
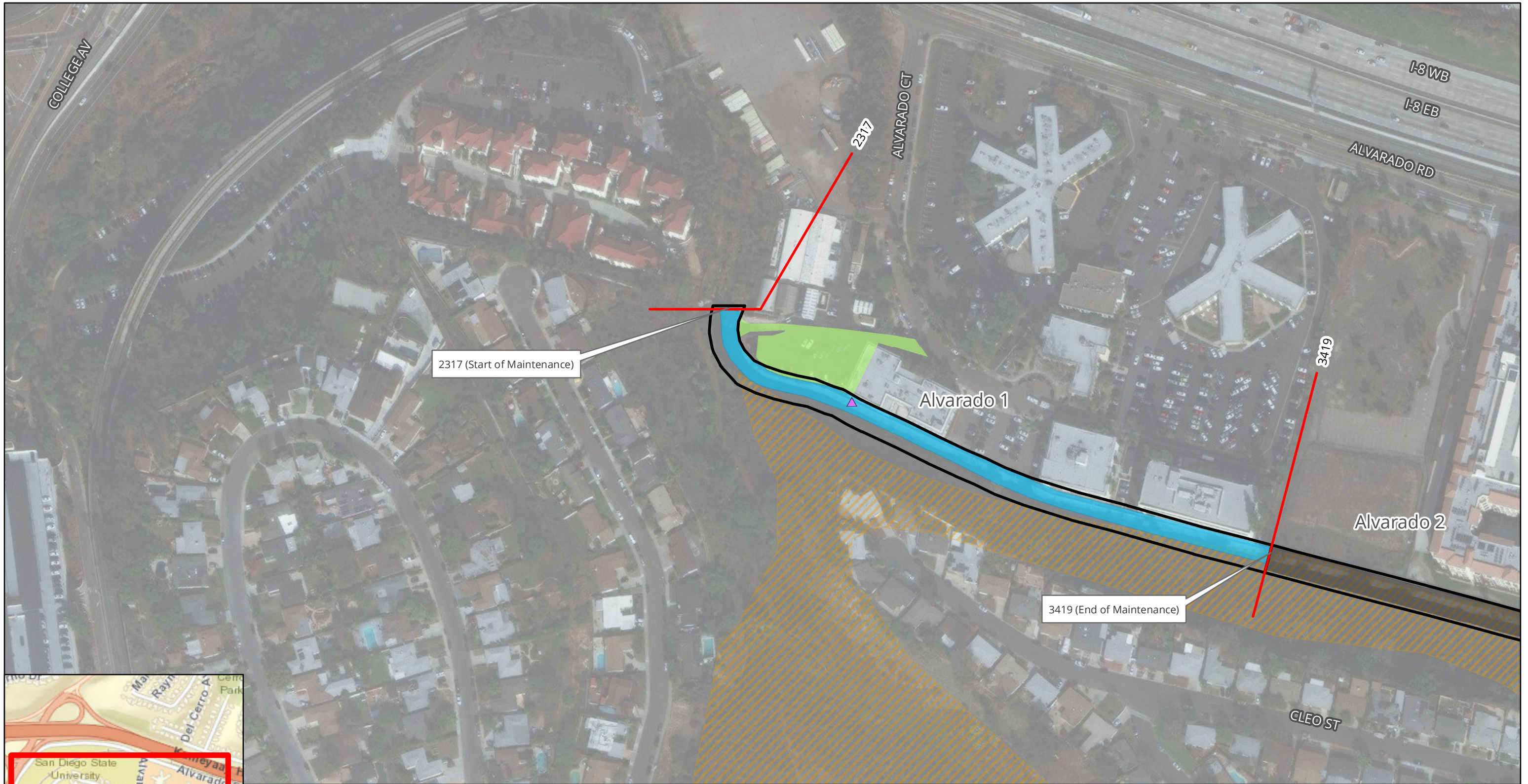
## Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	Yes; see Appendix A-4 Location: Station 2537
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

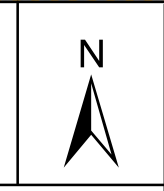






In-Stream Erosion Control	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	

- Notes:**
1. Concrete repair may occur within this facility area.
  2. In-stream post-maintenance erosion control measures may occur within this facility area.
  3. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  4. Access/Loading/Staging/Stockpiling may be modified during implementation.
  5. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Alvarado**  
**Segment Name: Alvarado 1**  
**Facility No: 4-07-021**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Alvarado Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Alvarado Canyon Creek, upstream of Alvarado Canyon Creek (Alvarado Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	Murray Reservoir Unnamed Tributary
<b>Facility Length</b>	Approximately 1,192 feet
<b>Top-of-Bank Width</b>	Approximately 37 feet
<b>Bottom Facility Width</b>	Approximately 19 feet
<b>Facility Depth</b>	Approximately 9 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	59-11vc12 (Caltrans), 12897-7-D, & 12897-2-D
<b>Coastal Zone</b>	No



**Figure 1: August 2014, from north side of the channel within 100% concrete portion of channel at 90-degree bend, looking downstream**



**Figure 2: Vicinity Map of Alvarado Segment 2**





# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Ornamental plantings</li> </ul>
<b>Habitat and Wildlife</b>	Although the channel is intersected by the Multi-Habitat Planning Area (MHPA), there are limited biological resources suitable for sensitive species use within the facility
<b>MHPA</b>	The Multi Habitat Planning Area (MHPA) boundary intersects the channel limits and extends south of the channel.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Alvarado
<b>Segment Name</b>	Alvarado 2
<b>Facility No.</b>	4-07-023
<b>Facility Location</b>	From immediately south of Alvarado Road to upstream end of Alvarado 1 segment
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 59-11vc12 (Caltrans), 12897-7-D, & 12897-2-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,192 feet Top width: 37 feet Bottom width: 19 feet Depth: 9 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,192 feet Width: 33–37 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 20 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to loader at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



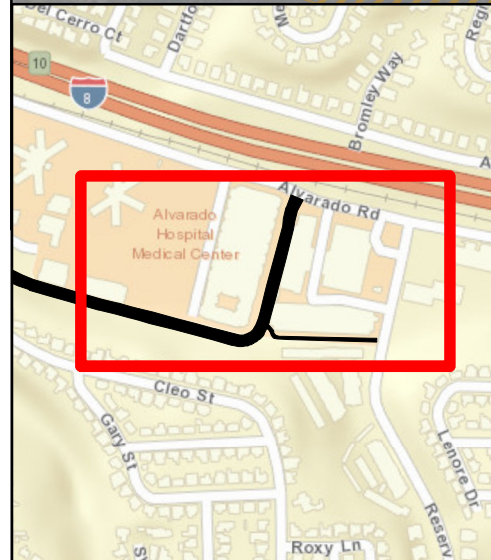
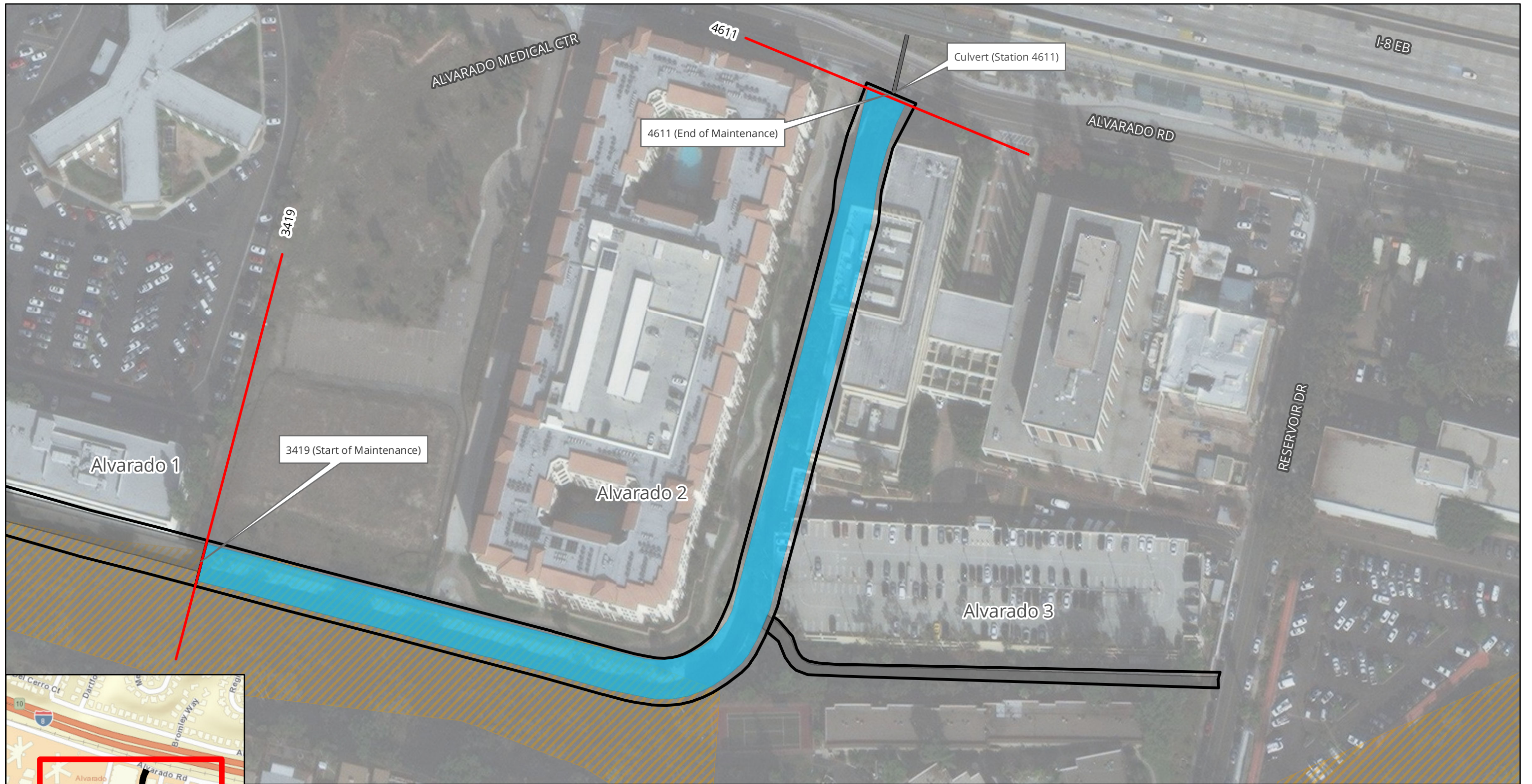
## Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







- Culvert
- Station
- Facility Area
- Multi-Habitat Planning Area
- Adjacent Facility Activity Area
- Maintenance Area

**Notes:**

1. Concrete repair may occur within this facility.
2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
3. Access/Loading/Staging/Stockpiling may be modified during implementation.
4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



The City of  
**SAN DIEGO**

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Alvarado**  
**Segment Name: Alvarado 2**  
**Facility No: 4-07-023**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Alvarado Canyon Creek - Alvarado Facility Group

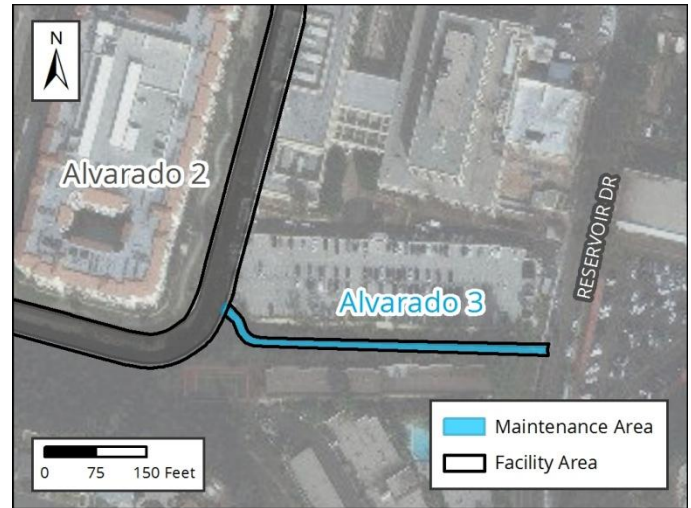
## Facility Maintenance Plan

### Alvarado Segment 3 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Alvarado Canyon Creek, upstream of Alvarado Canyon Creek (Alvarado Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	Murray Reservoir Unnamed Tributary
<b>Facility Length</b>	Approximately 517 feet
<b>Top-of-Bank Width</b>	Approximately 9–12.5 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 4–4.5 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	59-11vc12 (Caltrans) & 12897-7-D
<b>Coastal Zone</b>	No



**Figure 1: September 2017, facing the upstream end of the segment, at the location of the recent concrete lining repair work**



**Figure 2: Vicinity Map of Alvarado Segment 3**

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2015: No maintenance conducted 2016: Minor maintenance conducted (hand removal of sediment) 2018: Concrete repair conducted January 2019 – March 2019: No maintenance conducted
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#### Past Regulatory Approvals

<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	None
<b>401</b>	None
<b>1602</b>	None

**Mitigation for Previous Impacts**      None

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

**Current Conditions Affecting Facility Capacity**      The ditch was relatively clean with very little evidence of vegetation or sediment deposition

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
<b>Q (cubic feet per second [cfs])</b>	239	305	358	433	488	544

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	426 cfs
<b>Proposed MWMP Maintained Capacity</b>	N/A
<b>Maintenance Recommendation</b>	No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Ornamental planting</li> </ul>
<b>Habitat and Wildlife</b>	Although the ditch is intersected by the Multi-Habitat Planning Area (MHPA), there are limited biological resources suitable for sensitive species use within the facility
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 80 feet to the southwest of the ditch.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

# Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

## Environmental Protocols and Mitigation Measures

This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Alvarado Canyon Creek - Alvarado
<b>Segment Name</b>	Alvarado 3
<b>Facility No.</b>	4-07-250
<b>Facility Location</b>	From west of Reservoir Drive and south of Alvarado Road to Alvarado 2 segment between Station 3913 and Station 4057
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 59-11vc12 (Caltrans) & 12897-7-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 517 feet Top width: 9–12.5 feet Bottom width: 4 feet Depth: 4–4.5 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Alvarado Canyon Creek - Alvarado Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 517 feet Width: 9-12.5 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, sweeper
<b>Schedule</b>	Up to approximately 20 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedures</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

# Alvarado Canyon Creek - Alvarado Facility Group Facility Maintenance Plan

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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







- Facility Area
- Multi-Habitat Planning Area
- Adjacent Facility Activity Area
- Maintenance Area



- Notes:**
1. Concrete repair may occur within this facility.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Alvarado Canyon Creek - Alvarado**  
**Segment Name: Alvarado 3**  
**Facility No: 4-07-250**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Facility Maintenance Plan

## Murray Reservoir - Cowles Mountain Facility Group

### Segment Names (Facility numbers):

Cowles Mountain 1 (4-07-901)

Cowles Mountain 2 (4-07-911)

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	Murray Reservoir Unnamed Tributary (07)
<b>Facility Group Name</b>	Murray Reservoir - Cowles Mountain
<b>Segment Name (Facility Number)</b>	Cowles Mountain 1 (4-07-901) Cowles Mountain 2 (4-07-911)
<b>Substrate</b>	Cowles Mountain 1 / Concrete Cowles Mountain 2 / Concrete
<b>Location</b>	Southeast of the intersection of Navajo Road and Cowles Mountain Boulevard, and about 100 feet north of Lake Cayuga Drive
<b>MMP Map No(s).</b>	53, 54 amended
<b>Facility Inspection No.</b>	53, 54 amended
<b>Other Former Names</b>	Beaver Lake, San Carlos, Cowles Mountain Channel, Lake Badin, Golf Course



**Figure 1: Vicinity Map of Murray Reservoir - Cowles Mountain Facility Group**



# Murray Reservoir - Cowles Mountain Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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San Diego River Watershed Management Area; Hydrologic Subarea 907.11

**Adopted TMDLs** Bacteria Project I

**Highest Priority Water Quality Condition** Bacteria

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Murray Reservoir - Cowles Mountain

**Beneficial Uses**

**303(d) listed Impairments** No impairments recorded on the 303(d) List

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Lake Murray (First downstream water body)

**Beneficial Uses**

- Municipal and Domestic Supply (MUN)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Contact Water Recreation (REC-1)
- Non-contact Water Recreation (REC-2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)

**303(d) listed Impairments** Nitrogen, pH

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# Murray Reservoir - Cowles Mountain Facility Group Facility Maintenance Plan

## Cowles Mountain Segment 1 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail<sup>1</sup></b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of unnamed tributary to Murray Reservoir, north of Murray Reservoir unnamed tributary (Cowles Mountain Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 697 feet
<b>Top-of-Bank Width</b>	Approximately 9.5–22 feet
<b>Bottom Facility Width</b>	Approximately 5 feet
<b>Facility Depth</b>	Approximately 6 feet
<b>Adjacent Land Use</b>	Commercial, Multi-Family Residential, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
<b>As-Built Drawing Number</b>	10721-D
<b>Coastal Zone</b>	No



Figure 1: October 2018, upstream of culvert

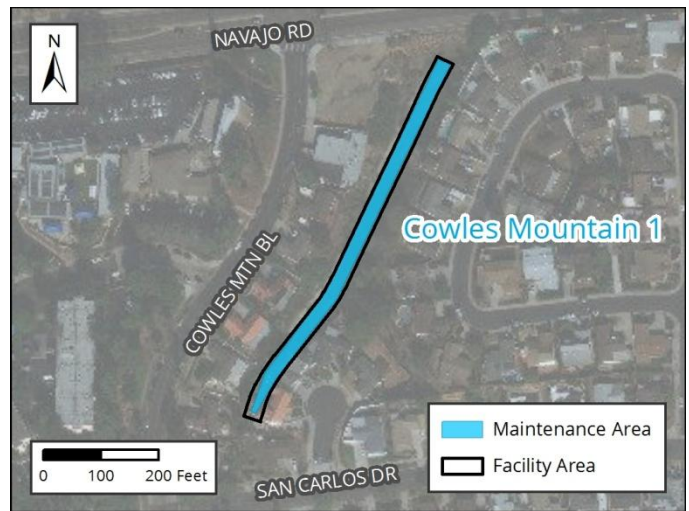


Figure 2: Vicinity Map of Cowles Mountain Segment 1

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2017: No maintenance conducted 2018: Minor maintenance 2019: No maintenance conducted
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#### Past Regulatory Approvals

<b>CEQA</b>	2011 MMP PEIR No. 42891
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	None
<b>401</b>	None
<b>1602</b>	None

<b>Mitigation for Previous Impacts</b>	None
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### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>2</sup>*

<b>Current Conditions Affecting Facility Capacity</b>	In November 2014, the vegetation was observed to vary from light to heavy as well as sections of clean concrete to approximately 0.5 foot of sediment
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#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
<b>Q (cubic feet per second [cfs])</b>	355	457	537	645	729	812

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	317 cfs
<b>Proposed MWMP Maintained Capacity</b>	340 cfs
<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from bottom of the ditch from Station 709 to Station 1406. Remove accumulated sediment and debris in culverts at Station 709 and at Station 1406.
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"><li>• Developed concrete-lined channel</li></ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"><li>• Developed land</li><li>• Ornamental plantings</li><li>• Riparian scrub</li></ul>
<b>Habitat and Wildlife</b>	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; c. 1953–1963 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

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# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Solid Waste (SW)</b>	MM-HR-1
EP-SW-2	MM-HR-2
EP-SW-3	<b>Noise (NOI)</b>
EP-SW-4	MM-NOI-1
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Murray Reservoir - Cowles Mountain
<b>Segment Name</b>	Cowles Mountain 1
<b>Facility No.</b>	4-07-901
<b>Facility Location</b>	From outlet of culvert underneath Navajo Road to inlet of culvert behind residences at the intersection of Cowles Mountain Boulevard and San Carlos Drive
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch, per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>3</sup></b>	Remove accumulated sediment, debris, and vegetation from bottom of the ditch from Station 709 to Station 1406. Remove accumulated sediment and debris in culverts at Station 709 and at Station 1406.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 10721-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>3</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 697 feet Top width: 9.5–22 feet Bottom width: 5 feet Depth: 6 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 697 feet Width: 9.5–22 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: No</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

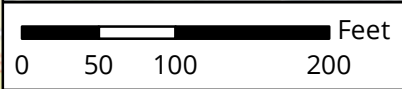
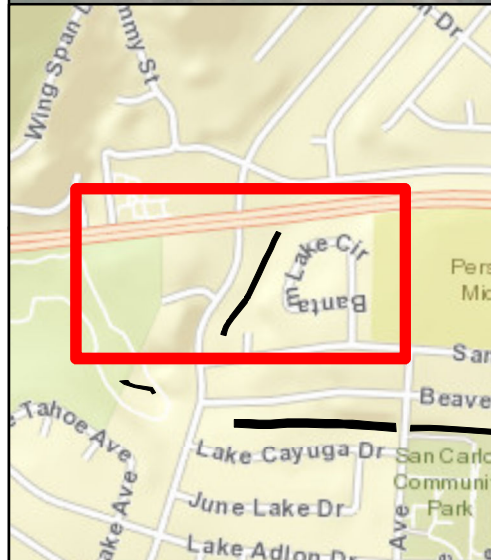
<sup>4</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

## Murray Reservoir - Cowles Mountain Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: 1. Vactor or pump standing water from facility 2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area) 3. Position vactor/pump to capture any incoming or contained flows 4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: 1. Demobilize equipment 2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization 3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
<b>Other Notes</b>	None





Culvert	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area



- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Murray Reservoir - Cowles Mountain**  
**Segment Name: Cowles Mountain 1**  
**Facility No: 4-07-901**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Cowles Mountain Segment 2 Detail

<b>Facility Type</b>	Concrete channel
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of unnamed tributary to Murray Reservoir
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 2,891 feet
<b>Top-of-Bank Width</b>	Approximately 22-38 feet
<b>Bottom Facility Width</b>	Approximately 5-11 feet
<b>Facility Depth</b>	Approximately 4-6 feet
<b>Adjacent Land Use</b>	Parks, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	9741-9-D & 9741-10-D
<b>Coastal Zone</b>	No



Figure 1: December 2016, above inlet culvert on the Boulder Lake end of channel



Figure 2: Vicinity Map of Cowles Mountain Segment 2

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2013: No maintenance conducted 2014/2015: Emergency removal of debris, sediment, and vegetation 2018: Minor maintenance conducted 2019: No maintenance conducted
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#### Past Regulatory Approvals

<b>CEQA</b>	2011 MMP PEIR No. 42891; EIR Addendum
<b>CDP</b>	N/A
<b>SDP</b>	SDP No. 2034245 (2017 Addendum)
<b>404</b>	None
<b>401</b>	None
<b>1602</b>	None

<b>Mitigation for Previous Impacts</b>	Stadium (0.036 acre)
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### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>1</sup>*

<b>Current Conditions Affecting Facility Capacity</b>	In November 2014, the vegetation was observed to vary from light to heavy as well as section of clean concrete to approximately 2.5 feet of sediment
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#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
<b>Q (cubic feet per second [cfs])</b>	284	365	429	517	583	649

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	148 cfs
<b>Proposed MWMP Maintained Capacity</b>	272 cfs

<b>Maintenance Recommendation</b>	Remove accumulated sediment, debris, and vegetation from the channel from Station 0 to Station 209, Station 785 to Station 1735 and from Station 1855 to Station 2891. Remove accumulated sediment and debris in culverts from Station 209 to Station 785 and from Station 1735 to Station 1855.
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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
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<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths



# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"><li>• Developed concrete-lined channel</li></ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"><li>• Developed land</li><li>• Ornamental plantings</li></ul>
<b>Habitat and Wildlife</b>	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
<b>MHPA</b>	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; c. 1953–1963 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

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# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-HR-1
<b>Solid Waste (SW)</b>	MM-HR-2
EP-SW-2	<b>Noise (NOI)</b>
EP-SW-3	MM-NOI-1
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Murray Reservoir - Cowles Mountain
<b>Segment Name</b>	Cowles Mountain 2
<b>Facility No.</b>	4-07-911
<b>Facility Location</b>	From outlet of culvert 100 feet east of Boulder Lake Avenue to San Carlos Golf Course
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from the channel from Station 0 to Station 209, Station 785 to Station 1735 and from Station 1855 to Station 2891. Remove accumulated sediment and debris in culverts from Station 209 to Station 785 and from Station 1735 to Station 1855.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Built?</b>	Yes; 9741-9-D & 9741-10-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Murray Reservoir - Cowles Mountain Facility Group

## Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 2,891 feet Top width: 22-38 feet Bottom width: 5-11 feet Depth: 4-6 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 2,195 feet; Culvert: 696 feet Width: 22-38 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 14 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel with assistance from Gradall/excavator at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	No
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: No</li> <li>2. Adjacent to maintenance area: No</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



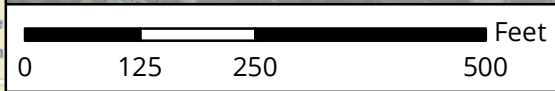
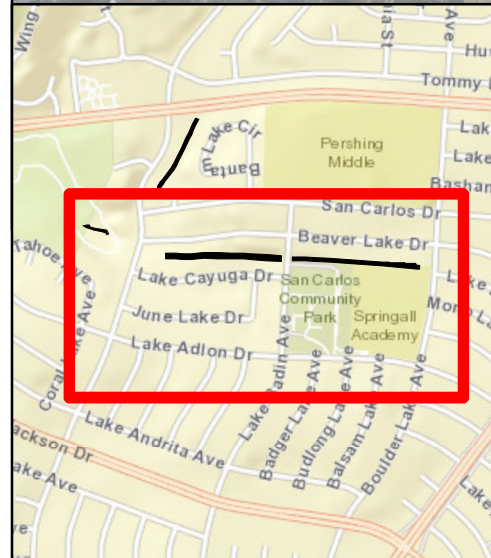
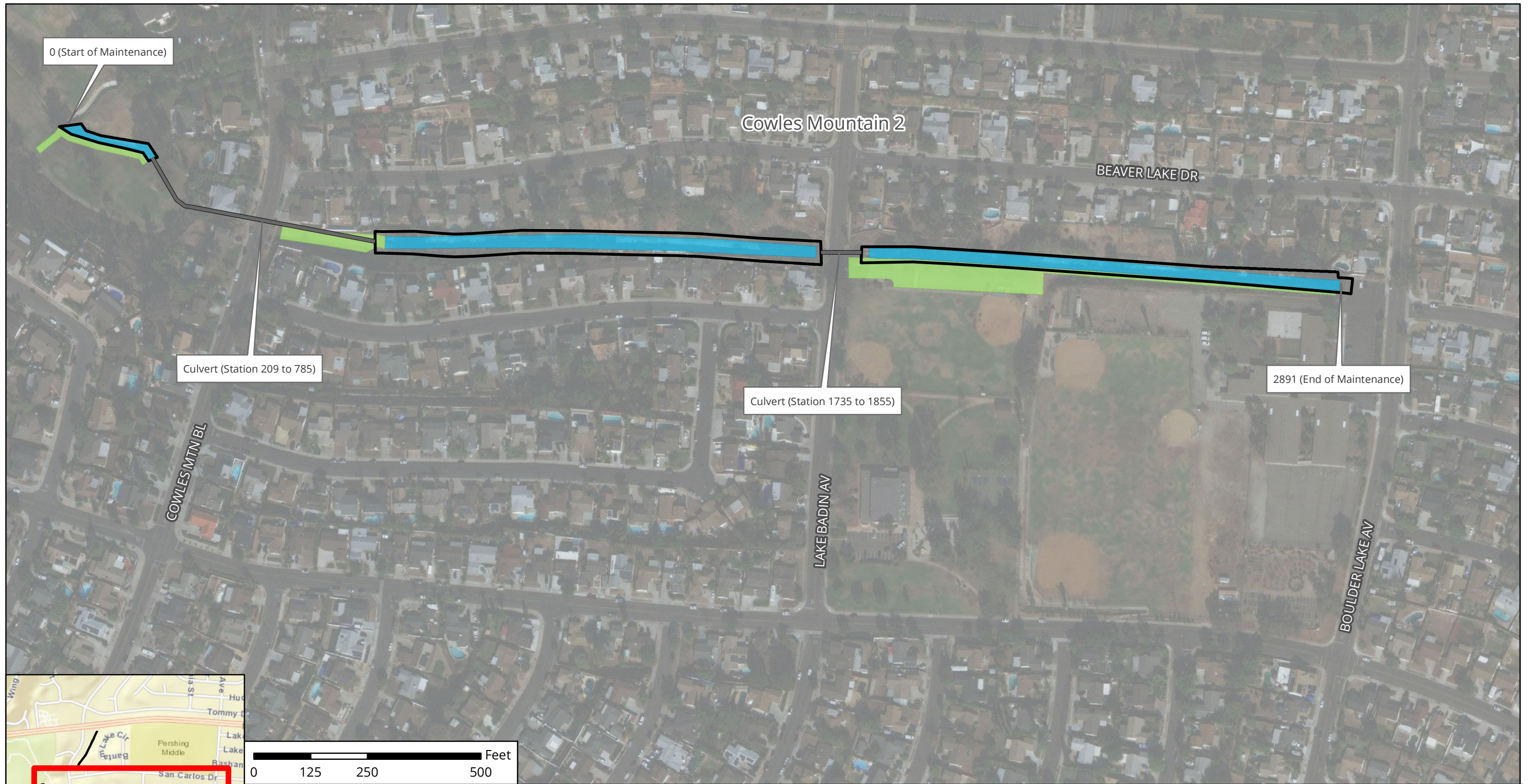
## Murray Reservoir - Cowles Mountain Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area



November 2019

- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

**Map A: General Site Plan**  
**Facility Group Name: Murray Reservoir - Cowles Mountain**  
**Segment Name: Cowles Mountain 2**  
**Facility No: 4-07-911**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Facility Maintenance Plan

## Norfolk Canyon Creek - Fairmount Facility Group

### Segment Names (Facility numbers):

Fairmount 1 (4-08-008)

Fairmount 2 (4-08-011)

Fairmount 3 (4-08-014)

Fairmount 4 (4-08-017)

Baja 1 (4-08-105)

Aldine 1 (4-08-150) (See Appendix  
A-5)

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Overview

<b>Watershed Management Area (WMA)</b>	San Diego River
<b>Watershed (Number)</b>	San Diego River (4)
<b>Hydrologic Subarea</b>	907.11
<b>Drainage Name (Number)</b>	Norfolk Canyon Creek (08)
<b>Facility Group Name</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name (Facility Number)</b>	Fairmount 1 (4-08-008) Fairmount 2 (4-08-011) Fairmount 3 (4-08-014) Fairmount 4 (4-08-017) Baja 1 (4-08-105) Aldine 1 (4-08-150) (See Appendix A-5)
<b>Substrate</b>	Fairmount 1 / Concrete Fairmount 2 / Concrete Fairmount 3 / Earthen Fairmount 4 / Concrete Baja 1 / Earthen and concrete Aldine 1 / Earthen
<b>Location</b>	Runs parallel to the west side of Fairmount Avenue from about 900 feet north of the intersection of Meade Avenue and Fairmount Avenue, and the Aldine Drive-Fairmount Avenue interchange
<b>MMP Map No(s).</b>	65a, 65b, 65c, 66
<b>Facility Inspection No.</b>	65a, 65b, 65c, 66
<b>Other Former Names</b>	Fairmount Canyon, Montezuma Channel

# Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan



Figure 1: Vicinity Map of Norfolk Canyon Creek - Fairmount Facility Group

# Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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## Water Quality Resource Summary

*This section describes water quality conditions within the facility and watershed.*

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### San Diego River Watershed Management Area; Hydrologic Subarea 907.11

<b>Adopted TMDLs</b>	Bacteria Project I
<b>Highest Priority Water Quality Condition</b>	Bacteria

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### Norfolk Canyon Creek - Fairmount

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	No impairments recorded on the 303(d) List

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### San Diego River (First downstream water body)

<b>Beneficial Uses</b>	<ul style="list-style-type: none"> <li>• Agricultural Supply (AGR)</li> <li>• Industrial Service Supply (IND)</li> <li>• Contact Water Recreation (REC-1)</li> <li>• Non-contact Water Recreation (REC-2)</li> <li>• Preservation of Biological Habitats of Special Significance (BIOL)</li> <li>• Warm Freshwater Habitat (WARM)</li> <li>• Wildlife Habitat (WILD)</li> <li>• Rare, Threatened, or Endangered Species (RARE)</li> </ul>
<b>303(d) listed Impairments</b>	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Oxygen, Dissolved Phosphorus, Total Dissolved Solids, Toxicity

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# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Fairmount Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Norfolk Canyon Creek, upstream of the San Diego River
Tributaries (listed from downstream to upstream)	Norfolk Canyon Creek
Facility Length	Approximately 248 feet
Top-of-Bank Width	Approximately 25 feet
Bottom Facility Width	Approximately 10 feet
Facility Depth	Approximately 5 feet
Adjacent Land Use	Open Space, Single-Family Residential, Transportation
As-Built Drawing Number	6928-D & 6948-D
Coastal Zone	No



Figure 1: April 2017, looking downstream at concrete channel

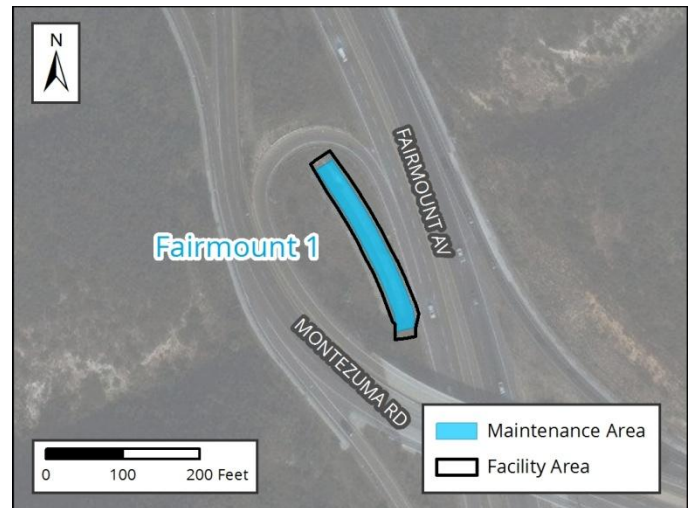


Figure 2: Vicinity Map of Fairmount Segment 1



# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Developed land</li> <li>• Disturbed land</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, migratory species may use the surrounding chaparral habitat within the Multi Habitat Planning Area (MHPA).
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundaries are located approximately 100 feet west and 150 feet east of the channel.
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1953–1964 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-BIO-6	MM-HR-1
<b>Health and Safety/Hazards (HAZ)</b>	MM-HR-2
EP-HAZ-3	<b>Noise (NOI)</b>
<b>Land Use (LU)</b>	MM-NOI-1
EP-LU-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	



# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name</b>	Fairmount 1
<b>Facility No.</b>	4-08-008
<b>Facility Location</b>	From outlet of culvert that crosses under the Montezuma-Fairmount interchange to outlet of culvert
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined channel per estimated original dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 6928-D & 6948-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 248 feet Top width: 25 feet Bottom width: 10 feet Depth: 5 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Channel: 248 feet Width: 25 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors

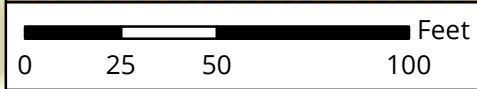
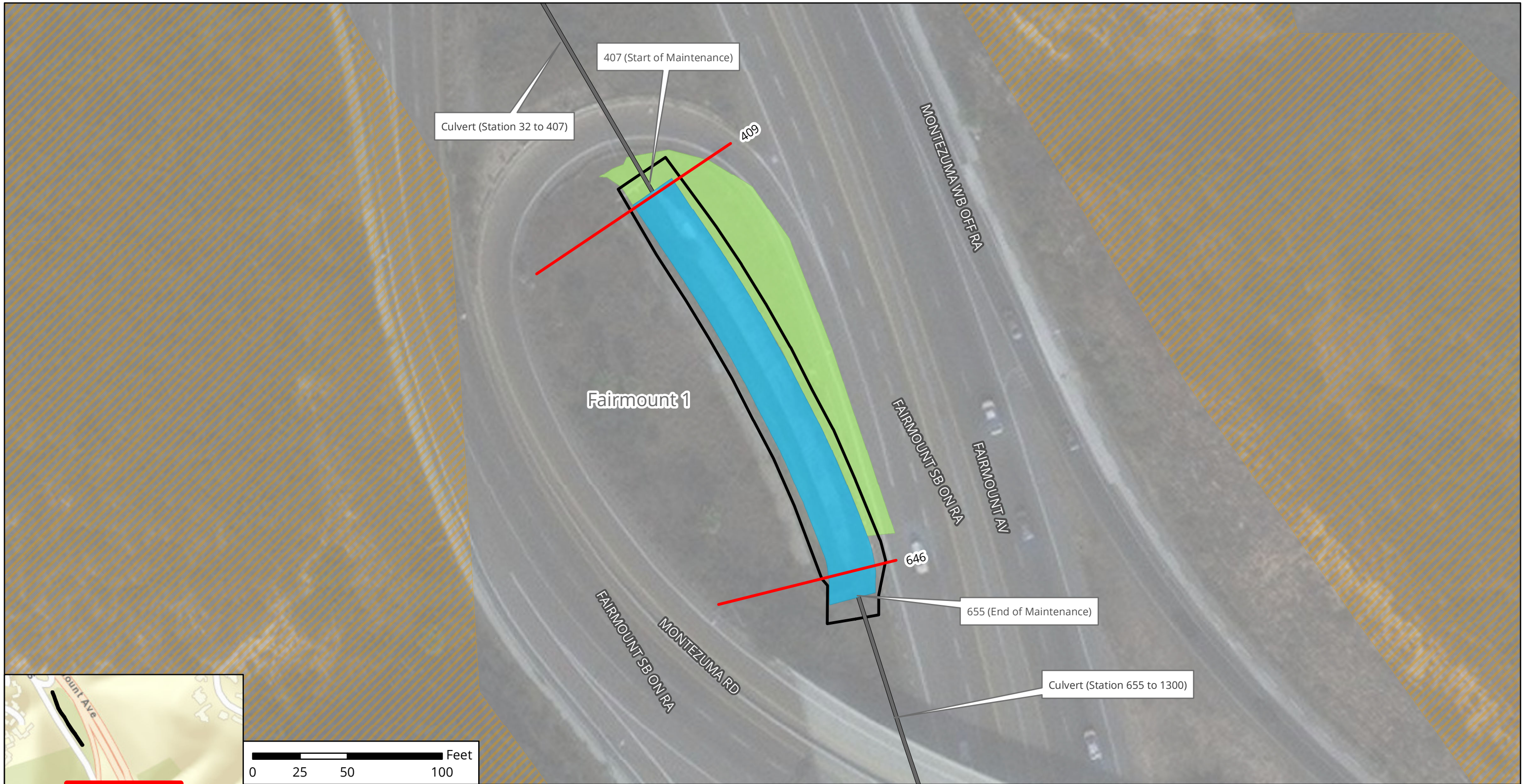
## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







Culvert	Access/Loading/Staging/Stockpiling Area
Station	Maintenance Area
Facility Area	
Multi-Habitat Planning Area	



**Notes:**

1. Concrete repair may occur within this facility area.
2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
3. Access/Loading/Staging/Stockpiling may be modified during implementation.
4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Norfolk Canyon Creek - Fairmount**  
**Segment Name: Fairmount 1**  
**Facility No: 4-08-008**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Fairmount Segment 2 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Middle reach of Norfolk Canyon Creek (south), immediately upstream of Norfolk Canyon Creek (Fairmount Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	Norfolk Canyon Creek
<b>Facility Length</b>	Approximately 1,220 feet
<b>Top-of-Bank Width</b>	Approximately 20 feet
<b>Bottom Facility Width</b>	Approximately 7 feet
<b>Facility Depth</b>	Approximately 4.5 feet
<b>Adjacent Land Use</b>	Open Space, Other Residential, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	6929-D & 6948-D
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream at vegetation concrete ditch

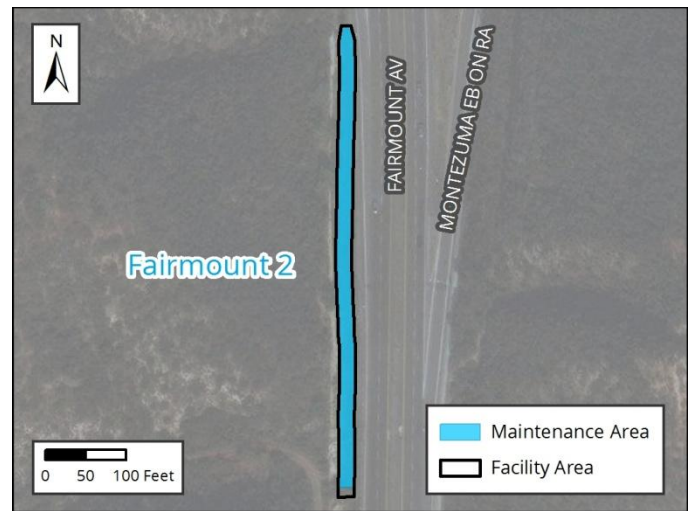


Figure 2: Vicinity Map of Fairmount Segment 2





# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Coastal sage scrub</li> <li>• Developed land</li> <li>• Disturbed land</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the surrounding habitat for nesting/roosting. Other sensitive bird species could occur in sage scrub habitat adjacent to the ditch (e.g., coastal California gnatcatcher).
<b>MHPA</b>	The facility is partially within the Multi Habitat Planning Area (MHPA) along the entire western side of the ditch
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; 1960 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-HR-1
<b>Land Use (LU)</b>	MM-HR-2
EP-LU-1	<b>Noise (NOI)</b>
<b>Solid Waste (SW)</b>	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name</b>	Fairmount 2
<b>Facility No.</b>	4-08-011
<b>Facility Location</b>	From 900 feet south of Montezuma-Fairmount interchange to inlet of culvert that crosses under the Montezuma-Fairmount interchange
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove accumulated sediment, debris, and vegetation from Station 1300 to Station 1875. Remove accumulated sediment and debris in culvert from Station 655 to Station 1300.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Built?</b>	Yes; 6929-D & 6948-D
<b>Substrate Detail</b>	Concrete bottom and banks

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

<b>Facility Dimensions (Approximate)</b>	Length: 1,220 feet Top width: 20 feet Bottom width: 7 feet Depth: 4.5 feet
<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 575 feet; Culvert: 645 feet Width: 20 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



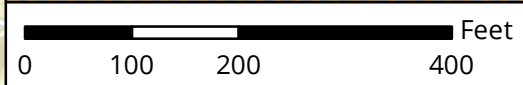
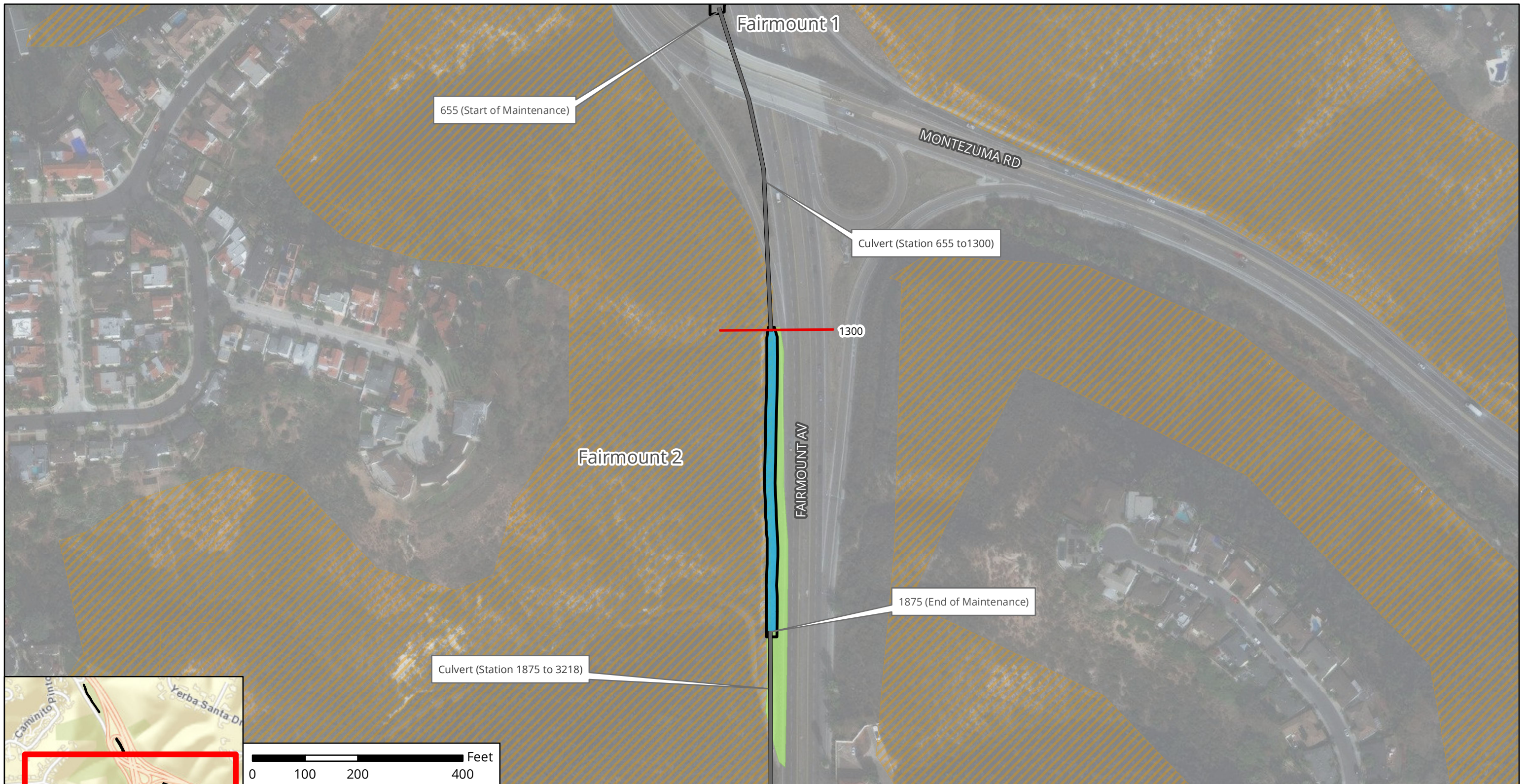
## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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<b>Flow Management</b>	As needed: <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None







Culvert	Multi-Habitat Planning Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area

- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Norfolk Canyon Creek - Fairmount**  
**Segment Name: Fairmount 2**  
**Facility No: 4-08-011**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**









# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Fairmount Segment 3 Detail

<b>Facility Type</b>	Earthen channel
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Location Within Watershed</b>	Upper reach of Norfolk Canyon Creek (south), immediately upstream of Norfolk Canyon Creek (Fairmount Segment 2)
<b>Tributaries (listed from downstream to upstream)</b>	Norfolk Canyon Creek
<b>Facility Length</b>	Approximately 820 feet
<b>Top-of-Bank Width</b>	Approximately 40–60 feet
<b>Bottom Facility Width</b>	Approximately 15–25 feet
<b>Facility Depth</b>	Approximately 6–10 feet
<b>Adjacent Land Use</b>	Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	6930-D
<b>Coastal Zone</b>	No



**Figure 1: April 2017, looking downstream at scour pool at channel outfall**



**Figure 2: Vicinity Map of Fairmount Segment 3**



# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

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<b>Facility Vegetation</b>	<ul style="list-style-type: none"><li>• Chaparral</li><li>• Disturbed wetland (palm-dominated)</li></ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"><li>• Chaparral</li><li>• Coastal sage scrub</li><li>• Developed concrete-lined channel</li><li>• Developed land</li><li>• Disturbed land</li><li>• Eucalyptus woodland</li><li>• Ornamental plantings</li><li>• Scrub oak chaparral</li></ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife; however, raptors or other sensitive bird species, such as coastal California gnatcatcher, may use the surrounding chaparral, eucalyptus woodland, or coastal sage scrub habitat within the Multi Habitat Planning Area (MHPA)
<b>MHPA</b>	The facility is adjacent to the Multi Habitat Planning Area (MHPA) and access intersects the MHPA which extends west of the channel
<b>Mitigation Within Facility</b>	None

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# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

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#### Archeological and Tribal Resources

<b>Resource Identified in APE</b>	None
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<b>Resource Identified Adjacent to APE</b>	None
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<b>Resource Type</b>	N/A
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#### Historical Resources

<b>Resource Identified in APE</b>	Channel; 1960 earthen channel
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<b>Potential Historical Resources</b>	Yes
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<b>Constraint Identified</b>	
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# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
EP-HAZ-3	MM-HR-1
<b>Land Use (LU)</b>	MM-HR-2
EP-LU-1	<b>Noise (NOI)</b>
<b>Paleontological Resources (PAL)</b>	MM-NOI-1
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name</b>	Fairmount 3
<b>Facility No.</b>	4-08-014
<b>Facility Location</b>	From 200 feet north of Aldine Drive-Fairmount Avenue interchange to north 810 feet to a culvert inlet
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of earthen channel per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Restore riprap from Station 4009 to Station 4038 at the culvert outlet
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Bank repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation <u>Bank grading and stabilization</u>
<b>Bank Repair</b>	Yes (multiple options); see Appendix A-4
<b>Concrete Repair</b>	No
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen channel
<b>Existing Plans and/or As-Built?</b>	Yes; 6930-D
<b>Substrate Detail</b>	Earthen bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 820 feet Top width: 40–60 feet Bottom width: 15–25 feet Depth: 6–10 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

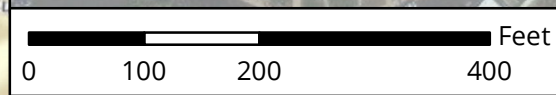
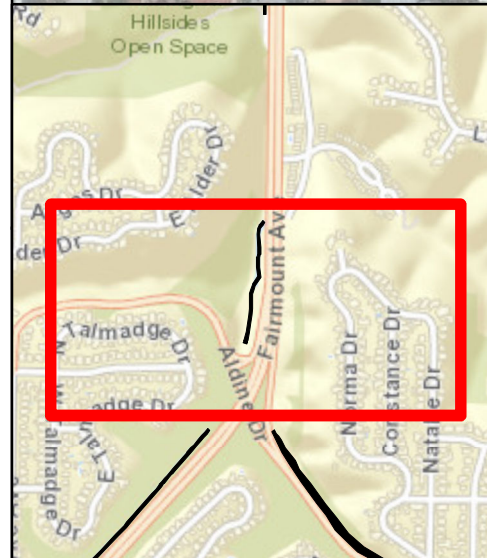
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 29 feet Width: 25 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<p>Riprap Restoration:</p> <ol style="list-style-type: none"> <li>1. Gradall/excavator stationed above channel places riprap into channel</li> <li>2. Bulldozer/track-steer and/or Gradall/excavator enters channel at access/loading area</li> <li>3. Bulldozer/track-steer and/or Gradall/excavator clears area and places riprap into place</li> <li>4. Gradall/excavator scoops material from channel and loads dump truck</li> <li>5. Dump truck hauls material to legal disposal site</li> </ol> <p>Routine Maintenance:</p> <ol style="list-style-type: none"> <li>1. Bobcat/skid-steer and/or bulldozer/track-steer enter or are lowered into channel at access/loading area</li> <li>2. Bobcat/skid-steer and/or bulldozer/track-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from channel and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego

## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





Culvert	Access/Loading/Staging /Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	



**Notes:**  
 1. Access/Loading/Staging/Stockpiling may also occur within City ROW.  
 2. Access/Loading/Staging/Stockpiling may be modified during implementation.  
 3. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Norfolk Canyon Creek - Fairmount**  
**Segment Name: Fairmount 3**  
**Facility No: 4-08-014**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.





# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Fairmount Segment 4 Detail

<b>Facility Type</b>	Concrete ditch
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Norfolk Canyon Creek (south), immediately downstream of Norfolk Canyon Creek (Fairmount Segment 3)
<b>Tributaries (listed from downstream to upstream)</b>	Norfolk Canyon Creek
<b>Facility Length</b>	Approximately 1,849 feet
<b>Top-of-Bank Width</b>	Approximately 16 feet
<b>Bottom Facility Width</b>	Approximately 4 feet
<b>Facility Depth</b>	Approximately 4 feet
<b>Adjacent Land Use</b>	Open Space, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	6930-D, 6931-D, & 6947-D
<b>Coastal Zone</b>	No



Figure 1: April 2017, looking downstream at sediment, debris and vegetation in concrete ditch

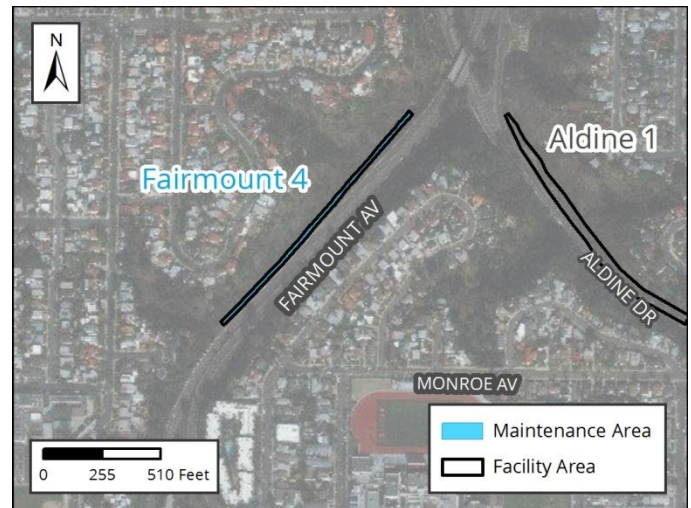


Figure 2: Vicinity Map of Fairmount Segment 4





# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>Disturbed wetland (concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>Chaparral</li> <li>Coastal sage scrub</li> <li>Developed land</li> <li>Disturbed land</li> <li>Eucalyptus woodland</li> <li>Ornamental plantings</li> <li>Scrub oak chaparral</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present adjacent to the facility for nesting/roosting. Other sensitive bird species (e.g., coastal California gnatcatcher) could occur in sage scrub habitat adjacent to the ditch.
<b>MHPA</b>	The facility is intersected by the Multi Habitat Planning Area (MHPA) intermittently along the entire length of the ditch
<b>Mitigation Within Facility</b>	None

### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A
<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	Channel; c. 1953–1964 concrete channel
<b>Potential Historical Resources</b>	Yes
<b>Constraint Identified</b>	

# Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

Environmental Protocols (EP)	Mitigation Measures (MM)
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-4	MM-BIO-2
EP-BIO-5	MM-BIO-3
EP-BIO-6	MM-BIO-4
<b>Health and Safety/Hazards (HAZ)</b>	MM-BIO-6
EP-HAZ-3	<b>Historic, Archaeological, and Tribal Cultural Resources (HR and CR)</b>
<b>Land Use (LU)</b>	MM-HR-1
EP-LU-1	MM-HR-2
<b>Solid Waste (SW)</b>	<b>Noise (NOI)</b>
EP-SW-2	MM-NOI-1
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name</b>	Fairmount 4
<b>Facility No.</b>	4-08-017
<b>Facility Location</b>	From 400 feet northwest of Monroe Avenue to outlet of culvert under Aldine Drive-Fairmount Avenue interchange
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>2</sup></b>	Remove sediment, debris, and vegetation from segment from Station 4637 to Station 5887. Remove sediment and debris in culvert from Station 4038 to Station 4637.
<b>Maintenance Activities</b>	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
<b>Maintenance Method</b>	Excavation; mechanized equipment inside and outside the ditch Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	Yes; see Appendix A-4
<b>Post-Maintenance Erosion Control Recommendation</b>	No
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Concrete ditch
<b>Existing Plans and/or As-Builts?</b>	Yes; 6930-D, 6931-D, & 6947-D
<b>Substrate Detail</b>	Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,849 feet Top width: 16 feet Bottom width: 4 feet Depth: 4 feet

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

<b>Authorized Facility Maintenance Area</b>	Length: Ditch: 1,250 feet; Culvert: 599 feet Width: 16 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 7 working days
<b>Maintenance Crew</b>	Approximately 8-12 people
<b>Routine Maintenance Procedures</b>	<ol style="list-style-type: none"> <li>1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area</li> <li>2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading area</li> <li>3. Gradall/excavator scoops material from ditch and loads dump truck</li> <li>4. Dump truck hauls material to legal disposal site</li> </ol>
<b>Traffic Control</b>	Yes; coordinate with the City of San Diego
<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>3</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan

<sup>3</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



# Norfolk Canyon Creek - Fairmount Facility Group

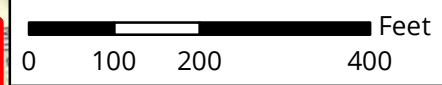
## Facility Maintenance Plan

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<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	None
<b>Post-Maintenance Procedures</b>	Conduct post-maintenance procedures as follows: <ol style="list-style-type: none"><li>1. Demobilize equipment</li><li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li><li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li><li>4. Remove temporary BMPs</li><li>5. Update maintenance record</li><li>6. Conduct post-maintenance site photo documentation</li></ol>
<b>Other Notes</b>	None







Culvert	Adjacent Facility Activity Area
Station	Access/Loading/Staging/Stockpiling Area
Facility Area	Maintenance Area
Multi-Habitat Planning Area	



- Notes:**
1. Concrete repair may occur within this facility area.
  2. Access/Loading/Staging/Stockpiling may also occur within city ROW.
  3. Access/Loading/Staging/Stockpiling may be modified during implementation.
  4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

November 2019

**Map A: General Site Plan**  
**Facility Group Name: Norfolk Canyon Creek - Fairmount**  
**Segment Name: Fairmount 4**  
**Facility No: 4-08-017**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, the GIS User Community, SanGIS, and the City of San Diego.







# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Baja Segment 1 Detail

<b>Facility Type</b>	Earthen and concrete channel
<b>Substrate Detail<sup>1</sup></b>	Stations 6-281: Concrete bottom and banks Stations 281-569: Earthen bottom, concrete north bank, and earthen/graded south bank Stations 569-1507: Concrete bottom and banks
<b>Location Within Watershed</b>	Upper reach of Norfolk Canyon Creek, immediately upstream of Norfolk Canyon Creek, southeast (Fairmount Segment 1)
<b>Tributaries (listed from downstream to upstream)</b>	No named tributaries
<b>Facility Length</b>	Approximately 1,369 feet
<b>Top-of-Bank Width</b>	Approximately 13-32 feet
<b>Bottom Facility Width</b>	Approximately 4-20 feet
<b>Facility Depth</b>	Approximately 3.5-4 feet
<b>Adjacent Land Use</b>	Multi-Family Residential, Single-Family Residential, Transportation
<b>As-Built Drawing Number</b>	10657-5-D
<b>Coastal Zone</b>	No



Figure 1: November 2016, facing downstream end of facility group; towards 60-inch-diameter RCP culvert beneath the Collwood Villas Apartments and Collwood Boulevard



Figure 2: Vicinity Map of Baja Segment 1

<sup>1</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Facility Maintenance History

*This section describes previous facility maintenance, regulatory approvals, and mitigation.*

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<b>History of Maintenance</b>	Prior to 2011: Unknown 2011 – 2017: No maintenance conducted 2018 – 2019: Routine maintenance conducted
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#### Past Regulatory Approvals

**CEQA** 2011 MMP PEIR No. 42891

**CDP** N/A

**SDP** SDP No. 2034245 (2017 Addendum)

**404** NWP 18/33 USACE File #SPL-2018-00362-SRR (expires March 2022)

**401** RWQCB 401 Cert No. R9-2018-0107 (expires March 2022)

**1602** None

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<b>Mitigation for Previous Impacts</b>	Stadium (0.078 acre); Marron Valley Cornerstone Lands Conservation Bank (0.021 acre)
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# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Hydrology and Hydraulics Summary

*This section describes the current conditions in the facility related to hydrology/hydraulics, as well as analysis of hydraulic capacity before and after proposed maintenance, and the potential for erosion following maintenance.<sup>2</sup>*

**Current Conditions Affecting Facility Capacity**      In November 2016, the amount of vegetation was observed to vary from light to heavy and broken concrete lining was noted

#### Hydrologic Peak Flows

Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	593	730	867	958	1,049	1,232

#### Hydraulic Capacity of Facility

<b>Current Capacity</b>	250 cfs
<b>Proposed MWMP Maintained Capacity</b>	250 cfs

#### Maintenance Recommendation

From Station 6 to Station 281: No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change.

From Station 281 to Station 589: Partially remove vegetation; cut down existing palm trees, leaving 2-foot-tall stumps with root balls intact in the ground. Stumps should be left in place to help mitigate velocities. Remove all fallen palm tree trunks and debris. Leave all other existing vegetation and sediment in place.

From Station 589 to Station 646: Remove palm tree growing out of a crack in the concrete lining and repair/replace the broken and missing concrete lining to match the existing flow line. Previously designed post-maintenance erosion control measures at Station 281 and Station 488 to be installed and maintained as necessary.

Repair/replacement of broken concrete lining from Station 281 to Station 646.

From Station 788 to Station 1507: No maintenance currently proposed; however vegetation, sediment and debris removal or concrete repair/replacement activities should be performed if the conditions change.

#### In-Stream Post-Maintenance Erosion Control Recommendation

Yes; see Appendix A-4  
Location: Station 281 and Station 488

<sup>2</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

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### Biological Resource Summary

*This section describes the facility vegetation community, adjacent vegetation and land uses, and notes to illustrate special habitat and wildlife.*

<b>Facility Vegetation</b>	<ul style="list-style-type: none"> <li>• Developed concrete-lined channel</li> <li>• Disturbed wetland (palm-dominated; concrete-lined)</li> </ul>
<b>Adjacent Vegetation</b>	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Developed land</li> <li>• Disturbed land</li> <li>• Eucalyptus woodland</li> </ul>
<b>Habitat and Wildlife</b>	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the eucalyptus woodland present within the facility for nesting/roosting.
<b>MHPA</b>	The facility is partially adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 150 feet south of the channel location.
<b>Mitigation Within Facility</b>	None

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### Historical, Archaeological, and Tribal Cultural Resource Summary

*This section describes the historical, archeological, and tribal cultural resources identified in, or adjacent to, the Area of Potential Effect (APE) for this facility.*

<b>Archeological and Tribal Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Resource Identified Adjacent to APE</b>	None
<b>Resource Type</b>	N/A

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<b>Historical Resources</b>	
<b>Resource Identified in APE</b>	None
<b>Potential Historical Resources</b>	None
<b>Constraint Identified</b>	

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# Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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## Environmental Protocols and Mitigation Measures

*This section lists the Environmental Protocols (EPs) and Mitigation Measures (MMs) and that are applicable to the proposed facility maintenance.*

<b>Environmental Protocols (EP)</b>	<b>Mitigation Measures (MM)</b>
<b>Biological Resources (BIO)</b>	<b>Air Quality (AQ)</b>
EP-BIO-1	MM-AQ-1
EP-BIO-2	<b>Biological Resources (BIO)</b>
EP-BIO-3a, 3b, 3c	MM-BIO-2
EP-BIO-4	MM-BIO-3
EP-BIO-5	MM-BIO-4
EP-BIO-6	MM-BIO-6
<b>Health and Safety/Hazards (HAZ)</b>	<b>Noise (NOI)</b>
EP-HAZ-3	MM-NOI-1
<b>Hydrology (HYD)</b>	
EP-HYD-1	
<b>Land Use (LU)</b>	
EP-LU-1	
<b>Paleontological Resources (PAL)</b>	
EP-PAL-1	
<b>Solid Waste (SW)</b>	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
<b>Water Quality (WQ)</b>	
EP-WQ-1	

# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

### Maintenance Methods

*This section describes the specific activities, equipment, and methodology for maintenance of this facility including a general site plan (Map A). It is intended to be used as a guide for the maintenance crew.*

<b>Facility Group</b>	Norfolk Canyon Creek - Fairmount
<b>Segment Name</b>	Baja 1
<b>Facility No.</b>	4-08-105
<b>Facility Location</b>	From upstream end of a natural segment south of Baja Drive and northeast of the Maisel Way cul-de-sac to culvert beneath the Collwood Villa Apartments
<b>Coastal Zone</b>	No
<b>MWMP Proposed Maintenance</b>	Maintenance of channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
<b>Hydrology and Hydraulics Recommendation<sup>3</sup></b>	<p>From Station 6 to Station 281: No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change.</p> <p>From Station 281 to Station 589: Partially remove vegetation; cut down existing palm trees, leaving 2-foot-tall stumps with root balls intact in the ground. Stumps should be left in place to help mitigate velocities. Remove all fallen palm tree trunks and debris. Leave all other existing vegetation and sediment in place.</p> <p>From Station 589 to Station 646: Remove palm tree growing out of a crack in the concrete lining and repair/replace the broken and missing concrete lining to match the existing flow line.</p> <p>Previously designed post-maintenance erosion control measures at Station 281 and Station 488 to be installed and maintained as necessary.</p> <p>Repair/replacement of broken concrete lining from Station 281 to Station 646.</p> <p>From Station 788 to Station 1507: No maintenance currently proposed; however vegetation, sediment and debris removal or concrete repair/replacement activities should be performed if the conditions change.</p>
<b>Maintenance Activities</b>	<p>Vegetation grubbing, trimming, and removal</p> <p>Invasive plant species treatment and removal</p> <p>Sediment removal</p> <p>Concrete repair</p>
<b>Maintenance Method</b>	<p>Excavation; mechanized equipment inside and outside the channel</p> <p>Temporary access/loading</p> <p>Temporary staging</p> <p>Temporary diversions</p> <p>Hand removal of vegetation</p>

<sup>3</sup> Stations are approximate and may not directly correspond with facility and/or maintenance lengths

## Norfolk Canyon Creek - Fairmount Facility Group Facility Maintenance Plan

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<b>Bank Repair</b>	No
<b>Concrete Repair</b>	Yes; see Appendix A-4
<b>Concrete/Gabion Structure Repair and Maintenance</b>	No
<b>Culvert Maintenance</b>	No
<b>Post-Maintenance Erosion Control Recommendation</b>	Yes (multiple options); see Appendix A-4
<b>Trash/Debris Fence Repair and Maintenance</b>	No
<b>Facility Type</b>	Earthen and concrete channel
<b>Existing Plans and/or As-Builts?</b>	Yes; 10657-5-D
<b>Substrate Detail<sup>3</sup></b>	Stations 6-281: Concrete bottom and banks Stations 281-569: Earthen bottom, concrete north bank, and earthen/graded south bank Stations 569-1507: Concrete bottom and banks
<b>Facility Dimensions (Approximate)</b>	Length: 1,369 feet Top width: 13–32 feet Bottom width: 4–20 feet Depth: 3.5–4 feet
<b>Authorized Facility Maintenance Area</b>	Length: Channel: 1,369 feet Width: 13–32 feet
<b>Maintenance Quantities</b>	To be determined at time of maintenance
<b>Access/Loading/Staging/Stockpiling Area(s)</b>	Designated areas on Map A or within City ROW may be used for access, loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant environmental impacts.
<b>Equipment</b>	Crane, Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump truck, trash pump, fuel-powered hand tools, sweeper
<b>Schedule</b>	Up to approximately 30 working days
<b>Maintenance Crew</b>	Approximately 8–12 people
<b>Routine Maintenance Procedures</b>	1. Bobcat/skid-steer and/or track steer enter or are lowered into channel at access/loading area 2. Crews cut and drop palm tree in channel 3. Crews chain and drag palm tree in channel 4. Gradall/excavator scoops material from channel and loads dump truck 5. Dump truck hauls material to legal disposal site
<b>Traffic Control</b>	No

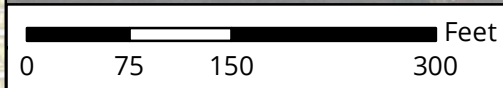
# Norfolk Canyon Creek - Fairmount Facility Group

## Facility Maintenance Plan

<b>Additional Maintenance Information</b>	
<b>Pre-Maintenance Meeting</b>	<p>Prior to the start of any maintenance activity, a qualified specialist(s) shall conduct the following on site:</p> <ol style="list-style-type: none"> <li>1. Review sensitive biological, historical, and water quality resources; if present, flag/delineate</li> <li>2. Conduct appropriate training</li> <li>3. Review Best Management Practices (BMP) installation</li> <li>4. If needed, review pre- and during-maintenance pumping procedure</li> <li>5. Conduct pre-maintenance site photo documentation</li> </ol>
<b>Biology</b>	<p>Suitable habitat for sensitive species<sup>4</sup>:</p> <ol style="list-style-type: none"> <li>1. Within maintenance area: Yes, limited suitable habitat present</li> <li>2. Adjacent to maintenance area: Yes</li> </ol> <p>Activities to be conducted under authority of a qualified biologist:</p> <ol style="list-style-type: none"> <li>1. Nesting bird surveys required within 72 hours of the start of vegetation clearing from February 1 through September 15</li> </ol>
<b>Flow Management</b>	<p>As needed:</p> <ol style="list-style-type: none"> <li>1. Vactor or pump standing water from facility</li> <li>2. Install temporary dry-weather flow-diversion berm(s) across facility (upstream and downstream of maintenance area)</li> <li>3. Position vactor/pump to capture any incoming or contained flows</li> <li>4. If pumping water through temporary hose(s) to location(s) downstream, allow for distributed discharge and infiltration</li> </ol>
<b>Downstream Sensitive Waters</b>	Yes; implement BMPs per Water Pollution Control Plan
<b>BMP Installation</b>	See Water Pollution Control Plan
<b>In-Stream Post-Maintenance Erosion Control Recommendation</b>	<p>Yes; see Appendix A-4</p> <p>Location: Station 281 and Station 488</p>
<b>Post-Maintenance Procedures</b>	<p>Conduct post-maintenance procedures as follows:</p> <ol style="list-style-type: none"> <li>1. Demobilize equipment</li> <li>2. Restore temporary access/loading areas to pre-maintenance condition or as required by the WPCP for final stabilization</li> <li>3. Street Sweeper will sweep/clean debris from street/right-of-way/project area(s), as needed</li> <li>4. Remove temporary BMPs</li> <li>5. Update maintenance record</li> <li>6. Conduct post-maintenance site photo documentation</li> </ol>
<b>Other Notes</b>	None

<sup>4</sup> Species covered under the Multiple Species Conservation Program, other special-status species, including raptors





In-Stream Erosion Control	Multi-Habitat Planning Area
Culvert	Access/Loading/Staging/Stockpiling Area
Station	Maintenance Area
Facility Area	



November 2019

**Map A: General Site Plan**  
**Facility Group Name: Norfolk Canyon Creek - Fairmount**  
**Segment Name: Baja 1**  
**Facility No: 4-08-105**  
**Facility Maintenance Plan**  
**Municipal Waterways Maintenance Plan**



- Notes:**
1. Concrete repair may occur within this facility area.
  2. In-stream post-maintenance erosion control measures may occur within this facility area.
  3. Access/Loading/Staging/Stockpiling may also occur within City ROW.
  4. Access/Loading/Staging/Stockpiling may be modified during implementation.
  5. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.



