Facility Maintenance Plan

Washington Canyon Creek - Washington Facility Group

Segment Names (Facility numbers):
Washington 1 (5-02-151)
Washington 2 (5-02-153)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.21
Drainage Name (Number)	Washington Canyon Creek (02)
Facility Group Name	Washington Canyon Creek - Washington
Segment Name (Facility Number)	Washington 1 (5-02-151)
	Washington 2 (5-02-153)
Substrate	Washington 1 / Earthen
	Washington 2 / Concrete
Location	About 650 feet south of Washington Place and 400 feet northeast
	of San Diego Avenue
MMP Map No(s).	84
Facility Inspection No.	84
Other Former Names	Washington Channel



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

Water Quality Resource Summary

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

Can Diaga Day Wateralaad	Management Auges I	Hydrologic Subarea 908.21
San Dieon Bay Walershen	Management Area: 1	Avoronoic Siinarea 90x 7 i

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

Washington Canyon Creek - Washington

		_
Beneficial Uses		
303(d) listed Impairments	No impairments recorded on the 303(d) List	

San Diego Bay (First downstream water body)		
Beneficial Uses	Industrial Service Supply (IND)	
	Contact Water Recreation (REC-1)	
	Non-contact Water Recreation (REC-2)	
	 Preservation of Biological Habitats of Special Significance (BIOL) 	
	Wildlife Habitat (WILD)	
	Rare, Threatened, or Endangered Species (RARE)	
	 Spawning, Reproduction, and/or Early Development (SPWN) 	
	Navigation (NAV)	
	Commercial and Sport Fishing (COMM)	
	Estaurine (EST)	
	Marine (MAR)	
	Migration of Aquatic Organisms (MIGR)	
	Shellfish Harvesting (SHELL)	
303(d) listed Impairments	Mercury, PAHs (Polycyclic Aromatic Hydrocarbons), PCBs (Polychlorinated biphenyls)	

Washington Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Middle reach of Washington Canyon Creek, upstream of San Diego Bay
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 217 feet
Top-of-Bank Width	Approximately 80 feet
Bottom Facility Width	Approximately 35 feet
Facility Depth	Approximately 8 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2017, looking upstream at transition from Washington 2



Figure 2: Vicinity Map of Washington Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	2011 – 2014: No maintenance conducted
	2015/2016: Emergency excavation of sediment and vegetation
	November 2015: Cluster of palm tree removed
	January 2016 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	RGP 63 USACE File #SPL-2016-00012-RAG
401	RGP 63 Verification No. R9-2016-0045;821330;lhonma
1602	LSA Emergency Notification submitted 02/2016

1602 LSA Emergency Notification submitted 02/2016

Mitigation for Previous Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel

Maintenance (No mitigation required)

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.¹

Current Conditions	Affecting	Vegetation was observed to be light to dense with up to 1 foot of sediment				
Facility Capacity		deposition				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	82	105	123	147	165	183
second [cfs])						
Hydraulic Capacity of Facility						
Curre	ent Capacity	162 cfs				
Proposed MWM	P Maintained	ned Capacity 162 cfs				
Maintenance Recommendation Remove accumulated sediment, debris, and vegetation fr		getation from				
		Station 89 to Station 306.				
			Maintain/repair existing debris fence as needed.			
In-Stream Post-Ma	intenance Ero	sion Control	Yes; see Appendix A-4			
Recor	nmendation		Location: Station to be determined			

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland
	Natural flood channel
	Ornamental plantings
Adjacent Vegetation	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest
	MHPA boundary is located approximately 800 feet north of the channel.
Mitigation Within	Proposed as part of the RWQCB Conceptual Wetland Mitigation Plan for 2015/16
Facility	Emergency Channel Maintenance

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1941–1953 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

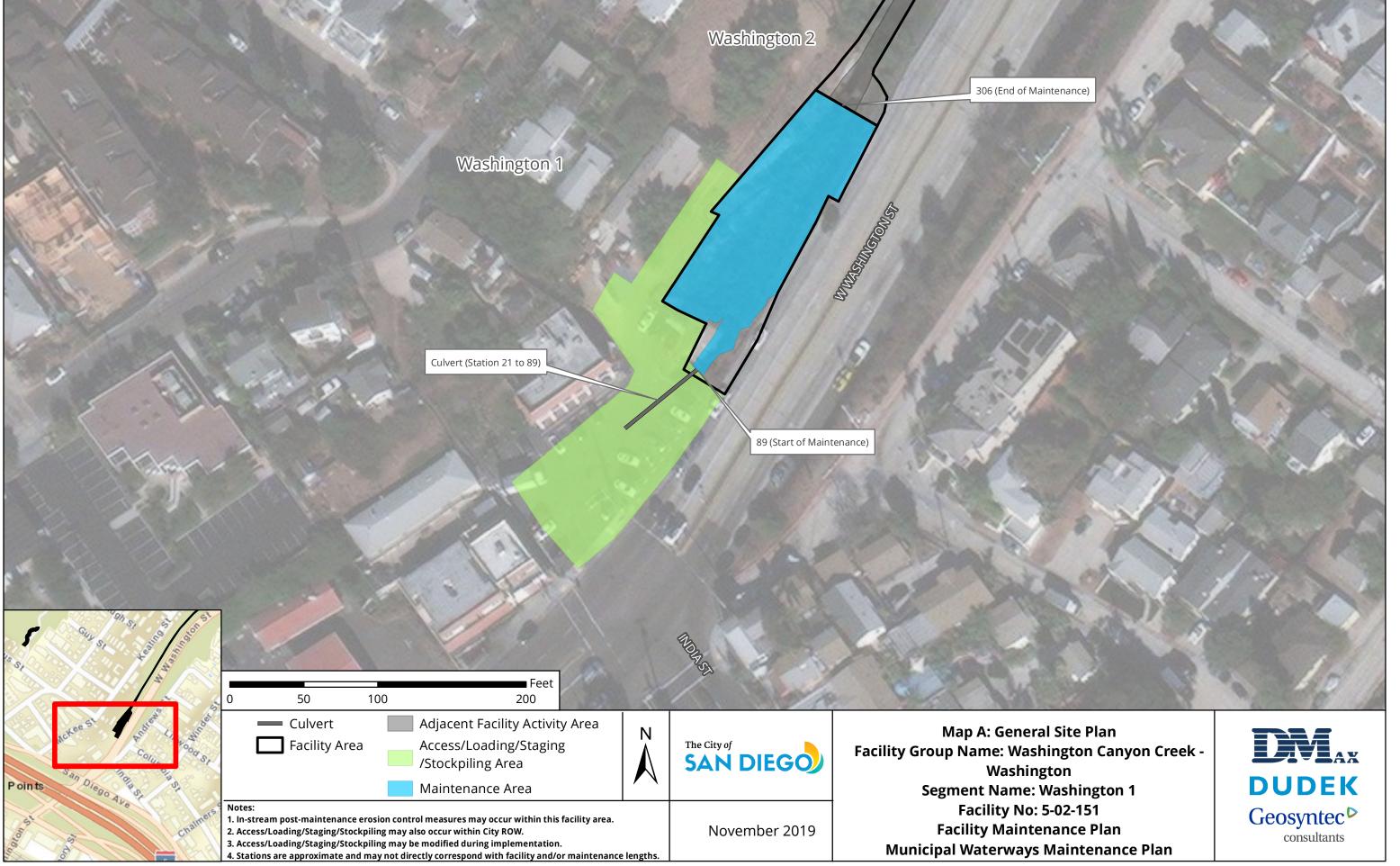
Facility Group	Washington Canyon Creek - Washington
Segment Name	Washington 1
Facility No.	5-02-151
Facility Location	From the downstream end of Washington 2 segment to 100 feet northeast
	of the intersection of India Street and Washington Street
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions,
	previous emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 89 to
Recommendation ²	Station 306.
	Maintain/repair existing debris fence as needed.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary stockpiling
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	
Trash/Debris Fence Repair and	Yes; see Appendix A-4
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None
Substrate Detail	Earthen bottom and banks

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

Facility Dimensions	Langth, 217 fact
Facility Dimensions	Length: 217 feet
(Approximate)	Top width: 80 feet
	Bottom width: 35 feet
	Depth: 8 feet
Authorized Facility Maintenance	Length: Channel: 217 feet
Area	Width: 10–80 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump
	truck, trash pump, vactor, fuel-powered hand tools, sweeper
Schedule	Up to approximately 7–14 working days
Maintenance Crew	Approximately 6–8 people
Routine Maintenance Procedures	1. Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, and loader
	enter or are lowered into channel at access/loading area
	2. Bobcat/skid-steer or bulldozer/track-steer pushes material to loader
	3. Gradall/excavator makes piles for loader
	4. Loader scoops material from channel and loads waiting dump truck at
	access/loading area
	5. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
1	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	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

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

Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	Yes; see Appendix A-4			
Erosion Control Recommendation	Location: Station to be determined			
Post-Maintenance Procedures	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			
Other Notes	None			



Washington Segment 2 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Middle reach of Washington Canyon Creek, upstream of Washington Canyon Creek (Washington Segment 1)
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 2,210 feet
Top-of-Bank Width	Approximately 13 feet
Bottom Facility Width	Approximately 5 feet
Facility Depth	Approximately 4 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2017, looking downstream at transition to Washington 1



Figure 2: Vicinity Map of Washington Segment 2

Facility Maintenance History

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

2011 – 2014: No maintenance conducted
2015/2016: Emergency excavation of sediment and vegetation
January 2017 – March 2019: No maintenance conducted

January 2017 – March 2019: No maintenance conducted

Prior to 2011: Unknown

Pä	ast	Κŧ	g	u	ıa	t	10	У	F	۱þ	P) r	C	V	a	Ш	S	

History of Maintenance

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2016-00012-RAG

401 RGP 63 Verification No. R9-2016-0045;821330;lhonma

1602 LSA Emergency Notification submitted 02/2016

Mitigation for Previous Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel

Maintenance (0.07 acre); an additional 0.01 acre for FWM needed for City

mitigation

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.¹

Current Conditions Facility Capacity	Affecting	Vegetation was observed to be light to dense with up to 1 foot of sediment deposition						
Hydrologic Peak Flo	ows							
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year		
Q (cubic feet per	82	105	123	147	165	183		
second [cfs])								
Hydraulic Capacity	of Facility							
Curr	ent Capacity		-	70 cfs				
Proposed MWM	IP Maintained	l Capacity	pacity 183 cfs					
Maintenance Recommendation			Remove accumulated sediment, debris, and vegetation in					
			concrete ditch from Station 306 to Station 2516					
In-Stream Post-Ma	intenance Ero	osion Control	None					
Reco	mmendation							

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Coastal sage scrub
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest
	MHPA boundary is located approximately 750 feet north of the ditch.
Mitigation Within	Adjacent to facility proposed as part of RWQCB Conceptual Wetland Mitigation Plan for
Facility	2015/16 Emergency Channel Maintenance

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				
Resource Identified in APE	None			
Resource Identified Adjacent to APE	None			
Resource Type	N/A			

Historical Resources	
Resource Identified in APE	Channel; 3715 India St.; 3717 India St.; 3731 India St.; 3735 India St.; 3737 India St.; 3741 India St.; c. 1941–1953 concrete channel; historic properties
Potential Historical Resources Constraint Identified	Yes

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

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.

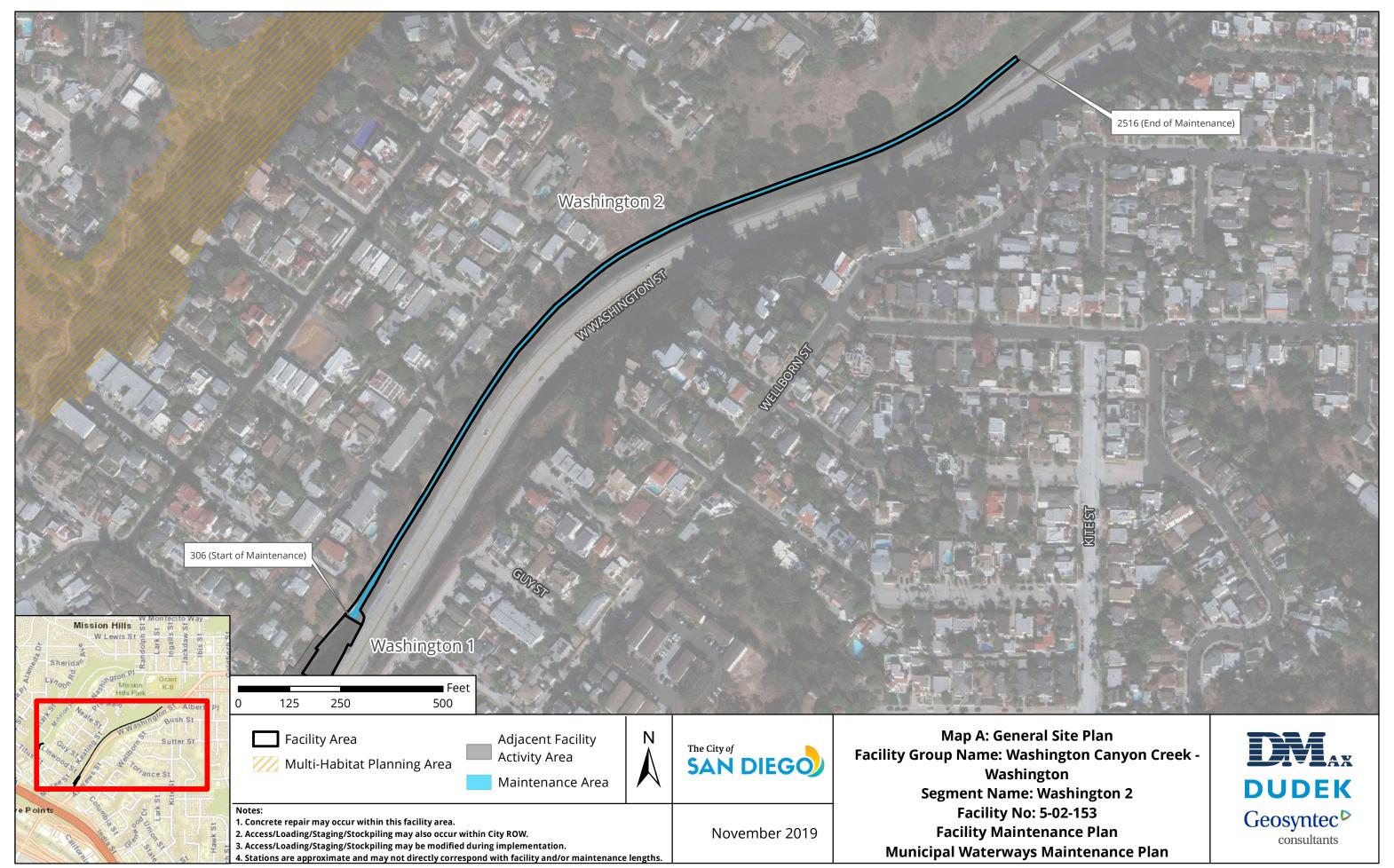
Facility Group	Washington Canyon Creek - Washington		
Segment Name	Washington 2		
Facility No.	5-02-153		
Facility Location	From 650 feet south of Washington Place to upstream end of Washington 1		
	segment		
Coastal Zone	No		
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per estimated original design		
	dimensions previous emergency maintenance approvals, and Hydrology		
	and Hydraulics recommendations		
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation in concrete ditch		
Recommendation ²	from Station 306 to Station 2516		
Maintenance Activities	Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal		
	Sediment removal		
	Concrete repair		
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch		
	Temporary access/loading		
	Temporary staging		
	Temporary stockpiling		
	Temporary diversions		
	Hand removal of vegetation		
Bank Repair	No		
Concrete Repair	Yes; see Appendix A-4		
Concrete/Gabion Structure Repair	No		
and Maintenance			
Culvert Maintenance	No		
Post-Maintenance Erosion Control	No		
Recommendation			
Trash/Debris Fence Repair and	No		
Maintenance			
Facility Type	Concrete ditch		
Existing Plans and/or As-Builts?	None		
Substrate Detail	Concrete bottom and banks		

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

[·	L 0.040 f		
Facility Dimensions	Length: 2,210 feet		
(Approximate)	Top width: 13 feet		
	Bottom width: 5 feet		
	Depth: 4 feet		
Authorized Facility Maintenance	Length: Ditch: 2,210 feet		
Area	Width: 13 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump,		
	vactor, fuel-powered hand tools, sweeper		
Schedule	Up to approximately 7–14 working days		
Maintenance Crew	Approximately 6–8 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer and loader enter or are lowered into ditch at		
	access/loading area		
	2. Bobcat/skid-steer pushes material to loader		
	3. Loader scoops material from ditch and loads dump truck at		
	access/loading area		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	Yes; coordinate with the City of San Diego		
	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		

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

Fl M	As a stable			
Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	None			



Facility Maintenance Plan

Mission Hills Canyon Creek -Titus Facility Group

Segment Name (Facility number): Titus 1 (5-02-162)



Overview

Watershed Management Area (WMA)	San Diego Bay		
Watershed (Number)	Pueblo San Diego (5)		
Hydrologic Subarea	908.21		
Drainage Name (Number)	Mission Hills Canyon Creek (02)		
Facility Group Name	Mission Hills Canyon Creek - Titus		
Segment Name (Facility Number)	Titus 1 (5-02-162)		
Substrate	Titus 1 / Earthen		
Location	About 200 feet southeast of Guy Street and 120 feet northeast of		
	Titus Street		
MMP Map No(s).	84a		
Facility Inspection No.	84a		
Other Former Names	None		



Figure 1: Vicinity Map of Mission Hills Canyon Creek - Titus Facility Group

Water Quality Resource Summary

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

Can Diago Bay Waterched	Managament Area	u Uvdralagis Cubaraa 000 21
San Diego bay Watersheo	ivianagement Area	n: Hydrologic Subarea 908.21

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

Mission Hills Canyon Creek - Titus

Beneficial Uses

303(d) listed Impairments No impairments recorded on the 303(d) List

San Diego Bay (First downstream water body)

San Diego Bay (First downstro	eam water body)
Beneficial Uses	Industrial Service Supply (IND)
	Wildlife Habitat (WILD)
	Rare, Threatened, or Endangered Species (RARE)
	 Spawning, Reproduction, and/or Early Development (SPWN)
	Navigation (NAV)
	Commercial and Sport Fishing (COMM)
	Estaurine (EST)
	Marine (MAR)
	Migration of Aquatic Organisms (MIGR)
	Shellfish Harvesting (SHELL)
303(d) listed Impairments	Mercury, PAHs (Polycyclic Aromatic Hydrocarbons), PCBs (Polychlorinated biphenyls)

Titus Segment 1 Detail

Facility Type	Earthen channel		
Substrate Detail	Earthen bottom and banks		
Location Within Watershed	Mission Hills Canyon Creek, upstream of San Diego Bay		
Tributaries (listed from downstream to	No named tributaries		
upstream)			
Facility Length	Approximately 207 feet		
Top-of-Bank Width	Approximately 40 feet		
Bottom Facility Width Approximately 10–20 feet			
Facility Depth	Approximately 3–8 feet		
Adjacent Land Use	Multi-Family Residential, Open Space, Single-Family Residential, Transportation		
As-Built Drawing Number	None		
Coastal Zone	No		



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

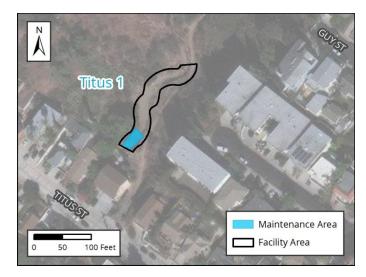


Figure 2: Vicinity Map of Titus Segment 1

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown

2011 – 2014: No maintenance conducted 2015/2016: Emergency excavation of sediment

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA None

CDP N/A

SDP None

404 RGP 63 (No USACE File # Assigned)

401 RGP 63 Verification No. R9-2016-0030:821649:lhonma

1602 LSA Emergency Notification submitted 01/14/2016

Mitigation for Previous Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel

Maintenance (No mitigation required)

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.¹

Current Conditions	Affecting	Little vegetation was observed and sediment deposition was estimated to be 3				
Facility Capacity		feet upstream of the debris fence				
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	52	66	77	92	104	115
second [cfs])						

Hydraulic Capacity of Facility

Current Capacity 17 cfs

Proposed MWMP Maintained Capacity 88 cfs

Maintenance Recommendation Remove accumulated sediment and debris from Station 110 to

Station 149.

Maintain/repair existing debris fence as needed.

In-Stream Post-Maintenance Erosion Control

Recommendation

None

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

Biological Resource Summary

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

Facility Vegetation	Natural flood channel
Adjacent Vegetation	Coastal sage scrub
	Developed land
	Disturbed coastal sage scrub
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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 channel.
МНРА	The facility is located entirely within the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1850 Titus St.; c. 1966–1972 earthen channel; building more than 45 years old (not previously evaluated)
Potential Historical Resources Constraint Identified	Yes

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

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.

Facility Group	Mission Hills Canyon Creek - Titus
Segment Name	Titus 1
Facility No.	5-02-162
Facility Location	About 200 feet southeast of Guy Street and 120 feet northeast of Titus
	Street
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel/culvert inlet area per estimated original
	design dimensions, previous emergency maintenance approvals, and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment and debris from Station 110 to Station 149.
Recommendation ²	Maintain/repair existing debris fence as needed.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	Yes; see Appendix A-4
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None
Substrate Detail ³	Earthen bottom and banks
Facility Dimensions	Length: 207 feet
(Approximate)	Top width: 40 feet
	Bottom width: 10–20 feet
	Depth: 3–8 feet

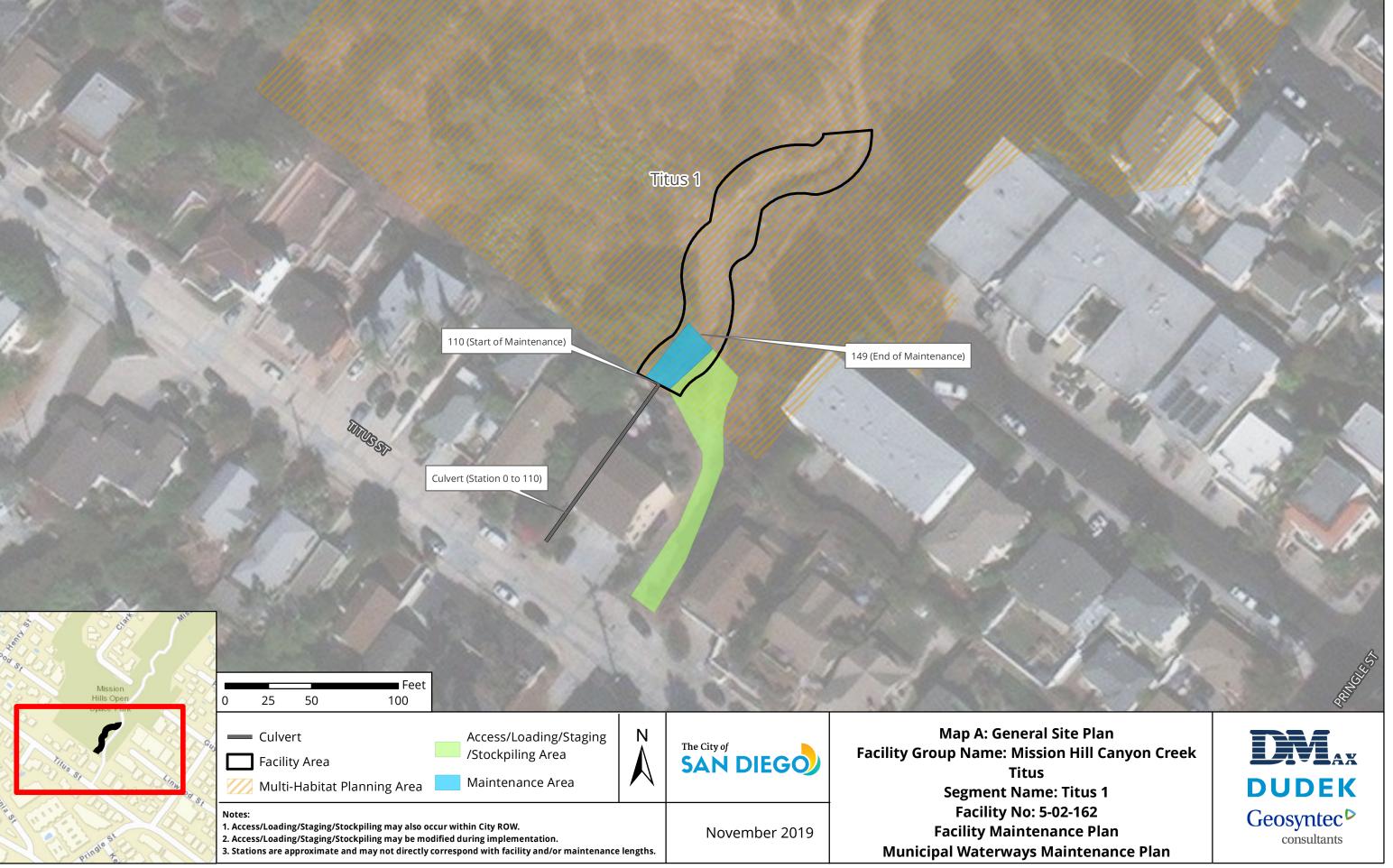
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Facility Maintenance	Length: Channel: 39 feet	
Area	Width: 14–24 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, sweeper	
Schedule	Up to approximately 7 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading	
	area	
	2. Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	No	
Additional Maintenance Information		
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	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	
Flow Management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation		

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

In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



Facility Maintenance Plan

Powerhouse Canyon Creek - Pershing Facility Group

Segment Names (Facility numbers):

Pershing 1 (5-03-011)

Pershing 2 (5-03-100)



Powerhouse Canyon Creek - Pershing Facility Group Facility Maintenance Plan

Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Powerhouse Canyon Creek (03)
Facility Group Name	Powerhouse Canyon Creek - Pershing
Segment Name (Facility Number)	Pershing 1 (5-03-011)
	Pershing 2 (5-03-100)
Substrate	Pershing 1 / Concrete
	Pershing 2 / Concrete
Location	Runs parallel to Pershing Drive and about 700 feet east of
	Interstate 5 (I-5)
MMP Map No(s).	86
Facility Inspection No.	86, 300x
Other Former Names	Florida Canyon, Pershing Channel



Figure 1: Vicinity Map of Powerhouse Canyon Creek - Pershing Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

Powerhouse Canyon Creek - Pershing		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	No impairments recorded on the 303(d) List	

Not Listed in Basin Plan (First downstream water body)		
Beneficial Uses		
303(d) listed Impairments	No impairments recorded on the 303(d) list	

Pershing Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Powerhouse Canyon Creek, upstream of the San Diego Bay
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,598 feet
Top-of-Bank Width	Approximately 24–33.5 feet
Bottom Facility Width	Approximately 7–14 feet
Facility Depth	Approximately 5.5–9.5 feet
Adjacent Land Use	Commercial, Industrial, Open Space, Parks, Transportation
As-Built Drawing Number	9890-1-D
Coastal Zone	No



Figure 1: May 2017, Looking upstream near the downstream end of the segment



Figure 2: Vicinity Map of Pershing Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Current Conditions Affecting The segment Facility Capacity		t was observed	to vary from cle	an concrete to d	ense vegetation	
Hydrologic Peak Flo)WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	386	554	675	1,048	1,540	1,870
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity		630 cfs				
Proposed MWMP Maintained Capacity		633 cfs				
Maintenance Recommendation		Remove accumulated sediment, debris, and vegetation from				
			Station 332 to Station 1930			
In-Stream Post-Maintenance Erosion Control		None				
Recommendation						

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Riparian scrub (southern willow scrub; concrete-lined)
Adjacent Vegetation	 Developed land Disturbed coastal sage scrub Disturbed land Eucalyptus woodland Ornamental plantings Riparian forest (coast live oak)
Habitat and Wildlife	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 (e.g., coastal California gnatcatcher) could occur in sage scrub habitat adjacent to the channel.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 360 feet north of the channel.
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	P-37-016659	
Resource Type	San Diego Flume System	

Historical Resources	
Resource Identified in APE	Channel; 1964 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Powerhouse Canyon Creek - Pershing
Segment Name	Pershing 1
Facility No.	5-03-011
Facility Location	From 700 feet east of Interstate 5 (I-5) to 100 feet east of the intersection of
	Florida Drive and Pershing Drive
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 332 to
Recommendation ²	Station 1930
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 9890-1-D
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 1,598 feet
(Approximate)	Top width: 24–33.5 feet
	Bottom width: 7–14 feet
	Depth: 5.5–9.5 feet

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

[
Authorized Facility Maintenance	Length: Channel: 1,598 feet	
Area	Width: 24–33.5 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, trash pump, sweeper	
Schedule	Up to approximately 7 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading area	
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading	
	area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
Traffic Control	Dump truck hauls material to legal disposal site No	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
D: 1	5. Conduct pre-maintenance site photo documentation	
Biology	Suitable habitat for sensitive species ³ :	
	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	
-1 1	clearing from February 1 through September 15	
Flow Management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	

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

In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



Pershing Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Powerhouse Canyon Creek, upstream of Powerhouse Canyon Creek (Pershing Segment 1)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 437 feet
Top-of-Bank Width	Approximately 24–28 feet
Bottom Facility Width	Approximately 7–14 feet
Facility Depth	Approximately 6.5–10 feet
Adjacent Land Use	Commercial, Industrial, Open Space, Parks, Transportation
As-Built Drawing Number	9890-1-D
Coastal Zone	No



Figure 1: May 2017, looking upstream from the Pershing Drive bridge



Figure 2: Vicinity Map of Pershing Segment 2

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Current Conditions Facility Capacity	Affecting	The segment was observed to be relatively clean			lean	
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	280	402	490	761	1,120	1,350
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity 1,350 cfs						
Proposed MWM	oosed MWMP Maintained Capacity 1,350 cfs					
Maintenance Recommendation		Remove accumulated sediment, debris, and vegetation from				
			Station 0 to Sta	ation 437		
In-Stream Post-Maintenance Erosion Control		None				
Recommendation						

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

Biological Resource Summary

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

Facility Vegetation	 Developed concrete-lined channel
	Riparian scrub (southern willow scrub; concrete-lined)
Adjacent Vegetation	Developed landEucalyptus woodland
	Disturbed coastal sage scrub
	Disturbed land
	Ornamental plantings
	Riparian forest (coast live oak)
Habitat and Wildlife	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 (e.g., coastal California gnatcatcher) could occur in sage scrub habitat adjacent to the channel.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest
	MHPA boundary is located approximately 360 feet north of the channel.
Mitigation Within	None
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1964 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

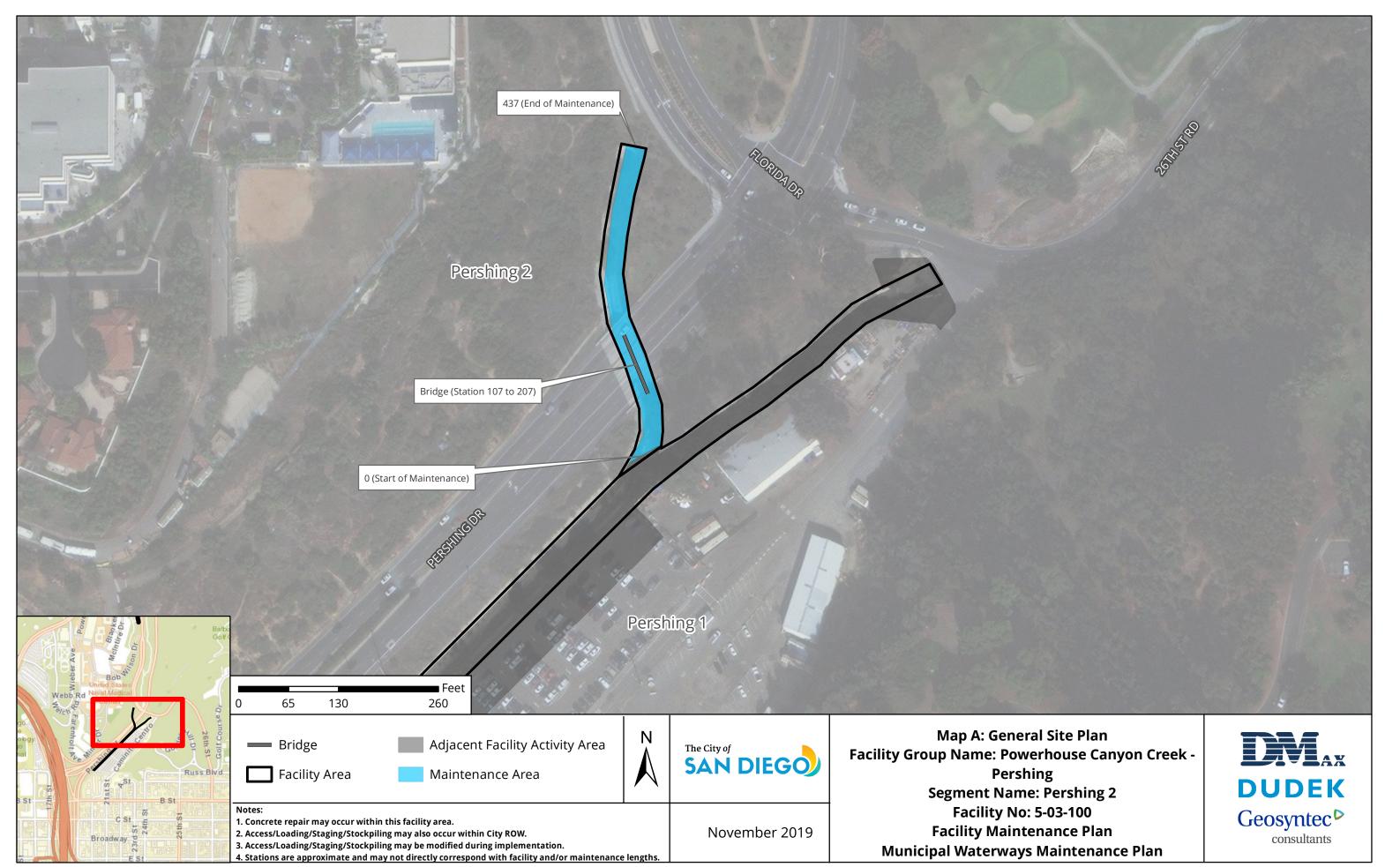
Facility Group	Powerhouse Canyon Creek - Pershing		
Segment Name	Pershing 2		
Facility No.	5-03-100		
Facility Location	From storm drain beneath Florida Drive to Pershing 1 segment upstream of		
	Station 1441		
Coastal Zone	No		
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and		
	Hydrology and Hydraulics recommendations		
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 0 to		
Recommendation ²	Station 437		
Maintenance Activities	Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal		
	Sediment removal		
	Concrete repair		
Maintenance Method	Excavation; mechanized equipment inside and outside the channel		
	Temporary access/loading		
	Temporary staging		
	Temporary diversions		
	Hand removal of vegetation		
Bank Repair	No		
Concrete Repair	Yes; see Appendix A-4		
Concrete/Gabion Structure Repair	No		
and Maintenance			
Culvert Maintenance	No		
Post-Maintenance Erosion Control	No		
Recommendation			
Trash/Debris Fence Repair and	No		
Maintenance			
Facility Type	Concrete channel		
Existing Plans and/or As-Builts?	Yes; 9890-1-D		
Substrate Detail	Concrete bottom and banks		
Facility Dimensions	Length: 437 feet		
(Approximate)	Top width: 24–28 feet		
	Bottom width: 7–14 feet		
	Depth: 6.5–10 feet		

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

Authorized Facility Maintenance	Length: Channel: 437 feet	
Area	Width: 24–28 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, trash pump, sweeper	
Schedule	Up to approximately 7 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading	
	area	
	2. For channel segment northwest of Pershing, Bobcat/skid-steer accesses through culvert	
	3. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading	
	area	
	4. Gradall/excavator scoops material from channel and loads dump truck	
	5. Dump truck hauls material to legal disposal site	
Traffic Control	No	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	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	
Flow Management	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	

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

Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

San Diego Bay - 28th St Facility Group

Segment Name (Facility number): 28th St 1 (5-03-901)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	San Diego Bay Unnamed Tributary (03)
Facility Group Name	San Diego Bay - 28th St
Segment Name (Facility Number)	28th St 1 (5-03-901)
Substrate	28th St 1 / Earthen
Location	Bordered by 28th Street to the east and G Street to the north
MMP Map No(s).	87
Facility Inspection No.	87
Other Former Names	None

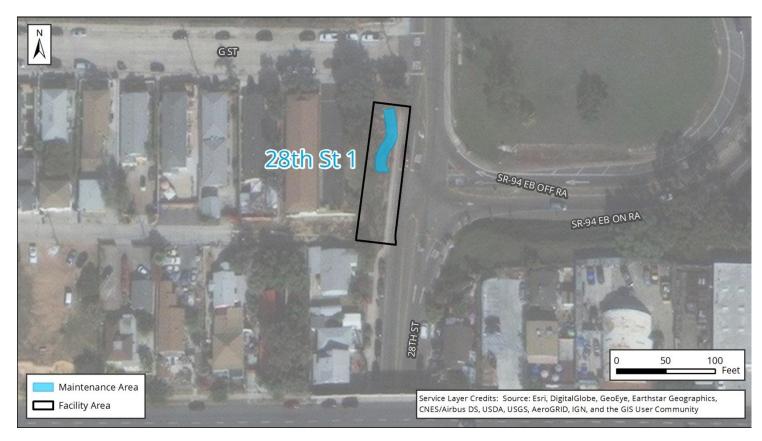


Figure 1: Vicinity Map of San Diego Bay - 28th St Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

San Diego Bay - 28th St	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

San Diego Bay (First downstro	eam water body)
Beneficial Uses	 Industrial Service Supply (IND) Contact Water Recreation (REC-1) Non-contact Water Recreation (REC-2) Preservation of Biological Habitats of Special Significance (BIOL) Wildlife Habitat (WILD) Rare, Threatened, or Endangered Species (RARE) Spawning, Reproduction, and/or Early Development (SPWN) Navigation (NAV) Commercial and Sport Fishing (COMM) Estaurine (EST) Marine (MAR) Migration of Aquatic Organisms (MIGR) Shellfish Harvesting (SHELL)
303(d) listed Impairments	Mercury, PAHs (Polycyclic Aromatic Hydrocarbons), PCBs (Polychlorinated biphenyls)

28th St Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upstream of San Diego Bay
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 67 feet
Top-of-Bank Width	Approximately 37–42 feet
Bottom Facility Width	Approximately 5–11 feet
Facility Depth	Approximately 9.5 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: July 2017, looking upstream towards the eroded eastern sidewall



Figure 2: Vicinity Map of 28th St Segment 1

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
Past Regulatory A	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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.¹

Facility Capacity sediment d			position. Erosior			h little evidence of downstream
Hydrologic Peak Flo)WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	43	55	64	77	86	96
Hydraulic Capacity of Facility						
Current Capacity		50 cfs				
Proposed MWMP Maintained Capacity		50 cfs				
bott Perf			Remove accumul bottom of earth Perform bank re of approximatel	en segment fro epair on the er	om Station 72 to oded eastern sid	Station 139. dewall over a length
In-Stream Post-Maintenance Erosion Control Recommendation				None		

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

Biological Resource Summary

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

Facility Vegetation	 Disturbed wetland
	Natural flood channel
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	None
Facility	

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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; c. 1953–1964 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Geologic Resources (GEO)	MM-BIO-6
EP-GEO-1	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
Health and Safety/Hazards (HAZ)	MM-HR-1
EP-HAZ-3	MM-HR-2
Paleontological Resources (PAL)	Noise (NOI)
EP-PAL-1	MM-NOI-1
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

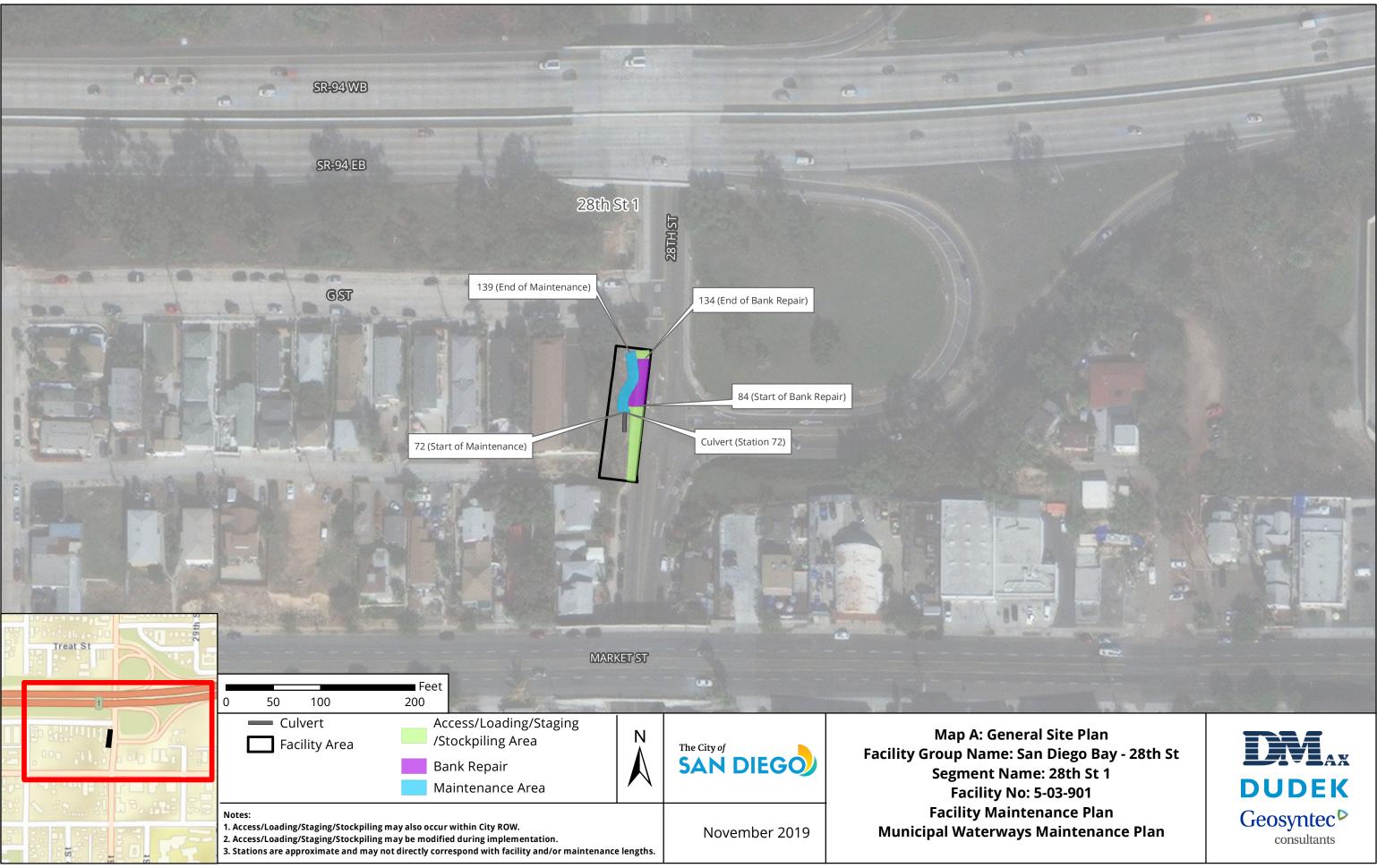
Facility Group	San Diego Bay - 28th St
Segment Name	28th St 1
Facility No.	5-03-901
Facility Location	From outlet of culvert south of G Street to inlet of culvert that discharges to
	the storm drain system
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions
	and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom of
Recommendation ²	earthen segment from Station 72 to Station 139.
	Perform bank repair on the eroded eastern sidewall over a length of
	approximately 50 feet (Station 84 to Station 134).
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Bank repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	Yes (multiple options); see Appendix A-4
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None
Substrate Detail ³	Earthen bottom and banks

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

Engility Dimensions	Longth, 67 foot
Facility Dimensions	Length: 67 feet
(Approximate)	Top width: 37–42 feet
	Bottom width: 5–11 feet
	Depth: 9.5 feet
Authorized Facility Maintenance	Length: Channel: 67 feet
Area	Width: 11–42 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, sweeper
Schedule	Up to approximately 60 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading
	area
	2. Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	3. Gradall/excavator scoops material from channel and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	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

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

Flow Management	As needed:	
1 10W Management		
	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Chollas Creek - National Facility Group

Segment Names (Facility numbers):

National 1 (5-04-004)

National 2 (5-04-006)



Chollas Creek - National Facility Group Facility Maintenance Plan

Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek (04)
Facility Group Name	Chollas Creek - National
Segment Name (Facility Number)	National 1 (5-04-004)
	National 2 (5-04-006)
Substrate	National 1 / Earthen and concrete
	National 2 / Concrete
Location	Extends south from Webster Avenue and flows parallel to
	Interstate 15 (I-15) along its western side
MMP Map No(s).	91, 93
Facility Inspection No.	91, 93
Other Former Names	Chollas Creek Channel, Gregory, Logan

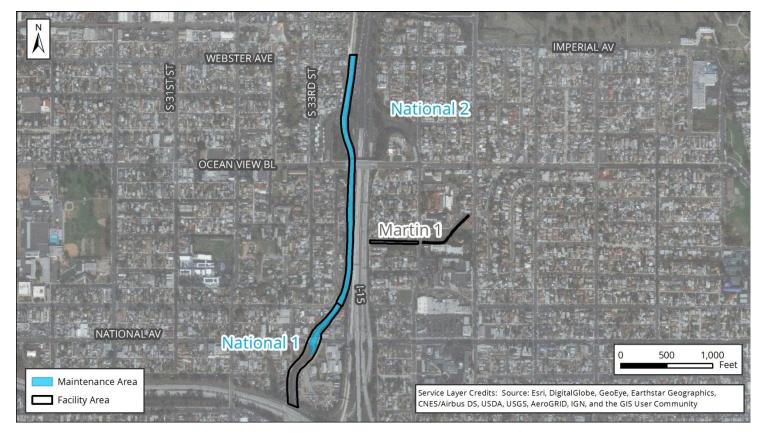


Figure 1: Vicinity Map of Chollas Creek - National Facility Group

Chollas Creek - National Facility Group Facility Maintenance Plan

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

Chollas Creek - National	
Beneficial Uses	Non-contact Water Recreation (REC-2)
	Warm Freshwater Habitat (WARM)
	Wildlife Habitat (WILD)
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc

Not Listed in Basin Plan (First downstream water body)	
Beneficial Uses	
303(d) listed Impairments	Benthic Community Effects, Sediment Toxicity

Chollas Creek - National Facility Group Facility Maintenance Plan

National Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail	Earthen bottom and earthen/concrete banks
Location Within Watershed	Lower reach of Chollas Creek, upstream of the San Diego Bay
Tributaries (listed from downstream to	Chollas Creek, Auburn Creek
upstream)	
Facility Length	Approximately 1,976 feet
Top-of-Bank Width	Approximately 82–162 feet
Bottom Facility Width	Approximately 35–50 feet
Facility Depth	Approximately 10–15 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	1979-D
Coastal Zone	No



Figure 1: October 2009, looking upstream where the channel crosses under National Avenue, representative of low vegetation



Figure 2: Vicinity Map of National Segment 1

Facility Maintenance History

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

History of Mainte	ntenance Prior to 2010: Unknown		
	2010/2011 and 2015/2016: Emergency excavation of sediment and vego		
	January 2017 – March 2019: No maintenance conducted		
Past Regulatory A	Approvals		
CEQA	2011 MMP PEIR	No. 42891	
CDP	N/A		
SDP	SDP No. 2034245 (2017 Addendum)		
404	RGP 63 USACE File #SPL-2016-00887-RAG		
401	RGP 63 Verification No. R9-2015-0198:820036:lhonma		
1602	LSA Emergency Notification submitted 01/2016		
Mitigation for Pre	evious Impacts	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel	
		Maintenance (0.46 acre); an additional 0.46 acre for FWM, 0.08 acre for OW,	
		and 0.68 acre for NFC needed for City mitigation	
		· •	

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.¹

Current Conditions Facility Capacity	In October 2009 Existing Conditions report, low vegetation was obset throughout the channel. The sediment depth was estimated to be 0 feet. Current conditions were reviewed in relation to the hydraulic at this segment in 2019 and documented in the current conditions assomemorandum in Appendix A of the Hydrology and Hydraulics Techra Report.		to be 0.5 to 3 raulic analysis for ons assessment			
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	900	2,000	3,000	4,000	6,000	7,900
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity			3,095 cfs			
Proposed MWMP Maintained Capacity		3,095 cfs				
Maintenance Recommendation		ation	Remove sediment, debris, and vegetation from channel bottom			
		1	from Station 1250 to Station 1746.			
		Remove vegetation from the earthen channel bottom only from				
			Station 1746 to S	tation 2066.		
In-Stream Post-Ma	intenance Ero	sion Control	None			
Recommendation						

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland (Arundo-dominated)Natural flood channel
Adjacent Vegetation	 Developed concrete-lined channel Developed land Disturbed land Disturbed wetland (Arundo-dominated) Ornamental plantings
Habitat and Wildlife	The channel does not contain suitable vegetation for sensitive species; however, due to the adjacency of the channel to suitable coastal and mudflat areas, there is some potential for Ridgway's rails to occur in the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	Proposed as part of the "FY16 Emergency Wetlands Mitigation Plan"

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	
Resource Identified in APE	P-37-012091; P-37-025853
Resource Identified Adjacent to APE	None
Resource Type	Prehistoric habitation refuse

Historical Resources	
Resource Identified in APE	Channel; 1954 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Chollas Creek - National
Segment Name	National 1
Facility No.	5-04-004
Facility Location	From upstream end of Oceanview segment 1 to just upstream of where Chollas Creek confluences with South Las Chollas Creek, south of Interstate 15 (I-15)
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove sediment, debris, and vegetation from channel bottom from Station 1250 to Station 1746. Remove vegetation from the earthen channel bottom only from Station 1746 to Station 2066.
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair and Maintenance	No
Culvert Maintenance	No
Post-Maintenance Erosion Control Recommendation	No
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	Yes; 1979-D
Substrate Detail	Earthen bottom and earthen/concrete banks

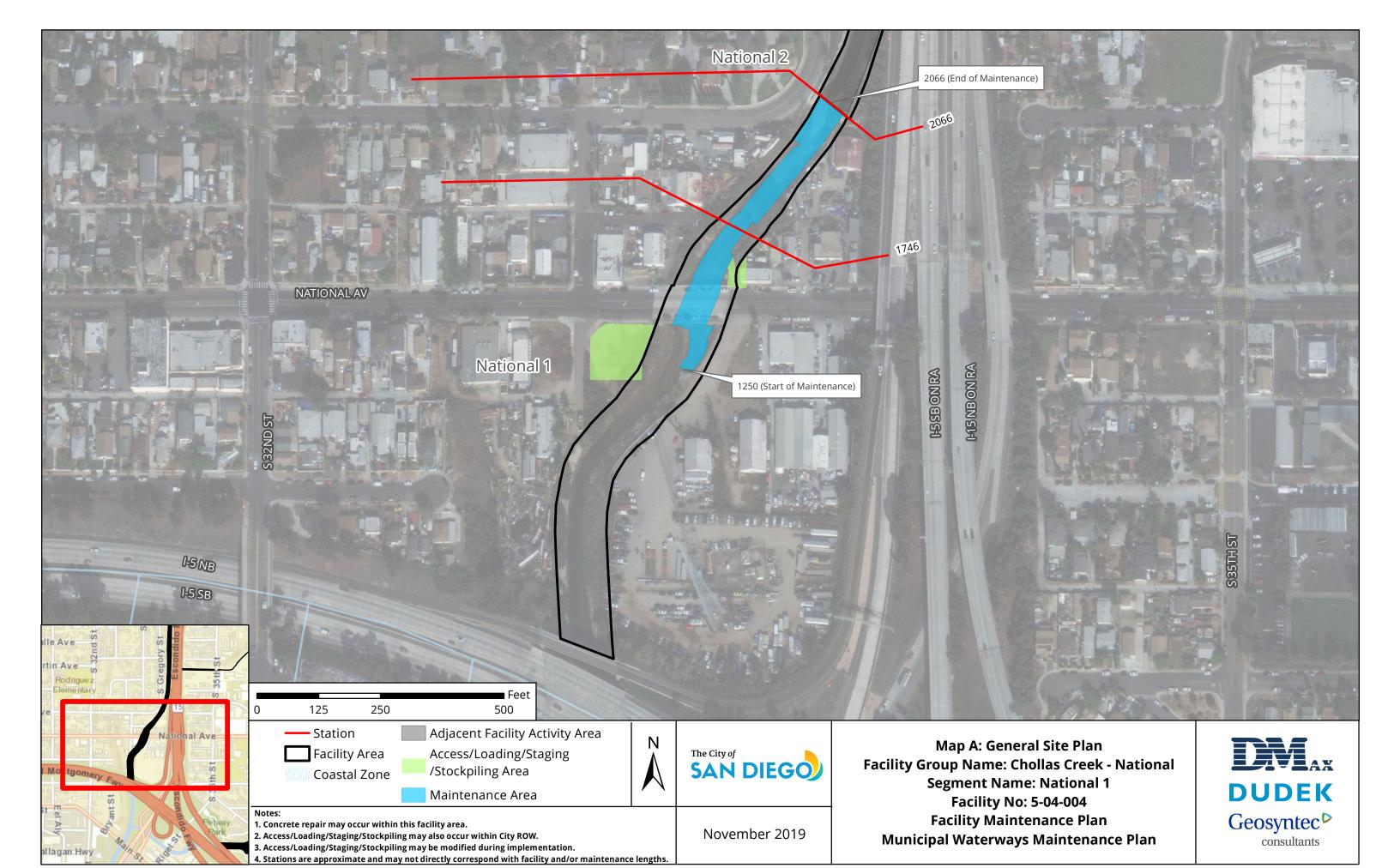
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² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

F. dille Discoursions	Level 4 076 feet	
Facility Dimensions	Length: 1,976 feet	
(Approximate)	Top width: 82–162 feet	
	Bottom width: 35–50 feet	
	Depth: 10–15 feet	
Authorized Facility Maintenance	Length: Channel: 816 feet	
Area	Width: 15–65 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,	
	fuel-powered hand tools, sweeper	
Schedule	Up to approximately 45–60 working days	
Maintenance Crew	Approximately 15–20 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading	
	area	
	2. Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to stockpile area or legal disposal site	
Traffic Control	No	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	1. Within maintenance area: No	
	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	
L	U y	

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

Flow Management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



National Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Chollas Creek, immediately upstream of Chollas Creek (National Segment 1)
Tributaries (listed from downstream to	Chollas Creek, Auburn Creek
upstream)	
Facility Length	Approximately 3,028 feet
Top-of-Bank Width	Approximately 50–60 feet
Bottom Facility Width	Approximately 20–50 feet
Facility Depth	Approximately 10–15 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	1979-D
Coastal Zone	No



Figure 1: October 2009, looking downstream, representative of medium to dense vegetation



Figure 2: Vicinity Map of National Segment 2

Facility Maintenance History

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

History of Maintenance	Prior to 2010: Unknown
	2010/2011 and 2015/2016: Emergency excavation of sediment and vegetation

January 2017 – March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2016-00887-RAG

401 RGP 63 Verification No. R9-2015-0198:820036:lhonma

1602 LSA Emergency Notification submitted 01/2016

Mitigation for Previous Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel

Maintenance (1.6 acres); an additional 1.6 acres for FWM needed for City

mitigation

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.¹

Current Conditions Affecting
Facility Canacity

In October 2009, moderate to dense vegetation was observed throughout the channel. The sediment depth was estimated to be 0.3 to 1 foot. Current conditions were reviewed in relation to the hydraulic analysis for this segment in 2019 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	900	2,000	3,000	4,000	6,000	7,900
second (cfs1)						

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Current Capacity 2,000 cfs

Proposed MWMP Maintained Capacity 4,350 cfs

Maintenance RecommendationRemove sediment, debris and vegetation throughout the channel from Station 2066 to 4774

In-Stream Post-Maintenance Erosion Control
Recommendation

None

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	Freshwater marsh (concrete-lined channel)
Adjacent Vegetation	 Developed land Disturbed land Disturbed wetland (Arundo-dominated) Natural flood channel Ornamental plantings
Habitat and Wildlife	The channel area itself does not contain suitable vegetation for sensitive species; however, due to the adjacency of the channel to suitable coastal and mudflat areas, there is some potential for Ridgway's rail to occur in the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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		
Resource Identified in APE	P-37-025852	
Resource Identified Adjacent to APE	None	
Resource Type	Prehistoric shell scatter	

Historical Resources	
Resource Identified in APE	Channel; c. 1953–1964 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

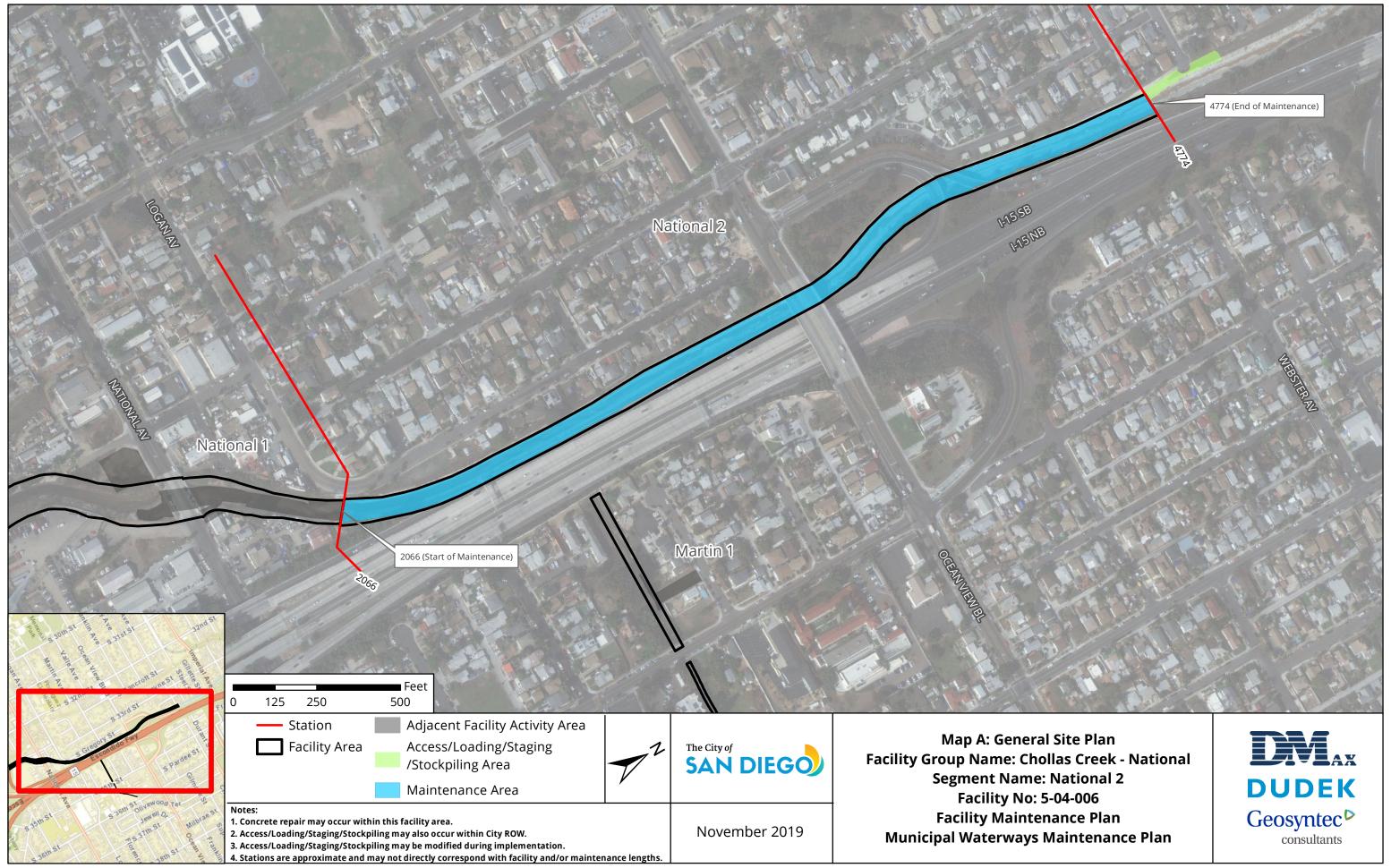
Facility Group	Chollas Creek - National
Segment Name	National 2
Facility No.	5-04-006
Facility Location	From Access/Maintenance Ramp near Webster Avenue along the west side
	of Interstate 15 (I-15) to 320 feet south of Logan Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions, previous
	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove sediment, debris and vegetation throughout the channel from
Recommendation ²	Station 2066 to 4774
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary stockpiling
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 1979-D
Substrate Detail ³	Concrete bottom and banks

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

[_ ···· _ ·	1
Facility Dimensions	Length: 3,028 feet
(Approximate)	Top width: 50–60 feet
	Bottom width: 20–50 feet
	Depth: 10–15 feet
Authorized Facility Maintenance	Length: Channel: 2,743 feet
Area	Width: 50–60 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,
	fuel-powered hand tools, sweeper
Schedule	Up to approximately 45–60 working days
Maintenance Crew	Approximately 15–20 people
Routine Maintenance Procedures	1. Loader and dump truck enter channel at access/loading area
	2. Loader scoops material from channel and loads dump truck
	3. Dump truck hauls material to stockpile area or legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: No
	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
Flow Management	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
	· · · · · · · · · · · · · · · · · · ·

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

Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Chollas Creek - Rolando Facility Group

Segment Names (Facility numbers):

Cartagena 1 (5-04-044)

Rolando 1 (5-04-046)

Rolando 2 (5-04-048)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek (04)
Facility Group Name	Chollas Creek - Rolando
Segment Name (Facility Number)	Cartagena 1 (5-04-044)
	Rolando 1 (5-04-046)
	Rolando 2 (5-04-048)
Substrate	Cartagena 1 / Concrete
	Rolando 1 / Concrete
	Rolando 2 / Earthen
Location	Bordered by Aragon Drive to the east, by commercial development
	to the north, by residential development to the south, and by
	College Avenue to the west
MMP Map No(s).	71, 72
Facility Inspection No.	71, 72
Other Former Names	Chollas Creek Channel



Figure 1: Vicinity Map of Chollas Creek - Rolando Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

Chollas Creek - Rolando	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)					
Beneficial Uses	Non-contact Water Recreation (REC-2)				
	Warm Freshwater Habitat (WARM)				
Wildlife Habitat (WILD)					
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc				

Cartagena Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Unnamed tributary to Chollas Creek, upstream of Chollas Creek
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 1,225 feet
Top-of-Bank Width	Approximately 16–21 feet
Bottom Facility Width	Approximately 8–20 feet
Facility Depth	Approximately 6.5 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Office, Open Space, Single-Family Residential, Transportation
As-Built Drawing Number	20597-D
Coastal Zone	No



Figure 1: July 2017, looking upstream; missing sidewall and eroded bank at center

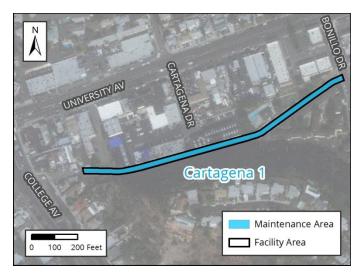


Figure 2: Vicinity Map of Cartagena Segment 1

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown
miscory of Maintenance	PHOLIO ZULL. UNKNOWN

January 2011 – March 2019: No maintenance conducted, except section of wall that had collapsed into channel was removed in 2016 (no permits

required)

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 None401 None

1602 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.¹

Current Conditions Affecting The segment		nt bottom is relatively clean with minor vegetation present. The					
Facility Capacity side slopes r			range from light to heavy vegetation.				
Hydrologic Peak Flows							
Storm Event	2-year	5-year 10-year 25-year 50-year 100-year					
Q (cubic feet per	1,306	1,738	1,928	2,328	2,434	2,739	
second [cfs])							
Hydraulic Capacity	Hydraulic Capacity of Facility						
Curr	Current Capacity 1,132 cfs						
Proposed MWM	Proposed MWMP Maintained Capacity 1,826 cfs						
Maintenance Recommendation			Remove accumulated sediment, debris, and vegetation from				
			segment bottom from Station 4997 to Station 6222				
In-Stream Post-Maintenance Erosion Control		None					
Recommendation							

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	 Coastal sage scrub Developed land Disturbed land Disturbed wetland (Arundo-dominated) Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within the facility, and the majority of coastal sage scrub present adjacent to the facility is dominated by lemonade berry (Rhus integrifolia); as such, it is not suitable for coastal California gnatcatcher
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1953–1964 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Chollas Creek - Rolando
Segment Name	Cartagena 1
Facility No.	5-04-044
Facility Location	From outlet of culvert underneath Bonillo Drive to inlet of culvert 100 feet
	east of College Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from segment
Recommendation ²	bottom from Station 4997 to Station 6222
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 20597-D
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 1,225 feet
(Approximate)	Top width: 16–21 feet
	Bottom width: 8–20 feet
	Depth: 6.5 feet

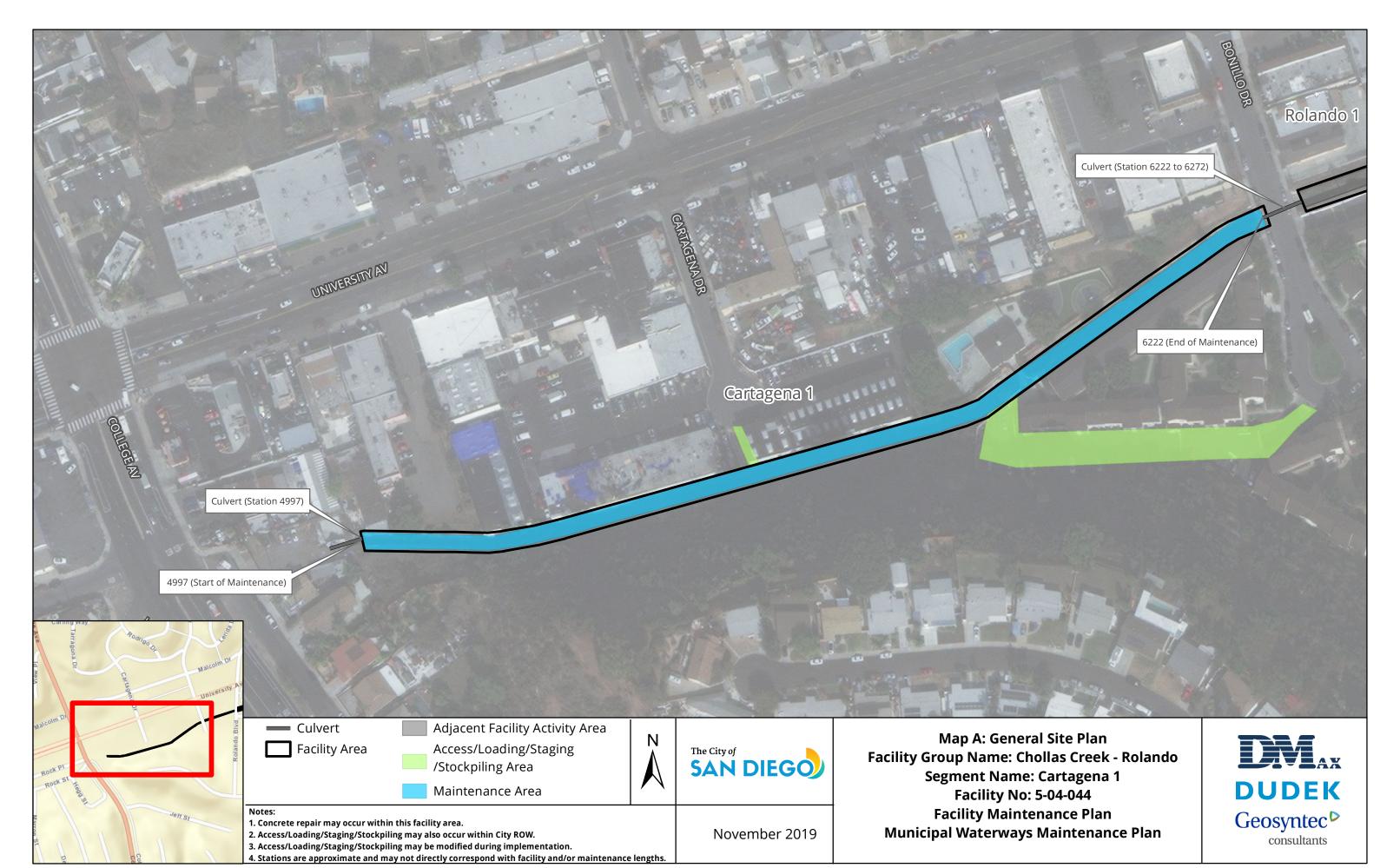
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

[
Authorized Facility Maintenance	Length: Channel: 1,225 feet		
Area	Width: 21 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump,		
	fuel-powered hand tools, sweeper		
Schedule	Up to approximately 14 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading		
	area with Gradall/excavator assistance		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from channel and loads dump truck		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	No		
	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		

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

BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	Conduct post-maintenance procedures as follows:			
	1. Demobilize equipment			
	2. Restore temporary access/loading areas to pre-maintenance condition of			
	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			
Other Notes	None			



Rolando Segment 1 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Chollas Creek (unnamed tributary), upstream of Chollas Creek (Oceanview Segment 1)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 424 feet
Top-of-Bank Width	Approximately 21 feet
Bottom Facility Width	Approximately 8 feet
Facility Depth	Approximately 6.5 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Office, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	11287-3-D
Coastal Zone	No



Figure 1: July 2017, looking upstream from downstream end segment

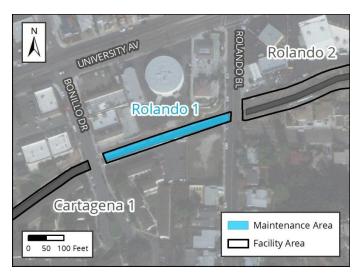


Figure 2: Vicinity Map of Rolando Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	Affecting	The segment was observed to be relatively clean and light vegetation was observed in some locations			egetation was	
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	577	707	793	943	986	1,157
second [cfs])						
Hydraulic Capacity	of Facility					
Curre	ent Capacity	829 cfs				
Proposed MWM	P Maintained	Capacity	pacity 829 cfs			
Maintenanc	e Recommend	ation	Remove accumulated sediment, debris, and vegetation from segment bottom from Station 6272 to Station 6646. Remove accumulated sediment and debris in culvert from Station 6222 to Station 6272.			
In-Stream Post-Ma Reco	intenance Eros mmendation	sion Control	N one			

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed land
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
	Natural flood channel
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or
	adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	None
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1965 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Chollas Creek - Rolando
Segment Name	Rolando 1
Facility No.	5-04-046
Facility Location	From outlet of culvert beneath Rolando Boulevard to inlet of tall culvert
	beneath Bonillo Drive
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology
	and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from segment
Recommendation ²	bottom from Station 6272 to Station 6646.
	Remove accumulated sediment and debris in culvert from Station 6222 to
	Station 6272.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete ditch
Existing Plans and/or As-Builts?	Yes; 11287-3-D
Substrate Detail	Concrete bottom and banks

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

Encility Dimensions	Langthy 424 foot
Facility Dimensions	Length: 424 feet
(Approximate)	Top width: 21 feet
	Bottom width: 8 feet
	Depth: 6.5 feet
Authorized Facility Maintenance	Length: Ditch: 374 feet; Culvert: 50 feet
Area	Width: 21 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump,
	vactor, fuel-powered hand tools, sweeper
Schedule	Up to approximately 30–45 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area
	with Gradall/excavator assistance
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading
	area
	Gradall/excavator scoops material from ditch and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
	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
Biology	Suitable habitat for sensitive species ³ :
Biology	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

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

E1 14 .			
Flow Management	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		
Downstream Sensitive Waters	No		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	None		



Rolando Segment 2 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen and riprap bottom, and earthen, rip-rap and gunite banks
Location Within Watershed	Upper reach of Chollas Creek, immediately upstream of Chollas Creek (unnamed tributary, Rolando Segment 1)
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 871 feet
Top-of-Bank Width	Approximately 36 feet
Bottom Facility Width	Approximately 15 feet
Facility Depth	Approximately 7 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Office, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	12701-L
Coastal Zone	No



Figure 1: May 2015, looking towards the double 8-foot wide by 5-foot, 2-inch tall RCB culvert at downstream end of segment



Figure 2: Vicinity Map of Rolando Segment 2

Facility Maintenance History

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

History of Mainte	nance	Prior to 2011: Unknown
		2011 – 2014: No maintenance conducted
		2015/2016: Emergency excavation of sediment and vegetation
		January 2017 – March 2019: No maintenance conducted
Past Regulatory A	Approvals	
CEQA	2011 MMP PEIR	No. 42891
CDP	N/A	
SDP	SDP No. 2034245	5 (2017 Addendum)
404	RGP 63 USACE Fi	ile #SPL-2015-00924-MG
401	RGP 63 Verificati	on No. R9-2015-0212:820311:lhonma
1602	LSA Emergency N	Notification submitted 02/2016
Mitigation for Pre	evious Impacts	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel
		Maintenance (0.06 acre); an additional 0.12 acre for SWS and 0.12 acre for

NFC needed for City mitigation

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.¹

			moderate to de as estimated to	•	was observed ar	nd sediment		
Hydrologic Peak Flo	ws							
Storm Event	2-year	5-year	5-year 10-year 25-year 50-year 100-year					
Q (cubic feet per second [cfs])	577	707	793	943	986	1,157		
Hydraulic Capacity	of Facility							
Current Capacity 235 cfs								
Proposed MWM	Proposed MWMP Maintained Capacity 235 cfs							
Maintenanc	e Recommend	• •			7517. culvert from ank over a length ion 7077). es over a length of			
In-Stream Post-Maintenance Erosion Control Recommendation			Yes; see Appendix A-4 Location: Station to be determined					
Reco	iiiieiiuation		Location. Station to be determined					

Rolando 2 (Facility No. 5-04-048)

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

Biological Resource Summary

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

	Material (Landshare al
Facility Vegetation	Natural flood channel
	Riparian scrub (southern willow scrub)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or
	adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	None
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A
	

Historical Resources	
Resource Identified in APE	Channel; 1956 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

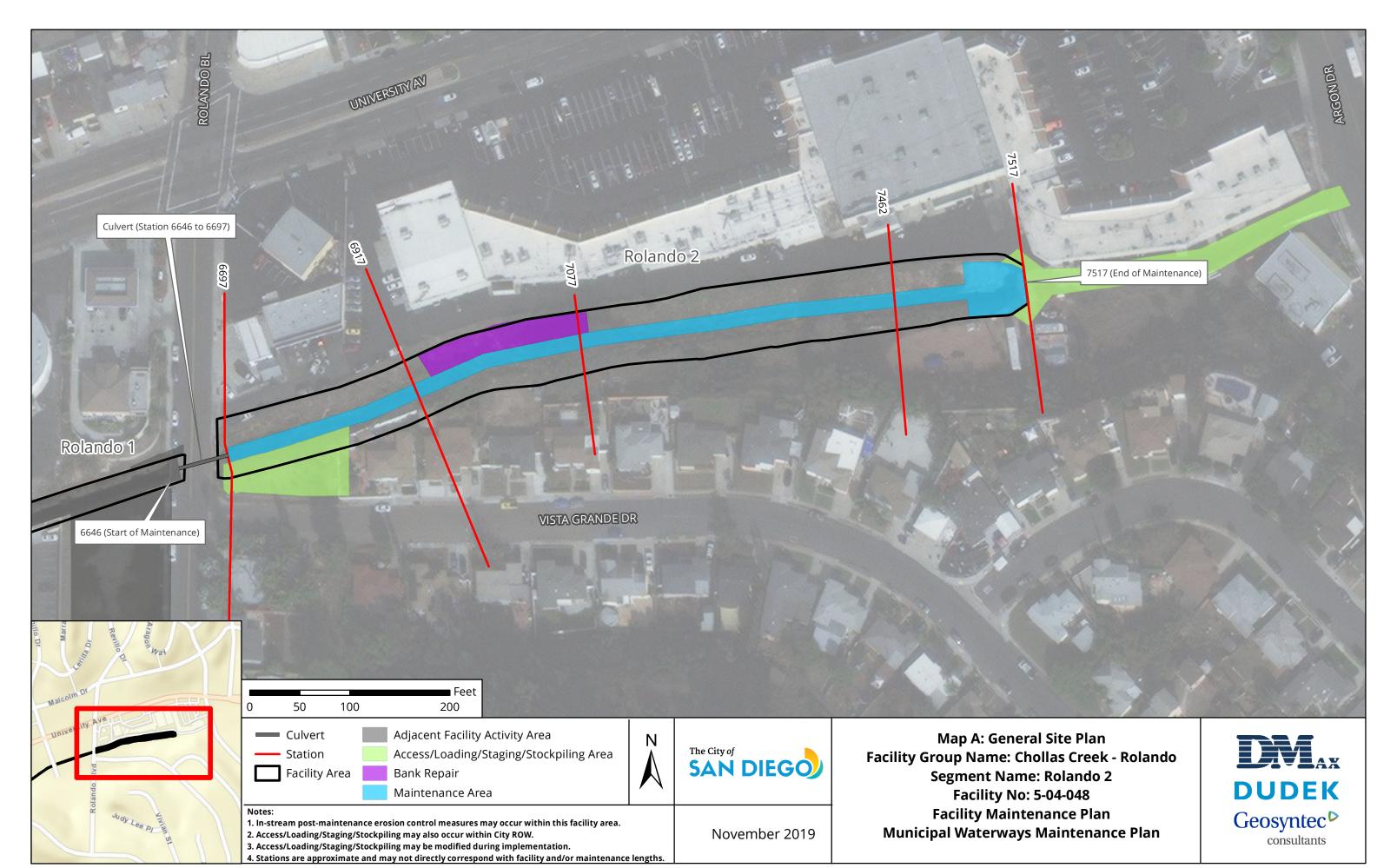
Facility Group	Chollas Creek - Rolando
Segment Name	Rolando 2
Facility No.	5-04-048
Facility Location	From 400 feet southwest of the intersection of University Avenue and
	Aragon Drive, to inlet of culvert beneath Rolando Boulevard
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous
	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from segment
Recommendation ²	bottom from Station 6697 to Station 7517.
	Remove accumulated sediment and debris in culvert from Station 6646 to
	Station 6697.
	Perform bank repair on the eroded northern bank over a length of
	approximately 160 feet (Station 6917 to Station 7077).
	Perform concrete bank repair on the side slopes over a length of
	approximately 55 feet (Station 7462 to Station 7517).
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
	Bank repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
	Riprap replacement
Bank Repair	Yes (multiple options); see Appendix A-4
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	

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

Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 12701-L
Substrate Detail	Earthen and rip-rap bottom, and earthen, riprap and gunite banks
Facility Dimensions	Length: 871 feet
(Approximate)	Top width: 36 feet
	Bottom width: 15 feet
	Depth: 7 feet
Authorized Facility Maintenance	Length: Channel: 820 feet; Culvert: 51 feet
Area	Width: 10-36 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck,
	trash pump, fuel-powered hand tools, sweeper
Schedule	Up to approximately 30–45 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading
	area
	2. Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	3. Gradall/excavator scoops material from channel and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No

	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	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
Flow Management	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
Downstream Sensitive Waters	No
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	Yes; see Appendix A-4
Erosion Control Recommendation	Location: Station to be determined
Post-Maintenance Procedures	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
Other Notes	None

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



Facility Maintenance Plan

Chollas Creek - Martin Facility Group

Segment Name (Facility number): Martin 1 (5-04-101)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek Unnamed Tributary (04)
Facility Group Name	Chollas Creek - Martin
Segment Name (Facility Number)	Martin 1 (5-04-101)
Substrate	Martin 1 / Earthen and concrete
Location	Bordered by 36th Street to the east, Interstate 15 (I-15) to the west, single-family residential developments to the north, and multifamily residential developments to the south
MMP Map No(s).	92
Facility Inspection No.	92
Other Former Names	None



Figure 1: Vicinity Map of Chollas Creek - Martin Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

Chollas Creek - Martin	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc	
	·	

Martin Segment 1 Detail

Facility Type	Earthen and concrete ditch	
Substrate Detail ¹	Stations 235-825: Earthen bottom and banks	
	Stations 825-1035: Earthen bottom , earthen right bank, concrete left	
	bank	
	Stations 1035-1428: Earthen bottom and banks	
Location Within Watershed	Lower reach of Chollas Creek unnamed tributary, immediately	
	upstream of Chollas Creek	
Tributaries (listed from downstream to	No named tributaries	
upstream)		
Facility Length	Approximately 1,195 feet	
Top-of-Bank Width	Approximately 25–70 feet	
Bottom Facility Width	Approximately 3–7 feet	
Facility Depth	Approximately 4–8 feet	
Adjacent Land Use	Single-Family Residential, Transportation, Vacant	
As-Built Drawing Number	None	
Coastal Zone	No	



Figure 1: July 2017, looking downstream at scoured ditch bed

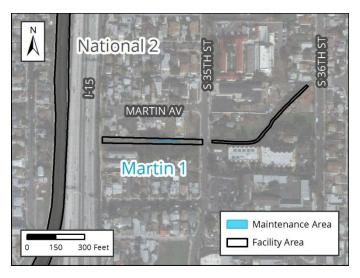


Figure 2: Vicinity Map of Martin Segment 1

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

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pre	evious 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.²

Current Conditions Facility Capacity	Affecting	The vegetation observed ranged from light to medium with no evidence of sediment deposition. A scoured area was identified during the site visit.				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	118	151	176	211	237	262
second [cfs])						
Hydraulic Capacity	Hydraulic Capacity of Facility					
Current Capacity 228 cfs						
Proposed MWM	WMP Maintained Capacity 228 cfs					
Maintenance Recommendation		Repair and restabilize scoured ditch bed between Station 496 to				
			Station 616			
In-Stream Post-Maintenance Erosion Control		Yes; see Appendix A-4				
Recommendation		Location: Station to be determined				

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Disturbed wetland (castor bean dominated)
	Natural flood channel
	Ornamental plantings
Adjacent Vegetation	Developed land
	Disturbed land
	Disturbed wetland (castor bean dominated)
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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		
Resource Identified in APE	P-37-025853	
Resource Identified Adjacent to APE	None	
Resource Type	Prehistoric habitation refuse	

Historical Resources	
Resource Identified in APE	Channel; 3463 Martin St.; 3487 Martin St.; pre-1953 earthen channel; two buildings more than 45 years old (not previously evaluated)
Potential Historical Resources Constraint Identified	Yes

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
Hydrology (HYD)	MM-CR-1
EP-HYD-1	MM-CR-2
Paleontological Resources (PAL)	MM-CR-3
EP-PAL-1	MM-CR-4
Solid Waste (SW)	MM-HR-1
EP-SW-2	MM-HR-2
EP-SW-3	Noise (NOI)
EP-SW-4	MM-NOI-1
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

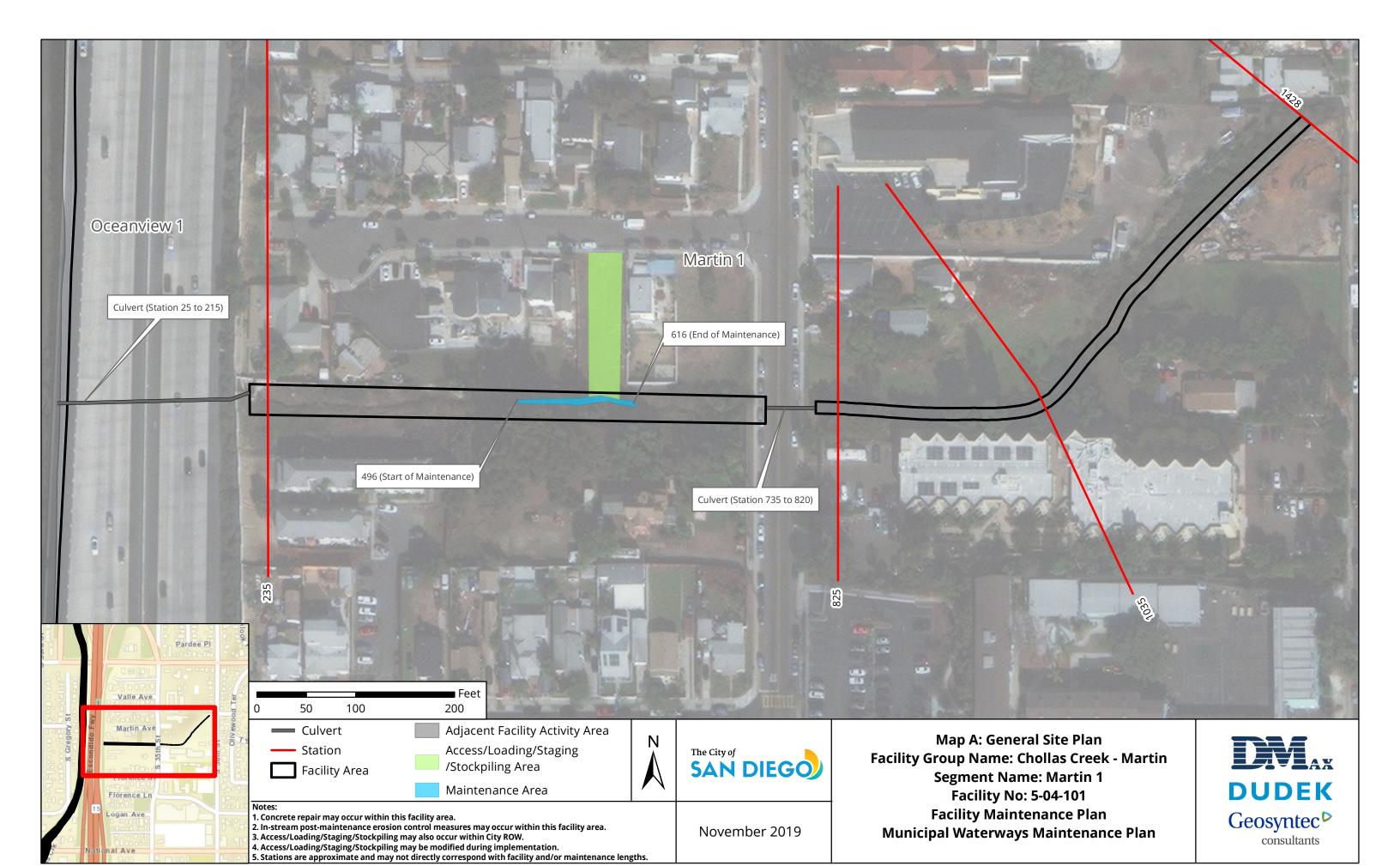
Facility Group	Chollas Creek - Martin	
Segment Name	Martin 1	
Facility No.	5-04-101	
Facility Location	From outlet of culvert at southwest corner of Hemlock Street and 36th	
	Street to outlet of culvert located on the west side of Interstate 15 (I-15)	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of earthen ditch per estimated original design dimensions	
	and Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	Repair and restabilize scoured ditch bed between Station 496 to Station	
Recommendation ³	616	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
	Concrete repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
Bank Repair	No	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen and concrete ditch	
Existing Plans and/or As-Builts?	None	
Substrate Detail ³	Stations 235-825: Earthen bottom and banks	
	Stations 825-1035: Earthen bottom , earthen right bank, concrete left bank	
	Stations 1035-1428: Earthen bottom and banks	
Facility Dimensions	Length: 1,195 feet	
(Approximate)	Top width: 25–70 feet	
	Bottom width: 3–7 feet	
	Depth: 4–8 feet	

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

	L			
Authorized Facility Maintenance	Length: Ditch: 120 feet			
Area	Width: 7-11 feet To be determined at time of maintenance			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,			
Area(s)	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.			
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, sweeper			
Schedule	Up to approximately 14 working days			
Maintenance Crew	Approximately 8–12 people			
Routine Maintenance Procedures	1. Gradall/excavator and/or bulldozer/track-steer enter or are lowered into			
	ditch at access/loading area			
	2. Gradall/excavator and/or bulldozer/track-steer place material into scour			
	hole			
	3. Bulldozer/track-steer compact material			
Traffic Control	No			
	Additional Maintenance Information			
Pre-Maintenance Meeting	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			
Biology	Suitable habitat for sensitive species ⁴ :			
	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			
Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
	See trate. Foliation Control Flan			

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

In-Stream Post-Maintenance	Yes; see Appendix A-4			
Erosion Control Recommendation	Location: Station to be determined			
Post-Maintenance Procedures	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			
Other Notes	None			



Facility Maintenance Plan

Chollas Creek - J St Facility Group

Segment Name (Facility number): J St 1 (5-04-163)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek Unnamed Tributary (04)
Facility Group Name	Chollas Creek - J St
Segment Name (Facility Number)	J St 1 (5-04-163)
Substrate	J St 1 / Earthen
Location	Bordered by single-family residential developments, community garden along Market Street, and Toyne Street to the west
MMP Map No(s).	100
Facility Inspection No.	100
Other Former Names	None



Figure 1: Vicinity Map of Chollas Creek - J St Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22			
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon		
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc		

Chollas Creek - J St	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)				
Beneficial Uses	Non-contact Water Recreation (REC-2)			
	Warm Freshwater Habitat (WARM)			
	Wildlife Habitat (WILD)			
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc			

J St Segment 1 Detail

Facility Type	Earthen ditch		
Substrate Detail	Earthen bottom and banks		
Location Within Watershed	Upper reach of Chollas Creek unnamed tributary, upstream of Chollas Creek		
Tributaries (listed from downstream to upstream)	No named tributaries		
Facility Length	Approximately 404 feet		
Top-of-Bank Width	Approximately 4–22 feet		
Bottom Facility Width	Approximately 4–6 feet		
Facility Depth	Approximately 0.4–3 feet		
Adjacent Land Use	Single-Family Residential, Transportation		
As-Built Drawing Number	28415-D		
Coastal Zone	No		



Figure 1: April 2018, looking west at bank repair

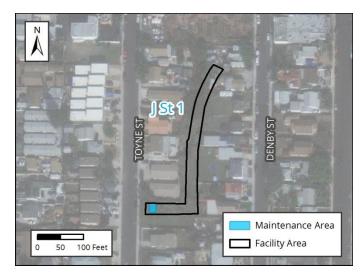


Figure 2: Vicinity Map of J St Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown		
	January 2011 – March 2019: No maintenance conducted		
Past Regulatory A	Approvals		
CEQA	2011 MMP PEIR No. 42891		
CDP	N/A		
SDP	SDP No. 2034245 (2017 Addendum)		
404	None		
401	None		
1602	None		
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	S Affecting	The amount of vegetation was observed to range from moderate to dense and no evidence of sediment deposition was noted				
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	29	37	43	51	57	64
second [cfs])						
Hydraulic Capacity	of Facility					
Curr	Current Capacity 17 cfs					
Proposed MWMP Maintained Capacity 17 cfs						
Maintenance Recommendation		Trim vegetation and remove invasive vegetation between Station 10 and Station 25. The remainder of J St is recommended to be maintained by private property owners from Station 25 to Station 193 to trim vegetation, remove invasive vegetation, and remove sediment, debris, and vegetation at the culvert outlets located at Station 108and Station 414. Remove sediment and debris in culvert at Station 10.				
In-Stream Post-Ma	intenance Eros	sion Control			None	
Reco	mmendation					

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

Biological Resource Summary

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

Facility Vegetation	Disturbed land
racinty vegetation	
	Disturbed wetland (Arundo-dominated)
	Ornamental plantings
Adjacent Vegetation	Disturbed land
	Disturbed wetland (Arundo-dominated)
	Natural flood channel
	Ornamental plantings
	Riparian scrub (southern willow scrub)
	Urban / Developed
Habitat and Wildlife	There is limited suitable habitat contained within the facility for wildlife. However, raptors
	could use the ornamental plantings within and adjacent to the facility for nesting/rooting.
MHPA	The facility is not within or adjacent to the Multi-Habitat Planning Area (MHPA)
Mitigation Within	None
Facility	

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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; 425-435 Toyne St.; pre-1953 earthen channel; two buildings more than 45 years old (not previously evaluated)
Potential Historical Resources Constraint Identified	Yes

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

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.

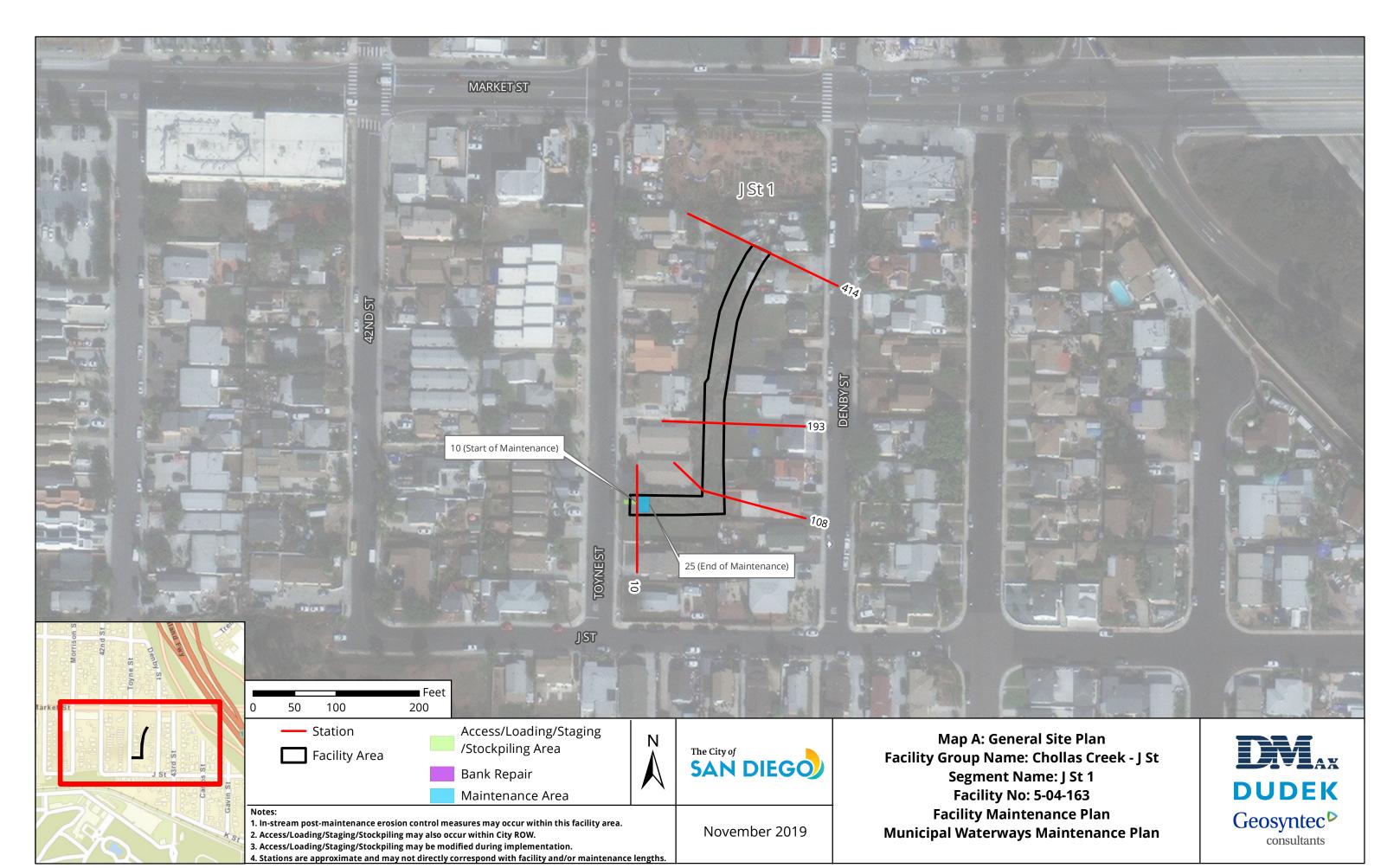
Facility Group	Chollas Creek - J St			
Segment Name	J St 1			
Facility No.	5-04-163			
Facility Location	From outlet of culvert 150 feet south of Market Street to inlet of culvert at			
	the east side of Toyne Street			
Coastal Zone	No			
MWMP Proposed Maintenance	Maintenance of earthen ditch per as-built dimensions and Hydrology and			
	Hydraulics recommendations			
Hydrology and Hydraulics	Trim vegetation and remove invasive vegetation between Station 10 and			
Recommendation ²	Station 25.			
	The remainder of J St is recommended to be maintained by private			
	property owners from Station 25 to Station 193 to trim vegetation, remove			
	invasive vegetation, and remove sediment, debris, and vegetation at the			
	culvert outlets located at Station 108and Station 414.			
	Remove sediment and debris in culvert at Station 10.			
Maintenance Activities	Vegetation grubbing, trimming, and removal			
	Invasive plant species treatment and removal			
	Sediment removal			
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch			
	Temporary access/loading			
	Temporary diversions			
	Hand removal of vegetation			
Bank Repair	No			
Concrete Repair	No			
Concrete/Gabion Structure Repair	No			
and Maintenance				
Culvert Maintenance	Yes; see Appendix A-4			
Post-Maintenance Erosion Control	No			
Recommendation				
Trash/Debris Fence Repair and	No			
Maintenance				
Facility Type	Earthen ditch			
Existing Plans and/or As-Builts?	Yes; 28415-D			
Substrate Detail	Earthen bottom and banks			

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

Facility Discounians	Longth, 404 foot				
Facility Dimensions	Length: 404 feet				
(Approximate)	Top width: 4–22 feet				
	Bottom width: 4–6 feet				
	Depth: 0.4–3 feet				
Authorized Facility Maintenance	Length: Ditch: 15 feet				
Area	Width: 8–15 feet				
Maintenance Quantities	To be determined at time of maintenance				
Access/Loading/Staging/Stockpiling					
Area(s)	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.				
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, fuel-				
	powered hand tools, sweeper				
Schedule	Up to approximately 3–5 working days				
Maintenance Crew	Approximately 9–12 people				
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into ditch at access/loading				
	area				
	2. Bulldozer/track-steer pushes material to Gradall/excavator at				
	access/loading area				
	3. Gradall/excavator scoops material and loads dump truck on street				
	4. Dump truck hauls material to legal disposal site				
Traffic Control	Yes; coordinate with the City of San Diego				
	Additional Maintenance Information				
Pre-Maintenance Meeting	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				
Biology	Suitable habitat for sensitive species ³ :				
	1. Within maintenance area: Yes				
	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				

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

Flow Management	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				
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan				
BMP Installation	See Water Pollution Control Plan				
In-Stream Post-Maintenance	None				
Erosion Control Recommendation					
Post-Maintenance Procedures	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				
Other Notes	None				



Facility Maintenance Plan

Auburn Creek - Home Facility Group

Segment Names (Facility numbers):

Home 1 (5-04-220)

Home 2 (5-04-224)

Home 3 (5-04-227)

Home 4 (5-04-229) (See Appendix

A-5)

Home 5 (5-04-231)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Auburn Creek (04)
Facility Group Name	Auburn Creek - Home
Segment Name (Facility Number)	Home 1 (5-04-220)
	Home 2 (5-04-224)
	Home 3 (5-04-227)
	Home 4 (5-04-229) (See Appendix A-5)
	Home 5 (5-04-231)
Substrate	Home 1 / Earthen
	Home 2 / Earthen
	Home 3 / Concrete
	Home 4 / Earthen and concrete
	Home 5 / Earthen and concrete
Location	About 300 feet northeast of Fairmount Avenue and northeast of
	the intersection of Home Avenue and Federal Boulevard
MMP Map No(s).	70, 76, 77
Facility Inspection No.	70, 76, 77
Other Former Names	Home Avenue Channel



Figure 1: Vicinity Map of Auburn Creek - Home Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc	

Auburn Creek - Home	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
Wildlife Habitat (WILD)		
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc	

Home Segment 1 Detail

Facility Type	Earthen channel	
Substrate Detail	Earthen bottom, earthen and partial riprap banks	
Location Within Watershed	Lower reach of Auburn Creek, immediately upstream of Chollas Creek	
Tributaries (listed from downstream to	Auburn Creek	
upstream)		
Facility Length	Approximately 489 feet	
Top-of-Bank Width	Approximately 33–82 feet	
Bottom Facility Width	Approximately 10–25 feet	
Facility Depth	Approximately 7–10.5 feet	
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Open Space, Public Facilities and Utilities, Transportation	
As-Built Drawing Number	57-11VC1P	
Coastal Zone	No	



Figure 1: February 2017, standing along east bank of segment, looking southwest at erosion behind east wing wall at downstream end



Figure 2: Vicinity Map of Home Segment 1

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown
	2011 – 2014: No maintenance conducted
	2015/2016: Emergency excavation of sediment and vegetation and bank
	repair (riprap)
	January 2017 – March 2019: No maintenance conducted
Past Pegulatory Approvals	

	· · · · · · · · · · · · · · · · · · ·		
January 2017 – March 2019: No maintenance conducted			
Past Regulatory A	Approvals		
CEQA	2011 MMP PEIR N	No. 42891	
CDP	N/A		
SDP	SDP No. 2034245	5 (2017 Addendum)	
404	RGP 63 USACE Fi	le #SPL-2016-00211-RAG	
401	RGP 63 Verification No. R9-2016-0085;822782;lhonma		
1602	2 LSA Emergency Notification submitted 03/2016		
Mitigation for Pro	evious Impacts	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel	
		Maintenance (0.09 acre); an additional 0.12 acre for NFC needed for City	
		mitigation	

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.¹

Current Conditions	Affecting	In March 2016, the vegetation was observed to range from light to heavy and				
Facility Capacity		sediment deposition was observed to be 1 foot in the culvert				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	5-year 10-year 25-year 50-year 100-year			100-year
Q (cubic feet per	120	290	430	630	950	1,200
second [cfs])						
Hydraulic Capacity	of Facility					
Curre	ent Capacity	957 cfs				
Proposed MWM	Proposed MWMP Maintained Capacity 1,028 cfs					
Maintenance Recommendation Remove accumulated sediment, debris, and vegetation from		getation from the				
		in-line weir at Station 641.				
			Remove accumulated sediment, debris, and vegetation from			
		Station 295 to Station 710.				
		Remove accumulated sediment and debris in culvert from				
		Stations 221 to Station 295.				
In-Stream Post-Maintenance Erosion Control		Yes; see Appendix A-4				
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.

Facility Vegetation	Natural flood channel
	Riparian forest (southern willow forest)
Adjacent Vegetation	Developed land
	Disturbed land
	Ornamental plantings
Habitat and Wildlife	Although this channel 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
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	None

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

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Noise (NOI)
EP-HAZ-3	MM-NOI-1
Hydrology (HYD)	
EP-HYD-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Auburn Creek - Home
Segment Name	Home 1
Facility No.	5-04-220
Facility Location	From outlet of culvert underneath the existing Terrace View Villas to inlet of
•	culvert beneath Federal Boulevard
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous
-	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from the in-line
Recommendation ²	weir at Station 641.
	Remove accumulated sediment, debris, and vegetation from Station 295 to
	Station 710.
	Remove accumulated sediment and debris in culvert from Stations 221 to
	Station 295.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	Yes; see Appendix A-4
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 57-11VC1P
Substrate Detail	Earthen bottom, earthen and partial riprap banks

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

Facility Dimensions	Longthy 400 foot
Facility Dimensions	Length: 489 feet
(Approximate)	Top width: 33–82 feet
	Bottom width: 10–25 feet
	Depth: 7–10.5 feet
Authorized Facility Maintenance	Length: Channel: 415 feet; Culvert: 74 feet
Area	Width: 13–30 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,
	vactor, sweeper
Schedule	Up to approximately 7–14 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bulldozer/track-steer, and loader enter or are lowered into channel at
	access/loading area
	2. Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	3. Gradall/excavator scoops material from channel and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	Within maintenance area: Yes, limited suitable habitat present
	Adjacent to maintenance area: Yes, limited suitable habitat present
	Activities to be conducted under authority of a qualified biologist:
	Nesting bird surveys required within 72 hours of the start of vegetation
	clearing from February 1 through September 15
	cleaning moin rebruary i unrough september 15

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

Flow Management	As needed:	
Tion management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	Yes; see Appendix A-4	
Erosion Control Recommendation	Location: Station to be determined	
Post-Maintenance Procedures	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	
Other Notes	None	



4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Home Segment 2 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom, earthen and partial riprap banks
Location Within Watershed	Lower reach of Auburn Creek, immediately upstream of Auburn Creek (Home, Segment 1)
Tributaries (listed from downstream to	Auburn Creek
upstream)	
Facility Length	Approximately 920 feet
Top-of-Bank Width	Approximately 45–55 feet
Bottom Facility Width	Approximately 12–22 feet
Facility Depth	Approximately 5–11 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Office, Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	3706-D
Coastal Zone	No



Figure 1: March 2016, looking upstream at the vegetation and displaced riprap downstream of the double 7-foot wide by 6-foot tall RCB culvert

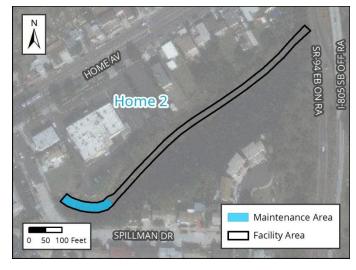


Figure 2: Vicinity Map of Home Segment 2

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 – 2017: No maintenance conducted

January 2018 – 2019: Routine maintenance conducted

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-2018-00276-SRR (expires March 2022)

401 RWQCB 401 Cert No. R9-2018-0076 (expires March 2022)

1602 No 1602 required per CDFW letter reference No. 1600-2018-0123-R5

Mitigation for Previous Impacts Stadium (0.06 acre); Marron Valley Cornerstone Lands Conservation Bank

(0.005 acre)

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.¹

Current Conditions Affecting	In February 2017, the channel was observed to contain extensive sediment as
Facility Capacity	well as cobbles along the bottom of the channel and dense vegetation at the
	upstream end

Hydrologic Peak Flows Storm Event 2-year 5-year 10-year 25-year 50-year 100-year Q (cubic feet per 120 430 290 630 950 1,200 second [cfs])

Hydraulic Capacity of Facility

Current Capacity 630 cfs

Proposed MWMP Maintained Capacity 1,200 cfs

Maintenance RecommendationRemove accumulated sediment, debris, and vegetation from the
bed and banks of the segment from Station 5 to Station 165.Remove accumulated sediment, debris, and vegetation from

culvert at Station 5.

In-Stream Post-Maintenance Erosion Control None
Recommendation

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland (Arundo-dominated)	
	Natural flood channel	
	Riparian forest (coast live oak)	
	Riparian forest (southern willow forest)	
Adjacent Vegetation	Developed land	
	Disturbed land	
	Ornamental plantings	
Habitat and Wildlife	Although this channel does contain some suitable vegetation for sensitive wildlife species, such as least Bell's vireo, the channel extents and area of vegetation present are limited such that it is unlikely for these species to use the channel for nesting or foraging. However, there is potential for raptors and other migratory species to use the vegetation within and adjacent to the channel.	
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 550 feet east of the channel.	
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1956 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Auburn Creek - Home
Segment Name	Home 2
Facility No.	5-04-224
Facility Location	From downstream end of outlet of culvert beneath Interstate 805 (I-805) to inlet of culvert under Spillman Drive
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from the bed and
Recommendation ²	banks of the segment from Station 5 to Station 165.
	Remove accumulated sediment, debris, and vegetation from culvert at Station 5.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 3706-D
Substrate Detail	Earthen bottom, earthen and partial riprap banks
Facility Dimensions	Length: 920 feet
(Approximate)	Top width: 45–55 feet
	Bottom width: 12–22 feet
	Depth: 5–11 feet

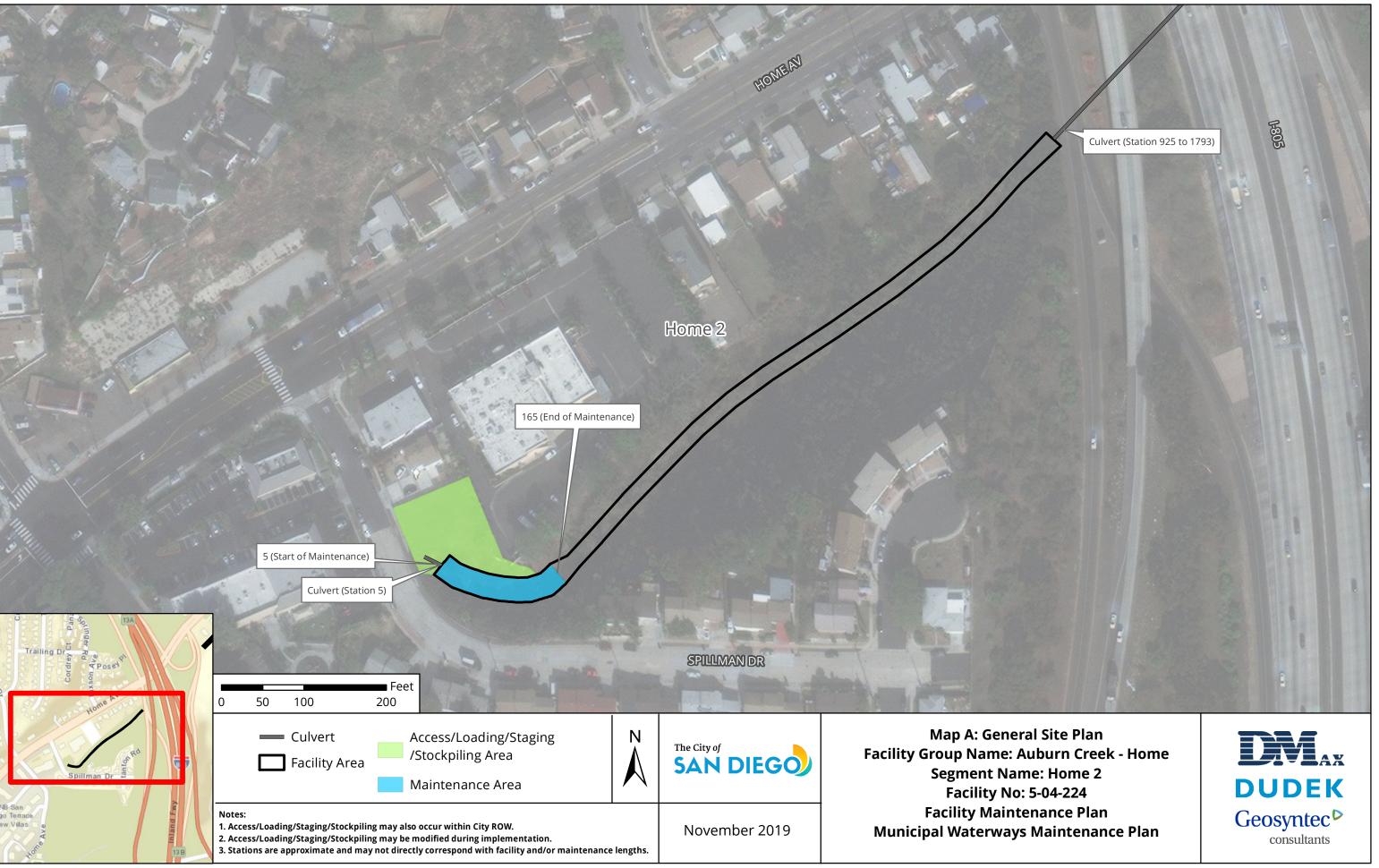
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Facility Maintenance	Length: Channel: 160 feet	
Area	Width: 30 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,	
	vactor, sweeper	
Schedule	Up to approximately 7–14 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer, and excavator enter or are lowered into channel at	
	access/loading area	
	2. Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	Yes; coordinate with the City of San Diego	
A	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	1. Within maintenance area: Yes	
	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	
Flow Management	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	
Downstream Sensitive Waters		

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

BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Home Segment 3 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Auburn Creek, immediately upstream of Auburn Creek (Home, Segment 2)
Tributaries (listed from downstream to upstream)	Auburn Creek
Facility Length	Approximately 1,237 feet
Top-of-Bank Width	Approximately 30 feet
Bottom Facility Width	Approximately 12 feet
Facility Depth	Approximately 6 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation
As-Built Drawing Number	12728-2-L
Coastal Zone	No



Figure 1: March 2016, looking downstream towards 7-foot wide by 6-foot tall double RCB culvert. Note clean channel.



Figure 2: Vicinity Map of Home Segment 3

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	Affecting	The channel was relatively clean with very little evidence of vegetation or sediment deposition		etation or		
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	120	290	430	630	950	1,200
Hydraulic Capacity of Facility						
Current Capacity 950 cfs						
Proposed MWMP Maintained Capacity 950 cfs						
Maintenance Recommendation Concrete repair and replacement from Station 1793 2162. Remove accumulated sediment, debris and vegetati Station 1793 to Station 2162.						
	In-Stream Post-Maintenance Erosion Control None Recommendation					

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	 Coastal sage scrub Developed land Disturbed wetland (Arundo-dominated) Ornamental plantings
Habitat and Wildlife	The channel area itself does not contain suitable vegetation for sensitive wildlife; however, suitable habitat is present in the areas surrounding the facility for sensitive bird species, such as coastal California gnatcatcher
МНРА	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 45 feet south of the channel.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; Pre-1963 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Auburn Creek - Home
Segment Name	Home 3
Facility No.	5-04-227
Facility Location	From downstream end of Home 4 segment to inlet of culvert beneath Interstate 805 (I-805)
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Concrete repair and replacement from Station 1793 to Station 2162.
Recommendation ²	Remove accumulated sediment, debris and vegetation from Station 1793 to Station 2162.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 12728-2-L
Substrate Detail ³	Concrete bottom and banks
Facility Dimensions	Length: 1,237 feet
(Approximate)	Top width: 30 feet
	Bottom width: 12 feet
	Depth: 6 feet

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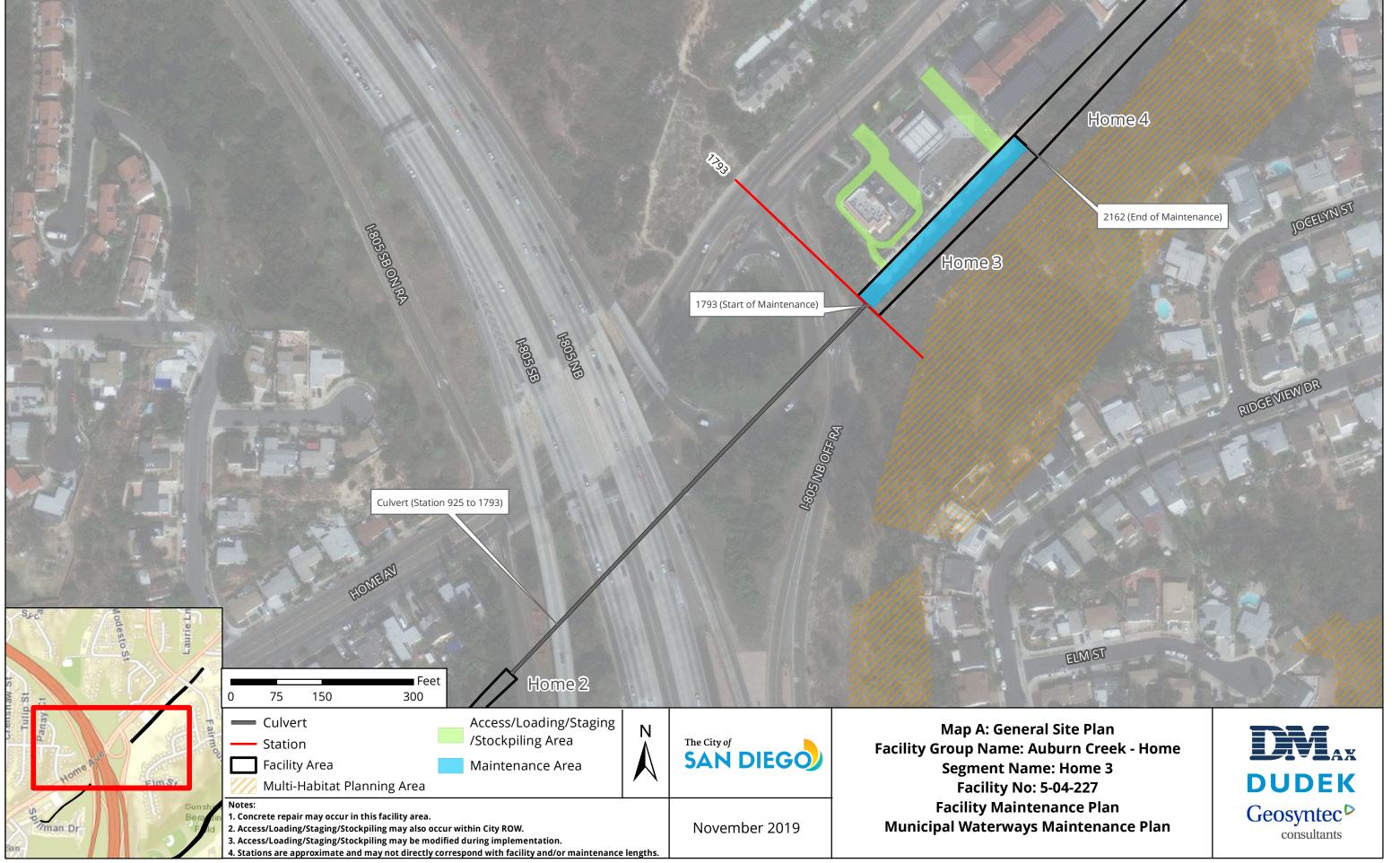
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Encility Maintenance	Langth: Channal: 260 fact
Authorized Facility Maintenance	Length: Channel: 369 feet
Area	Width: 30 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump,
	vactor, fuel-powered hand tools, sweeper
Schedule	Up to approximately 7–14 working days
Maintenance Crew	Approximately 8–10 people
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading
	area
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading
	area
	3. Gradall/excavator scoops material from channel and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with private property owner
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: No
	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
Flow Management	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
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan

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

BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	None		



Home Segment 5 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 3018-3293: Earthen bottom and concrete right bank
	Stations 3018-3166: Earthen bottom and shotcrete left bank
	Stations 3166-3293: Earthen bottom and earthen left bank
Location Within Watershed	Lower reach of Auburn Creek, immediately upstream of Auburn Creek
	(unnamed tributary, Home, Segment 4)
Tributaries (listed from downstream to	Auburn Creek
upstream)	
Facility Length	Approximately 377 feet
Top-of-Bank Width	Approximately 30 feet
Bottom Facility Width	Approximately 12 feet
Facility Depth	Approximately 6 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Open Space, Single-
	Family Residential, Transportation, Vacant
As-Built Drawing Number	12728-2-L
Coastal Zone	No



Figure 1: March 2016, looking upstream at the double-barrel 74-inch-diameter RCP culvert



Figure 2: Vicinity Map of Home Segment 5

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

Facility Maintenance History

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

History of Mainte	nance Prior to 2011: Unknown	
	2011 – 2014: No maintenance conducted	
	2015/2016: Emergency excavation of sediment and vegetation	
	2018: Routine maintenance conducted	
	2019: No maintenance conducted	
Past Regulatory Approvals		
CEQA	2011 MMP PEIR No. 42891	
CDP	N/A	
SDP	SDP No. 2034245 (2017 Addendum)	
404	RGP 63 USACE File #SPL-2015-00945-RAG; NWP 31/33 USACE File #SPL-2018-00276-SRR (expires	
	March 2022)	
401	RGP 63 Verification No. R9-2016-0043:821318;lhonma; RWQCB 401 Cert No. R9-2018-0076 (expires March 2022)	
1602	LSA Emergency Notification submitted 02/2016	
Mitigation for Pre	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel Maintenance to 0.10 acre. Added Otay Reed Wetland Mitigation Plan (0.16 acre).	

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.²

Current Conditions Affecting In February		In February 2	2017, the amount of vegetation in the channel was observed to be			
Facility Capacity light to medi		ium and cobbles were observed along the bottom				
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	120	290	430	630	950	1,200
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity			630 cfs			
Proposed MWMP Maintained Capacity		630 cfs				
Maintenance Recommendation		Remove accumulated sediment, debris, and vegetation from				
		bottom of segment from Station 3018 to Station 3293.				
		Remove accumulated sediment and debris from culvert at				
		Station 2916 to Station 3018.				
In-Stream Post-Maintenance Erosion Control		None				
Recommendation						

Biological Resource Summary

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

Facility Vegetation	Natural flood channel	
Adjacent Vegetation	Coastal sage scrub	
	Developed concrete-lined channel	
	Developed land	
	Disturbed wetland (Arundo-dominated)	
	Ornamental plantings	
Habitat and Wildlife	The channel area itself does not contain suitable vegetation for sensitive wildlife; however, suitable habitat for sensitive bird species, such as coastal California gnatcatcher, is present in the areas surrounding the facility	
МНРА	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 90 feet south of the channel.	
Mitigation Within Facility	None	

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

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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; 1956 earthen channel
Potential Historical Resources Constraint Identified	Yes

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

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.

Facility Group	Auburn Creek - Home
Segment Name	Home 5
Facility No.	5-04-231
Facility Location	From 290 feet northeast of Fairmount Avenue to inlet of culvert
	underneath Fairmount Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of channel per as-built dimensions, previous maintenance
	approval, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom of
Recommendation ³	segment from Station 3018 to Station 3293.
	Remove accumulated sediment and debris from culvert at Station 2916 to
	Station 3018.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	Yes; 12728-2-L
Substrate Detail ³	Stations 3018-3293: Earthen bottom and concrete right bank
	Stations 3018-3166: Earthen bottom and shotcrete left bank
	Stations 3166-3293: Earthen bottom and earthen left bank

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

acility Dimensions Approximate)	Length: 377 feet Top width: 30 feet	
appi oxiiiiate)	TOD WIGHT, 3H 1661	
	Bottom width: 12 feet	
	Depth: 6 feet	
uthorized Engility Maintenance	Length: Channel: 275 feet; Culvert: 102 feet	
uthorized Facility Maintenance		
rea	Width: 30 feet To be determined at time of maintenance	
Maintenance Quantities		
ccess/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
rea(s)	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.	
quipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,	
	vactor, sweeper	
chedule	Up to approximately 7–14 working days	
laintenance Crew	Approximately 8–12 people	
outine Maintenance Procedures	1. Bulldozer/track-steer and loader enter or are lowered into channel at	
	access/loading area	
	2. Bulldozer/track-steer push material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to legal disposal site	
raffic Control	Yes; coordinate with private property owner and the City of San Diego	
	Additional Maintenance Information	
re-Maintenance Meeting	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	
iology	Suitable habitat for sensitive species ⁴ :	
	1. Within maintenance area: No	
	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	

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

Flow Management	As needed:	
1 10W Management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Auburn Creek - Wightman Facility Group

Segment Names (Facility numbers):
Wightman 1 (5-04-239)
Wightman 2 (5-04-241)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Auburn Creek (04)
Facility Group Name	Auburn Creek - Wightman
Segment Name (Facility Number)	Wightman 1 (5-04-239)
	Wightman 2 (5-04-241)
Substrate	Wightman 1 / Earthen and concrete
	Wightman 2 / Earthen
Location	Extends north to south between Euclid Avenue and 54th Street,
	crossing beneath University Avenue
MMP Map No(s).	67, 68
Facility Inspection No.	67, 68
Other Former Names	Home Avenue Channel

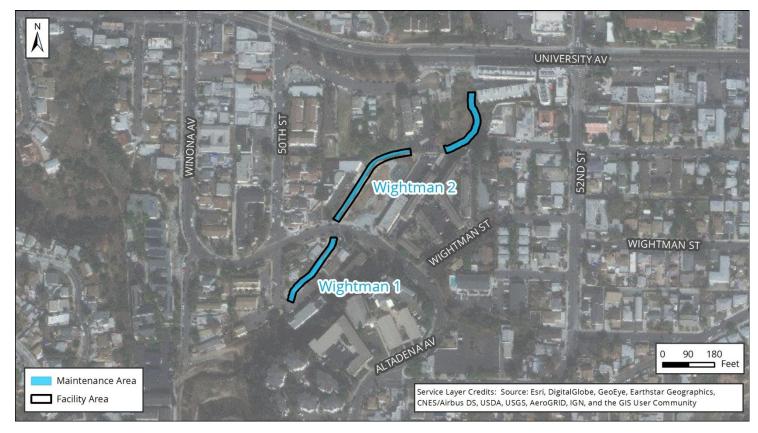


Figure 1: Vicinity Map of Auburn Creek - Wightman Facility Group

Water Quality Resource Summary

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

San Diego Bay Waters	d Management Area:	: Hydrologic Subarea 908.22
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Adopted TMDLsBacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek

diazinon

Highest Priority Water Quality Condition

Bacteria; dissolved copper, lead, and zinc

Paleta Creek - Cottonwood

Beneficial Uses

303(d) listed Impairments No impairments recorded on the 303(d) List

San Diego Bay (First downstream water body)

Beneficial Uses

303(d) listed Impairments No impairments recorded on the 303(d) List

Wightman Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 5830-5870: Concrete bottom and banks Stations 5870-5910: Earthen bottom and banks Stations 5910-6127: Concrete bottom and banks
Location Within Watershed	Upper reach of Auburn Creek (unnamed tributary), immediately upstream of Auburn Creek (unnamed tributary, Wightman, Segment 1)
Tributaries (listed from downstream to upstream)	Auburn Creek
Facility Length	Approximately 332 feet
Top-of-Bank Width	Approximately 13–34.5 feet
Bottom Facility Width	Approximately 3.5–13.5 feet
Facility Depth	Approximately 2–6 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: August 2017, looking upstream just after transition from concrete to earthen lining; deep sediment observed



Figure 2: Vicinity Map of Wightman Segment 1

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

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown
iliator v or mannitumanicu	

2011 - 2014: No maintenance conducted

2015/2016: Emergency excavation of sediment and vegetation

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2015-00862-RAG

401 RGP 63 Verification No. R9-2015-0192;819895;lhonma

1602 LSA Emergency Notification submitted 12/2015

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.²

Current Conditions	Affecting	The channel was relatively clean with very little evidence of vegetation or				
Facility Capacity		sediment deposition				
Hydrologic Peak Flo	WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	116	172	220	343	500	630
second [cfs])						
Hydraulic Capacity of Facility						
Curre	ent Capacity	248 cfs				
Proposed MWM	IP Maintained	ned Capacity 248 cfs				
Maintenanc	Maintenance Recommendation Remove accumulated sediment, debris, and vegetation from			tation from		
			bottom of segment from Station 5830 to Station 6127.			
		Remove accumulated sediment and debris in culvert from		ert from		
			Station 5795 to Station 5830.			
In-Stream Post-Ma	intenance Eros	sion Control	trol Yes; see Appendix A-4			
Reco	Recommendation Location: Station to be determined			d		

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

Biological Resource Summary

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

Facility Vegetation	 Developed concrete-lined channel Disturbed wetland (Arundo-dominated) Natural flood channel
Adjacent Vegetation	 Developed land Disturbed land Ornamental plantings Riparian forest (southern willow forest)
Habitat and Wildlife	The channel area itself does not contain suitable vegetation for sensitive wildlife species. Suitable habitat for sensitive wildlife species (e.g., least Bell's vireo) is present adjacent to the facility. However, the vegetation present is both limited and isolated by residential development such that it is unlikely for sensitive bird species to use the habitat for nesting or foraging.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	Cobble substrate restored onsite following previous maintenance

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1968 earthen channel
Potential Historical Resources Constraint Identified	Yes

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
EP-HAZ-3	MM-HR-1
Hydrology (HYD)	MM-HR-2
EP-HYD-1	Noise (NOI)
Paleontological Resources (PAL)	MM-NOI-1
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Auburn Creek - Wightman
Segment Name	Wightman 1
Facility No.	5-04-239
Facility Location	From outlet of culvert beneath Wightman Street to inlet of culvert at the
	southern terminus of 50th Street
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen and concrete channel per estimated original
	design dimensions, previous emergency maintenance approvals, and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom of
Recommendation ³	segment from Station 5830 to Station 6127.
	Remove accumulated sediment and debris in culvert from Station 5795 to
	Station 5830.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	None
Substrate Detail ³	Stations 5830-5870: Concrete bottom and banks
	Stations 5870-5910: Earthen bottom and banks
	Stations 5910-6127: Concrete bottom and banks

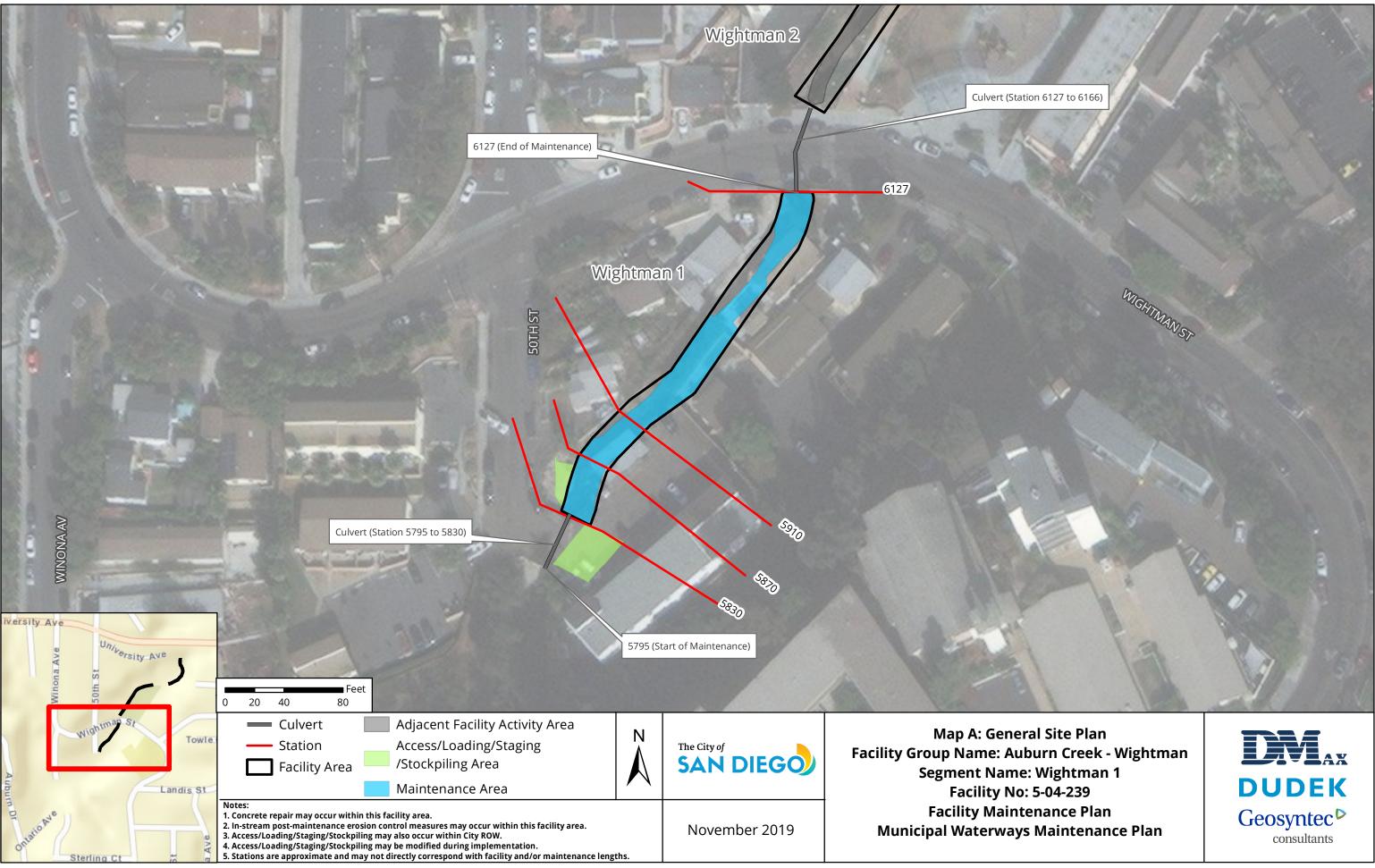
³ Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Facility Dimensions	Length: 332 feet
(Approximate)	Top width: 13–34.5 feet
(Approximate)	Bottom width: 3.5–13.5 feet
	Depth: 2-6 feet
Authorized Facility Maintenance	Length: Channel: 297 feet; Culvert: 35 feet
Area	Width: 22 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	loading, staging, and/or stockpiling. The boundaries of these areas may
Al ea(s)	also be modified as long as changes do not result in new significant
	environmental impacts.
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, dump truck,
Lquipment	trash pump, fuel-powered hand tools, sweeper
Schedule	Up to approximately 14 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bobcat/skid-steer and/or bulldozer/track-steer enter or are lowered into
Routine Maintenance Procedures	
	channel at access/loading area
	2. Bobcat/skid-steer and/or bulldozer/track-steer push material to
	Gradall/excavator at access/loading area
	3. Gradall/excavator scoops material from channel and loads dump truck
Tueffie Combuel	4. Dump truck hauls material to disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ⁴ :
	1. Within maintenance area: No
	2. Adjacent to maintenance area: Yes, limited suitable habitat present
	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

-

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

Fl M	A d - d	
Flow Management	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	
Downstream Sensitive Waters	No	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	Yes; see Appendix A-4	
Erosion Control Recommendation	Location: Station to be determined	
Post-Maintenance Procedures	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	
Other Notes	None	



Wightman Segment 2 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Auburn Creek (unnamed tributary), upstream of Auburn Creek (unnamed tributary, Home, Segment 5)
Tributaries (listed from downstream to upstream)	Auburn Creek
Facility Length	Approximately 801 feet
Top-of-Bank Width	Approximately 18–39 feet
Bottom Facility Width	Approximately 2.5–13.5 feet
Facility Depth	Approximately 2–7 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	12983-1-D & 12983-2-D
Coastal Zone	No



Figure 1: August 2017, looking downstream toward channel bank failure/erosion

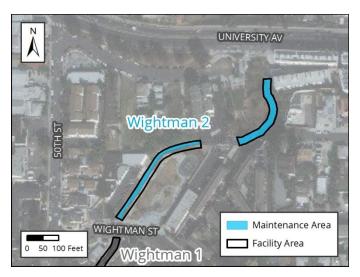


Figure 2: Vicinity Map of Wightman Segment 2

Facility Maintenance History

Mitigation for Previous Impacts

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

History of Mainte	enance Prior to 2011: Unknown
	2011 – 2014: No maintenance conducted
	2015/2016: Emergency excavation of sediment and vegetation
	January 2017 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	RGP 63 USACE File #SPL-2015-00862-RAG
401	RGP 63 Verification No. R9-2015-0192;819895;lhonma
1602	LSA Emergency Notification submitted 12/2015

Onsite restoration for NFC (0.09 acre)

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.¹

		vegetation was observed to range from medium to dense, however, ttle evidence of sediment deposition. Earthen and channel bank re noted.				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	86	127	160	248	360	450
Hydraulic Capacity of Facility						
Current Capacity		160 cfs				
Proposed MWMP Maintained Capacity 160 cfs						
Maintenance Recommendation		Remove accumulated sediment, debris, and vegetation from bottom of segment from Station 6166 to Station 6542, and Station 6659 to Station 6928. Remove accumulated sediment and debris in culvert from Station 6127 to Station 6166, and Station 6542 to Station 6659. Perform bank repair between Station 6780 to Station 6850. Perform concrete repair/replacement between Station 6353 to Station 6403 and Station 6659 to Station 6710.				
In-Stream Post-Ma	intenance Ero	sion Control	Yes; see Appendix A-4			
Recommendation			Location: Station to be determined			

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland (Arundo-dominated)
	Natural flood channel
	Riparian forest (southern willow forest)
Adjacent Vegetation	Developed land
	Disturbed land
	Ornamental plantings
	Riparian forest (southern willow forest)
Habitat and Wildlife	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo), the channel extents and area of vegetation present are both limited and isolated from other suitable habitat by residential development such that it is unlikely for sensitive bird species to use the channel for nesting or foraging
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	Cobble substrate restored onsite following previous maintenance

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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; 1968 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Geologic Resources (GEO)	MM-BIO-6
EP-GEO-1	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
Health and Safety/Hazards (HAZ)	MM-HR-1
EP-HAZ-3	MM-HR-2
Hydrology (HYD)	Noise (NOI)
EP-HYD-1	MM-NOI-1
Paleontological Resources (PAL)	
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Auburn Creek - Wightman	
Segment Name	Wightman 2	
Facility No.	5-04-241	
Facility Location	From outlet of culvert beneath University Avenue to inlet of culvert beneath	
	Wightman Street	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of channel per as-built dimensions, previous emergency	
	maintenance approvals, and Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom of	
Recommendation ²	segment from Station 6166 to Station 6542, and Station 6659 to Station 6928.	
	Remove accumulated sediment and debris in culvert from Station 6127 to	
	Station 6166, and Station 6542 to Station 6659.	
	Perform bank repair between Station 6780 to Station 6850.	
	Perform concrete repair/replacement between Station 6353 to Station 6403	
	and Station 6659 to Station 6710.	
Maintenance Activities Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal	
	Sediment removal	
	Concrete repair	
	Bank repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	Yes (multiple options); see Appendix A-4	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	Yes; see Appendix A-4	
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen channel	

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

Existing Plans and/or As-Builts?	Yes; 12983-1-D & 12983-2-D	
Substrate Detail	Earthen bottom and banks	
Facility Dimensions	Length: 801 feet	
(Approximate)	Top width: 18–39 feet	
(Арргохіпіасе)	Bottom width: 2.5–13.5 feet	
	Depth: 2-7 feet	
Authorized Facility Maintenance	Length: Channel: 645 feet; Culvert: 156 feet	
Area	Width: 13–26 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	loading, staging, and/or stockpiling. The boundaries of these areas may	
Al cu(s)	also be modified as long as changes do not result in new significant	
	environmental impacts.	
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, fuel-	
_qa.pc.it	powered hand tools, sweeper	
Schedule	Up to approximately 14 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures		
	area	
	Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to disposal site	
Traffic Control	No	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	1. Within maintenance area: Yes, limited suitable habitat present	
	2. Adjacent to maintenance area: Yes, limited suitable habitat present	
	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	

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

Flow Management	As needed:	
110W Management	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	
Downstream Sensitive Waters	No	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	Yes; see Appendix A-4	
Erosion Control Recommendation	Location: Station to be determined	
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Chollas Creek - Megan Facility Group

Segment Names (Facility numbers):

Megan 1 (5-04-260)

Megan 2 (5-04-262)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek Unnamed Tributary (04)
Facility Group Name	Chollas Creek - Megan
Segment Name (Facility Number)	Megan 1 (5-04-260)
	Megan 2 (5-04-262)
Substrate	Megan 1 / Concrete
	Megan 2 / Earthen
Location	About 400 feet southwest of the intersection of Megan Way and
	Euclid Avenue
MMP Map No(s).	N/A
Facility Inspection No.	312
Other Former Names	None



Figure 1: Vicinity Map of Chollas Creek - Megan Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon	
Highest Priority Water Ouality Condition	Bacteria; dissolved copper, lead, and zinc	

Chollas Creek - Megan	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc	

Megan Segment 1 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Chollas Creek unnamed tributary, upstream of Chollas Creek
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 849 feet
Top-of-Bank Width	Approximately 15–24 feet
Bottom Facility Width	Approximately 3–6 feet
Facility Depth	Approximately 4–6 feet
Adjacent Land Use	Open Space, Other Residential, Single-Family Residential, Transportation
As-Built Drawing Number	16653-D (Reach 1) & 11812-D (Reach 2)
Coastal Zone	No



Figure 1: July 2017, looking upstream at concrete ditch

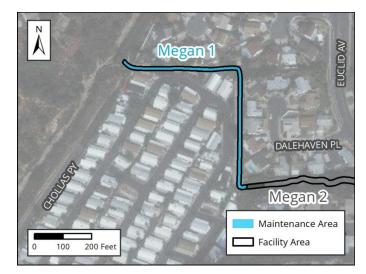


Figure 2: Vicinity Map of Megan Segment 1

Facility Maintenance History

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

History of Mainte	enance	Prior to 2011: Unknown
		January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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. 1

		t of vegetation in the segment varied from light to moderate and eposition was observed in some portions of the segment and the				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	295	430	502	602	675	747
Hydraulic Capacity of Facility						
Current Capacity		602 cfs				
Proposed MWMP Maintained Capacity 747 cfs						
Maintenance Recommendation		Remove deposited sediment, debris, and vegetation from Station 2 to Station 851. Concrete repair/replacement between Stations 2 and 851. Perform bank repair behind right (north/northeast) bank of concrete ditch from Station 846 to 851. Perform bank repair and riprap replacement at Station 2.				
In-Stream Post-Maintenance Erosion Control Recommendation		None				

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Riparian scrub (southern willow scrub; concrete-lined)
Adjacent Vegetation	Coastal sage scrub (baccharis-dominated)
	Developed land
	Disturbed coastal sage scrub
	Natural flood channel
	Ornamental plantings
Habitat and Wildlife	There is limited suitable habitat contained within the facility for wildlife. However, suitable coastal sage scrub habitat for coastal California gnatcatcher is present to the west of the channel.
MHPA	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA
	boundary is located approximately 40 feet west of the ditch.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1966 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Geologic Resources (GEO)	MM-BIO-6
EP-GEO-1	MM-BIO-7
Health and Safety/Hazards (HAZ)	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
EP-HAZ-3	MM-HR-1
Land Use (LU)	MM-HR-2
EP-LU-1	Noise (NOI)
Solid Waste (SW)	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Chollas Creek - Megan
Segment Name	Megan 1
Facility No.	5-04-260
Facility Location	From downstream end of Megan 2 segment to Chollas Creek just
	downstream of a pedestrian bridge
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per as-built design dimensions and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove deposited sediment, debris, and vegetation from Station 2 to
Recommendation ²	Station 851.
	Concrete repair/replacement between Stations 2 and 851.
	Perform bank repair behind right (north/northeast) bank of concrete ditch
	from Station 846 to 851.
	Perform bank repair and riprap replacement at Station 2.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
	Bank repair
Maintenance Method	Excavation; mechanized equipment outside the ditch
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	Yes (multiple options); see Appendix A-4
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete ditch
Existing Plans and/or As-Builts?	Yes; 16653-D (Reach 1) & 11812-D (Reach 2)
Substrate Detail	Concrete bottom and banks

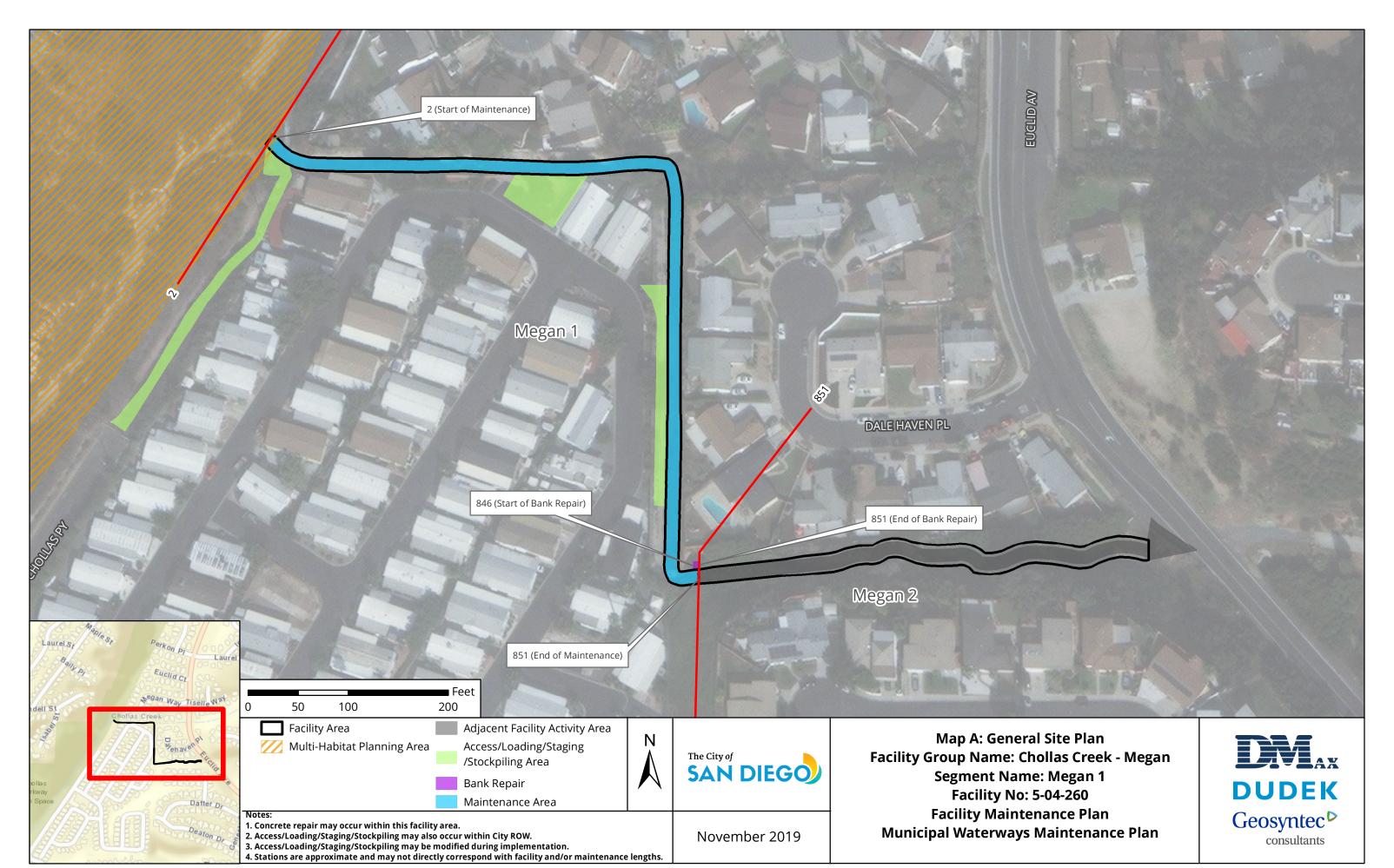
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² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Facility Dimensions	Length: 849 feet
(Approximate)	Top width: 15–24 feet
(Approximate)	Bottom width: 3–6 feet
Authorized Facility Maintenance	Depth: 4-6 feet
Authorized Facility Maintenance	Length: Ditch: 849 feet
Area	Width: 15–24 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-
	powered hand tools, wheelbarrow, sweeper
Schedule	Up to approximately 21 working days
Maintenance Crew	Approximately 8–16 people
Routine Maintenance Procedures	1. Hand tools and wheelbarrow used in ditch to move material to
	Gradall/excavator at access/loading area
	2. Bobcat/skid-steer enters or is lowered into ditch at access/loading area
	3. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading
	area
	4. Gradall/excavator scoops material from ditch and loads dump truck
	5. Dump truck hauls material to legal disposal site
Traffic Control	No
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
3 ,	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

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

Flow Management	As needed:	
1 10W Management		
	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Megan Segment 2 Detail

Facility Type	Earthen ditch
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Chollas Creek unnamed tributary, upstream of Chollas Creek
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 464 feet
Top-of-Bank Width	Approximately 23 feet
Bottom Facility Width	Approximately 5 feet
Facility Depth	Approximately 6 feet
Adjacent Land Use	Other Residential, Single-Family Residential, Transportation
As-Built Drawing Number	11812-D
Coastal Zone	No



Figure 1: July 2017, looking upstream near upstream end at vegetation



Figure 2: Vicinity Map of Megan Segment 2

Facility Maintenance History

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

History of Mainte	enance	Prior to 2011: Unknown January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pre	evious Impacts	None

Hydrology and Hydraulics Summary

Current Conditions Affecting

Recommendation

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.¹

The vegetation observed ranged from medium to dense with the flow path of

Location: Station to be determined

Facility Capacity		the ditch mainly unobstructed. At the transition to the concrete ditch, sediment deposition was noted within the earthen ditch flowline as well as failure of a portion of the earthen bank.				
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	106	204	239	286	321	355
second [cfs])						
Hydraulic Capacity	of Facility					
Current Capacity 355 cfs						
Proposed MWM	IP Maintaine	Maintained Capacity 355 cfs				
Maintenance RecommendationRemove accumulated sediment and vegetation froside (left bank) of the ditch between Stations 851 areturn the ditch flow path to originally designed co		51 and 913 to				
In-Stream Post-Maintenance Erosion Control			Yes; see	Appendix A-4		

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

Biological Resource Summary

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

Facility Vegetation	Natural flood channel
Adjacent Vegetation	 Developed concrete-lined channel Developed land Disturbed coastal sage scrub Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within the facility and the majority of coastal sage scrub present adjacent to the facility is disturbed and not suitable for coastal California gnatcatcher
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 600 feet north west of the ditch.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1953–1964 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	Historic, Archaeological, and Tribal Cultural
	Resources (HR and CR)
Hydrology (HYD)	MM-HR-1
EP-HYD-1	MM-HR-2
Paleontological Resources (PAL)	Noise (NOI)
EP-PAL-1	MM-NOI-1
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Chollas Creek - Megan
Segment Name	Megan 2
Facility No.	5-04-262
Facility Location	From outlet of culvert that crosses under Euclid Avenue to upstream end of Megan 1 segment
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen ditch per as-built dimensions and Hydrology and Hydraulics recommendations. Additionally, vegetation may be trimmed/removed within portions of the facility identified as access.
Hydrology and Hydraulics	Remove accumulated sediment and vegetation from the south side (left
Recommendation ²	bank) of the ditch between Stations 851 and 913 to return the ditch flow path to originally designed condition.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen ditch
Existing Plans and/or As-Builts?	Yes; 11812-D
Substrate Detail	Earthen bottom and banks
Facility Dimensions	Length: 464 feet
(Approximate)	Top width: 23 feet
	Bottom width: 5 feet
	Depth: 6 feet

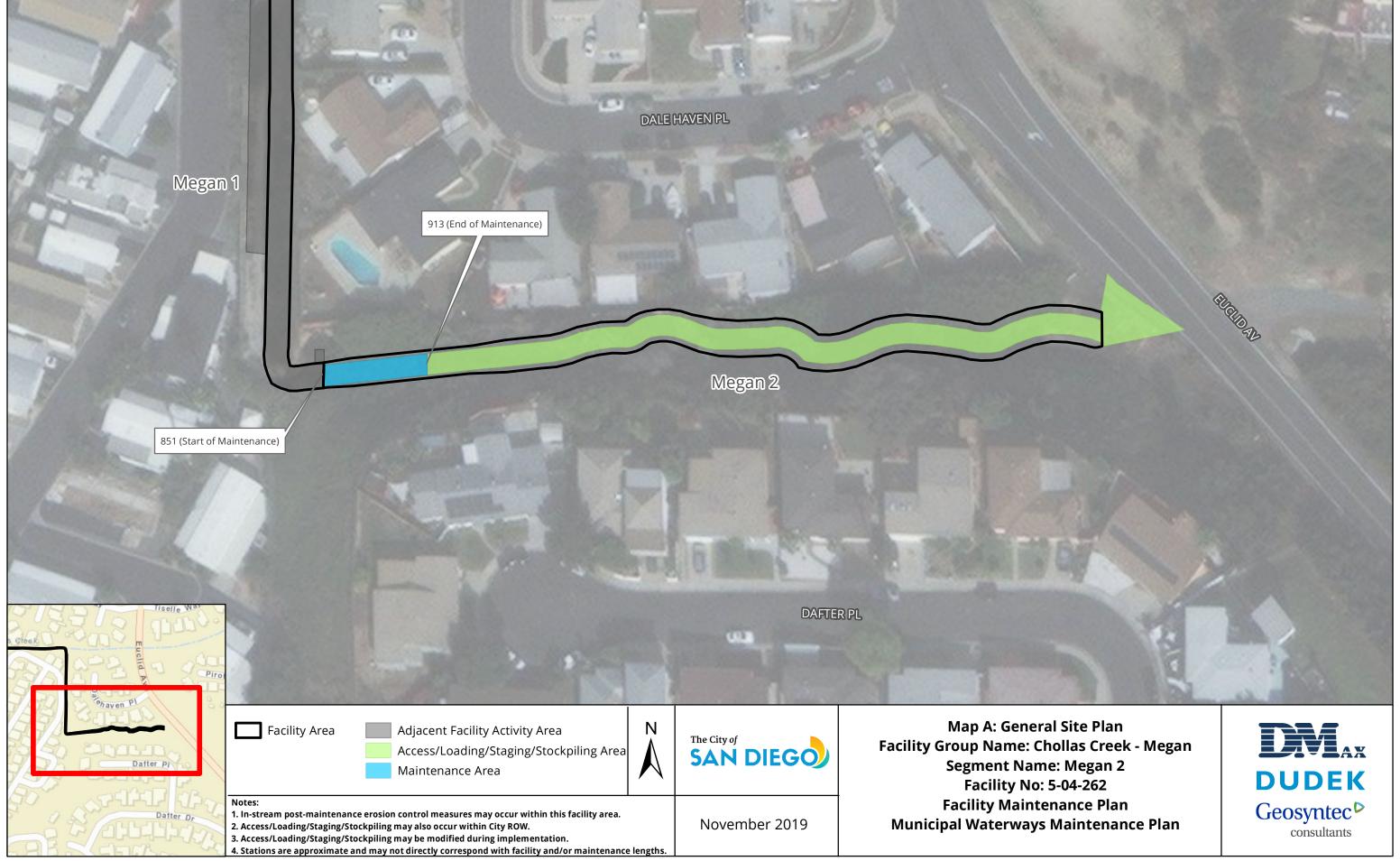
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² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Facility Maintenance	Length: Ditch: 62 feet
Area	Width: 5 feet
Maintenance Quantities	To be determined at time of maintenance
-	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,
	sweeper
Schedule	Up to approximately 14 working days
Maintenance Crew	Approximately 8–16 people
Routine Maintenance Procedures	Riprap Restoration:
	1. Gradall/excavator stationed above ditch places riprap into ditch
	2. Bulldozer/track-steer, and/or Gradall/excavator enters ditch at
	access/loading area
	3. Bulldozer/track-steer, loader, and/or Gradall/excavator clears area and
	transports/places riprap into place
	4. Gradall/excavator scoops material from ditch and loads dump truck
	5. Dump truck hauls material to legal disposal site
	3
	Routine Maintenance:
	Bulldozer/track-steer enters or is lowered into ditch at access/loading
	area
	Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	Gradall/excavator scoops material from ditch and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
Trainic Control	res, coordinate with the City of San Diego

	Additional Maintenance Information			
Pre-Maintenance Meeting	Prior to the start of any maintenance activity, a qualified specialist(s) shall			
8	conduct the following on site:			
	1. Review sensitive biological, historical, and water quality resources; if			
	present, flag/delineate			
	Conduct appropriate training			
	B. Review Best Management Practices (BMP) installation			
	4. If needed, review pre- and during-maintenance pumping procedure			
	5. Conduct pre-maintenance site photo documentation			
Biology	Suitable habitat for sensitive species ³ :			
2.0.069	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			
Flow Management	As needed:			
Tion management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	Yes; see Appendix A-4			
Erosion Control Recommendation	Location: Station to be determined			
Post-Maintenance Procedures	Conduct post-maintenance procedures as follows:			
	1. Demobilize equipment			
	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			
Other Notes	None			

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



Facility Maintenance Plan

Chollas Creek - 54th St Facility Group

Segment Name (Facility number): 54th St 1 (5-04-280)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	Chollas Creek Unnamed Tributary (04)
Facility Group Name	Chollas Creek - 54th St
Segment Name (Facility Number)	54th St 1 (5-04-280)
Substrate	54th St 1 / Concrete
Location	South of Redwood Street and is bound by 54th Street to the west and by Thornton Place to the east
MMP Map No(s).	N/A
Facility Inspection No.	305
Other Former Names	None



Figure 1: Vicinity Map of Chollas Creek - 54th St Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22			
Adopted TMDLs	Adopted TMDLs Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon		
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc		

Chollas Creek - 54th St	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)				
Beneficial Uses • Non-contact Water Recreation (REC-2)				
	Warm Freshwater Habitat (WARM)			
Wildlife Habitat (WILD)				
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc			

54th St Segment 1 Detail

Facility Type	Concrete ditch		
Substrate Detail	Gunite bottom and banks		
Location Within Watershed	Upper reach of Chollas Creek unnamed tributary, upstream of Chollas Creek		
Tributaries (listed from downstream to	No named tributaries		
upstream)			
Facility Length	Approximately 346 feet		
Top-of-Bank Width	Approximately 6–20 feet		
Bottom Facility Width	Approximately 3 feet		
Facility Depth	Approximately 3.5 feet		
Adjacent Land Use	Commercial, Multi-Family Residential, Other Residential, Single-Family Residential, Transportation, Vacant		
As-Built Drawing Number	9373-L		
Coastal Zone	No		



Figure 1: July 2017, looking downstream towards the culvert; conveys flows beneath parking lot, then discharges back into ditch



Figure 2: Vicinity Map of 54th St Segment 1

Facility Maintenance History

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

History of Mainte	enance	Prior to 2011: Unknown January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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.¹

Current Conditions Facility Capacity	Affecting	Accumulated sediment and patches of dense vegetation in the bottom of the ditch were observed and sediment deposition was estimated to be 2 inches within the ditch and up to 2 feet within the culvert				
Hydrologic Peak Flo)WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	73	93	108	130	146	163
Hydraulic Capacity	of Facility					
Curre	Current Capacity 40 cfs					
Proposed MWMP Maintained Capacity 93 cfs						
Maintenanc	e Recommend	ation	Remove accumulated sediment, debris, and vegetation from Station 34 to Station 135, and Station 217 to 380. Remove accumulated sediment and debris in the culvert from Station 135 to 217, and at Station 34.			
In-Stream Post-Maintenance Erosion Control Recommendation			None			

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

Biological Resource Summary

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

Facility Vegetation	 Developed concrete-lined channel Riparian scrub (southern willow scrub; concrete-lined)
Adjacent Vegetation	 Developed land Disturbed land Eucalyptus woodland Ornamental plantings
Habitat and Wildlife	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.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; c. 1966–1968 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Chollas Creek - 54th St			
Segment Name	54th St 1			
Facility No.	5-04-280			
Facility Location	From 200 feet south of Redwood Street to culvert entrance to the storm			
	drain system in 54th Street			
Coastal Zone	No			
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per as-built dimensions and Hydrology			
	and Hydraulics recommendations			
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 34 to			
Recommendation ²	Station 135, and Station 217 to 380.			
	Remove accumulated sediment and debris in the culvert from Station 135			
	to 217, and at Station 34.			
Maintenance Activities	Vegetation grubbing, trimming, and removal			
	Invasive plant species treatment and removal			
	Sediment removal			
	Concrete repair			
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch			
	Temporary access/loading			
	Temporary staging			
	Temporary diversions			
	Hand removal of vegetation			
Bank Repair	No			
Concrete Repair	Yes; see Appendix A-4			
Concrete/Gabion Structure Repair	No			
and Maintenance				
Culvert Maintenance	Yes; see Appendix A-4			
Post-Maintenance Erosion Control	rol No			
Recommendation				
Trash/Debris Fence Repair and	No			
Maintenance				
Facility Type	Concrete ditch			
Existing Plans and/or As-Builts?	Yes; 9373-L			
Substrate Detail	Gunite bottom and banks			

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

Facility Dimensions	Length: 346 feet			
(Approximate)	Top width: 6–20 feet			
(Approximate)	Bottom width: 3 feet			
Authorized Facility Maintonance	Depth: 3.5 feet			
Authorized Facility Maintenance	Length: Ditch: 264 feet; Culvert: 82 feet			
Area	Width: 6–19 feet			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	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			
Area(s)	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.			
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-			
	powered hand tools, wheelbarrow, sweeper			
Schedule	Up to approximately 7 working days			
Maintenance Crew	Approximately 8–12 people			
Routine Maintenance Procedures	1. Hand tools and wheelbarrow used in ditch to move material to			
	Gradall/excavator at access/loading area			
	2. Bobcat/skid-steer enters or is lowered into ditch at access/loading area			
	3. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading			
	area			
	4. Gradall/excavator scoops material from ditch and loads dump truck			
	5. Dump truck hauls material to legal disposal site			
Traffic Control	No			
	Additional Maintenance Information			
Pre-Maintenance Meeting	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			
Biology	Suitable habitat for sensitive species ³ :			
3 ,	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			
	a.cao			

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

Flour Managamant	As associated.			
Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	None			



Facility Maintenance Plan

South Chollas Creek -Southcrest Facility Group

Segment Names (Facility numbers):
Alpha 1 (5-05-006)
Ocean View 1 (5-05-008)



Overview

Watershed Management Area (WMA)	San Diego Bay		
Watershed (Number)	Pueblo San Diego (5)		
Hydrologic Subarea	908.22		
Drainage Name (Number)	South Chollas Creek (05)		
Facility Group Name	South Chollas Creek - Southcrest		
Segment Name (Facility Number)	Alpha 1 (5-05-006)		
	Ocean View 1 (5-05-008)		
Substrate	Alpha 1 / Earthen and concrete		
	Ocean View 1 / Earthen and concrete		
Location	About 500 feet upstream of the Ocean View Boulevard bridge to		
	600 feet upstream of Interstate 5 (I-5)		
MMP Map No(s).	95, 97, 97a, 98		
Facility Inspection No.	95, 97, 97a, 98		
Other Former Names	Southcrest, 40th Street		

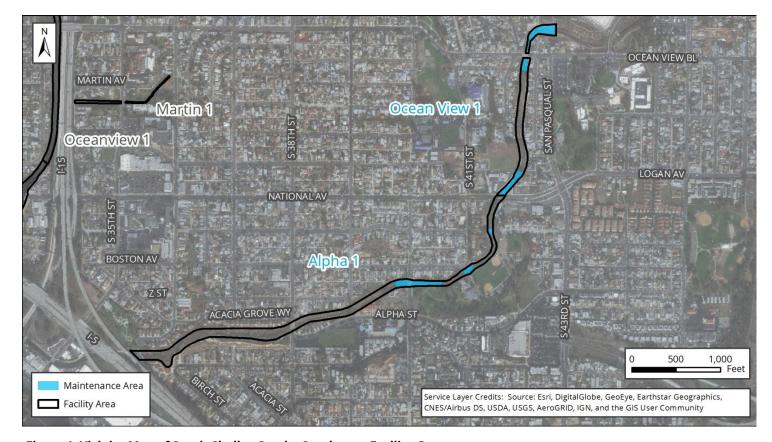


Figure 1: Vicinity Map of South Chollas Creek - Southcrest Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea	908.22
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Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek
	diazinon

Highest Priority Water Quality Condition Bacteria; dissolved copper, lead, and zinc

South Chollas Creek - Southcrest

Beneficial Uses	Be	ne	fic	ial	Us	es
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303(d) listed Impairments No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)

enonas ereek (1113t downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc	

Alpha Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 1662-3467: Earthen bottom, earthen left bank, and concrete right bank Stations 3467-5135: Earthen bottom and concrete banks Stations 5135-5627: Earthen bottom and banks Stations 5627-6437: Earthen bottom, earthen left bank, and concrete right bank Stations 6437-6580: Earthen bottom and riprap banks Stations 6580-6687: Concrete bottom and banks
Location Within Watershed	Lower reach of South Chollas Creek, upstream of Chollas Creek
Tributaries (listed from downstream to upstream)	South Chollas Creek, South Chollas Creek Encanto Branch
Facility Length	Approximately 5,024 feet
Top-of-Bank Width	Approximately 46–105 feet
Bottom Facility Width	Approximately 16–85 feet
Facility Depth	Approximately 6–16 feet
Adjacent Land Use	Commercial, Industrial, Multi-Family Residential, Office, Open Sapce, Parks, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	2420-2423-D, 7662-7669-D, 11275-D, 15690-D, 18816-D, 18817-D, & 5796-5798-L
Coastal Zone	No

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



Figure 1: July 2017, looking downstream under the pedestrian bridge located just east of I-5



Figure 2: Vicinity Map of Alpha Segment 1

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 – 2015: No maintenance conducted 2016: Invasive vegetation removal conducted

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 None401 None1602 None

1602 None
Mitigation for Previous Impacts None

Recommendation

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.²

Current Conditions Facility Capacity	S Affecting	The vegetation observed ranged from light to dense with evidence of sedim deposition			dence of sediment	
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	550	1,300	2,000	3,000	3,900	5,300
second [cfs])						
Hydraulic Capacity of Facility						
Curr	ent Capacity		550 cfs			
Proposed MWMP Maintained Capacity 1,300 cfs						
Maintenance Recommendation		Remove accumulated sediment, debris, and overgrown vegetation from Station 4788 to Station 5135, Station 5613 to Station 5734, and Station 6195 to 6277. Trim vegetation from Station 5135 to Station 5316. Perform bank repair on the earthen bank from Station 5456 to Station 5556.				
			Private segme	o Station 6195 a	nd Station 6277	property owners to Station 6580).
In-Stream Post-Ma	iintenance Ero	osion Control		Yes; see	Appendix A-4	

Location: Station to be determined

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland	
	 Disturbed wetland (Arundo-dominated) 	
	Freshwater marsh	
	Natural flood channel	
	Riparian forest (southern willow forest)	
	Riparian scrub	
Adjacent Vegetation	Coastal sage scrub	
	Developed land	
	Disturbed land	
	Disturbed wetland (Arundo-dominated)	
	Eucalyptus woodland	
	Ornamental plantings	
Habitat and Wildlife	The habitat within and adjacent to the facility provides potential nesting and/or foraging for raptor and sensitive bird species, including least Bell's vireo and coastal California gnatcatcher	
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)	
Mitigation Within Facility	Proposed as part of the "FY16 Emergency Wetlands Mitigation Plan"	

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	
Resource Identified in APE	P-37-025706; P-37-034479
Resource Identified Adjacent to APE	None
Resource Type	Shell scatter; Pedestrian bridge

Historical Resources	
Resource Identified in APE	Channel; 1959, 1964 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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.

Biological Resources (BIO) EP-BIO-1 EP-BIO-2 Biological Resources (BIO) EP-BIO-3a, 3b, 3c MM-BIO-1a EP-BIO-5 EP-BIO-6 MM-BIO-3 EP-BIO-6 MM-BIO-6 Geologic Resources (GEO) MM-BIO-6 Health and Safety/Hazards (HAZ) EP-HAZ-3 Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) EP-SW-2 EP-SW-2 EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-7 EP-SW-7 EP-SW-8 Water Quality (WQ) FER-WOL-1	Environmental Protocols (EP)	Mitigation Measures (MM)
EP-BIO-2 Biological Resources (BIO) 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 Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) MM-BIO-6 Health and Safety/Hazards (HAZ) MM-BIO-6 EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-SW-2 EP-SW-2 EP-SW-3 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ) Water Quality (WQ)	Biological Resources (BIO)	Air Quality (AQ)
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 Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-SP-AL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-3 EP-SW-4 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-BIO-1	MM-AQ-1
EP-BIO-4 MM-BIO-2 EP-BIO-5 MM-BIO-3 EP-BIO-6 MM-BIO-4 Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-SP-L-1 Solid Waste (SW) EP-SW-3 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ) Water Quality (WQ)	EP-BIO-2	Biological Resources (BIO)
EP-BIO-5 MM-BIO-3 EP-BIO-6 MM-BIO-4 Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-BIO-3a, 3b, 3c	MM-BIO-1a
EP-BIO-6 MM-BIO-4 Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-BIO-4	MM-BIO-2
Geologic Resources (GEO) MM-BIO-5 EP-GEO-1 MM-BIO-6 Health and Safety/Hazards (HAZ) Historic, Archaeological, and Tribal Cultural Resources (HR and CR) EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-5 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-BIO-5	MM-BIO-3
EP-GEO-1MM-BIO-6Health and Safety/Hazards (HAZ)Historic, Archaeological, and Tribal Cultural Resources (HR and CR)EP-HAZ-3MM-HR-1Hydrology (HYD)MM-HR-2EP-HYD-1Noise (NOI)Paleontological Resources (PAL)MM-NOI-1EP-PAL-1Solid Waste (SW)EP-SW-2EP-SW-3EP-SW-3EP-SW-4EP-SW-4EP-SW-5EP-SW-5EP-SW-6EP-SW-7EP-SW-7EP-SW-8Water Quality (WQ)	EP-BIO-6	MM-BIO-4
Health and Safety/Hazards (HAZ) EP-HAZ-3 MM-HR-1 Hydrology (HYD) EP-HYD-1 Paleontological Resources (PAL) EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	Geologic Resources (GEO)	MM-BIO-5
Resources (HR and CR) EP-HAZ-3	EP-GEO-1	MM-BIO-6
EP-HAZ-3 MM-HR-1 Hydrology (HYD) MM-HR-2 EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-PAL-1 Solid Waste (SW) EP-SW-2 FP-SW-2 EP-SW-3 FP-SW-4 EP-SW-4 FP-SW-5 EP-SW-5 FP-SW-6 EP-SW-7 FP-SW-8 Water Quality (WQ) Water Quality (WQ)	Health and Safety/Hazards (HAZ)	Historic, Archaeological, and Tribal Cultural
Hydrology (HYD) EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)		Resources (HR and CR)
EP-HYD-1 Noise (NOI) Paleontological Resources (PAL) MM-NOI-1 EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-HAZ-3	MM-HR-1
Paleontological Resources (PAL) EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-7 EP-SW-8 Water Quality (WQ)	Hydrology (HYD)	MM-HR-2
EP-PAL-1 Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-HYD-1	Noise (NOI)
Solid Waste (SW) EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	Paleontological Resources (PAL)	MM-NOI-1
EP-SW-2 EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-PAL-1	
EP-SW-3 EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	Solid Waste (SW)	
EP-SW-4 EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-SW-2	
EP-SW-5 EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-SW-3	
EP-SW-6 EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-SW-4	
EP-SW-7 EP-SW-8 Water Quality (WQ)	EP-SW-5	
EP-SW-8 Water Quality (WQ)	EP-SW-6	
Water Quality (WQ)	EP-SW-7	
	EP-SW-8	
FP-WO-1	Water Quality (WQ)	
'''\	EP-WQ-1	

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.

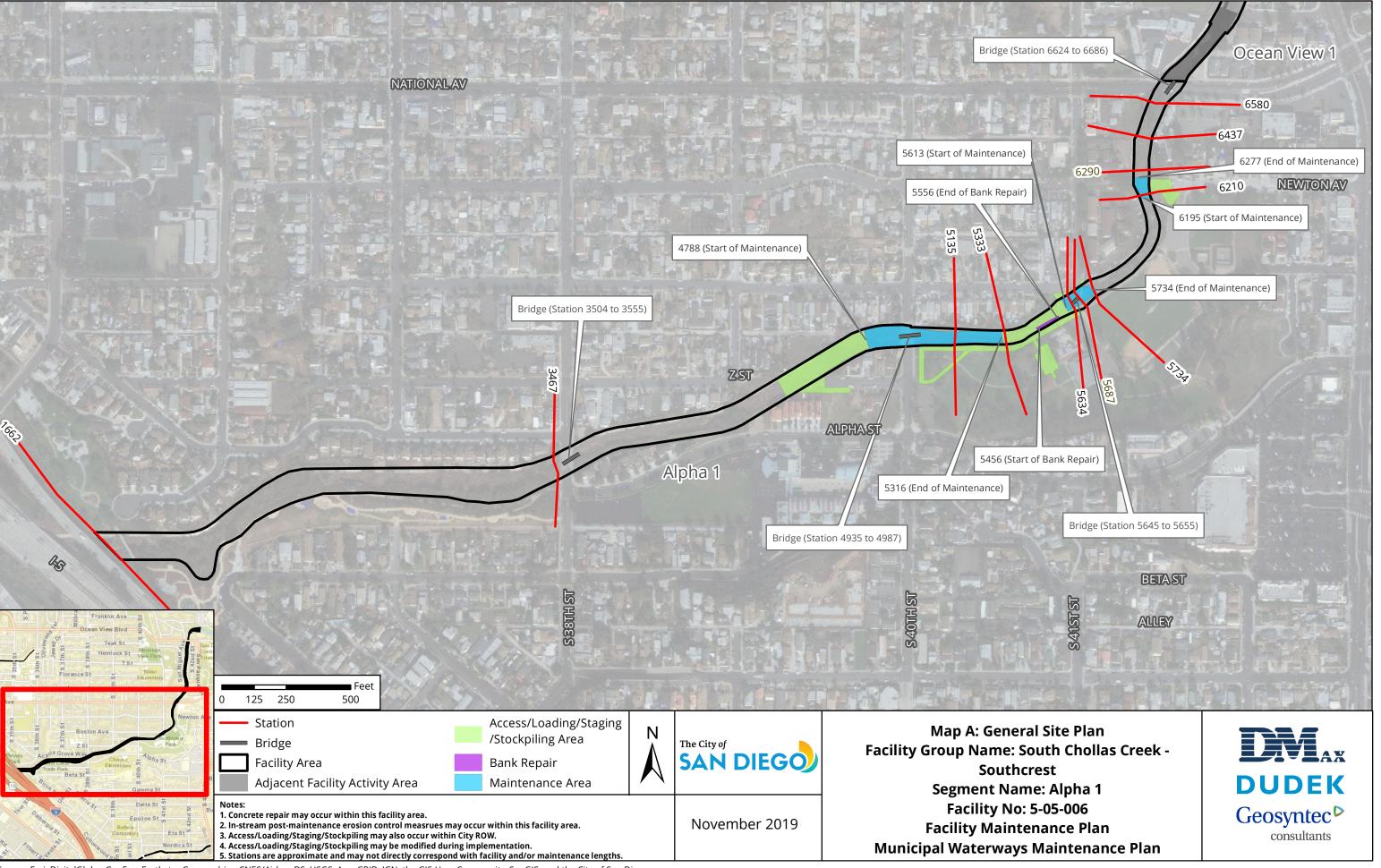
Facility Group	South Chollas Creek - Southcrest		
Segment Name	Alpha 1		
Facility No.	5-05-006		
Facility Location	From the downstream end of the Ocean View segment to 600 feet		
	upstream of Interstate 5 (I-5)		
Coastal Zone	No		
MWMP Proposed Maintenance	Maintenance of channel per as-built dimensions and Hydrology and		
	Hydraulics recommendations		
Hydrology and Hydraulics	Remove accumulated sediment, debris, and overgrown vegetation from		
Recommendation ³	Station 4788 to Station 5135, Station 5613 to Station 5734, and Station 6195		
	to 6277.		
	Trim vegetation from Station 5135 to Station 5316.		
	Perform bank repair on the earthen bank from Station 5456 to Station		
	5556.		
	Private segments to be maintained by private property owners (Station		
	5734 to Station 6195 and Station 6277 to Station 6580).		
Maintenance Activities	Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal		
	Sediment removal		
	Concrete repair		
Maintenance Method	Excavation; mechanized equipment inside and outside the channel		
	Temporary access/loading		
	Temporary staging		
	Temporary diversions		
	Hand removal of vegetation		
Bank Repair	Yes (multiple options); see Appendix A-4		
Concrete Repair	Yes; see Appendix A-4		
Concrete/Gabion Structure Repair	No		
and Maintenance			
Culvert Maintenance	No		
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4		
Recommendation			
Trash/Debris Fence Repair and	No		
Maintenance			
Facility Type	Earthen and concrete channel		

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

Frieting Diana and Jay As Builton	V 2420 2422 D 7662 7660 D 44275 D 45600 D 40046 D 40047 D 0
Existing Plans and/or As-Builts?	Yes; 2420-2423-D, 7662-7669-D, 11275-D, 15690-D, 18816-D, 18817-D, & 5796-5798-L
Substrate Detail ³	
Substrate Detail	Stations 1662-3467: Earthen bottom, earthen left bank, and concrete right
	bank
	Stations 3467-5135: Earthen bottom and concrete banks
	Stations 5135-5627: Earthen bottom and banks
	Stations 5627-6437: Earthen bottom, earthen left bank, and concrete right
	bank
	Stations 6437-6580: Earthen bottom and riprap banks
Facility Discouries	Stations 6580-6687: Concrete bottom and banks
Facility Dimensions	Length: 5,024 feet
(Approximate)	Top width: 46–105 feet
	Bottom width: 16–85 feet
Analysis described as 1 c	Depth: 6–16 feet
Authorized Facility Maintenance	Length: Channel: 1,007 feet
Area	Width: 20–68 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,
	fuel-powered hand tools, sweeper
Schedule	Up to approximately 70 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Gradall/excavator, loader, and bulldozer/track-steer enter channel at
	access/loading area
	2. Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	3. Gradall/excavator and loader scoop material from channel and load
	dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No
	Additional Maintenance Information
Pre-Maintenance Meeting	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

Biology	Suitable habitat for sensitive species ⁴ :		
. ,	1. Within maintenance area: Yes		
	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		
Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	Yes; see Appendix A-4		
Erosion Control Recommendation	Location: Station to be determined		
Post-Maintenance Procedures	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		
	7. If maintenance occurs in privately owned sections, post-maintenance		
	erosion control measures are recommended to be evaluated by the private		
	property owners		

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



Ocean View Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 6687-6942: Concrete bottom and banks
	Stations 6942-8200: Earthen bottom and concrete banks
	Stations 8200-8910: Concrete bottom and banks
Location Within Watershed	Lower reach of South Chollas Creek, immediately upstream of Chollas Creek (Alpha Segment 1)
Tributaries (listed from downstream to	South Chollas Creek, South Chollas Creek Encanto Branch
upstream)	
Facility Length	Approximately 2,223 feet
Top-of-Bank Width	Approximately 53–195 feet
Bottom Facility Width	Approximately 11–100 feet
Facility Depth	Approximately 8–14 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Office, Open Space, Parks, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	20117-D & 20116-D
Coastal Zone	No



Figure 1: July 2017, looking downstream toward the start of the concrete bottom channel



Figure 2: Vicinity Map of Ocean View Segment 1

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

Facility Maintenance History

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

	D 1 1 2044 II I
History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.²

Current Conditions	S Affecting	The channel was relatively clean with very little evidence of vegetation or				
Facility Capacity		sediment deposition				
Hydrologic Peak Flo	Hydrologic Peak Flows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	550	1,300	2,000	3,000	3,900	5,300
second [cfs])						
Hydraulic Capacity	Hydraulic Capacity of Facility					
Curr	ent Capacity	1,300 cfs				
Proposed MWM	IP Maintained Capacity 1,300 cfs					
Maintenance Recommendation No maintenance currently proposed; however vegetation,			vegetation,			
		sediment and debris removal, or concrete repair/replacement				
		activities should be performed if the conditions change				
In-Stream Post-Ma	n-Stream Post-Maintenance Erosion Control If maintenance occurs in privately owned section of downst			ion of downstream		
Reco	mmendation	segment (Alpha 1), in-stream post-maintenance erosion contro			ce erosion control	
			measures are recommended to be evaluated by the private			ed by the private
			property owners			

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Disturbed wetland (Arundo-dominated; concrete-lined)
	Ornamental plantings (concrete-lined)
	 Riparian forest (southern willow forest; concrete-lined)
Adjacent Vegetation	Coastal sage scrub
	Developed land
	Disturbed land
	Natural flood channel
	Ornamental plantings
Habitat and Wildlife	There are limited biological resources suitable for sensitive species use within the facility;
	however, there is potential for sensitive species, such as coastal California gnatcatcher, to
	occur in coastal sage scrub habitat adjacent to the channel
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	Proposed as part of the "FY16 Emergency Wetlands Mitigation Plan"
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-1	Noise (NOI)
EP-HAZ-3	MM-NOI-1
Paleontological Resources (PAL)	
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

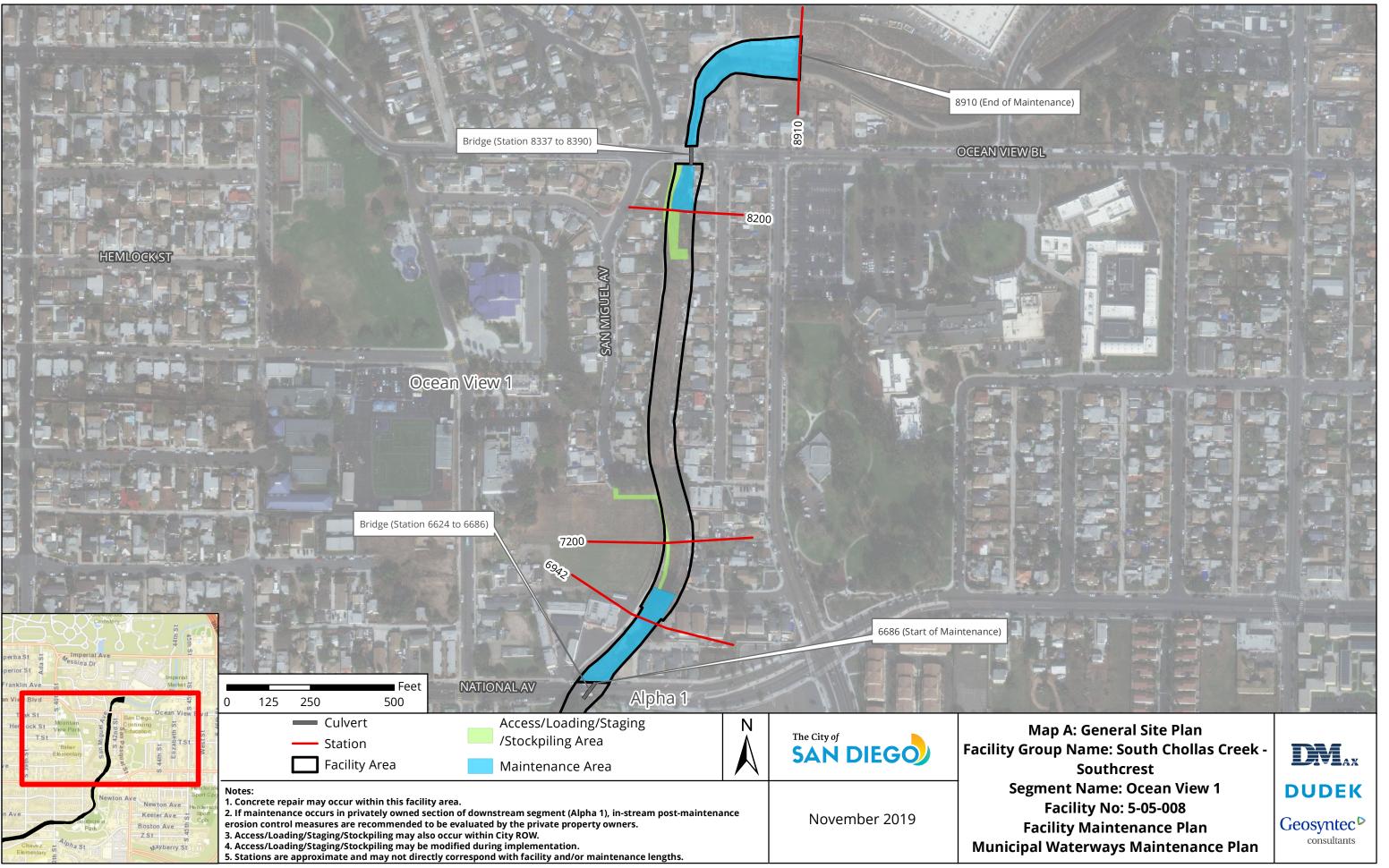
Facility Group	South Chollas Creek - Southcrest		
Segment Name	Ocean View 1		
Facility No.	5-05-008		
Facility Location	From about 500 feet upstream of the Ocean View Boulevard bridge, where		
	the concrete channel segment begins, to the upstream side of the National		
	Avenue bridge		
Coastal Zone	No		
MWMP Proposed Maintenance	Maintenance of channel per as-built dimensions and Hydrology and		
	Hydraulics recommendations		
Hydrology and Hydraulics	No maintenance currently proposed; however vegetation, sediment and		
Recommendation ³	debris removal, or concrete repair/replacement activities should be		
	performed if the conditions change		
Maintenance Activities	Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal		
	Sediment removal		
	Concrete Repair		
Maintenance Method	Excavation; mechanized equipment inside and outside the channel		
	Temporary access/loading		
	Temporary staging		
	Temporary diversions		
	Hand removal of vegetation		
Bank Repair	No		
Concrete Repair	Yes; see Appendix A-4		
Concrete/Gabion Structure Repair	No		
and Maintenance			
Culvert Maintenance	No		
Post-Maintenance Erosion Control	No		
Recommendation			
Trash/Debris Fence Repair and	No		
Maintenance			
Facility Type	Earthen and concrete channel		
Existing Plans and/or As-Builts?	Yes; 20117-D & 20116-D		
Substrate Detail ³	Stations 6687-6942: Concrete bottom and banks		
	Stations 6942-8200: Earthen bottom and concrete banks		
	Stations 8200-8910: Concrete bottom and banks		

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

Facility Dimensions	Length: 2,223 feet			
(Approximate)	Top width: 53–195 feet			
(Approximate)	Bottom width: 11–100 feet			
Authorized Fedility Maintenance	Depth: 8–14 feet			
Authorized Facility Maintenance	Length: Channel: 1,010 feet			
Area	Width: 53–195 feet			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,			
Area(s)	loading, staging, and/or stockpiling. The boundaries of these areas may also be modified as long as changes do not result in new significant			
	also be modified as long as changes do not result in new significant			
	environmental impacts.			
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,			
	fuel-powered hand tools, sweeper			
Schedule	Up to approximately 30 working days			
Maintenance Crew	Approximately 8–12 people			
Routine Maintenance Procedures	1. Gradall/excavator, loader, bulldozer/track-steer enter or are lowered into			
	channel at access/loading area			
	2. Bulldozer/track-steer and/or loader push material to Gradall/excavator			
	and loader at access/loading area			
	3. Gradall/excavator and loader scoop material from channel and loads			
	dump truck			
	4. Dump truck hauls material to legal disposal site			
Traffic Control	No			
	Additional Maintenance Information			
Pre-Maintenance Meeting	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			
Biology	Suitable habitat for sensitive species ⁴ :			
	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			
	and the second s			

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

Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	If maintenance occurs in privately owned section of downstream segment			
Erosion Control Recommendation	(Alpha 1), in-stream post-maintenance erosion control measures are			
	recommended to be evaluated by the private property owners			
Post-Maintenance Procedures	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			
Other Notes	None			



Facility Maintenance Plan

South Chollas Creek - Euclid Facility Group

Segment Names (Facility numbers):

Euclid 1 (5-05-019) (See Appendix A-5)

Euclid 2 (5-05-021)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	South Chollas Creek (05)
Facility Group Name	South Chollas Creek - Euclid
Segment Name (Facility Number)	Euclid 1 (5-05-019) (See Appendix A-5)
	Euclid 2 (5-05-021)
Substrate	Euclid 1 / Earthen
	Euclid 2 / Concrete
Location	About 250 feet southeast of the intersection of Hilltop Drive and
	Euclid Avenue, northwest of the intersection of Market Street and
	Euclid Avenue
MMP Map No(s).	104
Facility Inspection No.	104
Other Former Names	Guymon



Figure 1: Vicinity Map of South Chollas Creek - Euclid Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22			
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek diazinon		
Highest Priority Water Quality Condition	Bacteria; dissolved copper, lead, and zinc		

South Chollas Creek - Euclid	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)				
Beneficial Uses • Non-contact Water Recreation (REC-2)				
Warm Freshwater Habitat (WARM)				
Wildlife Habitat (WILD)				
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc			

Euclid Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed Middle reach of South Chollas Creek, upstream of South Chol (Euclid Segment 1)	
Tributaries (listed from downstream to	South Chollas Creek
upstream)	
Facility Length	Approximately 1,142 feet
Top-of-Bank Width	Approximately 18–39 feet
Bottom Facility Width	Approximately 10–21 feet
Facility Depth	Approximately 4–6 feet
Adjacent Land Use	Open Space, Other Residential, Public Facilities and Utilities, Single- Family Residential, Transportation, Vacant
As-Built Drawing Number	2420-2423-D, 7662-7669-D, & 9983-6-D
Coastal Zone	No



Figure 1: April 2017, representative of concrete portion of channel



Figure 2: Vicinity Map of Euclid Segment 2

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
•	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Current Conditions Facility Capacity	Affecting	The channel was observed to be relatively clean with very little evidence of vegetation or sediment deposition					
Hydrologic Peak Flo	WS						
Storm Event	2-year	5-year	5-year 10-year 25-year 50-year 100-year				
Q (cubic feet per second [cfs])	540	1,250	2,000	3,000	3,900	5,300	
Hydraulic Capacity	of Facility						
Curre	ent Capacity		225 cfs				
Proposed MWM	IP Maintained	Capacity	N/A				
Maintenanc	Maintenance Recommendation No maintenance currently proposed; however vegetation,			vegetation,			
			sediment and debris removal, or concrete repair/replacement				
			activities should be performed if the conditions change				
In-Stream Post-Ma Reco	intenance Eros mmendation	sion Control	rol None				

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	 Developed land Disturbed chaparral Disturbed land Disturbed wetland Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
МНРА	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 north of the channel.
Mitigation Within Facility	Proposed as part of the "FY16 Emergency Wetlands Mitigation Plan"

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Noise (NOI)
EP-HAZ-1	MM-NOI-1
EP-HAZ-3	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	South Chollas Creek - Euclid
Segment Name	Euclid 2
Facility No.	5-05-021
Facility Location	From the southwest corner of Hilltop Drive and 51st Street to inlet of box culvert beneath Euclid Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	No maintenance currently proposed; however vegetation, sediment and
Recommendation ²	debris removal, or concrete repair/replacement activities should be performed if the conditions change
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 2420-2423-D, 7662-7669-D, & 9983-6-D
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 1,142 feet
(Approximate)	Top width: 18–39 feet
	Bottom width: 10–21 feet
	Depth: 4–6 feet

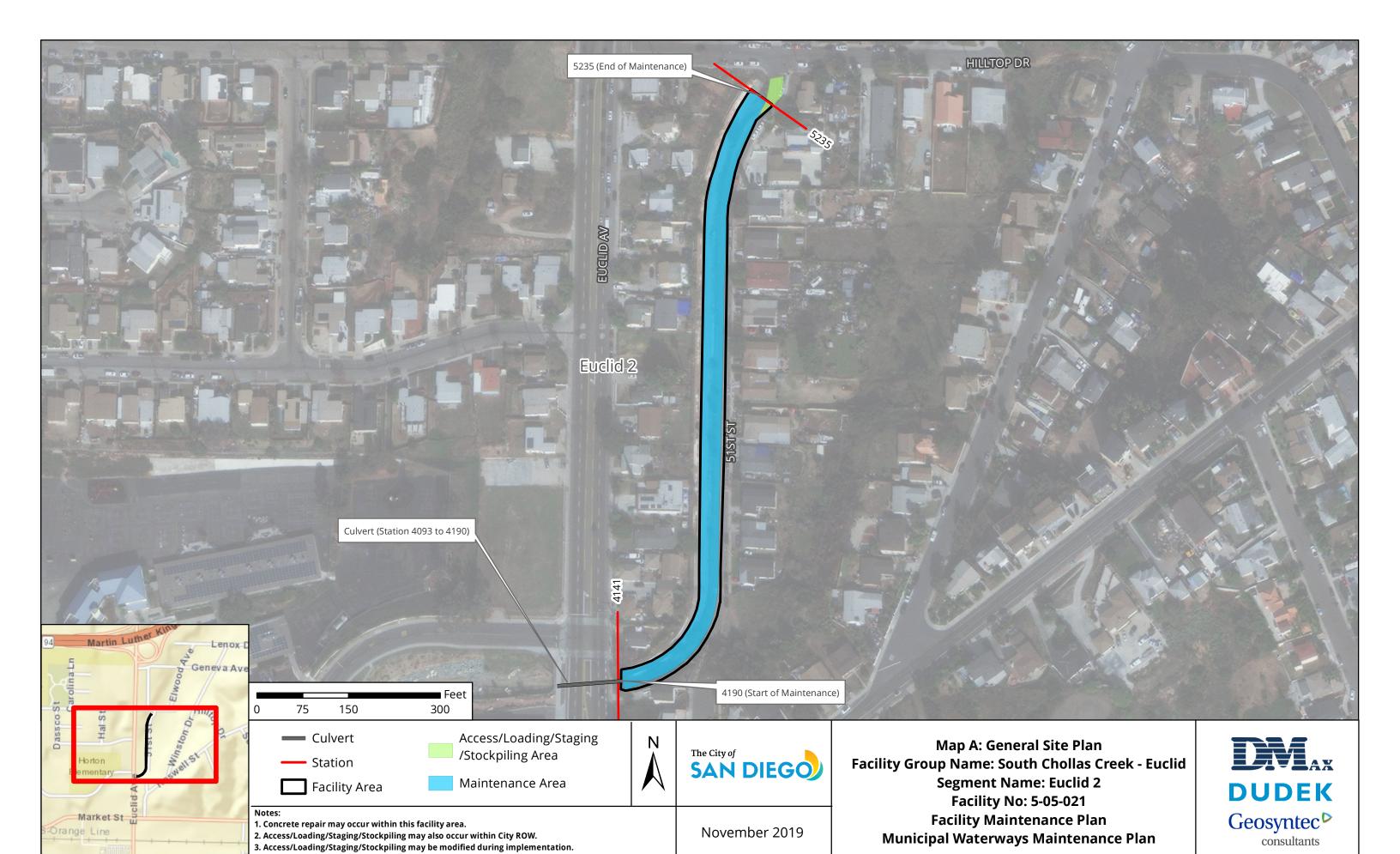
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Facility Maintenance	Length: Channel: 1,045 feet; Culvert: 97 feet
Area	Width: 18–39 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, loader, dump truck, trash pump, sweeper
Schedule	Up to approximately 14 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bobcat/skid-steer and/or loader enter or are lowered into ditch at
	access/loading area
	2. Bobcat/skid-steer and/or loader push material to loader at
	access/loading area
	3. Loader scoops material from ditch and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	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
Flow Management	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
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan
BMP Installation	See Water Pollution Control Plan

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

In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



4. Stations are approximate and may not directly correspond with facility and/or maintenance lengths.

Facility Maintenance Plan

South Chollas Creek - Federal Facility Group

Segment Names (Facility numbers):

Federal 1 (5-05-035)

Federal 2 (5-05-037)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	South Chollas Creek (05)
Facility Group Name	South Chollas Creek - Federal
Segment Name (Facility Number)	Federal 1 (5-05-035)
	Federal 2 (5-05-037)
Substrate	Federal 1 / Earthen and concrete
	Federal 2 / Concrete
Location	About 300 feet north of the intersection of Federal Boulevard and
	Winnett Street, 500 feet north of the intersection of Federal
	Boulevard and 60th Street, and 65 feet south of State Route 94
MMP Map No(s).	101
Facility Inspection No.	101
Other Former Names	None

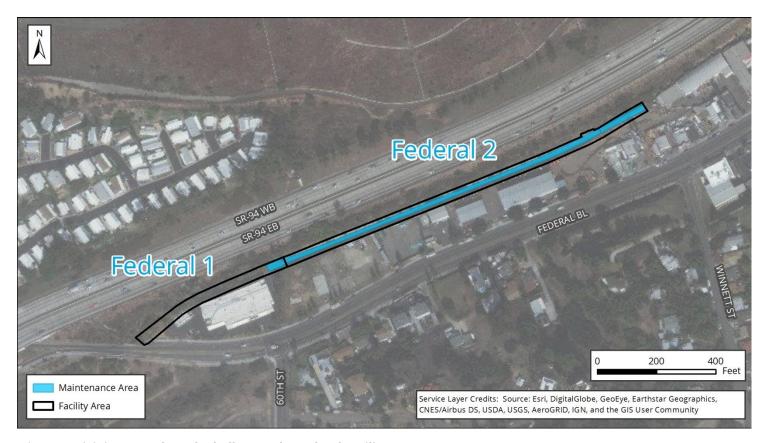


Figure 1: Vicinity Map of South Chollas Creek - Federal Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22		
Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek	
	diazinon	
Highest Priority Water	Bacteria; dissolved copper, lead, and zinc	
Quality Condition		

South Chollas Creek - Federal		
Beneficial Uses		
303(d) listed Impairments	No impairments recorded on the 303(d) List	

Chollas Creek (First downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc	
	·	

Federal Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 363-927: Earthen bottom, earthen right bank, and concrete/vertical retaining wall left bank Stations 927-977: Riprap bottom, earthen right bank, and concrete/vertical retaining wall on left bank
Location Within Watershed	Upper reach of South Chollas Creek, immediately upstream of South Chollas Creek (Euclid Segment 2)
Tributaries (listed from downstream to upstream)	South Chollas Creek
Facility Length	Approximately 614 feet
Top-of-Bank Width	Approximately 28 feet
Bottom Facility Width	Approximately 24 feet
Facility Depth	Approximately 6 feet
Adjacent Land Use	Industrial, Multi-Family Residential, Open Space, Other Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	14482-D & 20039-D
Coastal Zone	No



Figure 1: December 2016, looking upstream

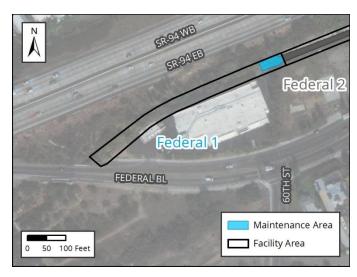


Figure 2: Vicinity Map of Federal Segment 1

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

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 – 2017: No maintenance conducted

2018 – 2019: Routine maintenance conducted

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-2018-00364-MAL (expires March 2022)

401 RWQCB 401 Cert No. R9-2018-0089 (expires March 2022)

1602 CDFW SAA No. 1600-2018-0167-R5 Op Law Letter (expires 03/15/2023)

Mitigation for Previous Impacts HAF/Cornerstone (0.04 acre); Stadium (0.12 acre)

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.²

Facility Capacity	s Affecting	sediment deposition				
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	167	370	580	830	1,100	1,500
Hydraulic Capacity of Facility						
Curr	ent Capacity	580 cfs				

Proposed MWMP Maintained Capacity	830 cfs		
Maintenance Recommendation	Remove accumulated sediment, debris, and vegetation f		

Maintenance RecommendationRemove accumulated sediment, debris, and vegetation from
channel bottom and banks in the riprap portion of the channel
from Station 927 to Station 977

In-Stream Post-Maintenance Erosion Control	None
Recommendation	

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

Biological Resource Summary

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

Facility Vegetation	Ornamental plantings
Adjacent Vegetation	Coastal sage scrub
	Developed land
	Disturbed coastal sage scrub
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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 channel.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 500 feet to the southwest of the channel.
Mitigation Within Facility	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	
Resource Identified in APE	P-37-011165
Resource Identified Adjacent to APE	None
Resource Type	Prehistoric midden and artifact scatter

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-7
EP-HAZ-3	Noise (NOI)
Land Use (LU)	MM-NOI-1
EP-LU-1	
Paleontological Resources (PAL)	
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

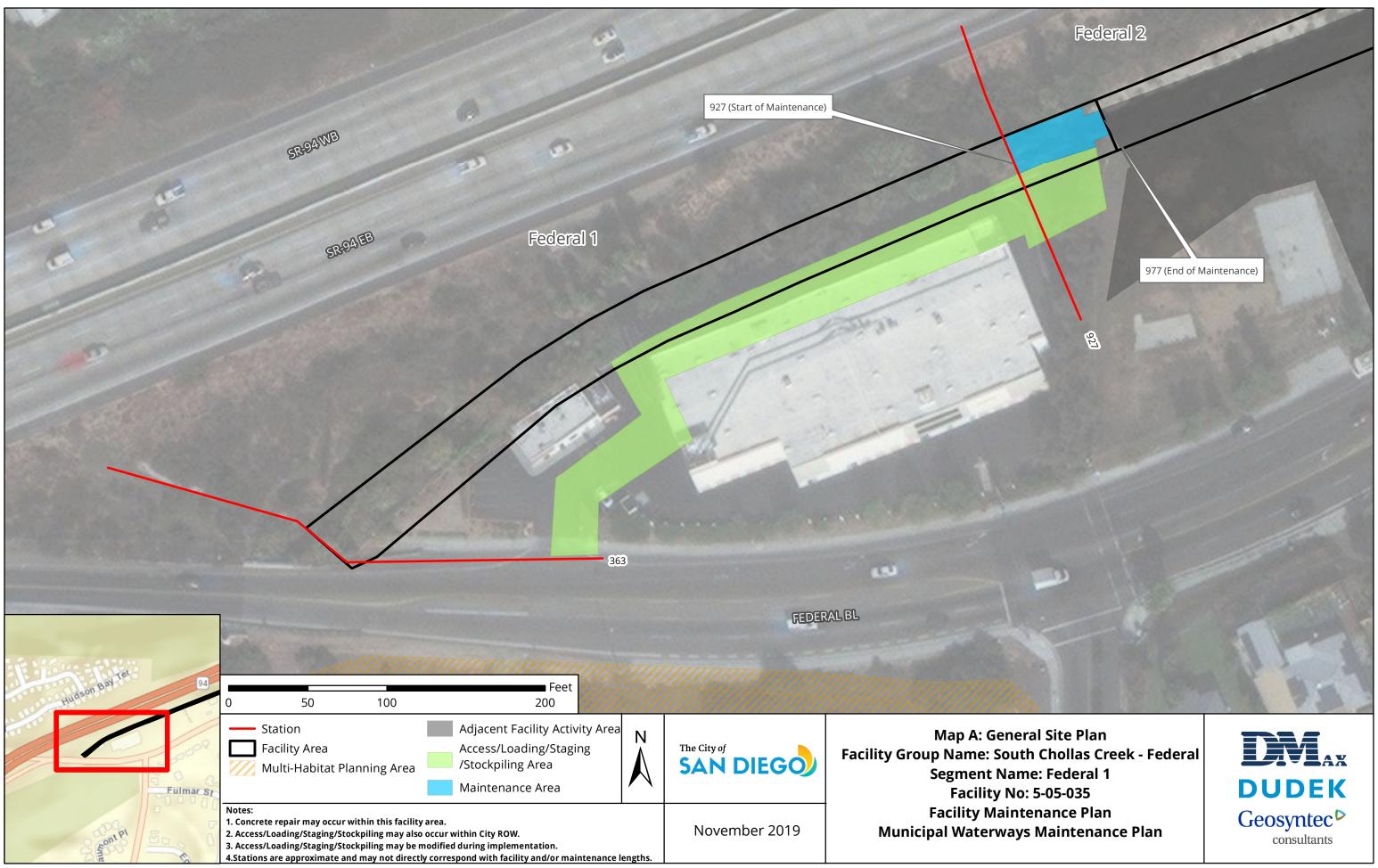
Facility Group	South Chollas Creek - Federal	
Segment Name	Federal 1	
Facility No.	5-05-035	
Facility Location	From the downstream end of Federal 2 segment to a single-span bridge at Federal Boulevard	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of channel per as-built dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics Recommendation ³	Remove accumulated sediment, debris, and vegetation from channel bottom and banks in the riprap portion of the channel from Station 927 to Station 977	
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Riprap replacement	
Bank Repair	No	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen and concrete channel	
Existing Plans and/or As-Builts?	Yes; 14482-D & 20039-D	
Substrate Detail ³	Stations 363-927: Earthen bottom, earthen right bank, and concrete/vertical retaining wall left bank Stations 927-977: Riprap bottom, earthen right bank, and concrete/vertical retaining wall on left bank	

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

Facility Dimensions	Length: 614 feet
(Approximate)	Top width: 28 feet
(Approximate)	Bottom width: 24 feet
Authorized Fedition Maintenance	Depth: 6 feet
Authorized Facility Maintenance	Length: Channel: 61 feet
Area	Width: 17–28 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump
	truck, trash pump, fuel-powered hand tools, sweeper
Schedule	Up to approximately 21 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bobcat/skid-steer and bulldozer/track-steer are lowered into channel at
	access/loading area
	2. Bobcat/skid-steer and bulldozer/track-steer push material to
	Gradall/excavator at access/loading area. Bobcat/skid-steer to be used on
	concrete section (Federal 2), and bulldozer/track-steer to be used on
	earthen section (Federal 1)
	3. Gradall/excavator and backhoe scoop material from channel and load
	dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No .
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ⁴ :
	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
	clearing norm representation to

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

Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	Overnight equipment storage required		



Federal Segment 2 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of South Chollas Creek, immediately upstream of South Chollas Creek (Federal Segment 1)
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 1,329 feet
Top-of-Bank Width	Approximately 28 feet
Bottom Facility Width	Approximately 8 feet
Facility Depth	Approximately 5–9 feet
Adjacent Land Use	Industrial, Multi-Family Residential, Open Space, Other Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	14482-D & 20039-D
Coastal Zone	No



Figure 1: November 2016, looking northeast at the concrete-lined ditch. Note the minimal vegetation established within the ditch.



Figure 2: Vicinity Map of Federal Segment 2

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 – 2017: No maintenance conducted

2018 – 2019: Routine maintenance conducted

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-2018-00364-MAL (expires March 2022)

401 RWQCB 401 Cert No. R9-2018-0089 (expires March 2022)

1602 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.¹

Current Conditions	s Affecting	In November 2016, the amount of vegetation was observed to be mostly clean			be mostly clean	
Facility Capacity		concrete ditch with portions of minor sediment deposit and light vegetation				
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	167	370	580	830	1,100	1,500
second [cfs])						

Hydraulic Capacity of Facility

Current Capacity 1,500 cfs

Proposed MWMP Maintained Capacity 1,500 cfs

Maintenance Recommendation Remove vegetation from ditch bottom from Station 977 to

Station 2306

In-Stream Post-Maintenance Erosion Control None

Recommendation

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	 Coastal sage scrub Developed land Disturbed coastal sage scrub Disturbed land Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; 1972 concrete channel
Potential Historical Resources	None
Constraint Identified	

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)	
Biological Resources (BIO)	Air Quality (AQ)	
EP-BIO-1	MM-AQ-1	
EP-BIO-2	Biological Resources (BIO)	
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	
Health and Safety/Hazards (HAZ)	Noise (NOI)	
EP-HAZ-3	MM-NOI-1	
Solid Waste (SW)		
EP-SW-2		
EP-SW-3		
EP-SW-4		
EP-SW-5		
EP-SW-6		
EP-SW-7		
EP-SW-8		
Water Quality (WQ)		
EP-WQ-1		

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.

Facility Group	South Chollas Creek - Federal
Segment Name	Federal 2
Facility No.	5-05-037
Facility Location	From 300 feet north of the intersection of Federal Boulevard and Winnett
	Street to the upstream end of Federal 1 segment
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per as-built dimensions, previous
	maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove vegetation from ditch bottom from Station 977 to Station 2306
Recommendation ²	
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete ditch
Existing Plans and/or As-Builts?	Yes; 14482-D & 20039-D
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 1,329 feet
(Approximate)	Top width: 28 feet
	Bottom width: 8 feet
	Depth: 5–9 feet

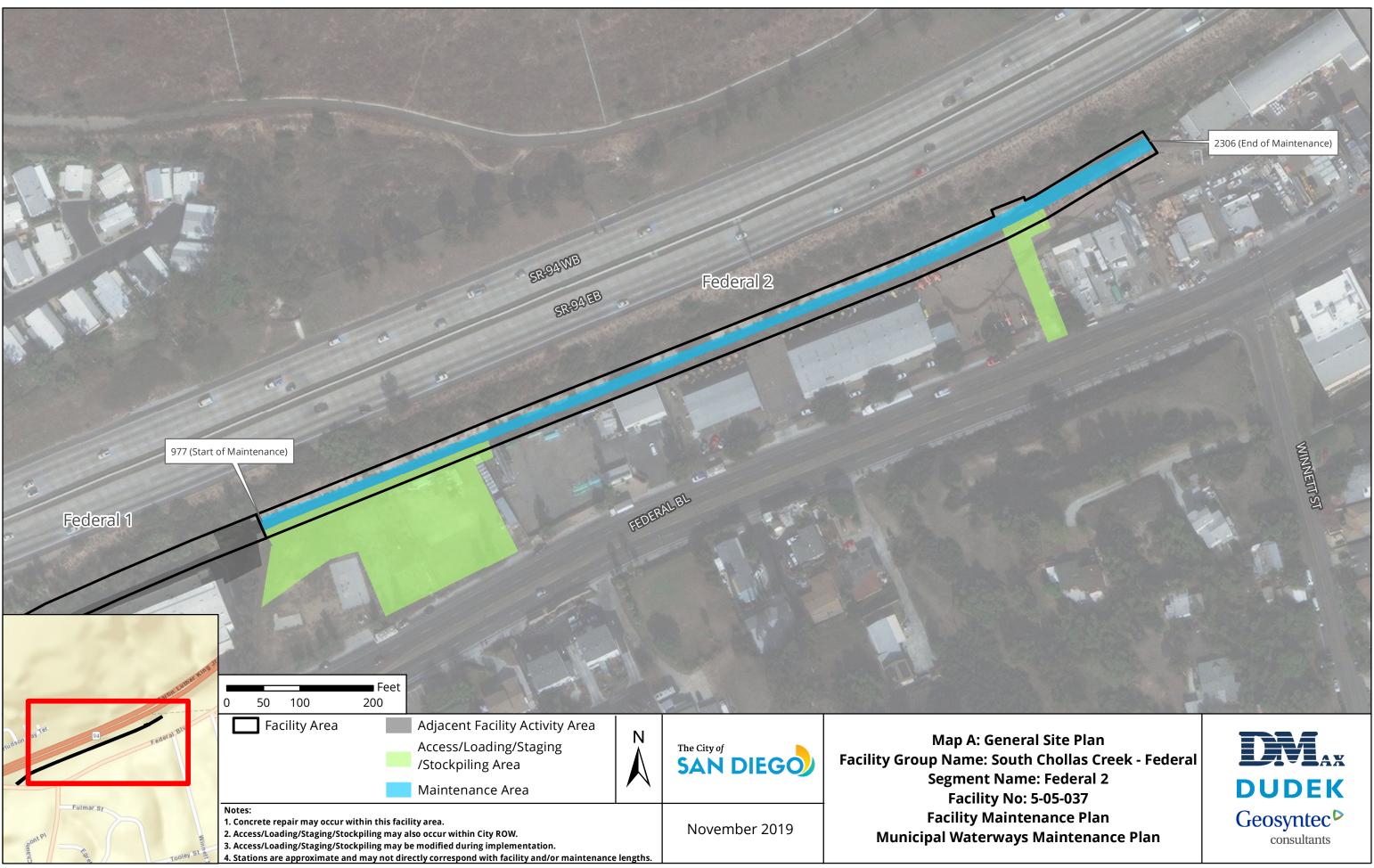
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Encility Maintenance	Longth: Ditch: 1 220 foot		
Authorized Facility Maintenance	Length: Ditch: 1,329 feet		
Area	Width: 28 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, backhoe, dump truck, trash pump,		
	fuel-powered hand tools, sweeper		
Schedule	Up to approximately 21 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer is lowered into ditch at access/loading area		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator and backhoe scoop material from ditch and load		
	dump truck		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	No		
Additional Maintenance Information			
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		

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

BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	Overnight equipment storage required	



Facility Maintenance Plan

South Chollas Creek Encanto Branch - Castana Facility Group

Segment Name (Facility number): Castana 1 (5-05-205)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	South Chollas Creek Encanto Branch (05)
Facility Group Name	South Chollas Creek Encanto Branch - Castana
Segment Name (Facility Number)	Castana 1 (5-05-205)
Substrate	Castana 1 / Earthen and concrete
Location	About 350 feet south of Groveland Drive and 120 east of Euclid
	Avenue
MMP Map No(s).	105
Facility Inspection No.	105
Other Former Names	None

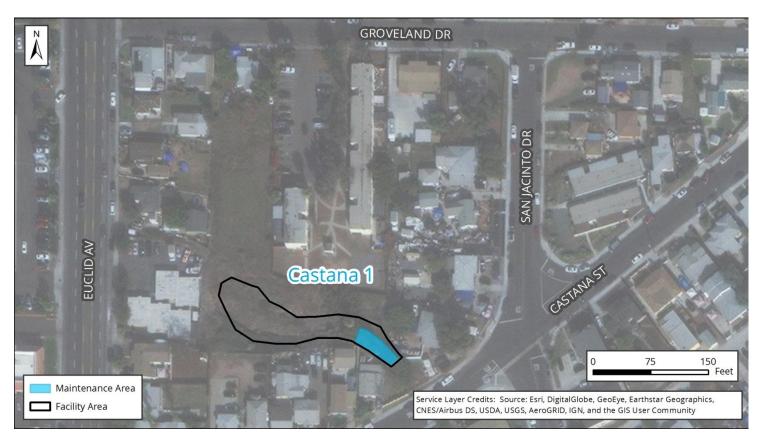


Figure 1: Vicinity Map of South Chollas Creek Encanto Branch - Castana Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.22

Adopted TMDLs Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek

diazinon

Highest Priority Water Bac

Quality Condition

Bacteria; dissolved copper, lead, and zinc

South Chollas Creek Encanto Branch - Castana

Beneficial Uses

303(d) listed Impairments No impairments recorded on the 303(d) List

Not Listed in Basin Plan (First downstream water body)

Beneficial Uses

303(d) listed Impairments No impairments recorded on the 303(d) list

Castana Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 122-316: Earthen bottom and banks
	Stations 316-382: Earthen bottom, earthen right bank, gunite left bank
Location Within Watershed	Lower reach of the South Chollas Creek Encanto Branch
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 260 feet
Top-of-Bank Width	Approximately 20–70 feet
Bottom Facility Width	Approximately 4–10 feet
Facility Depth	Approximately 4–10 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Office, Single-Family Residential,
	Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2017, looking downstream at vegetation and gunite lining on left bank

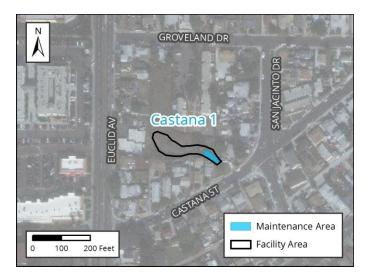


Figure 2: Vicinity Map of Castana Segment 1

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

Facility Maintenance History

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

History of Mainte	
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.²

			of vegetation was sediment depositi		light to mediu	m with no
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	25	32	38	45	51	56
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity 49 cfs						
Proposed MWMP Maintained Capacity 49 cfs		cfs				
Maintenance Recommendation		No maintenance	currently propo	sed; however	vegetation,	
		sediment and debris removal, or concrete repair/replacement				
			activities should be performed if the conditions change			
In-Stream Post-Maintenance Erosion Control		sion Control	Yes; see Appendix A-4			
Recommendation			Location: Station to be determined			

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland
Adjacent Vegetation	Developed land
	Disturbed land
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
МНРА	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 north of the channel.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources Constraint Identified	None	

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

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.

Facility Group	South Chollas Creek Encanto Branch - Castana
Segment Name	Castana 1
Facility No.	5-05-205
Facility Location	From 170 feet west of the intersection of San Jacinto Drive and Castana
	Street to 120 east of Euclid Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete and earthen-lined channel per estimated original
	design dimensions, previous maintenance approvals, and Hydrology and
	Hydraulics recommendations
Hydrology and Hydraulics	No maintenance currently proposed; however vegetation, sediment and
Recommendation ³	debris removal, or concrete repair/replacement activities should be
	performed if the conditions change
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	None
Substrate Detail ³	Stations 122-316: Earthen bottom and banks
	Stations 316-382: Earthen bottom, earthen right bank, gunite left bank

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

Facility Dimensions	Length: 260 feet
(Approximate)	Top width: 20–70 feet
(pp. s	Bottom width: 4–10 feet
	Depth: 4–10 feet
Authorized Facility Maintenance	Length: Channel: 66 feet
Area	Width: 20–70 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Crane, boom truck, Bobcat/skid-steer, bulldozer/track-steer,
	Gradall/excavator, backhoe, dump truck, trash pump, vactor, fuel-powered
	hand tools, sweeper
Schedule	Up to approximately 30 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	Palm Removal Methodology:
	1. Man in boom truck or use of crane cuts section of the palm tree from top
	to bottom.
	2. Crane lowers cut material in the channel.
	3. Bobcat/skid-steer in channel pushes cut material to loading point.
	4. Gradall/excavator scoops material from channel at loading area.
	5. Gradall/excavator dumps material on stockpile area or directly into
	dump truck.
	6. If stockpiled, gradall/excavator scoops material from stockpile to dump
	truck.
	Routine Maintenance:
	1. Bobcat/skid-steer enters or is lowered into channel at access/loading
	area with Gradall/excavator assistance
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading
	area
	3. Gradall/excavator scoops material from channel and loads dump truck
Traffic Control	
	Additional Maintenance Information
Pre-Maintenance Meeting	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

Biology	Suitable habitat for sensitive species ⁴ :	
	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	
Flow Management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	Yes; see Appendix A-4	
Erosion Control Recommendation	Location: Station to be determined	
Post-Maintenance Procedures	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	
Other Notes	None	

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 $^{^4}$ Species covered under the Multiple Species Conservation Program, other special-status species, including raptors



Facility Maintenance Plan

South Chollas Creek Encanto Branch - Imperial Facility Group

Segment Names (Facility numbers):
Imperial 1 (5-05-304) (See
Appendix A-5)
Imperial 2 (5-05-306)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	South Chollas Creek Encanto Branch (05)
Facility Group Name	South Chollas Creek Encanto Branch - Imperial
Segment Name (Facility Number)	Imperial 1 (5-05-304) (See Appendix A-5) Imperial 2 (5-05-306)
Substrate	Imperial 1 / Earthen Imperial 2 / Concrete
Location	Southwest of 60th Street and East of Euclid Avenue
MMP Map No(s).	107
Facility Inspection No.	107
Other Former Names	Encanto Channel, Akins

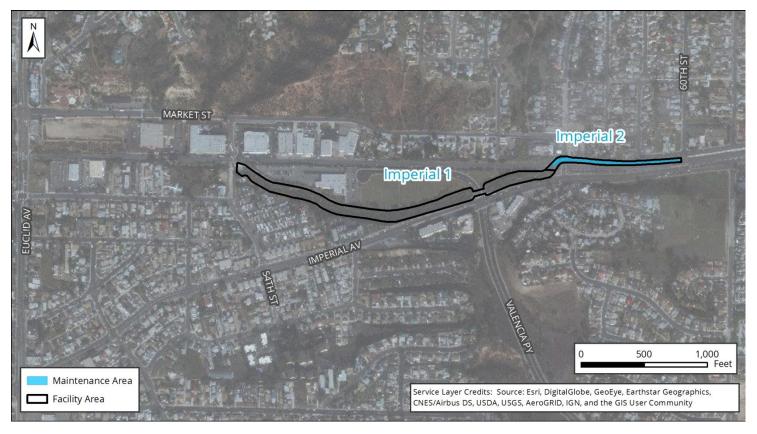


Figure 1: Vicinity Map of South Chollas Creek Encanto Branch - Imperial Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea	908.22
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Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek

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Highest Priority Water Quality Condition Bacteria; dissolved copper, lead, and zinc

South Chollas Creek Encanto Branch - Imperial

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303(d) listed Impairments No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)

Chonas Creek (i ii se downsere	Chonas creek (Thist downstream water body)		
Beneficial Uses	Non-contact Water Recreation (REC-2)		
	Warm Freshwater Habitat (WARM)		
	Wildlife Habitat (WILD)		
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc		

Imperial Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of the South Chollas Creek Encanto Branch, immediately upstream of South Chollas Creek Encanto Branch (Imperial Segment 1)
Tributaries (listed from downstream to	South Chollas Creek Encanto Branch
upstream)	
Facility Length	Approximately 1,074 feet
Top-of-Bank Width	Approximately 22–34 feet
Bottom Facility Width	Approximately 10–30 feet
Facility Depth	Approximately 5–10 feet
Adjacent Land Use	Commercial, Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	11556-3-D
Coastal Zone	No



Figure 1: April 2017, looking downstream at concrete channel near 60th Street

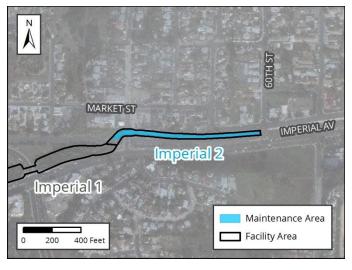


Figure 2: Vicinity Map of Imperial Segment 2

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown	
	January 2011 – March 2019: No maintenance conducted	
Past Regulatory A	Approvals	
CEQA	2011 MMP PEIR No. 42891	
CDP	N/A	
SDP	SDP No. 2034245 (2017 Addendum)	
404	None	
401	None	
1602	None	
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	Affecting	The channel was observed to be relatively clean with very little evidence of vegetation or sediment deposition				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	563	851	1,100	1,762	2,600	3,400
second [cfs])						
Hydraulic Capacity of Facility						
Curre	ent Capacity	ity 3,400 cfs				
Proposed MWMP Maintained Capacity N/A						
Maintenance Recommendation			No maintenance currently proposed; however vegetation,			
			sediment and debris removal, or concrete repair/replacemen activities should be performed if the conditions change			
In-Stream Post-Ma	intenance Ero	sion Control	None			
Recoi	mmendation					

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel	
Adjacent Vegetation	 Developed land Disturbed land Disturbed wetland Disturbed wetland (Arundo-dominated) Ornamental plantings 	
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within the facility, but raptors or other migratory species may use the tall trees in the disturbed wetland habitat downstream of the channel	
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 470 feet northwest of the channel.	
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Noise (NOI)
EP-HAZ-1	MM-NOI-1
EP-HAZ-3	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	South Chollas Creek Encanto Branch - Imperial	
Segment Name	Imperial 2	
Facility No.	5-05-306	
Facility Location	From west of 60th Street to the upstream end of Imperial 1 segment	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and	
	Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	No maintenance currently proposed; however vegetation, sediment and	
Recommendation ²	debris removal, or concrete repair/replacement activities should be	
	performed if the conditions change	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
	Concrete repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Concrete channel	
Existing Plans and/or As-Builts?	Yes; 11556-3-D	
Substrate Detail	Concrete bottom and banks	
Facility Dimensions	Length: 1,074 feet	
(Approximate)	Top width: 22–34 feet	
	Bottom width: 10–30 feet	
	Depth: 5–10 feet	

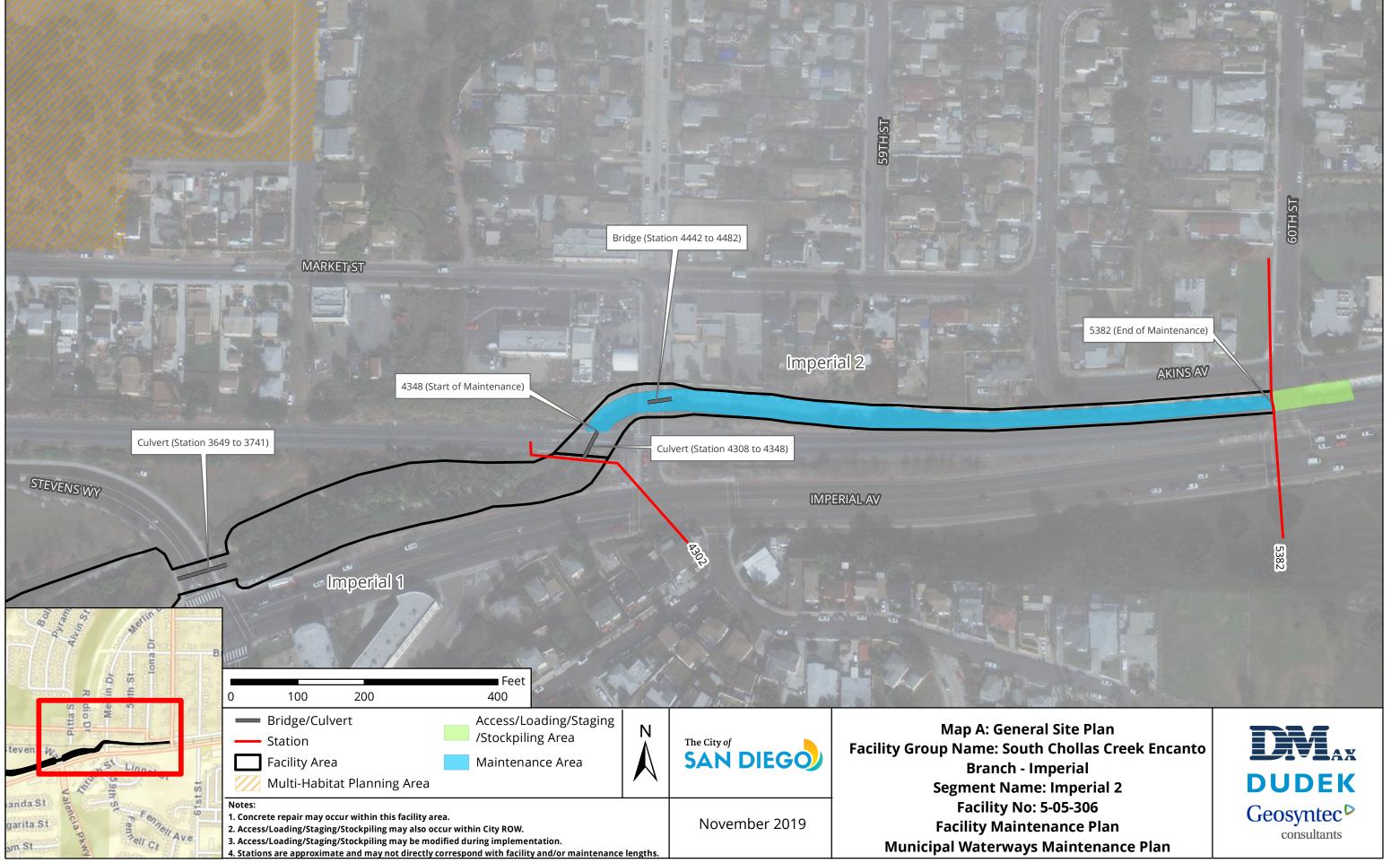
² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Authorized Encility Maintenance	Langth: Channal: 1 074 foot			
Authorized Facility Maintenance	Length: Channel: 1,074 feet			
Area	Width: 22–34 feet			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,			
Area(s)	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.			
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, fuel-			
	powered hand tools, sweeper			
Schedule	Up to approximately 7 working days			
Maintenance Crew	Approximately 8–12 people			
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading			
	area			
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading			
	area			
	3. Gradall/excavator scoops material from channel and loads dump truck			
	4. Dump truck hauls material to legal disposal site			
Traffic Control	Yes; coordinate with the City of San Diego and Metropolitan Transit Board			
	Additional Maintenance Information			
Pre-Maintenance Meeting	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			
Biology	Suitable habitat for sensitive species ³ :			
	1. Within maintenance area: No			
	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			
Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			

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

BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

South Chollas Creek Encanto Branch - Jamacha Facility Group

Segment Names (Facility numbers):

Jamacha 1 (5-05-603)

Jamacha 2 (5-05-606) (See Appendix A-5)

Jamacha 3 (5-05-610) (See Appendix A-5)

Lobrico 1 (5-05-702) (See Appendix A-5)

Cadman 1 (5-05-802) (See Appendix A-5)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.22
Drainage Name (Number)	South Chollas Creek Encanto Branch (05)
Facility Group Name	South Chollas Creek Encanto Branch - Jamacha
Segment Name (Facility Number)	Jamacha 1 (5-05-603) Jamacha 2 (5-05-606) (See Appendix A-5) Jamacha 3 (5-05-610) (See Appendix A-5) Lobrico 1 (5-05-702) (See Appendix A-5) Cadman 1 (5-05-802) (See Appendix A-5)
Substrate	Jamacha 1 / Earthen Jamacha 2 / Earthen Jamacha 3 / Earthen Lobrico 1 / Earthen Cadman 1 / Earthen
Location	About 1,100 feet west of Cardiff Street and southeast of the intersection of Imperial Avenue and Woodman Street
MMP Map No(s).	113, 114, 115
Facility Inspection No.	113, 114, 115, 301, 309
Other Former Names	Jamacha Channel, Jamacha Expressway

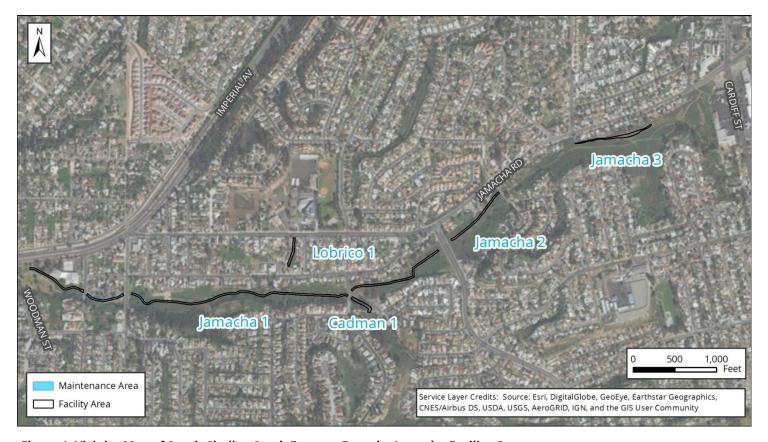


Figure 1: Vicinity Map of South Chollas Creek Encanto Branch - Jamacha Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea	908.22
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Adopted TMDLs	Bacteria Project I; Chollas Creek dissolved copper, lead, and zinc; Chollas Creek
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Highest Priority Water Quality Condition

Bacteria; dissolved copper, lead, and zinc

South Chollas Creek Encanto Branch - Jamacha

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303(d) listed Impairments No impairments recorded on the 303(d) List

Chollas Creek (First downstream water body)

Chollas Creek (First downstream water body)				
Beneficial Uses	Non-contact Water Recreation (REC-2)			
	Warm Freshwater Habitat (WARM)			
	Wildlife Habitat (WILD)			
303(d) listed Impairments	Copper, Indicator Bacteria, Lead, Nitrogen, Pesticides, Phosphorus, Trash, Zinc			

Jamacha Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Lower reach of the South Chollas Creek Encanto Branch, upstream of South Chollas Creek Encanto Branch (Imperial Segment 2)
Tributaries (listed from downstream to	South Chollas Creek Encanto Branch
upstream)	
Facility Length	Approximately 5,386 feet
Top-of-Bank Width	Approximately 18–95 feet
Bottom Facility Width	Approximately 6–21 feet
Facility Depth	Approximately 1–8 feet
Adjacent Land Use	Commercial, Open Space, Parks, Public Facilities and Utilities, Single- Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2016, upstream of 10-foot-wide by 5-foothigh RCB culvert beneath 69th Street facing west



Figure 2: Vicinity Map of Jamacha Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – December 2013: No maintenance conducted
	December 2014: Invasive vegetation removal conducted
	2015/2016: Emergency excavation of sediment and vegetation
	January 2017 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	RGP 63 USACE File #SPL-2016-00944-RAG
401	RGP 63 Verification No. R9-2016-0016
1602	LSA Emergency Notification submitted 01/2016
Mitigation for Pre	evious Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel
	Maintenance (0.10 acre); an additional 0.02 acre for DW needed for City
	mitigation

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.¹

Current Conditions Affecting The amount of		of vegetation was observed to vary from light to dense and				
		eposition near the culverts was estimated to be 1 to 2 feet				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	612	779	913	1,102	1,241	1,386
Hydraulic Capacity	of Facility					
Current Capacity 244 cfs						
Proposed MWMP Maintained Capacity 440 cfs						
Maintenance Recommendation Remove accumulated sediment, debris, and vegetation bottom of segment from Station 1441 to Station 1457, 1523 to Station 1996, and Station 2110 to Station 2324 Remove accumulated sediment and debris in culverts Station 1457 to Station 1523 and Station 1996 to Station		1457, Station 2324. verts from				
In-Stream Post-Ma	intenance Eros	ion Control	Yes; see Appendix A-4			
Recommendation		Location: Station to be determined				

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

Biological Resource Summary

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

Facility Vegetation	Disturbed freshwater marsh
	Disturbed wetland
	 Disturbed wetland (Arundo-dominated)
	Freshwater marsh
	Natural flood channel
Adjacent Vegetation	Coastal sage scrub
	Developed land
	Disturbed coastal sage scrub
	Disturbed land
	Disturbed wetland (Arundo-dominated)
	Eucalyptus woodland
	Non-native grassland
	Ornamental plantings
	Riparian forest (coast live oak)
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within the facility, but raptors or other migratory species may use the riparian forest (coast live oak), eucalyptus woodland, and coastal sage scrub habitat adjacent to the channel. Coastal sage
	scrub habitat is isolated and unlikely to support coastal California gnatcatcher.
MHPA	
	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	Identified as potential compensatory mitigation area. A compensatory mitigation plan has
Facility	not yet been prepared.

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	Noise (NOI)
Hydrology (HYD)	MM-NOI-1
EP-HYD-1	
Paleontological Resources (PAL)	
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

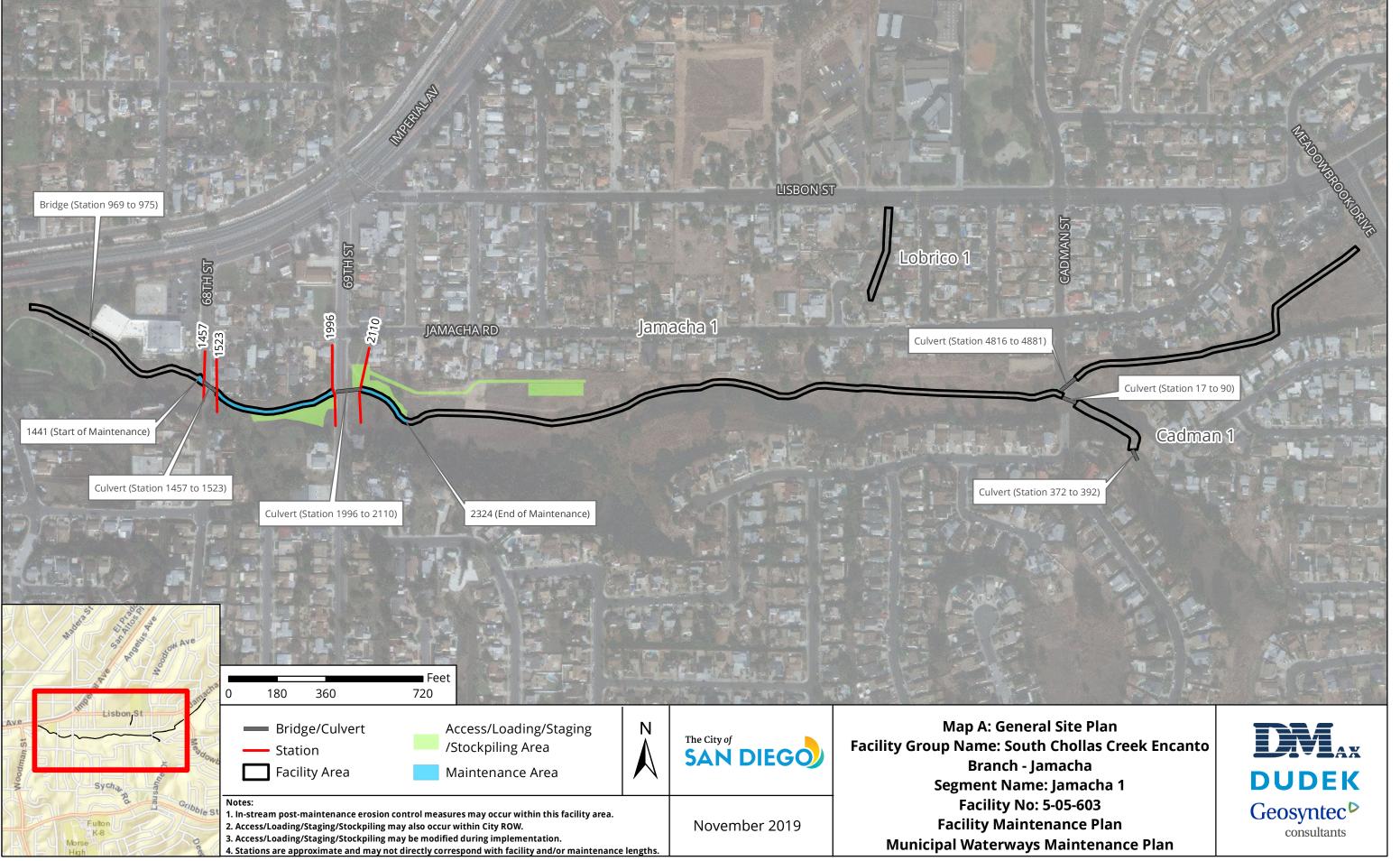
Facility Group	South Chollas Creek Encanto Branch - Jamacha	
Segment Name	Jamacha 1	
Facility No.	5-05-603	
Facility Location	From downstream outlet of culvert beneath Meadow Brook Drive to inlet of	
	culvert beneath Imperial Avenue	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions,	
	previous maintenance approvals, and Hydrology and Hydraulics	
	recommendations	
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom of	
Recommendation ²	segment from Station 1441 to Station 1457, Station 1523 to Station 1996,	
	and Station 2110 to Station 2324.	
	Remove accumulated sediment and debris in culverts from Station 1457 to	
	Station 1523 and Station 1996 to Station 2110.	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
Maintenance Method	Excavation; mechanized equipment outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary stockpiling	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	No	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	Yes; see Appendix A-4	
Post-Maintenance Erosion Control	Yes (multiple options); see Appendix A-4	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen channel	
Existing Plans and/or As-Builts?	None	
Substrate Detail	Earthen bottom and banks	

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

Facility Dimensions	Length: 5,386 feet
(Approximate)	Top width: 18–95 feet
(Approximate)	Bottom width: 6–21 feet
	Depth: 1–8 feet
Authorized Facility Maintenance	Length: Channel: 703 feet; Culvert: 180 feet
Area	Width: 10–25 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	loading, staging, and/or stockpiling. The boundaries of these areas may
Alcu(s)	also be modified as long as changes do not result in new significant
	environmental impacts.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck,
Equipment	trash pump, sweeper
Schedule	Up to approximately 60 working days
Maintenance Crew	Approximately 8–16 people
Routine Maintenance Procedures	Gradall/excavator and loader work within access/loading area
Routine Maintenance Procedures	Gradall/excavator and loader scoop material from channel and load
	dump truck
	3. If necessary, bulldozer/track-steer enters channel at access/loading area
	and pushes material to Gradall/excavator
	4. Dump truck hauls material to legal disposal site
Traffic Control	No
	Additional Maintenance Information
	<u> </u>
Pre-Maintenance Meeting	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
Biology	5. Conduct pre-maintenance site photo documentation
Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: No
	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

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

Flow Management	As needed:
Tion management	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
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	Yes; see Appendix A-4
Erosion Control Recommendation	Location: Station to be determined
Post-Maintenance Procedures	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
Other Notes	None



Facility Maintenance Plan

Paleta Creek - Cottonwood Facility Group

Segment Names (Facility numbers):
Cottonwood 1 (5-06-005)
Cottonwood 2 (5-06-008)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.31
Drainage Name (Number)	Paleta Creek (06)
Facility Group Name	Paleta Creek - Cottonwood
Segment Name (Facility Number)	Cottonwood 1 (5-06-005)
	Cottonwood 2 (5-06-008)
Substrate	Cottonwood 1 / Concrete
	Cottonwood 2 / Concrete
Location	Bound by Highland Avenue to the east, by I-5 to the west, by
	Cottonwood Street and Nordica Avenue to the north, and by
	Marine View Avenue and Division Street to the south
MMP Map No(s).	120, 121
Facility Inspection No.	120, 121
Other Former Names	Cottonwood Channel



Figure 1: Vicinity Map of Paleta Creek - Cottonwood Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.31		
Adopted TMDLs None		
Highest Priority Water Quality Condition	No Highest Priority has been identified for this part of the Watershed Management Area	

Paleta Creek - Cottonwood	
Beneficial Uses	Non-contact Water Recreation (REC-2)
	Warm Freshwater Habitat (WARM)
	Wildlife Habitat (WILD)
303(d) listed Impairments	Copper, Lead

San Diego Bay (First downstream water body)	
Beneficial Uses	Industrial Service Supply (IND)
	Contact Water Recreation (REC-1)
	Non-contact Water Recreation (REC-2)
	 Preservation of Biological Habitats of Special Significance (BIOL)
	Wildlife Habitat (WILD)
	Rare, Threatened, or Endangered Species (RARE)
	 Spawning, Reproduction, and/or Early Development (SPWN)
	Navigation (NAV)
	Commercial and Sport Fishing (COMM)
	Estaurine (EST)
	Marine (MAR)
	Migration of Aquatic Organisms (MIGR)
	Shellfish Harvesting (SHELL)
303(d) listed Impairments	Mercury, PAHs (Polycyclic Aromatic Hydrocarbons), PCBs (Polychlorinated biphenyls)

Cottonwood Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Paleta Creek, upstream of the San Diego Bay
Tributaries (listed from downstream to	Paleta Creek
upstream)	
Facility Length	Approximately 572 feet
Top-of-Bank Width	Approximately 28.5 feet
Bottom Facility Width	Approximately 12 feet
Facility Depth	Approximately 5.5 feet
Adjacent Land Use	Single-Family Residential, Multi-Family Residential, Commercial, Transportation, Open Space, Vacant
As-Built Drawing Number	3019-D, 3021-D
Coastal Zone	No



Figure 1: May 2015, looking downstream at concrete channel

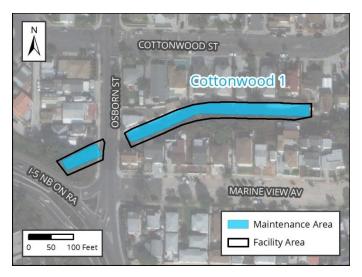


Figure 2: Vicinity Map of Cottonwood Segment 1

Facility Maintenance History

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

History of Mainte	enance	Prior to 2011: Unknown
		January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals	
CEQA	2011 MMP PEIR I	No. 42891
CDP	N/A	
SDP	SDP No. 2034245 (2017 Addendum)	
404	RGP 63 USACE File #SPL-2015-00900-WSZ	
401	RGP 63 Verification No. R9-2015-0203:820160:lhonma	
1602	LSA Emergency N	Notification submitted 02/2016
Mitigation for Pro	evious Impacts	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel Maintenance (0.12 acre); an additional 0.12 acre for FWM needed for City mitigation

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.¹

Facility Capacity to dense in the		the amount of vegetation was observed to range from moderate the bottom of the channel and many trees. The sediment was estimated to be 0.2 feet.				
Hydrologic Peak Flo)WS					
Storm Event 2-year 5-year			10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	1,116	1,422	1,664	2,001	2,254	2,507
Hydraulic Capacity of Facility						
Current Capacity			630 cfs			
Proposed MWMP Maintained Capacity			678 cfs			
Maintenance Recommendation			Remove accumulated sediment, debris, and vegetation from Station 1006 to Station 1091, and Station 1163 to Station 1578. Remove accumulated sediment and debris in culverts at Station 1006 and from Station 1091 to Station 1163.			
In-Stream Post-Maintenance Erosion Control			None			
Recommendation						

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed concrete-lined channelDeveloped land
	Disturbed landOrnamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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				
Resource Identified in APE	None			
Resource Identified Adjacent to APE	None			
Resource Type	N/A			

Historical Resources	
Resource Identified in APE	Channel; c. 1964 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

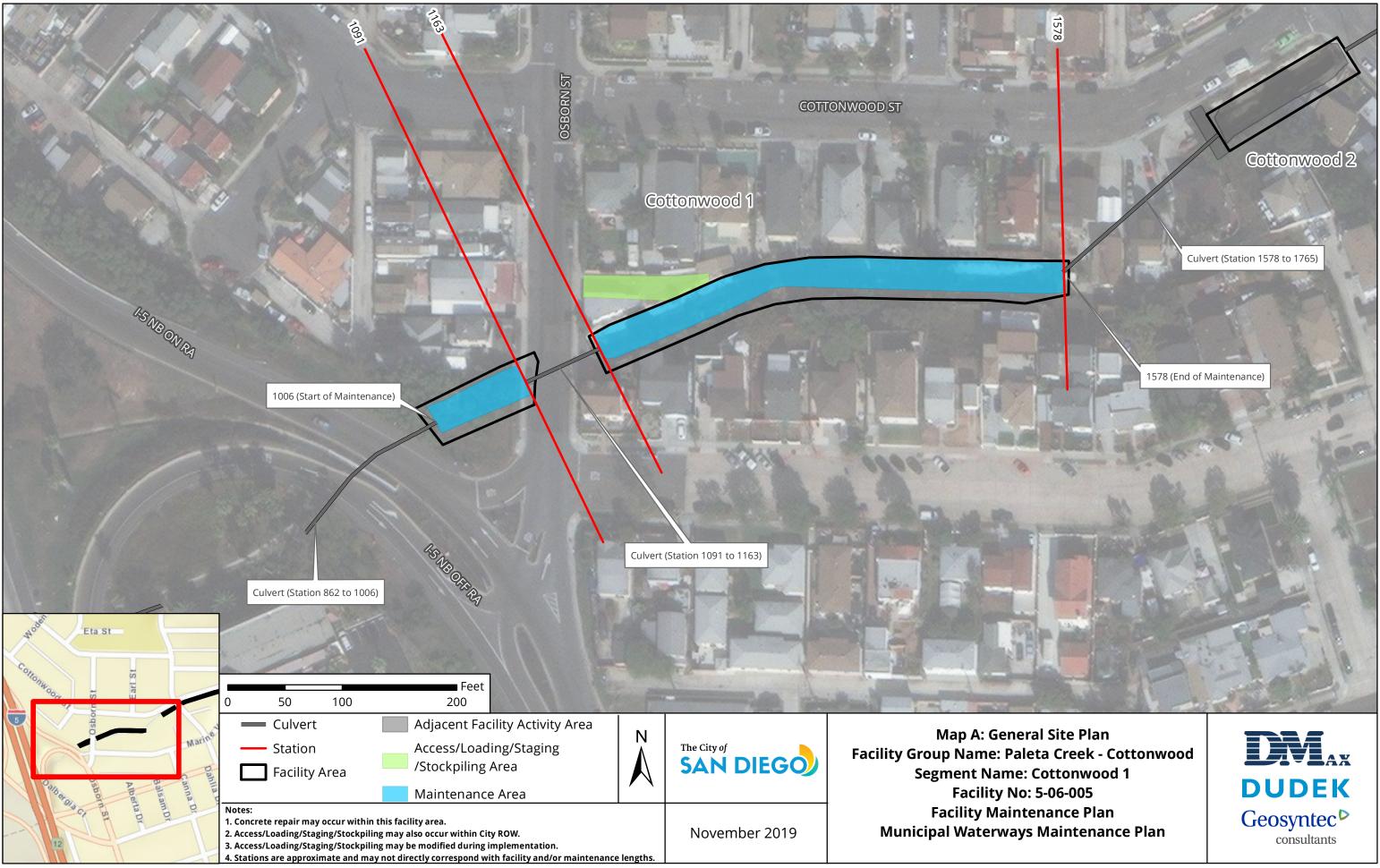
Facility Group	Paleta Creek - Cottonwood			
Segment Name	Cottonwood 1			
Facility No.	5-06-005			
Facility Location	From 300 feet southwest of the intersection of Cottonwood Street and S			
	40th Street to inlet of culvert beneath Osborn Street			
Coastal Zone	No			
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions, previous			
	emergency maintenance approvals, and Hydrology and Hydraulics			
	recommendations			
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 1006			
Recommendation ²	to Station 1091, and Station 1163 to Station 1578.			
	Remove accumulated sediment and debris in culverts at Station 1006 and			
	from Station 1091 to Station 1163.			
Maintenance Activities	Vegetation grubbing, trimming, and removal			
	Invasive plant species treatment and removal			
	Sediment removal			
	Concrete repair			
Maintenance Method	Excavation; mechanized equipment inside and outside the channel			
	Temporary access/loading			
	Temporary staging			
	Temporary diversions			
	Hand removal of vegetation			
Bank Repair	No			
Concrete Repair	Yes; see Appendix A-4			
Concrete/Gabion Structure Repair	No			
and Maintenance				
Culvert Maintenance	Yes; see Appendix A-4			
Post-Maintenance Erosion Control	No			
Recommendation				
Trash/Debris Fence Repair and	No			
Maintenance				
Facility Type	Concrete channel			
Existing Plans and/or As-Builts?	Yes; 3019-D, 3021-D			
Substrate Detail	Concrete bottom and banks			

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

Facility Dimensions	Length: 572 feet			
(Approximate)	Top width: 28.5 feet			
(Approximate)	Bottom width: 12 feet			
	Depth: 5.5 feet			
Authorized Facility Maintonance				
Authorized Facility Maintenance	Length: Channel: 500 feet; Culvert: 72 feet			
Area	Width: 28.5 feet			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,			
Area(s)	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.			
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,			
	sweeper			
Schedule	Up to approximately 7 working days			
Maintenance Crew	Approximately 6–8 people			
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading			
	area			
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading			
	area			
	3. Gradall/excavator scoops material from channel and loads dump truck			
	4. Dump truck hauls material to legal disposal site			
Traffic Control	Yes; coordinate with the City of San Diego			
	Additional Maintenance Information			
Pre-Maintenance Meeting	Prior to the start of any maintenance activity, a qualified specialist(s) shall			
J	conduct the following on site:			
	1. Review sensitive biological, historical, and water quality resources; if			
	present, flag/delineate			
	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			
Biology	Suitable habitat for sensitive species ³ :			
	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			

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

Flow Management	As needed:			
1 10W Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	None			



Cottonwood Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Paleta Creek, immediately upstream of Paleta Creek (Cottonwood Segment 1)
Tributaries (listed from downstream to upstream)	Paleta Creek
Facility Length	Approximately 2,204 feet
Top-of-Bank Width	Approximately 28.5 feet
Bottom Facility Width	Approximately 12 feet
Facility Depth	Approximately 5.5 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	3019-D, 3021-D
Coastal Zone	No



Figure 1: May 2015, looking upstream from double 9-foot-wide by 5-foot-tall RCB culvert at 40th Street



Figure 2: Vicinity Map of Cottonwood Segment 2

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			
Past Regulatory A	Approvals				
CEQA	2011 MMP PEIR N	No. 42891			
CDP	N/A	N/A			
SDP	SDP No. 2034245 (2017 Addendum)				
404	RGP 63 USACE File #SPL-2015-00900-WSZ				
401	RGP 63 Verification No. R9-2015-0203:820160:lhonma				
1602	LSA Emergency Notification submitted 02/2016				
Mitigation for Pre	evious Impacts	RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel Maintenance (0.12 acre); an additional 0.06 acre for DSWS needed for City mitigation			

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.¹

Facility Capacity vegetation in		5, the vegetation was observed to range from moderate to dense n the bottom of the channel and many trees. The sediment was estimated to be 0.2 feet.				
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	1,104	1,406	1,646	1,979	2,229	2,479
Hydraulic Capacity	of Facility					
Current Capacity			519 cfs			
Proposed MWMP Maintained Capacity			522 cfs			
Maintenanc	Remove accumulated sediment, debris, and vegetation from Station 1765 to Station 1892, Station 1951 to Station 3095, and Station 3152 to Station 3782. Remove accumulated sediment and debris in culverts from Station 1578 to Station 1765, Station 1892 to Station 1951, and Station 3095 to Station 3152.					
In-Stream Post-Maintenance Erosion Control Recommendation		sion Control	None			

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel	
Adjacent Vegetation	 Developed concrete-lined channel Developed land Disturbed land 	
	Ornamental plantings	
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility	
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)	
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; 1969 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Paleta Creek - Cottonwood
Segment Name	Cottonwood 2
Facility No.	5-06-008
Facility Location	From a outlet of culvert underneath Highland Avenue from the east and south of Nordica Avenue to inlet of culverts beneath residences south of intersection of Cottonwood Street and S 40th Street
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove accumulated sediment, debris, and vegetation from Station 1765 to Station 1892, Station 1951 to Station 3095, and Station 3152 to Station 3782. Remove accumulated sediment and debris in culverts from Station 1578 to Station 1765, Station 1892 to Station 1951, and Station 3095 to Station 3152.
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair and Maintenance	No
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control Recommendation	No
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 3019-D, 3021-D

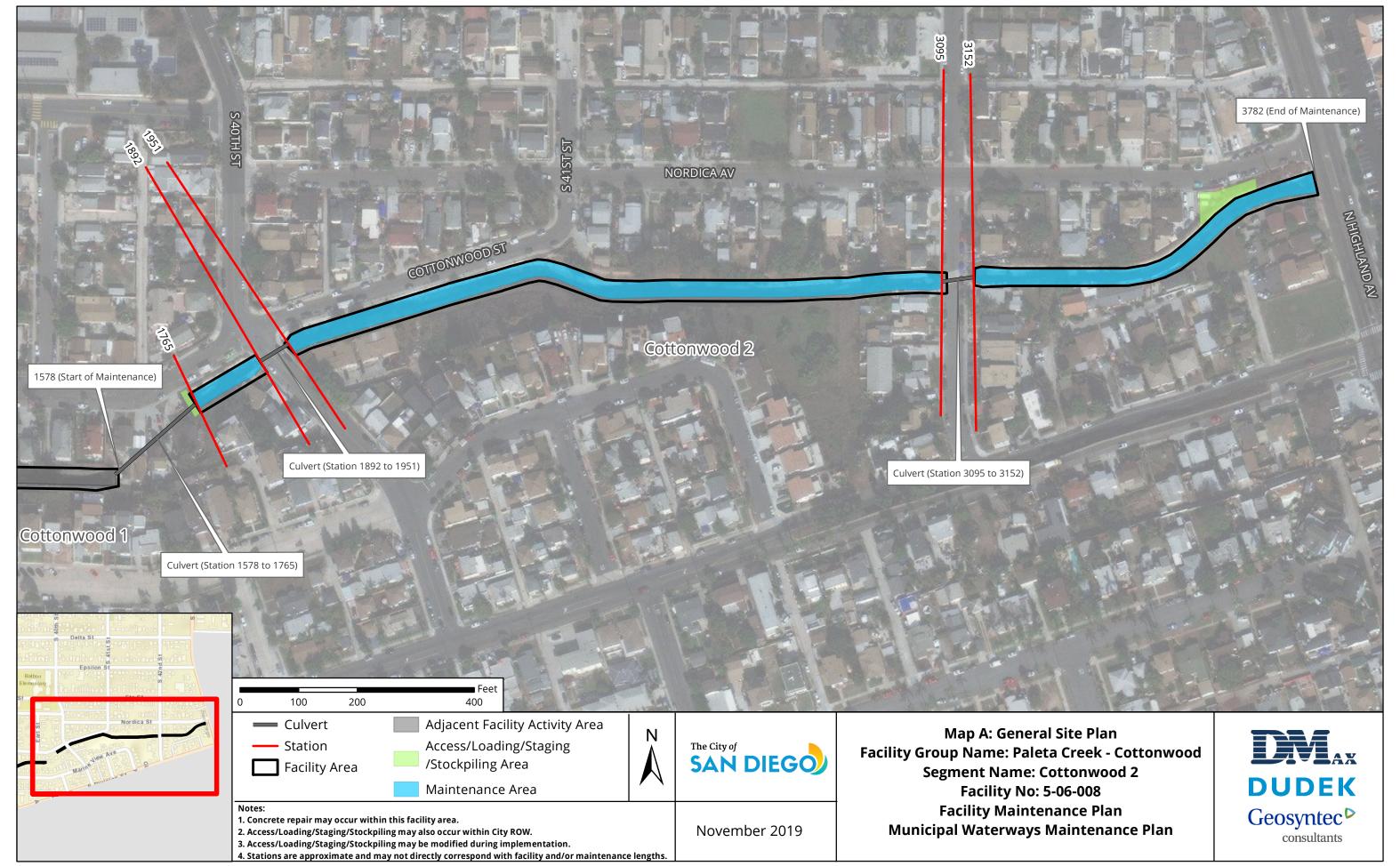
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² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 2,204 feet
(Approximate)	Top width: 28.5 feet
,	Bottom width: 12 feet
	Depth: 5.5 feet
Authorized Facility Maintenance	Length: Channel: 1,899 feet; Culvert: 303 feet
Area	Width: 28.5 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,
	sweeper
Schedule	Up to approximately 7 working days
Maintenance Crew	Approximately 6–8 people
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading
	area
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading
	area
	3. Gradall/excavator scoops material form channel and loads dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	Yes; coordinate with the City of San Diego
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	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

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

Flow Management	As needed:		
1 10W Management			
	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	None		



Facility Maintenance Plan

Paleta Creek - Solola Facility Group

Segment Names (Facility numbers):

Solola 1 (5-06-020)

Solola 2 (5-06-023)

Cervantes 1 (5-06-025) (See

Appendix A-5)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Pueblo San Diego (5)
Hydrologic Subarea	908.31
Drainage Name (Number)	Paleta Creek (06)
Facility Group Name	Paleta Creek - Solola
Segment Name (Facility Number)	Solola 1 (5-06-020)
	Solola 2 (5-06-023)
	Cervantes 1 (5-06-025) (See Appendix A-5)
Substrate	Solola 1 / Concrete
	Solola 2 / Concrete
	Cervantes 1 / Earthen
Location	About 300 feet southwest of intersection of South Radio Drive and
	Cervantes Avenue, and east of 47th Street
MMP Map No(s).	116, 117, 118, 119
Facility Inspection No.	116, 117, 118, 119
Other Former Names	None

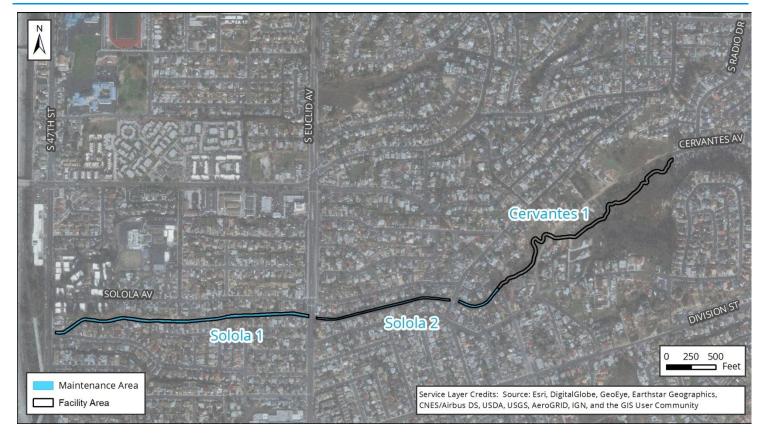


Figure 1: Vicinity Map of Paleta Creek - Solola Facility Group

Water Quality Resource Summary

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

San Diego Bay Watershed Management Area; Hydrologic Subarea 908.31			
Adopted TMDLs	None		
Highest Priority Water	No Highest Priority has been identified for this part of the Watershed Management		
Quality Condition	Area		

Paleta Creek - Solola	
Beneficial Uses	Non-contact Water Recreation (REC-2)
	Warm Freshwater Habitat (WARM)
	Wildlife Habitat (WILD)
303(d) listed Impairments	Copper, Lead

San Diego Bay (First downstream water body)				
Beneficial Uses	Industrial Service Supply (IND)			
	Contact Water Recreation (REC-1)			
	Non-contact Water Recreation (REC-2)			
	 Preservation of Biological Habitats of Special Significance (BIOL) 			
	Wildlife Habitat (WILD)			
	Rare, Threatened, or Endangered Species (RARE)			
	 Spawning, Reproduction, and/or Early Development (SPWN) 			
	Navigation (NAV)			
	Commercial and Sport Fishing (COMM)			
	Estaurine (EST)			
	Marine (MAR)			
	Migration of Aquatic Organisms (MIGR)			
	Shellfish Harvesting (SHELL)			
303(d) listed Impairments	Mercury, PAHs (Polycyclic Aromatic Hydrocarbons), PCBs (Polychlorinated biphenyls)			

Solola Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Middle reach of Paleta Creek, upstream of Paleta Creek (Cottonwood Segment 2)
Tributaries (listed from downstream to upstream)	Paleta Creek
Facility Length	Approximately 2,625 feet
Top-of-Bank Width	Approximately 28 feet
Bottom Facility Width	Approximately 10–19 feet
Facility Depth	Approximately 5–6 feet
Adjacent Land Use	Multi-Family Residential, Single-Family Residential, Transportation
As-Built Drawing Number	15422-D & 12964-D
Coastal Zone	No



Figure 1: April 2017, looking downstream at accumulated sediment and debris in concrete channel

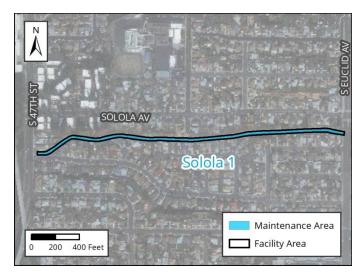


Figure 2: Vicinity Map of Solola Segment 1

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 minor

concrete repair

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 None

401 None

1602 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.¹

Current Conditions	s Affecting	The segment was observed to range from a mostly clean channel to moderate				
Facility Capacity		vegetation with sediment and debris deposition				
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	43	100	160	250	390	470
second [cfs])						

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Current Capacity	470 cfs
Proposed MWMP Maintained Capacity	470 cfs

Maintenance Recommendation	Remove accumulated sediment, debris, and vegetation between
	Station 39 and Station 2664

In-Stream Post-Maintenance Erosion Control	None
Recommendation	

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed land
	Disturbed land
	Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or
	adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within	None
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources Constraint Identified	None	

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

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.

Facility Group	Paleta Creek - Solola		
Segment Name	Solola 1		
Facility No.	5-06-020		
Facility Location	From outlet of culvert at Euclid Avenue to inlet of culvert at 47th Street		
Coastal Zone	No		
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and		
	Hydrology and Hydraulics recommendations		
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation between Station 39		
Recommendation ²	and Station 2664		
Maintenance Activities	Vegetation grubbing, trimming, and removal		
	Invasive plant species treatment and removal		
	Sediment removal		
	Concrete repair		
Maintenance Method	Excavation; mechanized equipment inside and outside the channel		
	Temporary access/loading		
	Temporary staging		
	Temporary diversions		
	Hand removal of vegetation		
Bank Repair	No		
Concrete Repair	Yes; see Appendix A-4		
Concrete/Gabion Structure Repair	Yes; see Appendix A-4		
and Maintenance			
Culvert Maintenance	No		
Post-Maintenance Erosion Control	No		
Recommendation			
Trash/Debris Fence Repair and	No		
Maintenance			
Facility Type	Concrete channel		
Existing Plans and/or As-Builts?	Yes; 15422-D & 12964-D		
Substrate Detail	Concrete bottom and banks		
Facility Dimensions	Length: 2,625 feet		
(Approximate)	Top width: 28 feet		
	Bottom width: 10–19 feet		
	Depth: 5–6 feet		
Authorized Facility Maintenance	Length: Channel: 2,625 feet		
Area	Width: 28 feet		

-

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

Maintenance Overatities	To be determined at time of maintanance		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,		
	sweeper		
Schedule	Up to approximately 30 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading		
	area		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from channel and loads dump truck		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	Yes; coordinate with the City of San Diego		
,	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
	Dec 1.5.5. Chadon Cont. of Flan		

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

In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	None			



Solola Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Paleta Creek, immediately upstream of Paleta Creek (Solola Segment 1)
Tributaries (listed from downstream to upstream)	Paleta Creek
Facility Length	Approximately 2,027 feet
Top-of-Bank Width	Approximately 9–30 feet
Bottom Facility Width	Approximately 4–17.5 feet
Facility Depth	Approximately 4–12 feet
Adjacent Land Use	Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	9228-L & 9227-L
Coastal Zone	No



Figure 1: April 2017, looking downstream at second drop structure and sediment accumulated at bottom of structure

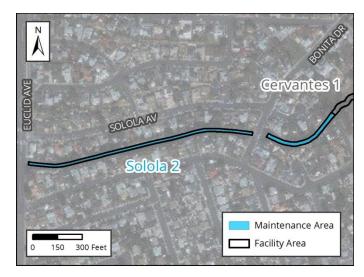


Figure 2: Vicinity Map of Solola Segment 2

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 minor

concrete repair

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 None

401 None

1602 None

Mitigation for Previous Impacts None

Recommendation

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.

Current Conditions	urrent Conditions Affecting The segment was observed to range from a mostly clean channel to moderate				nel to moderate	
Facility Capacity	Capacity vegetation with sediment and debris deposition					
Hydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	43	100	160	250	390	470
second [cfs])						
Hydraulic Capacity	of Facility					
Curr	Current Capacity 325 cfs					
Proposed MWMP Maintained Capacity 325 cfs						
Maintenance Recommendation Remove the accumulated sediment, debris, and vegetation from				regetation from		
Station 2734 to Station 4122, and Station 4172 to Station 4691.				Station 4691.		
			Remove the accumulated sediment and debris in culverts from			
			Station 2664 to Station 2734, and Station 4122 to Station 4172.			
In-Stream Post-Maintenance Erosion Control None						

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	 Developed land Disturbed land Natural flood channel Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; Pre-1974 concrete channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

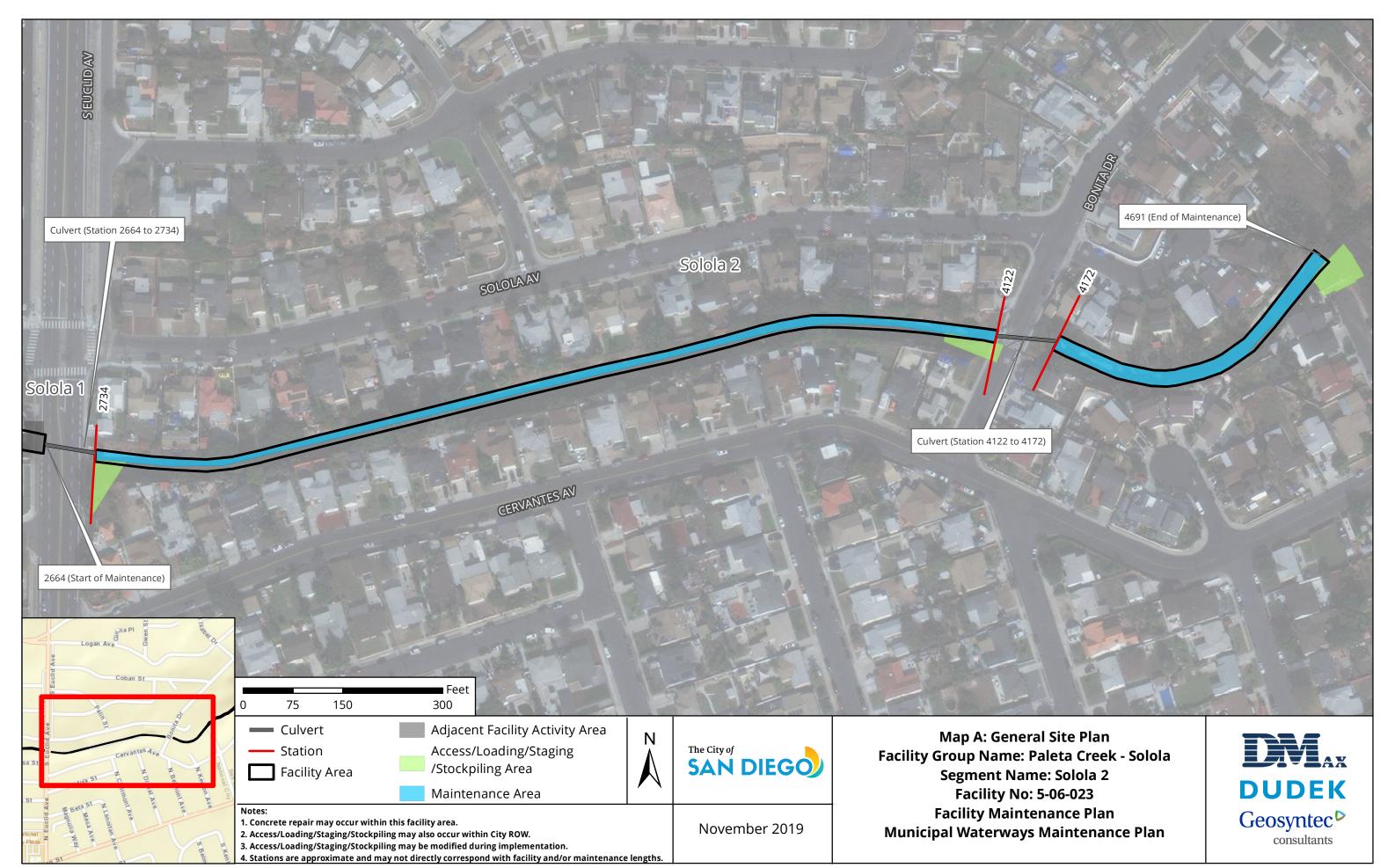
Facility Group	Paleta Creek - Solola
Segment Name	Solola 2
Facility No.	5-06-023
Facility Location	From downstream end of Cervantes 1 segment to inlet of culvert that
	crosses under Euclid Avenue
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove the accumulated sediment, debris, and vegetation from Station
Recommendation ²	2734 to Station 4122, and Station 4172 to Station 4691.
	Remove the accumulated sediment and debris in culverts from Station
	2664 to Station 2734, and Station 4122 to Station 4172.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	Yes; see Appendix A-4
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 9228-L & 9227-L
Substrate Detail	Concrete bottom and banks

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

Encility Dimonsions	Longth, 2,027 foot		
Facility Dimensions	Length: 2,027 feet		
(Approximate)	Top width: 9–30 feet		
	Bottom width: 4–17.5 feet		
	Depth: 4–12 feet		
Authorized Facility Maintenance	Length: Channel: 1,907 feet; Culvert: 120 feet		
Area	Width: 9–30 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,		
	sweeper		
Schedule	Up to approximately 30 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures 1. Bobcat/skid-steer enters or is lowered into channel at access			
	area		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from channel and loads dump truck		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	No		
	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
	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		
Biology	Suitable habitat for sensitive species ³ :		
2.0.08)	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		
	cleaning moin rebruary i unrough september 15		

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

Flow Management	As needed:	
1 10W Management		
	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Sweetwater River - Parkside Facility Group

Segment Name (Facility number):
Parkside 1 (5-11-003)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Sweetwater (5)
Hydrologic Subarea	909.12
Drainage Name (Number)	Sweetwater River Unnamed Tributary (11)
Facility Group Name	Sweetwater River - Parkside
Segment Name (Facility Number)	Parkside 1 (5-11-003)
Substrate	Parkside 1 / Concrete
Location	About 300 feet west of the eastern intersection of Garber Avenue and Parkside Avenue, southeast of the intersection of Rhoades Road and Parkside Avenue
MMP Map No(s).	122
Facility Inspection No.	122
Other Former Names	Parkside Channel



Figure 1: Vicinity Map of Sweetwater River - Parkside Facility Group

Water Quality Resource Summary

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

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

Sweetwater River - Parkside	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Sweetwater River (First downstream water body)		
Beneficial Uses	Industrial Service Supply (IND)	
	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
303(d) listed Impairments	Benthic Community Effects, Indicator Bacteria, Nitrogen, Pesticides, Phosphorus,	
	Selenium, Total Dissolved Solids, Toxicity	

Parkside Segment 1 Detail

Facility Type	Concrete channel	
Substrate Detail	Concrete bottom and banks	
Location Within Watershed	Middle reach of Sweetwater River unnamed tributary	
Tributaries (listed from downstream to	No named tributaries	
upstream)		
Facility Length	Approximately 1,197 feet	
Top-of-Bank Width	Approximately 25–35 feet	
Bottom Facility Width	Approximately 10–17 feet	
Facility Depth	Approximately 5–7 feet	
Adjacent Land Use	Single-Family Residential, Transportation, Open Space	
As-Built Drawing Number	7498-D	
Coastal Zone	No	



Figure 1: May 2015, representative of channel (with moderate vegetation), looking upstream

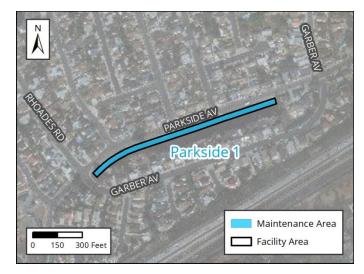


Figure 2: Vicinity Map of Parkside Segment 1

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 – 2014: No maintenance conducted

2015/2016: Emergency excavation of sediment and vegetation

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2015-00909-RAG

401 RGP 63 Verification No. R9-2015-0208:820215:lhonma

1602 LSA Emergency Notification submitted 01/2016

Mitigation for Previous Impacts RWQCB Conceptual Wetland Mitigation Plan for 2015/16 Emergency Channel

Maintenance (0.20 acre)

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.¹

Current Conditions	s Affecting	In May 2015, 1	the amount of ve	egetation obser	ved was dense v	with many large
Facility Capacity		trees and sediment deposition was estimated to be 0.2 feet deep				
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	709	886	1,034	1,241	1,477	1,536
second [cfs])						

Hydraulic Capacity of Facility

Current Capacity 735 cfs

Proposed MWMP Maintained Capacity 735 cfs

Maintenance Recommendation Remove accumulated sediment, debris, and overgrown

vegetation from Station 298 to Station 1495

In-Stream Post-Maintenance Erosion Control

None

Recommendation

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed land
	Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

None	
None	

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

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.

Facility Group	Sweetwater River - Parkside
Segment Name	Parkside 1
Facility No.	5-11-003
Facility Location	From 300 feet west of Garber Avenue to inlet of culvert beneath Rhoades Road
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions, previous emergency maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove accumulated sediment, debris, and overgrown vegetation from Station 298 to Station 1495
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 7498-D
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 1,197 feet
(Approximate)	Top width: 25–35 feet Bottom width: 10–17 feet Depth: 5–7 feet

_

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

Authorized Facility Maintenance	Length: Channel: 1,197 feet		
Area	Width: 25–35 feet To be determined at time of maintenance		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,		
	sweeper		
Schedule	Up to approximately 7–14 working days		
Maintenance Crew	Approximately 6–8 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading		
	area		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from channel and loads dump truck		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	Yes; coordinate with the City of San Diego		
Additional Maintenance Information			
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
Flow Management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		

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

BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Facility Maintenance Plan

Nestor Creek - Nestor Facility Group

Segment Names (Facility numbers):

Cedar 1 (5-22-008)

Cedar 2 (5-22-010)

Dahlia 1 (5-22-013)

Cerissa 1 (5-22-016)

Grove 1 (5-22-023)

30th St 1 (5-22-028)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Otay (5)
Hydrologic Subarea	910.20
Drainage Name (Number)	Nestor Creek (22)
Facility Group Name	Nestor Creek - Nestor
Segment Name (Facility Number)	Cedar 1 (5-22-008)
	Cedar 2 (5-22-010)
	Dahlia 1 (5-22-013)
	Cerissa 1 (5-22-016)
	Grove 1 (5-22-023)
	30th St 1 (5-22-028)
Substrate	Cedar 1 / Earthen
	Cedar 2 / Concrete
	Dahlia 1 / Concrete
	Cerissa 1 / Earthen
	Grove 1 / Earthen and concrete
	30th St 1 / Earthen and concrete
Location	About 400 feet north of Palm Avenue and 1,300 feet north of Iris
	Avenue, crossing Interstate 5 (I-5)
MMP Map No(s).	131, 132, 133, 134
Facility Inspection No.	132, 133, 134, 300x
Other Former Names	Nestor



Figure 1: Vicinity Map of Nestor Creek - Nestor Facility Group

Water Quality Resource Summary

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

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

Nestor Creek - Nestor	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Otay River (First downstream water body)		
Beneficial Uses	Agricultural Supply (AGR)	
	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
	Rare, Threatened, or Endangered Species (RARE)	
303(d) listed Impairments	No impairments recorded on the 303(d) list	

Cedar Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and riprap banks
Location Within Watershed	Lower reach of Nestor Creek, upstream of the San Diego Bay
Tributaries (listed from downstream to	Nestor Creek, Nestor Creek Unnamed Tributary
upstream)	
Facility Length	Approximately 427 feet
Top-of-Bank Width	Approximately 28–32 feet
Bottom Facility Width	Approximately 10–16.5 feet
Facility Depth	Approximately 4–7 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Other Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	None
Coastal Zone	CST-APP



Figure 1: November 2016, looking downstream from the upstream end of the segment

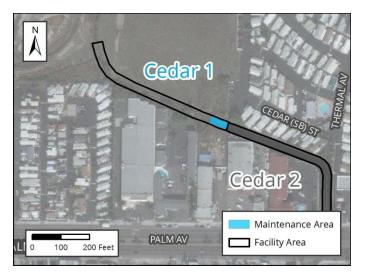


Figure 2: Vicinity Map of Cedar Segment 1

Facility Maintenance History

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

History of Maintonance	Drianto 2011, Halmania
History of Maintenance	Prior to 2011: Unknown

2011 - 2014: No maintenance conducted

2015/2016: Emergency excavation of sediment and vegetation

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP CDP No. 2161345 (City issued)

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2016-00011-MBT

401 RGP 63 Verification No. R9-2016-0044;821320;lhonma

1602 LSA Emergency Notification submitted 02/2016; CDFW SAA No. 1600-2018-0189-R5 (expires

01/15/2023)

Mitigation for Previous Impacts TBD

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.¹

Current Conditions Affecting In Novemb		In November	er 2016, the amount of vegetation was observed to from light to			
Facility Capacity dense and s		sediment deposition was noted				
Hydrologic Peak Flo	Hydrologic Peak Flows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	300	360	440	640	840	1,093
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity 160 cfs						
Proposed MWMP Maintained Capacity		360 cfs				
Maintenance Recommendation Remove accumulated sediment, debris, and vegetation from channel bottom from Station 790 to Station 855. Assessment continues on the remainder of Cedar 1 (Station 428 to Station 790) to determine if future maintenance will benefit the associated areas.			5. dar 1 (Station 428			
In-Stream Post-Maintenance Erosion Control Recommendation		sion Control	None			
Reco	ciidatioii					

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

Biological Resource Summary

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

Facility Vegetation	Freshwater marsh
	Natural flood channel
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Disturbed wetland (Arundo-dominated)
	Ornamental plantings
Habitat and Wildlife	There are limited biological resources suitable for sensitive species use within the facility. However, due to the adjacency to coastal and marsh habitat, there is potential for sensitive species, such as Ridgway's rail, to occur within and downstream of the channel.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest
	MHPA boundaries are located approximately 370 feet west of the channel location.
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	Channel; Pre-1953 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

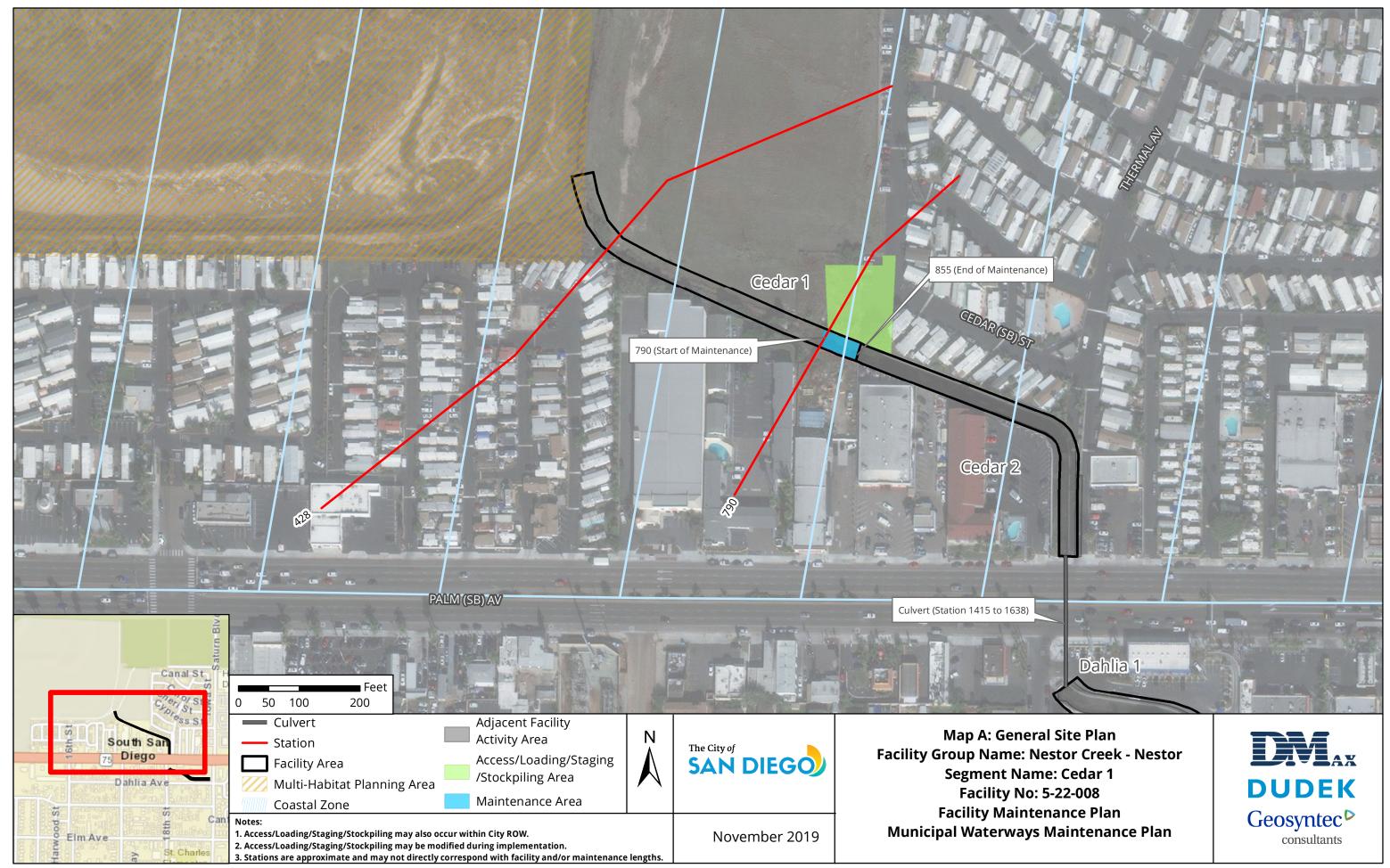
Facility Group	Nestor Creek - Nestor	
Segment Name	Cedar 1	
Facility No.	5-22-008	
Facility Location	From downstream end of Cedar 2 segment to 600 feet northwest of the	
	intersection of Palm Avenue and Thermal Avenue	
Coastal Zone	CST-APP	
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions	
	and Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from channel	
Recommendation ²	bottom from Station 790 to Station 855.	
	Assessment continues on the remainder of Cedar 1 (Station 428 to Station	
	790) to determine if future maintenance will benefit the associated areas.	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	No	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen channel	
Existing Plans and/or As-Builts?	None	
Substrate Detail	Earthen bottom and riprap banks	
Facility Dimensions	Length: 427 feet	
(Approximate)	Top width: 28–32 feet	
	Bottom width: 10–16.5 feet	
	Depth: 4–7 feet	

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

[T	
Authorized Facility Maintenance	Length: Channel: 65 feet	
Area	Width: 28–32 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,	
	sweeper	
Schedule	Up to approximately 7–14 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading	
	area	
	2. Bulldozer/track-steer pushes material to loader and Gradall/excavator at	
	access/loading area	
	3. Loader and Gradall/excavator scoop material from channel and load	
	dump truck	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	No	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	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	
Flow Management	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	
	<u> </u>	

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

Downstream Sensitive Waters	No	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Cedar Segment 2 Detail

Facility Type	Concrete channel	
Substrate Detail	Concrete bottom and banks	
Location Within Watershed	Lower reach of Nestor Creek, immediately upstream of Nestor Creek (Cedar Segment 1)	
Tributaries (listed from downstream to	Nestor Creek, Nestor Creek Unnamed Tributary	
upstream)		
Facility Length	Approximately 560 feet	
Top-of-Bank Width	Approximately 28 feet	
Bottom Facility Width	Approximately 16.5–28 feet	
Facility Depth	Approximately 8–9 feet	
Adjacent Land Use	Commercial, Open Space, Other Residential, Single-Family Residential, Transportation	
As-Built Drawing Number	22431-D	
Coastal Zone	CST-APP	



Figure 1: November 2016, looking upstream at the Palm Avenue triple RCB culvert

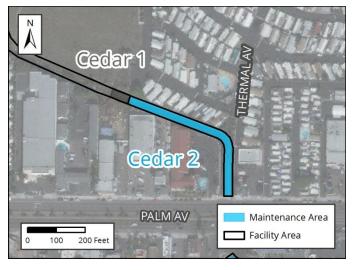


Figure 2: Vicinity Map of Cedar Segment 2

Facility Maintenance History

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

History of Maintenance Prior to 2010: Unknown

2010: Emergency maintenance activities

January 2011 – March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP No. 2161345 (City issued)

SDP SDP No. 2034245 (2017 Addendum)

404 NWP 43

401 RWQCB 401 Cert No. 10C-059 (one-time maintenance authorization)

1602 CDFW SAA No. 1600-2010-0195-R5 (expires 09/30/2015)

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.¹

Current Conditions	s Affecting	In November 2016, the vegetation was observed to vary from light to				
Facility Capacity		moderate v	moderate with approximately 0.5 foot of sediment deposition			
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	5-year 10-year 25-year 50-year 100-year			
Q (cubic feet per	300	360	440	640	840	1,093
second [cfs])						

Hydraulic Capacity of Facility

Current Capacity 980 cfs

Proposed MWMP Maintained Capacity 1,093 cfs

Maintenance Recommendation Remove accumulated sediment and vegetation from channel

bottom from Station 855 to Station 1415

In-Stream Post-Maintenance Erosion Control

Recommendation

None

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed land
	Disturbed land
	Disturbed wetland (Arundo-dominated)
	Freshwater marsh
	Natural flood channel
	Ornamental plantings
Habitat and Wildlife	There are no biological resources suitable for sensitive species use within the facility.
	However, due to the adjacency to coastal and marsh habitat, there is potential for sensitive species, such as Ridgway's rail, to occur within and downstream of the channel.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest
	MHPA boundaries are located approximately 500 feet west of the channel location.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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

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.

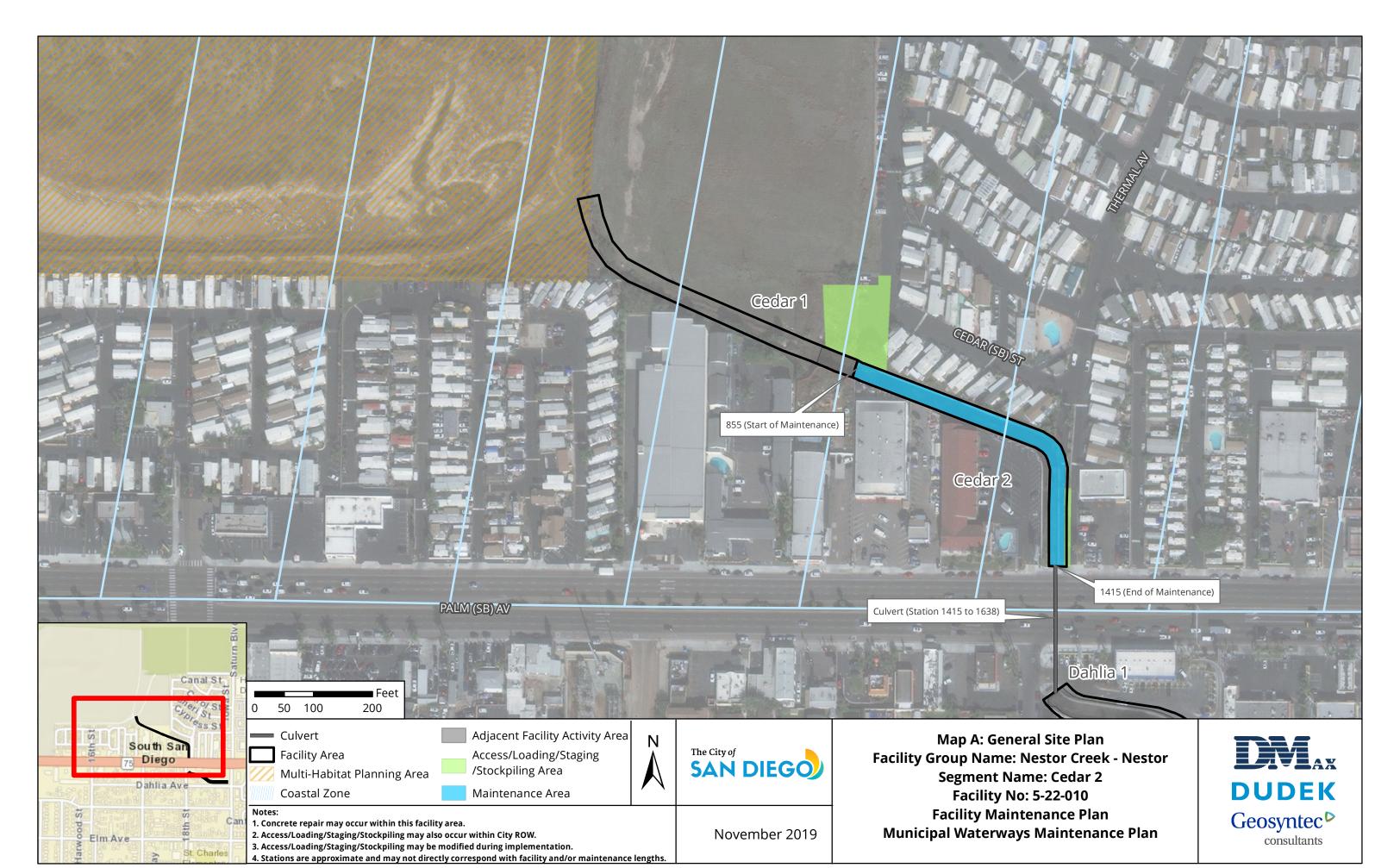
Facility Group	Nestor Creek - Nestor	
Segment Name	Cedar 2	
Facility No.	5-22-010	
Facility Location	From outlet of culvert beneath Palm Avenue to upstream end of Cedar 1	
-	segment	
Coastal Zone	CST-APP	
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and	
	Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	Remove accumulated sediment and vegetation from channel bottom from	
Recommendation ²	Station 855 to Station 1415	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
	Concrete repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Concrete channel	
Existing Plans and/or As-Builts?	Yes; 22431-D	
Substrate Detail	Concrete bottom and banks	
Facility Dimensions	Length: 560 feet	
(Approximate)	Top width: 28 feet	
	Bottom width: 16.5–28 feet	
	Depth: 8–9 feet	

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

	T	
Authorized Facility Maintenance	Length: Channel: 560 feet	
Area	Width: 28 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump,	
	sweeper	
Schedule	Up to approximately 7–14 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bobcat/skid-steer and/or loader enter or are lowered into channel at	
	access/loading area	
	2. Bobcat/skid-steer/loader push material to loader and Gradall/excavator	
	at access/loading area	
	3. Loader and Gradall/excavator scoop material from channel and load	
	dump truck	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	No	
,	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	1. Within maintenance area: No	
	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	
Flow Management	As needed:	
	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	
	Langer to: allouisacea allouialee and militation	

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

Downstream Sensitive Waters	No	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Dahlia Segment 1 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Lower reach of Nestor Creek, immediately upstream of Nestor Creek (Cedar Segment 2)
Tributaries (listed from downstream to upstream)	Nestor Creek, Nestor Creek Unnamed Tributary
Facility Length	Approximately 845 feet
Top-of-Bank Width	Approximately 30 feet
Bottom Facility Width	Approximately 30 feet
Facility Depth	Approximately 7–9 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Other Residential, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	21584-D
Coastal Zone	No



Figure 1: April 2015, looking upstream



Figure 2: Vicinity Map of Dahlia Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
•	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Current Conditions	S Affecting	In April 2015, the vegetation was observed to vary from light to moderate with				
Facility Capacity		some sediment deposition				
Hydrologic Peak Flo	Hydrologic Peak Flows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	243	300	365	520	690	864
second [cfs])						
Hydraulic Capacity of Facility						
Curr	ent Capacity		864 cfs			
Proposed MWM	IP Maintained	Capacity	N/A			
Maintenance Recommendation No maintenance currently proposed; however vegetation,			vegetation,			
			sediment and debris removal, or concrete repair/replacement		air/replacement	
			activities should be performed if the conditions change			
In-Stream Post-Maintenance Erosion Control		None				
Reco	mmendation					

Dahlia 1 (Facility No. 5-22-013)

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed concrete-lined channelDeveloped land
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
МНРА	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 northwest of the channel.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources Constraint Identified	None	

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

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.

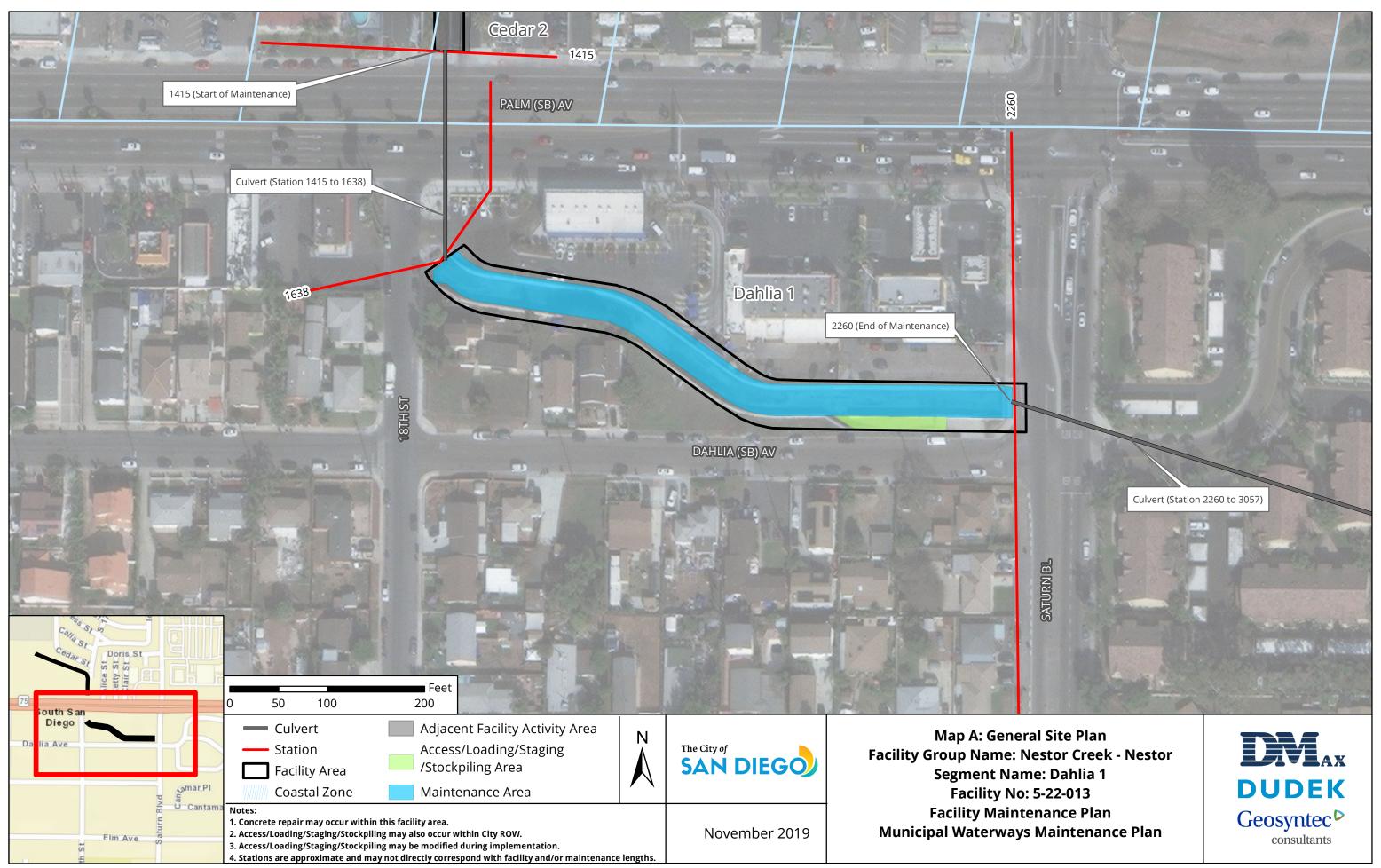
Dahlia 1 S-22-013 From outlet of culvert west of Saturn Boulevard to inlet of culvert southeast of the intersection of Palm Avenue and 18th Street
From outlet of culvert west of Saturn Boulevard to inlet of culvert southeast of the intersection of Palm Avenue and 18th Street No MWMP Proposed Maintenance Mydrology and Hydraulics Mydrology and Hydraulics Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Maintenance Method Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary access/loading Temporary diversions Hand removal of vegetation No Concrete Repair No Concrete Repair Mo Maintenance Ulvert Maintenance Yes; see Appendix A-4 No Recommendation No
of the intersection of Palm Avenue and 18th Street No MWMP Proposed Maintenance Maintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Maintenance Activities Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary staging Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair No Concrete/Gabion Structure Repair ind Maintenance Culvert Maintenance Post-Maintenance Erosion Control Recommendation No No No Maintenance Indicate In
ModWMP Proposed Maintenance MWMP Proposed Maintenance Mydrology and Hydraulics Recommendation No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Concrete repair Maintenance Method Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary diversions Hand removal of vegetation Bank Repair Concrete Repair Concrete Repair Concrete Repair Concrete Repair Concrete Repair Ves; see Appendix A-4 No Ost-Maintenance Ves; see Appendix A-4 No Recommendation
Mintenance of concrete-lined channel per as-built dimensions and Hydrology and Hydraulics recommendations No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Bank Repair Oncrete Repair Oncrete/Gabion Structure Repair Mointenance Fost-Maintenance Erosion Control Recommendation Maintenance Indianance Indianance Presson Control Recommendation
Hydrology and Hydraulics recommendations No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Maintenance Activities Maintenance Activities Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation No Concrete Repair No Concrete Repair Oncrete/Gabion Structure Repair Ind Maintenance Culvert Maintenance Ves; see Appendix A-4 Post-Maintenance Erosion Control Recommendation
No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Maintenance Method Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation No Concrete Repair Concrete Repair Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 No Recommendation No No No Recommendation
debris removal, or concrete repair/replacement activities should be performed if the conditions change Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair Maintenance Method Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 No Recommendation
Invasive plant species treatment and removal Sediment removal Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair Ves; see Appendix A-4 Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 Post-Maintenance Erosion Control Recommendation Invasive plant species treatment and removal Sediment removal Concrete repair No Temporary diversions Hand removal of vegetation No
Sediment removal Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair Yes; see Appendix A-4 Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 Post-Maintenance Erosion Control Recommendation Sediment removal Concrete repair No Yes; see Appendix A-4 No No
Concrete repair Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation Bank Repair Concrete Repair Yes; see Appendix A-4 Concrete/Gabion Structure Repair No Ind Maintenance Culvert Maintenance Yes; see Appendix A-4 No No No No No No No No No N
Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation No Concrete Repair Concrete/Gabion Structure Repair Ind Maintenance Culvert Maintenance Culvert Maintenance Cost-Maintenance Erosion Control Recommendation Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary staging Temporary diversions Hand removal of vegetation No Yes; see Appendix A-4 No No
Temporary access/loading Temporary staging Temporary diversions Hand removal of vegetation No Concrete Repair Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Culvert Maintenance Frosion Control Recommendation Temporary access/loading Temporary staging Temporary access/loading Temporary staging Temporary
Temporary staging Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair Yes; see Appendix A-4 Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 Post-Maintenance Erosion Control Recommendation Temporary staging Temp
Temporary diversions Hand removal of vegetation Bank Repair No Concrete Repair Yes; see Appendix A-4 Concrete/Gabion Structure Repair and Maintenance Culvert Maintenance Ves; see Appendix A-4 Post-Maintenance Erosion Control Recommendation Temporary diversions Hand removal of vegetation No Yes; see Appendix A-4 No
Hand removal of vegetation Bank Repair No Concrete Repair Yes; see Appendix A-4 Concrete/Gabion Structure Repair And Maintenance Culvert Maintenance Post-Maintenance Erosion Control Recommendation Hand removal of vegetation No Yes; see Appendix A-4 No No Recommendation
Sank Repair Concrete Repair Concrete/Gabion Structure Repair Ind Maintenance Culvert Maintenance Post-Maintenance Erosion Control Recommendation No No Yes; see Appendix A-4 No No No No No No No No No N
Concrete Repair Concrete/Gabion Structure Repair Ind Maintenance Culvert Maintenance Cost-Maintenance Erosion Control Recommendation Yes; see Appendix A-4 No
Concrete/Gabion Structure Repair No and Maintenance Culvert Maintenance Yes; see Appendix A-4 Post-Maintenance Erosion Control Recommendation
And Maintenance Culvert Maintenance Yes; see Appendix A-4 Post-Maintenance Erosion Control Recommendation
Culvert Maintenance Yes; see Appendix A-4 Post-Maintenance Erosion Control Recommendation Yes; see Appendix A-4
Post-Maintenance Erosion Control No Recommendation
Recommendation
rash/Debris Fence Repair and No
Maintenance
Concrete channel
existing Plans and/or As-Builts? Yes; 21584-D
Substrate Detail Concrete bottom and banks
Cacility Dimensions Length: 845 feet
Approximate) Top width: 30 feet
Bottom width: 30 feet
Depth: 7–9 feet

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

[
Authorized Facility Maintenance	Length: Channel: 622 feet; Culvert: 223 feet					
Area	Width: 30 feet					
Maintenance Quantities	To be determined at time of maintenance					
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,					
Area(s)	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.					
Equipment	Bobcat/skid-steer, loader, dump truck, trash pump, sweeper					
Schedule	Up to approximately 7–14 working days					
Maintenance Crew	Approximately 8–12 people					
Routine Maintenance Procedures	1. Bobcat/skid-steer/loader enters or is lowered into channel at					
	access/loading area					
	2. Bobcat/skid-steer/loader scoops material from channel and loads dump					
	truck at access/loading area					
	3. Dump truck hauls material to legal disposal site					
Traffic Control	No					
Additional Maintenance Information						
Pre-Maintenance Meeting	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					
Biology	Suitable habitat for sensitive species ³ :					
	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					
Flow Management	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					
Downstream Sensitive Waters	No					
BMP Installation	See Water Pollution Control Plan					
·						

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

In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



Cerissa Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Middle reach of Nestor Creek, immediately upstream of Nestor Creek (Dahlia Segment 1)
Tributaries (listed from downstream to	Nestor Creek, Nestor Creek Unnamed Tributary
upstream)	
Facility Length	Approximately 3,253 feet
Top-of-Bank Width	Approximately 65–85 feet
Bottom Facility Width	Approximately 35–60 feet
Facility Depth	Approximately 6–7 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Other Residential, Parks, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	21570-D & 17561-D
Coastal Zone	No



Figure 1: April 2015, looking upstream at the downstream end of the segment



Figure 2: Vicinity Map of Cerissa Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Current Conditions	Affecting	In April 2015	, the vegetation	was observed to	o be light to den	se and there was		
Facility Capacity		evidence of sediment deposition						
Hydrologic Peak Flo)WS							
Storm Event	2-year	5-year	r 10-year 25-year 50-year 100-year					
Q (cubic feet per	215	260	330	470	640	796		
second [cfs])								
Hydraulic Capacity	of Facility							
Curr	Current Capacity 340 cfs							
Proposed MWMP Maintained Capacity 420 cfs								
Maintenanc	Maintenance Recommendation Remove accumulated sediment, debris, and vegetation from				getation from			
channel bottom from Station 3057 to Station 3197 and Statio			197 and Station					
			4167 to Station 5494.					
			Remove accum	ulated sedimen	t and debris fro	m the culvert at		
			Station 2260 to Station 3057.					
			The remainder of Cerissa 1 is recommended to be maintained by			be maintained by		
			the private property owners to remove accumulated sediment,			ulated sediment,		
			debris, and overgrown vegetation.					
In-Stream Post-Ma	intenance Eros	sion Control	r ol None					
Reco	mmendation							

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland
	Disturbed wetland (Arundo-dominated)
	Freshwater marsh
	Riparian forest (southern willow forest)
Adjacent Vegetation	Developed land
	Disturbed land
	Disturbed wetland
	Disturbed wetland (Arundo-dominated)
	Ornamental plantings
	Riparian forest (southern willow forest)
Habitat and Wildlife	The habitat contained within the facility provides potential nesting and/or foraging for migratory bird or raptor species, as well as for other sensitive bird species such as least Bell's vireo and southern willow flycatcher. However, the channel is relatively isolated from other riparian habitat, reducing the potential for sensitive species to occur.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A
Resource Type	IVA

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	MM-BIO-7
Solid Waste (SW)	Noise (NOI)
EP-SW-2	MM-NOI-1
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Nestor Creek - Nestor
Segment Name	Cerissa 1
Facility No.	5-22-016
Facility Location	From outlet of culvert beneath Coronado Avenue to inlet of culvert beneath Saturn Boulevard
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of portions of the earthen channel that are City responsibility per as-built dimensions and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove accumulated sediment, debris, and vegetation from channel bottom from Station 3057 to Station 3197 and Station 4167 to Station 5494. Remove accumulated sediment and debris from the culvert at Station 2260 to Station 3057. The remainder of Cerissa 1 is recommended to be maintained by the private property owners to remove accumulated sediment, debris, and overgrown vegetation.
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Temporary stockpiling Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair and Maintenance	No
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 21570-D & 17561-D
Substrate Detail	Earthen bottom and banks

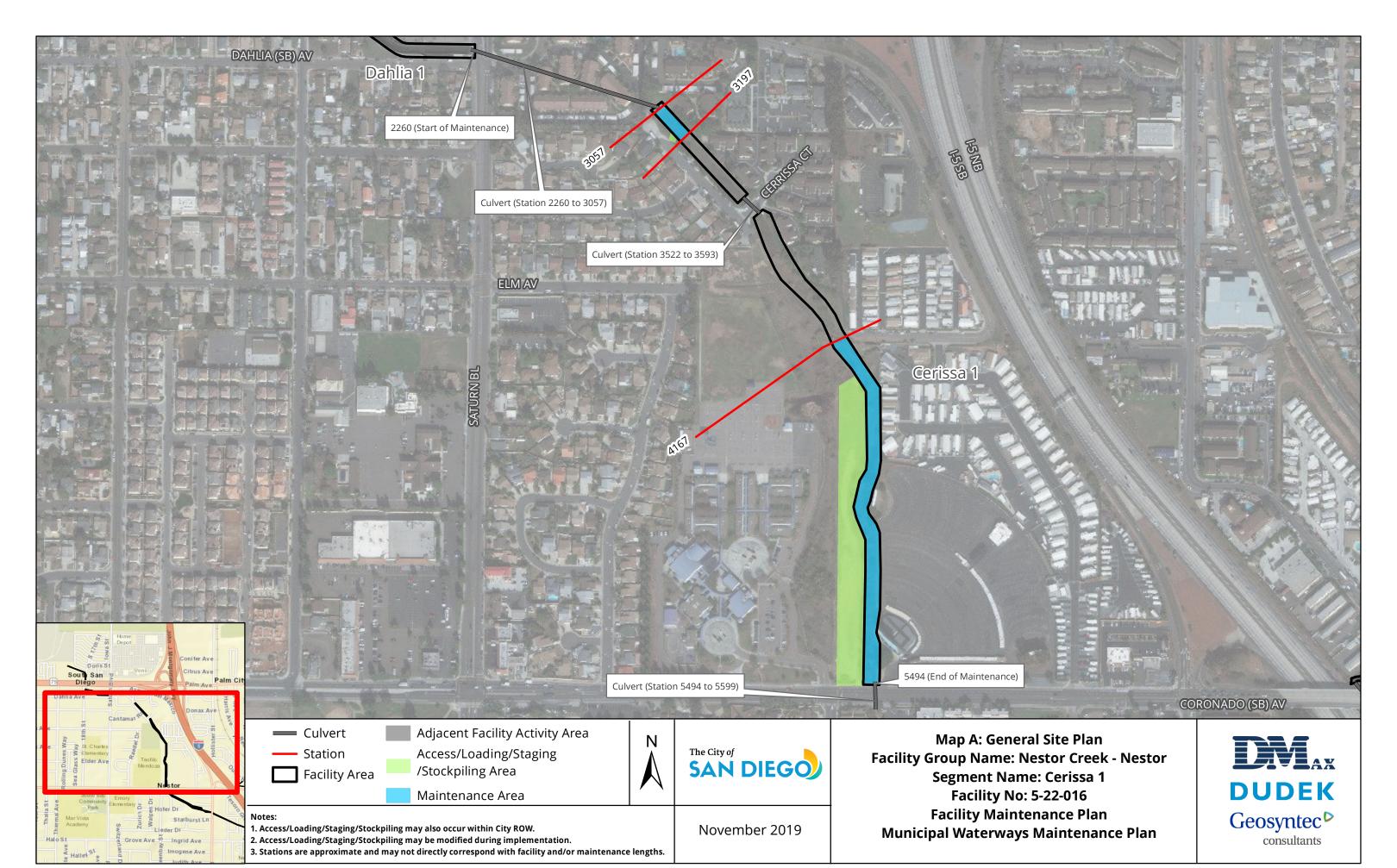
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² Stations are approximate and may not directly correspond with facility and/or maintenance lengths

Facility Dimensions	Length: 3,253 feet
(Approximate)	Top width: 65–85 feet
, ii	Bottom width: 35–60 feet
	Depth: 6–7 feet
Authorized Facility Maintenance	Length: Channel: 1,467 feet; Culvert: 797 feet
Area	Width: 45–69 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Northwest section: Bulldozer/track-steer, Gradall/excavator, loader, dump
	truck, trash pump
	South section: Bulldozer/track-steer, Gradall/excavator, long reach
	excavator, loader, dump truck, trash pump, fuel-powered hand tools,
	sweeper
Schedule	Up to approximately 28–35 working days
Maintenance Crew	Approximately 10–20 people
Routine Maintenance Procedures	Northwest Section:
	1. Bulldozer/track-steer enters channel at access/loading area
	2. Bulldozer/track-steer pushes material to Gradall/excavator at
	access/loading area
	3. Gradall/excavator scoops material from channel and stockpiles material on-site
	4. Loader manages stockpile. Loader will scoop material into dump truck
	5. Dump truck hauls material to legal disposal site
	South Section:
	1. Gradall/excavator and long-reach excavator at access/loading area scoop
	material from channel and load dump truck
	2. Bulldozer/track-steer may be used in channel to push material to
	Gradall/excavator at access/loading area
	3. Gradall/excavator scoops material from channel and stockpiles material
	on-site
	4. Loader manages stockpile. Loader will scoop material into dump truck
	5. Dump truck hauls material to legal disposal site
Traffic Control	No

	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: Yes
	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
Flow Management	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
Downstream Sensitive Waters	No
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	•
טנוופו ואטנפא	None

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



Grove Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail	Earthen bottom and concrete banks
Location Within Watershed	Upper reach of Nestor Creek, upstream of Nestor Creek (Cerissa Segment 1)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,454 feet
Top-of-Bank Width	Approximately 29–34 feet
Bottom Facility Width	Approximately 29–34 feet
Facility Depth	Approximately 3–4 feet
Adjacent Land Use	Open Space, Parks, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	14319-D
Coastal Zone	No



Figure 1: May 2015, looking upstream at the downstream portion of the segment



Figure 2: Vicinity Map of Grove Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	Affecting	In May 2015, the vegetation was observed to be moderate with little evidence of sediment deposition			ith little evidence	
Hydrologic Peak Flo)WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	20	88	180	270	365	456
Hydraulic Capacity	of Facility					
Curr	ent Capacity	456 cfs				
Proposed MWM	Proposed MWMP Maintained Capacity 456 cfs					
Maintenanc	e Recommend	ation	Remove accumulated vegetation from channel bottom from Station 8660 to Station 9228, and Station 9261 to Station 9732. Remove accumulated sediment, debris, and vegetation from the culverts from Station 9228 to Station 9261, and Station 9732 to Station 9802.			to Station 9732. getation from the
In-Stream Post-Ma Reco	intenance Ero mmendation	sion Control	rol None			

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland
	Riparian forest (southern willow forest)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Ornamental plantings
	Riparian forest (southern willow forest; concrete-lined)
Habitat and Wildlife	The habitat contained within this facility provides potential nesting and/or foraging for migratory birds and raptor species, as well as for other sensitive bird species such as least Bell's vireo and southern willow flycatcher. Although suitable habitat is present, the channel extents are limited and it is also isolated from other riparian corridors.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1971 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

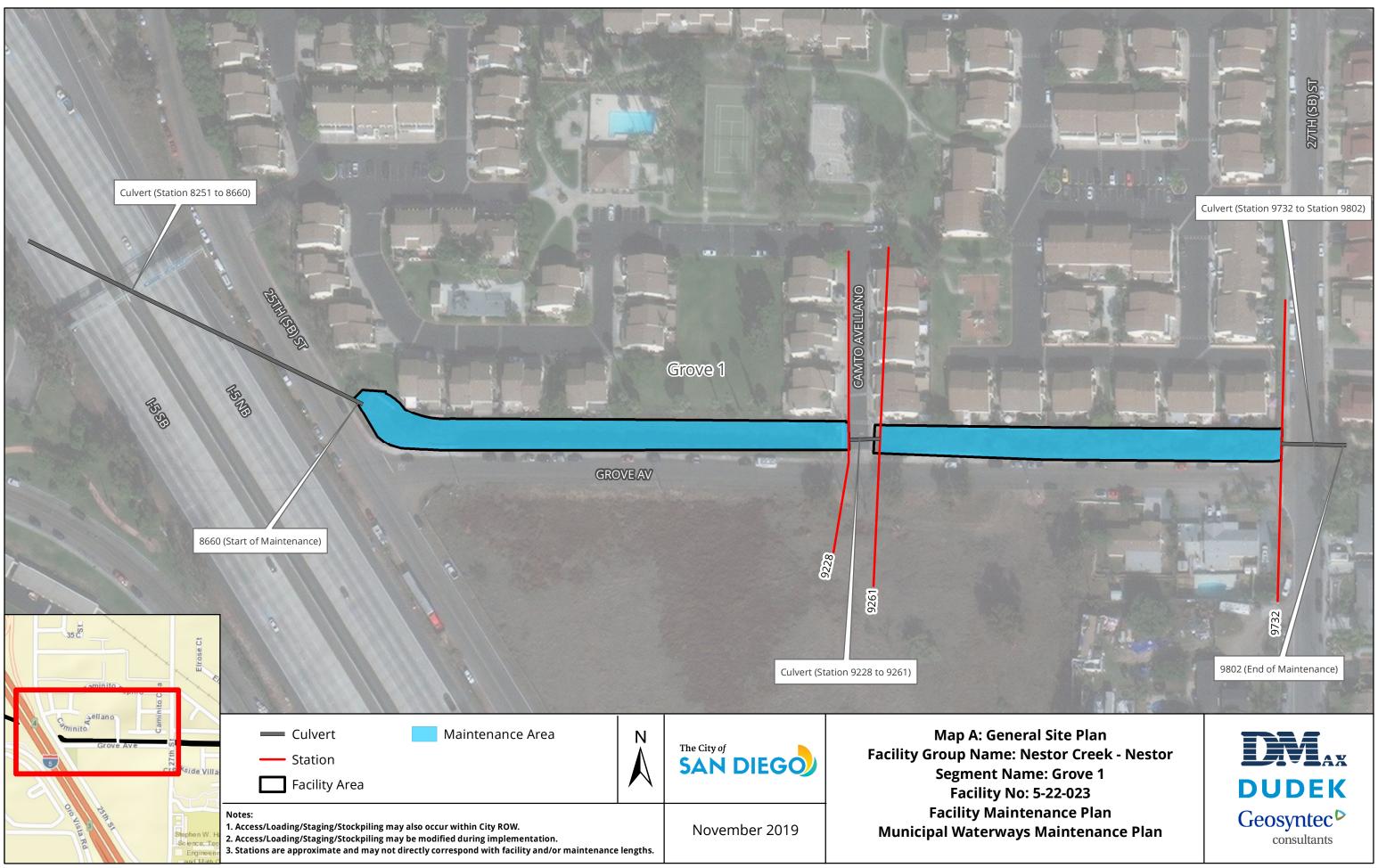
Facility Group	Nestor Creek - Nestor
Segment Name	Grove 1
Facility No.	5-22-023
Facility Location	From outlet of culvert beneath 27th Street to inlet of culvert beneath
	Interstate 5 (I-5)
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of portions of the earthen channel that are City responsibility
	per as-built dimensions and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated vegetation from channel bottom from Station 8660
Recommendation ²	to Station 9228, and Station 9261 to Station 9732.
	Remove accumulated sediment, debris, and vegetation from the culverts
	from Station 9228 to Station 9261, and Station 9732 to Station 9802.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	Yes; 14319-D
Substrate Detail	Earthen bottom and concrete banks

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

Facility Dimensions (Approximate) Authorized Facility Maintenance	Length: 1,454 feet Top width: 29–34 feet Bottom width: 29–34 feet Depth: 3–4 feet
	Bottom width: 29–34 feet
Nuthorized Easility Maintenance	
Nutherized Easility Maintenance	Deptil. 3-4 feet
	Length: Channel: 1,039 feet; Culvert: 103 feet
Area	Width: 29–34 feet
Maintenance Quantities	To be determined at time of maintenance
•	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bulldozer/track-steer, Gradall/excavator, loader, dump truck, trash pump,
	sweeper
Schedule	Up to approximately 14 working days
Maintenance Crew	Approximately 8–12 people
Routine Maintenance Procedures	1. Bulldozer/track-steer and/or loader enter or are lowered into channel at
	access/loading area
	2. Bulldozer/track-steer and/or loader push material to loader or
	Gradall/excavator at access/loading area
	3. Gradall/excavator and loader scoop material from channel and load
	dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No
	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: Yes
	2. Adjacent to maintenance area: Yes, limited suitable habitat present
	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

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

Flow Management	As needed:
1 low management	
	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
Downstream Sensitive Waters	No
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



30th St Segment 1 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 10653-10833: Earthen bottom and banks
	Stations 10833- 11801: Concrete bottom and banks
Location Within Watershed	Upper reach of Nestor Creek, upstream of Nestor Creek (Grove segment 2)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,183 feet
Top-of-Bank Width	Approximately 18–32 feet
Bottom Facility Width	Approximately 5–10 feet
Facility Depth	Approximately 3–10 feet
Adjacent Land Use	Industrial, Open Space, Other Residential, Single-Family Residential, Transportation
As-Built Drawing Number	23199-D & 22424-D
Coastal Zone	No



Figure 1: May 2015, looking upstream from a location downstream of the 42-inch-diameter RCP culvert

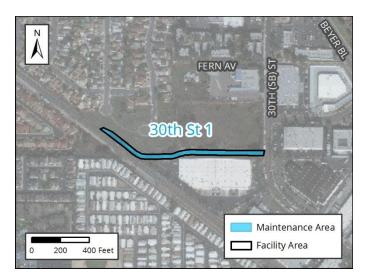


Figure 2: Vicinity Map of 30th St Segment 1

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

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.²

Current Conditions Facility Capacity	Affecting	In May 2015, dense vegetation and sediment deposition was observed throughout the segment length						
Hydrologic Peak Flows								
Storm Event	2-year	5-year	rear 10-year 25-year 50-year 100-year					
Q (cubic feet per second [cfs])	20	88	180	270	365	456		
Hydraulic Capacity	of Facility							
Curr	ent Capacity	140 cfs						
Proposed MWM	osed MWMP Maintained Capacity 165 cfs							
Maintenanc	e Recommend		Remove accumulated sediment, debris, and vegetation f segment channel from Station 10653 to Station 11830. Remove accumulated sediment, debris, and vegetation f culverts from under gabion dam and at Station 10680 ar Station 11830. Perform bank repair on the north concrete bank near Station 11547.			n 11830. getation from n 10680 and at		
In-Stream Post-Ma Reco	intenance Eros mmendation	sion Control	n Control None					

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Riparian forest (southern willow forest; concrete-lined)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Ornamental plantings
	Riparian forest (southern willow forest; concrete-lined)
Habitat and Wildlife	Although this channel 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
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Geologic Resources (GEO)	Noise (NOI)
EP-GEO-1	MM-NOI-1
Health and Safety/Hazards (HAZ)	
EP-HAZ-3	
Paleontological Resources (PAL)	
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Nestor Creek - Nestor
Segment Name	30th St 1
Facility No.	5-22-028
Facility Location	From west of 30th street to inlet of culvert beneath the San Diego and
	Imperial Valley Railroad crossing
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
-	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from segment
Recommendation ³	channel from Station 10653 to Station 11830.
	Remove accumulated sediment, debris, and vegetation from culverts from
	under gabion dam and at Station 10680 and at Station 11830.
	Perform bank repair on the north concrete bank near Station 11547.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	Yes (multiple options); see Appendix A-4
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	Yes; see Appendix A-4
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	Yes; 23199-D & 22424-D
Substrate Detail ³	Stations 10653-10833: Earthen bottom and banks
	Stations 10833- 11801: Concrete bottom and banks

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

·	1 4 400 ()
Facility Dimensions	Length: 1,183 feet
(Approximate)	Top width: 18–32 feet
	Bottom width: 5–10 feet
	Depth: 3–10 feet
Authorized Facility Maintenance	Length: Channel: 1,183 feet; Culvert: 18 feet (under gabion dam)
Area	Width: 11–32 feet
Maintenance Quantities	To be determined at time of maintenance
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,
Area(s)	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.
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump,
	sweeper
Schedule	Up to approximately 14 working days
Maintenance Crew	Approximately 12–18 people
Routine Maintenance Procedures	1. Bobcat/skid-steer and loader enter or are lowered into channel at
	access/loading area
	2. Bobcat/skid-steer pushes material to Gradall/excavator and loader at
	access/loading area
	3. Gradall/excavator and loader scoop material from channel and loads
	dump truck
	4. Dump truck hauls material to legal disposal site
Traffic Control	No
,	Additional Maintenance Information
Pre-Maintenance Meeting	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
Biology	Suitable habitat for sensitive species ⁴ :
	1. Within maintenance area: Yes, limited suitable habitat present
	2. Adjacent to maintenance area: Yes, limited suitable habitat present
	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

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

Flow Management	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			
Downstream Sensitive Waters	No			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	Concrete and riprap used to repair scour behind concrete wall previously			



Facility Maintenance Plan

Nestor Creek - Outer Facility Group

Segment Names (Facility numbers):

Outer 1 (5-22-110)

Outer 2 (5-22-112)



Overview

Watershed Management Area (WMA)	San Diego Bay
Watershed (Number)	Otay (5)
Hydrologic Subarea	910.20
Drainage Name (Number)	Nestor Creek Unnamed Tributary (22)
Facility Group Name	Nestor Creek - Outer
Segment Name (Facility Number)	Outer 1 (5-22-110)
	Outer 2 (5-22-112)
Substrate	Outer 1 / Earthen
	Outer 2 / Concrete
Location	Bordered by Outer Road to the east and northeast, by Coronado
	Avenue to the south, and by Interstate 5 (I-5) to the west
MMP Map No(s).	N/A
Facility Inspection No.	321
Other Former Names	None

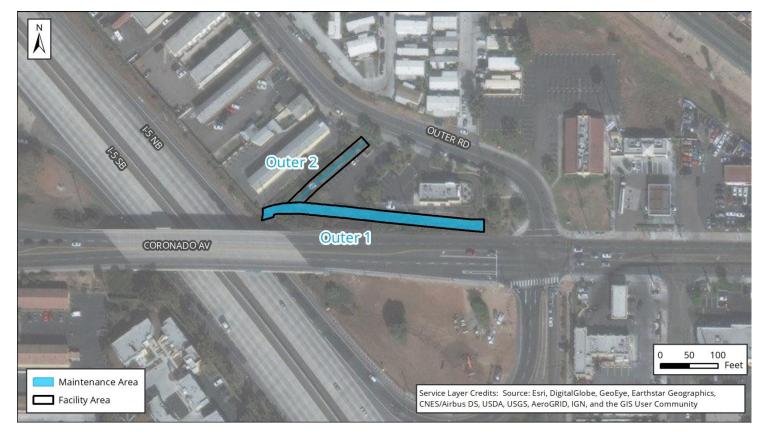


Figure 1: Vicinity Map of Nestor Creek - Outer Facility Group

Water Quality Resource Summary

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

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

Nestor Creek - Outer	
Beneficial Uses	
303(d) listed Impairments	No impairments recorded on the 303(d) List

Otay River (First downstream water body)		
Beneficial Uses	Agricultural Supply (AGR)	
	Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)	
	Wildlife Habitat (WILD)	
	Rare, Threatened, or Endangered Species (RARE)	
303(d) listed Impairments	No impairments recorded on the 303(d) list	

Outer Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Nestor Creek unnamed tributary
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 385 feet
Top-of-Bank Width	Approximately 20–50 feet
Bottom Facility Width	Approximately 4–14 feet
Facility Depth	Approximately 3–4 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Other Residential, Transportation
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2017, looking downstream at vegetation downstream of Outer 1 and Outer 2 junction

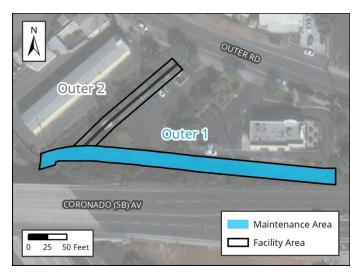


Figure 2: Vicinity Map of Outer Segment 1

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
Past Regulatory A	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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.¹

Current Conditions Facility Capacity	Affecting	The vegetation observed ranged from medium to dense and there was little evidence of sediment deposition				
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	106	135	158	190	212	236
second [cfs])						
Hydraulic Capacity of Facility						
Current Capacity		53 cfs				
Proposed MWMP Maintained Capacity		80 cfs				
Maintenance Recommendation		Trim vegetation from Station 228 to Station 613				
In-Stream Post-Maintenance Erosion Control Recommendation			No	one		

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

Biological Resource Summary

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

Facility Vegetation	Disturbed wetland			
Adjacent Vegetation	 Developed concrete-lined channel Developed land Disturbed land Ornamental plantings 			
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility			
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)			
Mitigation Within Facility	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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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

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.

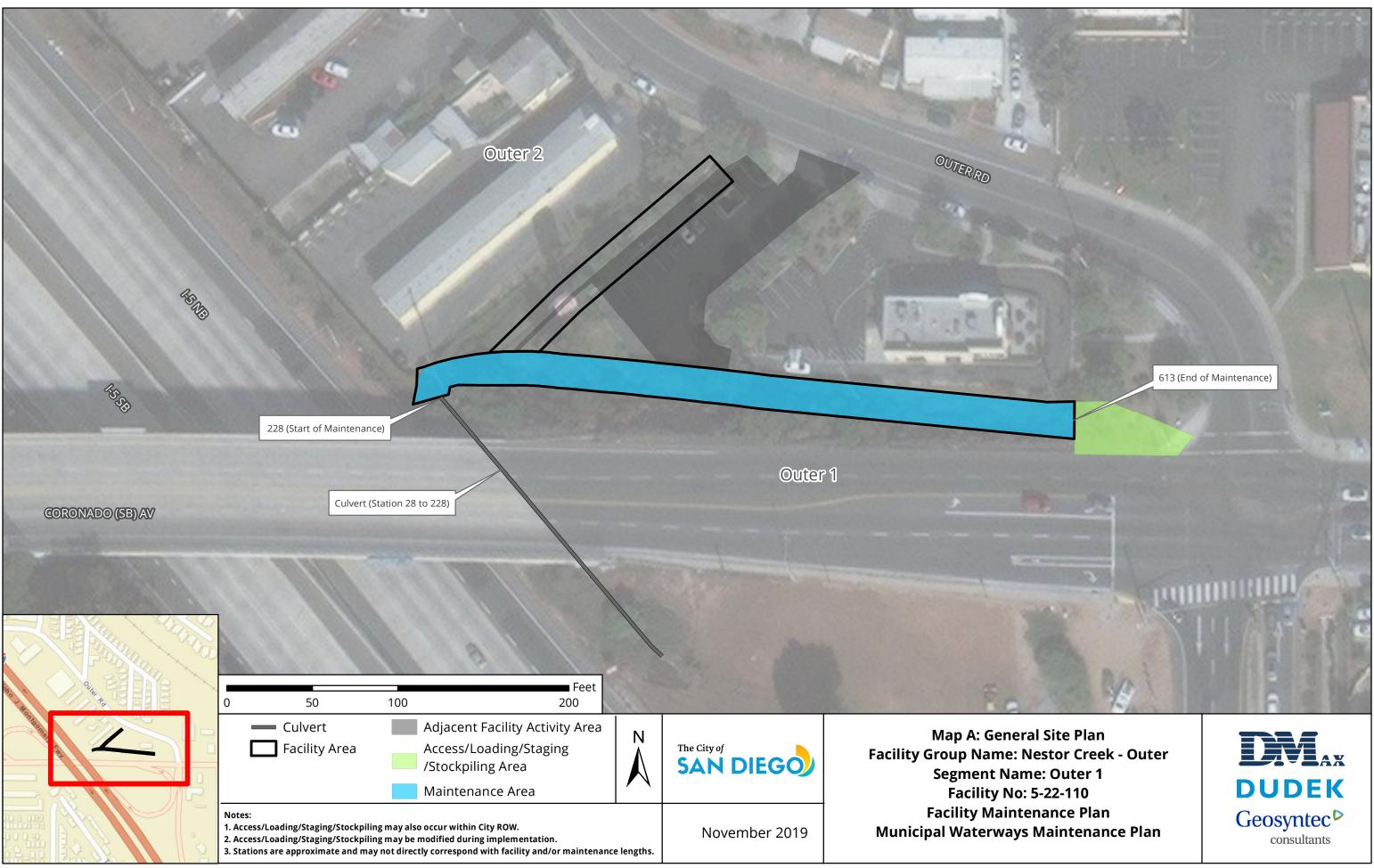
Facility Group	Nestor Creek - Outer
Segment Name	Outer 1
Facility No.	5-22-110
Facility Location	From the west of Outer Road to inlet of culvert that is 200 feet long and
-	discharges into the California Department of Transportation's Interstate 5
	(I-5) northbound on-ramp
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions
	and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Trim vegetation from Station 228 to Station 613
Recommendation ²	
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None
Substrate Detail	Earthen bottom and banks
Facility Dimensions	Length: 385 feet
(Approximate)	Top width: 20–50 feet
	Bottom width: 4–14 feet
	Depth: 3–4 feet

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

	I	
Authorized Facility Maintenance	Length: Channel: 385 feet	
Area	Width: 20–25 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,	
Area(s)	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.	
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor, fuel-	
	powered hand tools, sweeper	
Schedule	Up to approximately 7 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Fuel-powered hand tools used to trim vegetation	
	2. Bobcat/skid-steer and/or Gradall/excavator enter or are lowered into	
	channel at access/loading areas	
	3. Gradall/excavator stationed within access/loading area scoops material	
	and loads dump truck	
	4. Dump truck hauls material to legal disposal site	
	5. Vactor stationed at upstream end of access/loading area used to power	
	wash culverts in accordance with Flow Management section (below) and	
	Water Pollution Control Plan	
Traffic Control	Yes; coordinate with private property owner and the City of San Diego	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	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	

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

Flow Management	As needed:	
1 low management		
	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	
Downstream Sensitive Waters	No	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Outer Segment 2 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Nestor Creek unnamed tributary
Tributaries (listed from downstream to	No named tributaries
upstream)	
Facility Length	Approximately 176 feet
Top-of-Bank Width	Approximately 2 feet
Bottom Facility Width	Approximately 1 feet
Facility Depth	Approximately 2 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Other Residential, Transportation
As-Built Drawing Number	None
Coastal Zone	No



Figure 1: April 2017, looking downstream at sediment, debris and overhanging vegetation upstream of Outer 1 and Outer 2 junction

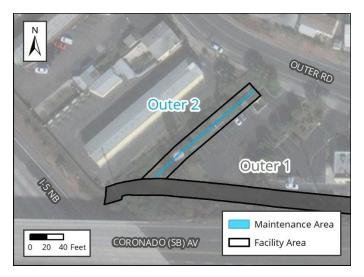


Figure 2: Vicinity Map of Outer Segment 2

Facility Maintenance History

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

History of Mainte	enance	Prior to 2011: Unknown
		January 2011 – March 2019: No maintenance conducted
Past Regulatory	Approvals	
CEQA	None	
CDP	N/A	
SDP	None	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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.¹

Current Conditions Facility Capacity	Affecting	Approximately 2 inches of accumulated sediment, debris was observed in the segment including vegetation hanging down into ditch				
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	5	6	7	9	10	11
Hydraulic Capacity of Facility						
Curre	ent Capacity		4.7 cfs			
Proposed MWM	IP Maintained	Capacity	5 cfs			
Maintenanc	e Recommend	ation	Remove accumulated sediment and debris and removal of			
			overhanging vegetation from bottom and sides of concrete ditch from Station 0 to Station 176			
In-Stream Post-Ma Reco	intenance Eros mmendation	sion Control	ontrol None			

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Developed land
	Disturbed land
	Disturbed wetland
	Ornamental plantings
Habitat and Wildlife	There are no significant biological resources suitable for sensitive species use within or adjacent to the facility
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources	
Resource Identified in APE	Channel; c. 1969–1974 earthen channel
Potential Historical Resources	Yes
Constraint Identified	

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

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.

Facility Group	Nestor Creek - Outer
Segment Name	Outer 2
Facility No.	5-22-112
Facility Location	From a drop inlet on Outer Road to the downstream end of Outer 2 segment
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per estimated original design dimensions and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment and debris and removal of overhanging
Recommendation ²	vegetation from bottom and sides of concrete ditch from Station 0 to Station 176
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment outside the ditch
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete ditch
Existing Plans and/or As-Builts?	None
Substrate Detail	Concrete bottom and banks
Facility Dimensions	Length: 176 feet
(Approximate)	Top width: 2 feet
	Bottom width: 1 feet
	Depth: 2 feet

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

	L			
Authorized Facility Maintenance	Length: Ditch: 176 feet			
Area	Width: 2 feet To be determined at time of maintenance			
Maintenance Quantities				
Access/Loading/Staging/Stockpiling	Designated areas on Map A or within City ROW may be used for access,			
Area(s)	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.			
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,			
	sweeper			
Schedule	Up to approximately 7 working days			
Maintenance Crew	Approximately 8–12 people			
Routine Maintenance Procedures	1. Gradall/excavator stationed within access/loading area in parking lot			
	scoops material from ditch and loads dump truck			
	2. Crew may also remove material by hand or by vactor			
	3. Dump truck hauls material to legal disposal site			
Traffic Control	Yes; coordinate with the City of San Diego			
Additional Maintenance Information				
Pre-Maintenance Meeting	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			
Biology	Suitable habitat for sensitive species ³ :			
	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			
Flow Management	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			
Downstream Sensitive Waters	No			
BMP Installation	See Water Pollution Control Plan			

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

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



Facility Maintenance Plan

Tijuana River - Pilot & Smuggler's Facility Group

Segment Names (Facility numbers):
Pilot Channel 1 (6-01-020)
Smuggler's Gulch 1 (6-01-100)



Overview

Watershed Management Area (WMA)	Tijuana River		
Watershed (Number)	Tijuana River (6)		
Hydrologic Subarea	911.11		
Drainage Name (Number)	Tijuana River (01)		
Facility Group Name	Tijuana River - Pilot & Smuggler's		
Segment Name (Facility Number)	Pilot Channel 1 (6-01-020)		
	Smuggler's Gulch 1 (6-01-100)		
Substrate	Pilot Channel 1 / Earthen		
	Smuggler's Gulch 1 / Earthen		
Location	About 100 feet east to 5,300 feet west of Hollister Street		
MMP Map No(s).	138a, 138b, 138c, 138, 139		
Facility Inspection No.	138a, 138b, 138c, 138, 139		
Other Former Names	None		

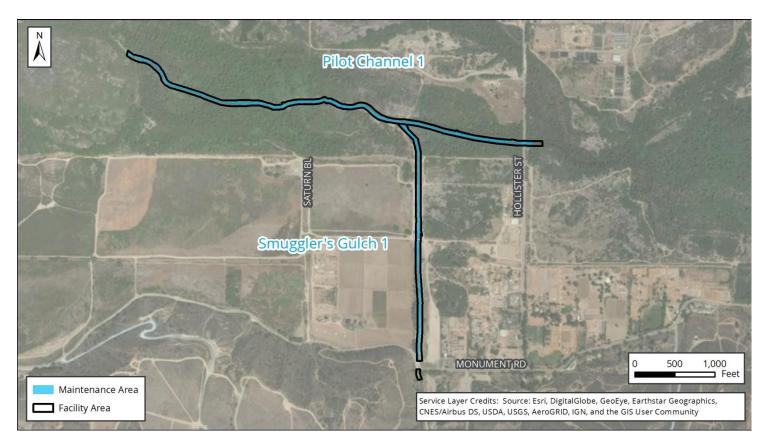


Figure 1: Vicinity Map of Tijuana River - Pilot & Smuggler's Facility Group

Water Quality Resource Summary

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

Tijuana River Watershed Management Area; Hydrologic Subarea 911.11				
Adopted TMDLs None				
Highest Priority Water Quality Condition	Sediment			

Tijuana River - Pilot & Smuggl	er's				
Beneficial Uses	Non-contact Water Recreation (REC-2)				
	 Preservation of Biological Habitats of Special Significance (BIOL) 				
	Warm Freshwater Habitat (WARM)				
	Wildlife Habitat (WILD)				
	Rare, Threatened, or Endangered Species (RARE)				
303(d) listed Impairments	Ammonia as Nitrogen, Benthic Community Effects, Cadmium, Eutrophic, Indicator				
	Bacteria, Low Dissolved Oxygen, Pesticides, Phosphorus, Sedimentation/Siltation,				
	Selenium, Solids, Surfactants (MBAS), Synthetic Organics, Total Nitrogen as N,				
	Toxicity, Trace Elements, Trash				

Tijuana River Estuary (First o	downstream water body)
Beneficial Uses	 Contact Water Recreation (REC-1) Non-contact Water Recreation (REC-2) Preservation of Biological Habitats of Special Significance (BIOL) Wildlife Habitat (WILD) Rare, Threatened, or Endangered Species (RARE) Spawning, Reproduction, and/or Early Development (SPWN) Commercial and Sport Fishing (COMM) Estaurine (EST) Marine (MAR) Migration of Aquatic Organisms (MIGR)
303(d) listed Impairments	 Shellfish Harvesting (SHELL) Eutrophic, Indicator Bacteria, Lead, Low Dissolved Oxygen, Nickel, Pesticides, Thallium, Trash, Turbidity

Pilot Channel Segment 1 Detail

Facility Type	Earthen channel		
Substrate Detail	Earthen bottom and banks		
Location Within Watershed	Middle reach of the Tijuana River, upstream of the Tijuana River Estuary		
Tributaries (listed from downstream to upstream)	Tijuana River Unnamed Tributary		
Facility Length	Approximately 5,550 feet		
Top-of-Bank Width	Approximately 23 feet		
Bottom Facility Width	Approximately 15 feet		
Facility Depth	Approximately 5 feet		
Adjacent Land Use	Open Space, Single-Family Residential, Transportation		
As-Built Drawing Number	None		
Coastal Zone	DEF-CER		



Figure 1: September 2012, looking south at the confluence point with the Smuggler's Gulch tributary

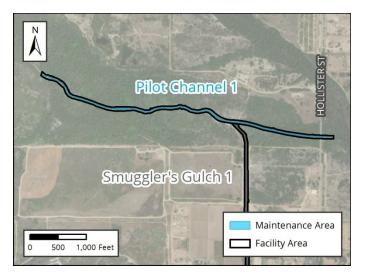


Figure 2: Vicinity Map of Pilot Channel Segment 1

Facility Maintenance History

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

History of Mainte	enance 1993: Emergency Pilot Channel construction		
	2004 & 2009: Emergency excavation of sediment and vegetation		
	September 2012 – March 2019: Routine maintenance conducted		
Past Regulatory A	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	IP USACE File #SPL-2009-00719-RRS (expires October 2027)		
401	RWQCB 401 Cert No. R9-2016-0028 (expires October 2027)		
1602	2 CDFW SAA No. 1600-2011-0271-R5 (expires November 2021)		
Mitigation for Pro	evious Impacts Tijuana River Emergency Channel Maintenance Wetland Mitigation Project		
	(11.02 acres)		
	Tijuana Wetlands Enhancement Project (8.62 acres)		

Hydrology and Hydraulics Summary

In-Stream Post-Maintenance Erosion Control

Recommendation

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.¹

Current Conditions Facility Capacity	s Affecting	The vegetation was observed to range from light to dense and sediment deposition was estimated to be 3 to 4.5 feet. Ponded water was present. 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.			er was present. analysis for this ons assessment	
Hydrologic Peak Flo	ows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	705	3,248	7,612	15,819	37,163	66,894
Hydraulic Capacity of Facility						
Current Capacity 10 cfs						
Proposed MWMP Maintained Capacity 200 cfs			cfs			
Maintenance Recommendation			Remove accumulated sediment, debris, and vegetation from Station 93 to Station 14956			

None

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

Biological Resource Summary

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

Facility Vegetation	Natural flood channel
Adjacent Vegetation	Developed land
	Disturbed land
	Disturbed wetland (Arundo-dominated)
	Eucalyptus woodland
	Natural flood channel
	Ornamental plantings
	Riparian forest (southern willow forest)
	Riparian scrub (mulefat scrub)
Habitat and Wildlife	The vegetation contained within and adjacent to 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)
MHPA	The channel is located entirely within the Multi Habitat Planning Area (MHPA)
Mitigation Within	Yes, maintenance area is the in-channel component of Tijuana Wetlands Enhancement
Facility	Mitigation Project

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		
Resource Identified in APE	None	
Resource Identified Adjacent to APE	None	
Resource Type	N/A	

Historical Resources	
Resource Identified in APE	P-37-025924; Hollister Street Bridge
Potential Historical Resources Constraint Identified	Yes

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

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.

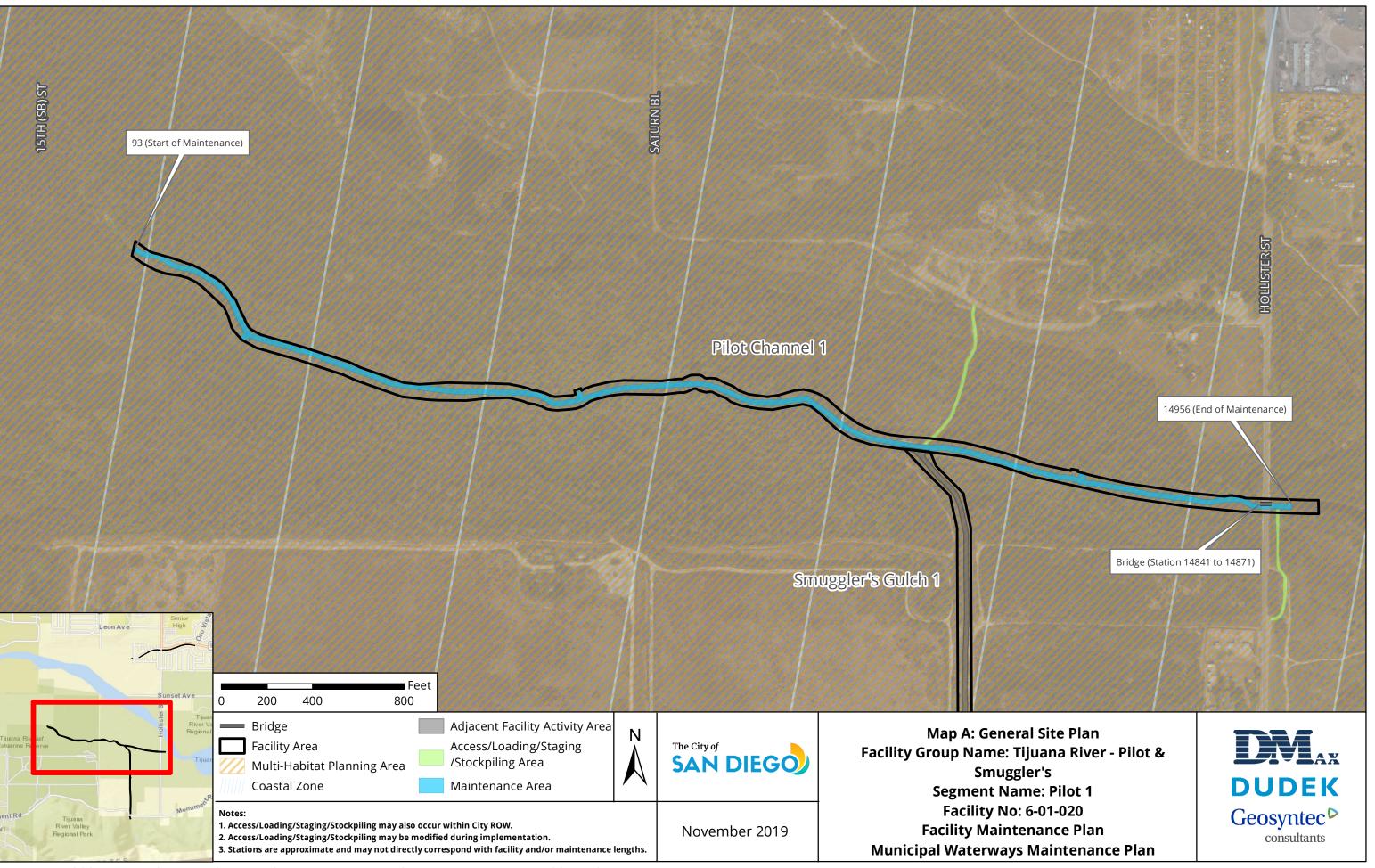
Facility Group	Tijuana River - Pilot & Smuggler's
Segment Name	Pilot Channel 1
Facility No.	6-01-020
Facility Location	From 100 feet east of Hollister Street to 5,300 feet west of Hollister Street
Coastal Zone	DEF-CER
MWMP Proposed Maintenance	Maintenance of earthen channel per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove accumulated sediment, debris, and vegetation from Station 93 to Station 14956
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary stockpiling Temporary diversions Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair and Maintenance	No
Culvert Maintenance	No
Post-Maintenance Erosion Control Recommendation	No
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None
Substrate Detail	Earthen bottom and banks
Facility Dimensions	Length: 5,550 feet
(Approximate)	Top width: 23 feet Bottom width: 15 feet Depth: 5 feet

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

Authorized Facility Maintenance	Length: Channel: 5,550 feet			
Area	Width: 23			
Aicu	Three turnarounds 20'x30' each feet			
Maintenance Quantities	To be determined at time of maintenance			
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City			
Area(s)	ROW may be used for access, loading staging, and/or stockpiling. The			
Alea(s)	boundaries of these areas may also be modified as long as changes do not			
	result in new significant environmental impacts.			
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader,			
Equipment	backhoe, dump truck, trash pump, critically silenced pump, Ditch			
	Witch/trencher, rock truck, water truck, fuel truck, vactor, material			
	screen/aggregate separator, fuel-powered hand tools, chipper, sweeper			
Schedule	Up to approximately 60–90 working days, plus 30–45 days if pre-			
	maintenance pumping required, plus 90 days for stockpile management			
Maintenance Crew	Approximately 15 people			
Routine Maintenance Procedures	West of Hollister Bridge: (Use Smuggler's Gulch Methodology).			
	East of Hollister Bridge:			
	1. Equipment uses access road east of Hollister Street/south of Hollister			
	Bridge			
	2. Long-reach excavator at access/loading area scoops material from			
	channel and loads dump truck.			
	3. Dump truck hauls material to stockpiling area			
	4. At stockpiling areas, bulldozer/track-steer manages stockpiles, backhoo			
	sorts material (waste, tires, vegetation, trash), loader places material in			
	dump truck			
	5. Dump truck hauls material to legal disposal site			
Traffic Control	No			
	Additional Maintenance Information			
Pre-Maintenance Meeting	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			

Biology	Suitable habitat for sensitive species ³ :			
ыогоду	1. Within maintenance area: Yes			
	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			
	2. Conduct daily surveys for light-footed Ridgway's rail3. Ensure adequate implementation of Shot Hole Borer beetle procedures			
Flow Management	in accordance with current guidelines, if necessary			
Flow Management	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			
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan			
BMP Installation	See Water Pollution Control Plan			
In-Stream Post-Maintenance	None			
Erosion Control Recommendation				
Post-Maintenance Procedures	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			
Other Notes	Complete comprehensive trip log manifest if transporting 9 or more waste			

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



Smuggler's Gulch Segment 1 Detail

Facility Type	Earthen channel		
Substrate Detail	Earthen bottom and banks		
Location Within Watershed	Lower reach of Smuggler's Gulch, immediately upstream of the Tijuana River		
Tributaries (listed from downstream to upstream)	No named tributaries		
Facility Length	Approximately 4,028 feet		
Top-of-Bank Width	Approximately 48–54 feet		
Bottom Facility Width	Approximately 17–20 feet		
Facility Depth	Approximately 15 feet		
Adjacent Land Use	Agriculture, Open Space, Transportation		
As-Built Drawing Number	None		
Coastal Zone	CST-APP, DEF-CER		



Figure 1: September 2012, looking south (upstream) from atop the Disney Crossing. Vegetation is very thick on the side slopes, while the streambed is mainly unvegetated.

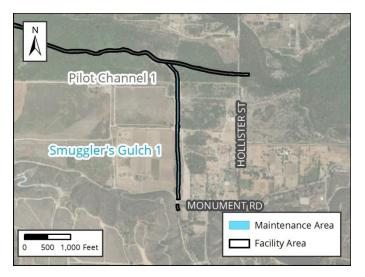


Figure 2: Vicinity Map of Smuggler's Gulch Segment 1

Facility Maintenance History

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

History of Mainte	enance 1993: Emergency Pilot Channel construction
	2004 & 2009: Emergency excavation of sediment and vegetation
	September 2012 – March 2019: Routine maintenance conducted
Past Regulatory A	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	IP USACE File #SPL-2009-00719-RRS (expires October 2027)
401	RWQCB 401 Cert No. R9-2016-0028 (expires October 2027)
1602	CDFW SAA No. 1600-2011-0271-R5 (expires November 2021)
Mitigation for Pro	evious Impacts Tijuana Wetlands Enhancement Project (8.62 acres)

Hydrology and Hydraulics Summary

Recommendation

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.¹

Current Conditions	Affecting	The vegetation	on was observed to be dense and sediment deposition was			
Facility Capacity estimated to		estimated to b	be 2 feet. A large amount of trash and debris was noted as well.			
Current con-		Current condit	nditions were reviewed in relation to the hydraulic analysis for this			
segment in			018 and docur	mented in the	current condi	tions assessment
		memorandum	um in Appendix A of the Hydrology and Hydraulics Technical			
		Report.		_		
Hydrologic Peak Flo	ws					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	653	1,479	1,668	2,520	3,081	3,626
second [cfs])						
Hydraulic Capacity	of Facility					
Curre	ent Capacity			653	cfs	
Proposed MWM	Proposed MWMP Maintained Capacity 900 cfs					
Maintenance Recommendation Re			Remove accumulated sediment, debris, and vegetation from			
		С	channel bottom from Station 1000 to Station 2530 and Station			
			2550 to Station 4046.			
			Remove accumulated sediment and debris from culverts Station			
2530 to Station 2550.						
Repair/replace concrete grout near the outlet of the 52-i			the 52-inch CMP			
	culvert at Station 4046.					
In-Stream Post-Maintenance Erosion Control			None			

Smuggler's Gulch 1 (Facility No. 6-01-100)

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	Natural flood channel
	Riparian scrub
Adjacent Vegetation	Agricultural land
	Coastal sage scrub
	Developed land
	Disturbed land
	Disturbed riparian scrub
	Eucalyptus woodland
	Natural flood channel
	Ornamental plantings
	Riparian forest (southern willow forest)
	Riparian scrub (mulefat scrub)
Habitat and Wildlife	The vegetation contained within and adjacent to 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, coastal California gnatcatcher, and Ridgeway's rail)
MHPA	The channel is located entirely within the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	Yes, maintenance area is the in-channel component of Tijuana Wetlands Enhancement Mitigation Project

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			
Resource Identified in APE	P-37-002611; P-37-010669; P-37-013486; P-37-013527		
Resource Identified Adjacent to APE	None		
Resource Type	Prehistoric lithic scatter; Prehistoric habitation site; Prehistoric shell and		
	lithic scatter; Prehistoric shell and lithic scatter		

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)			
Biological Resources (BIO)	Air Quality (AQ)			
EP-BIO-1	MM-AQ-1			
EP-BIO-2	Biological Resources (BIO)			
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			
Health and Safety/Hazards (HAZ)	MM-BIO-7			
EP-HAZ-3	Noise (NOI)			
Land Use (LU)	MM-NOI-1			
EP-LU-1				
Solid Waste (SW)				
EP-SW-2				
EP-SW-3				
EP-SW-4				
EP-SW-5				
EP-SW-6				
EP-SW-7				
EP-SW-8				
Water Quality (WQ)				
EP-WQ-1				

Tijuana River - Pilot & Smuggler's 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.

Facility Group	Tijuana River - Pilot & Smuggler's
Segment Name	Smuggler's Gulch 1
Facility No.	6-01-100
Facility Location	From 2,500 feet north of the international border to Tijuana River Pilot - Pilot 1 segment
Coastal Zone	CST-APP, DEF-CER
MWMP Proposed Maintenance	Maintenance of earthen channel and concrete culverts per estimated original design dimensions, previous maintenance approvals, and Hydrology and Hydraulics recommendations
Hydrology and Hydraulics Recommendation ²	Remove accumulated sediment, debris, and vegetation from channel bottom from Station 1000 to Station 2530 and Station 2550 to Station 4046. Remove accumulated sediment and debris from culverts Station 2530 to Station 2550. Repair/replace concrete grout near the outlet of the 52-inch CMP culvert at Station 4046.
Maintenance Activities	Vegetation grubbing, trimming, and removal Invasive plant species treatment and removal Sediment removal Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel Temporary access/loading Temporary staging Temporary diversions Temporary stockpiling Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair and Maintenance	No
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control Recommendation	No
Trash/Debris Fence Repair and Maintenance	No
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	None

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

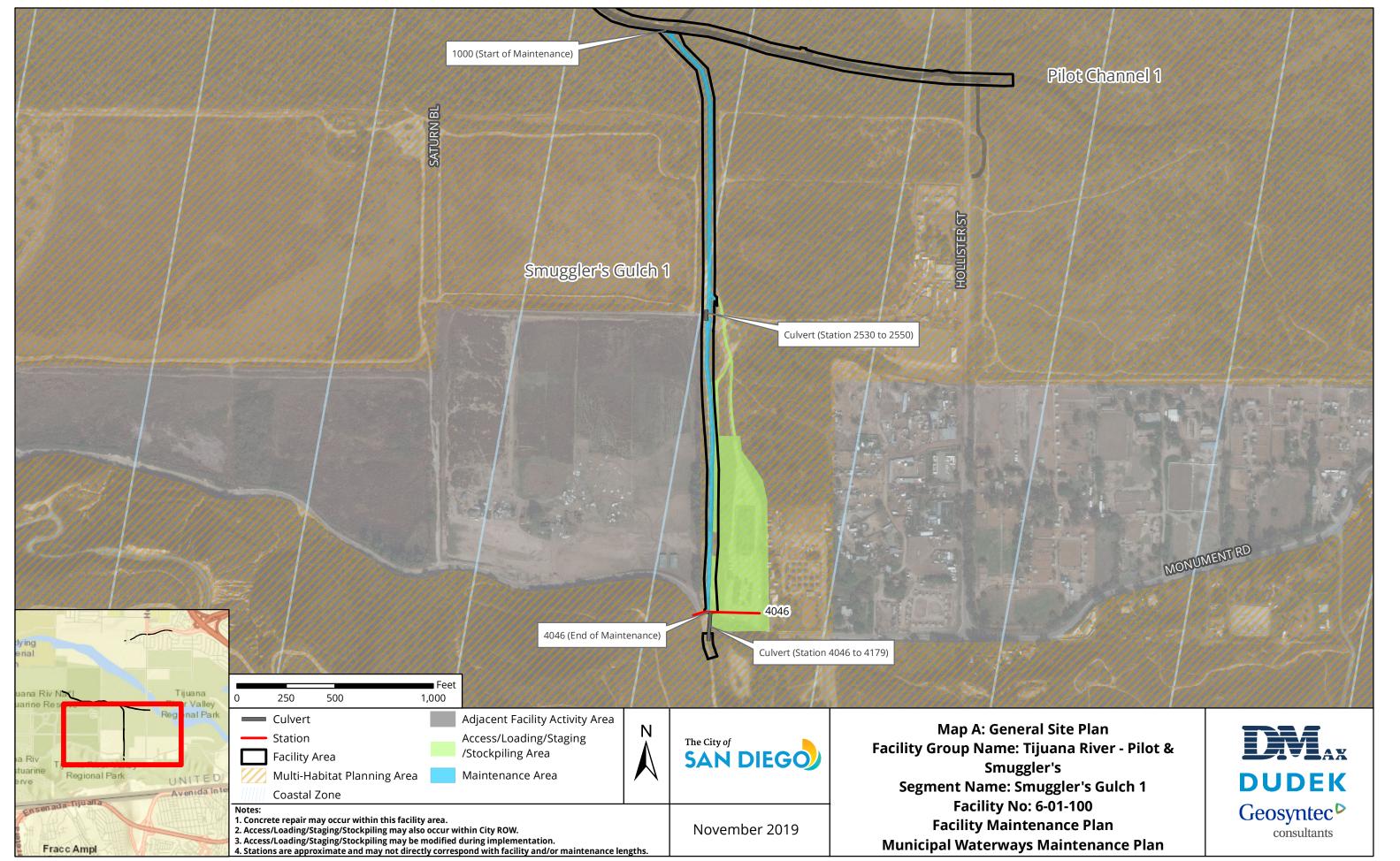
Tijuana River - Pilot & Smuggler's Facility Group Facility Maintenance Plan

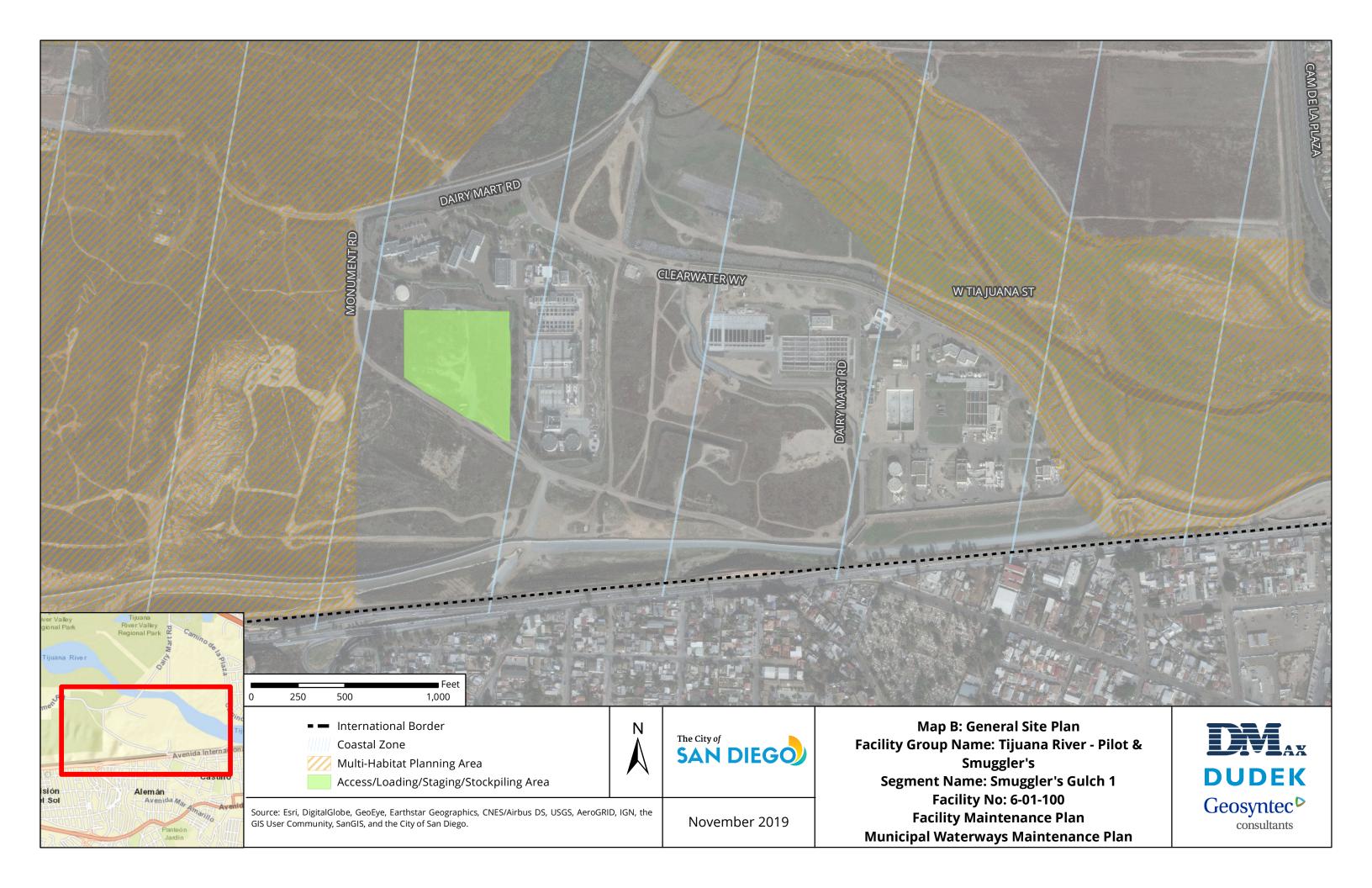
Length: 4,028 feet Top width: 48–54 feet Bottom width: 17–20 feet Depth: 15 feet
(Approximate) Top width: 48–54 feet Bottom width: 17–20 feet Depth: 15 feet Authorized Facility Maintenance Area Maintenance Quantities Access/Loading/Staging/Stockpiling Area(s) Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Top width: 48–54 feet Bottom width: 17–20 feet Width: 20 fee
Bottom width: 17–20 feet Depth: 15 feet Authorized Facility Maintenance Area Midth: 20 feet Width: 20 feet To be determined at time of maintenance Access/Loading/Staging/Stockpiling Area(s) Designated areas on Map A and B 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. Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
Authorized Facility Maintenance Area Midth: 20 feet Maintenance Quantities Access/Loading/Staging/Stockpiling Area(s) Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Designated areas on Map A and B 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. Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
Area Length: Channel: 3,026 feet; Culvert: 20 feet Width: 20 feet Maintenance Quantities Access/Loading/Staging/Stockpiling Area(s) Designated areas on Map A and B 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. Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
AreaWidth: 20 feetMaintenance QuantitiesTo be determined at time of maintenanceAccess/Loading/Staging/StockpilingDesignated areas on Map A and B 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.EquipmentBobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeperScheduleUp to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
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Area(s) 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. Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
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Equipment Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if pre- maintenance pumping required, plus 90 days for stockpile management
Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
backhoe, dump truck, trash pump, critically silenced pump, Ditch Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if pre- maintenance pumping required, plus 90 days for stockpile management
Witch/trencher, rock truck, water truck, fuel truck, vactor, material screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
screen/aggregate separator, fuel-powered hand tools, sweeper Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
Schedule Up to approximately 60–90 working days, plus 30–45 days if premaintenance pumping required, plus 90 days for stockpile management
maintenance pumping required, plus 90 days for stockpile management
Maintenance Crew Approximately 15 people
Routine Maintenance Procedures 1. Bobcat/skid-steer, Gradall/excavator, bulldozer/track-steer, and rock
truck enter or are lowered into channel at access/loading area
2. Bulldozer/track-steer pushes material to Gradall/excavator at
access/loading area or in the channel
3. Bobcat/skid-steer enters culverts under Disney Bridge and pushes
material to Gradall/excavator
4. Gradall/excavator scoops material from channel and loads rock truck
5. Rock truck hauls material to stockpiling area
6. At stockpiling areas: bulldozer/track-steer manages stockpiles, backhoe
sorts material (waste tires, vegetation, trash), loader places material in
dump truck
7. Dump truck hauls material to appropriate disposal facility
8. Vactor stationed on Monument Road flushes and vacuums material from
culverts beneath road and hauls to appropriate disposal facility
Traffic Control No
Additional Maintenance Information
Pre-Maintenance Meeting 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

Tijuana River - Pilot & Smuggler's Facility Group Facility Maintenance Plan

Biology	Suitable habitat for sensitive species ³ :
	1. Within maintenance area: Yes
	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
	2. Conduct daily surveys for light-footed Ridgway's rail
	3. Ensure adequate implementation of Shot Hole Borer beetle procedures
	in accordance with current guidelines, if necessary
Flow Management	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
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
	3. Street Sweeper will sweep/clean debits from street/right-or-way/project
	area(s), as needed
	area(s), as needed 4. Remove temporary BMPs
	area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record
	area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record 6. Conduct post-maintenance site photo documentation
Other Notes	area(s), as needed 4. Remove temporary BMPs 5. Update maintenance record

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





Facility Maintenance Plan

Tijuana River - Tocayo Facility Group

Segment Names (Facility numbers):

Tocayo 1 (6-02-115) (See Appendix A-5)

Tocayo 2 (6-02-118)



Overview

Watershed Management Area (WMA)	Tijuana River
Watershed (Number)	Tijuana River (6)
Hydrologic Subarea	911.11
Drainage Name (Number)	Tijuana River Unnamed Tributary (02)
Facility Group Name	Tijuana River - Tocayo
Segment Name (Facility Number)	Tocayo 1 (6-02-115) (See Appendix A-5)
	Tocayo 2 (6-02-118)
Substrate	Tocayo 1 / Earthen
	Tocayo 2 / Concrete
Location	About 1,300 feet east of Saturn Boulevard, and southwest of the
	intersection of Oro Vista Road and Tocayo Avenue
MMP Map No(s).	136, 137
Facility Inspection No.	136, 137
Other Former Names	Tocayo Channel



Figure 1: Vicinity Map of Tijuana River - Tocayo Facility Group

Water Quality Resource Summary

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

Tijuana River	Watershed	Management Area;	: Hydrologic Subare	a 911.11
,			, ,	

None

Adopted TMDLs
Highest Priority Water
Quality Condition

Sediment

Tijuana	Tocayo

	cia	

303(d) listed Impairments No impairments recorded on the 303(d) List

Tijuana River (First downstream water body)

	efi			

- Non-contact Water Recreation (REC-2)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Warm Freshwater Habitat (WARM)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)

303(d) listed Impairments

Ammonia as Nitrogen, Benthic Community Effects, Cadmium, Eutrophic, Indicator Bacteria, Low Dissolved Oxygen, Pesticides, Phosphorus, Sedimentation/Siltation, Selenium, Solids, Surfactants (MBAS), Synthetic Organics, Total Nitrogen as N, Toxicity, Trace Elements, Trash

Tocayo Segment 2 Detail

Facility Type	Concrete channel
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, immediately upstream of Tijuana River unnamed tributary (Tocayo Segment 1)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 2,855 feet
Top-of-Bank Width	Approximately 20–38 feet
Bottom Facility Width	Approximately 6–20 feet
Facility Depth	Approximately 6–7 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Other Residential, Public Facilities and Utilities, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	17042-D & 20960-D
Coastal Zone	N-APP-2



Figure 1: April 2017, looking upstream at vegetation



Figure 2: Vicinity Map of Tocayo Segment 2

Facility Maintenance History

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

History of Maintenance Prior to 2011: Unknown

2011 - 2014: No maintenance conducted

January 2015 and May 2017: Minor maintenance conducted

April 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP None

SDP SDP No. 2034245 (2017 Addendum)

404 None 401 None 1602

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.

Current Conditions Facility Capacity	s Affecting	The vegetation was observed to vary from fairly clean concrete to patches of low grasses and a small stand of trees located near the Hollister Street bridge				
Hydrologic Peak Flows						
Storm Event	2-year	5-year 10-year 25-year 50-year 100-year				
Q (cubic feet per	684	875	1,023	1,227	1,375	1,523
second [cfs])						
Hydraulic Capacity of Facility						
Curr	rrent Capacity 180 cfs					

Current Capacity	180 cfs
Proposed MWMP Maintained Capacity	220 cfs
Maintenance Recommendation	Remove accumulated sediment, debris, and vegetation from Station 1702 to Station 2725 and Station 2804 to Station 4279. Remove accumulated sediment and debris in culverts from Station 1424 to Station 1702 and Station 2725 to Station 2804. A maintenance area from Station 1414 to Station 1424 has been

identified for maintenance of the culvert at Station 1424.

None

In-Stream Post-Maintenance Erosion Control	
Recommendation	

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	Riparian forest (southern willow forest; concrete-lined)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Ornamental plantings
Habitat and Wildlife	There is limited suitable habitat contained within the facility for wildlife. However, raptors could use the ornamental vegetation present adjacent to the facility for nesting/roosting.
МНРА	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.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	Noise (NOI)
Solid Waste (SW)	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Tijuana River - Tocayo
Segment Name	Tocayo 2
Facility No.	6-02-118
Facility Location	From west of Oro Vista Road to upstream end of Tocayo 1 segment
Coastal Zone	N-APP-2
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from Station 1702
Recommendation ²	to Station 2725 and Station 2804 to Station 4279.
	Remove accumulated sediment and debris in culverts from Station 1424 to
	Station 1702 and Station 2725 to Station 2804.
	A maintenance area from Station 1414 to Station 1424 has been identified
	for maintenance of the culvert at Station 1424.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete channel
Existing Plans and/or As-Builts?	Yes; 17042-D & 20960-D
Substrate Detail	Concrete bottom and banks

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

Facility Dimensions	Length: 2,855 feet		
-			
(Approximate)	Top width: 20–38 feet Bottom width: 6–20 feet		
Analogical Politica Maria and an	Depth: 6-7 feet		
Authorized Facility Maintenance	Length: Channel: 2,498 feet; Culvert: 367 feet		
Area	Width: 20–38 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling			
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, sweeper		
Schedule	Up to approximately 21 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into channel at access/loading		
	area		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from channel and loads dump truck		
	4. Dump truck hauls material to legal dispose site		
Traffic Control	No		
	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures		
	in accordance with current guidelines, if necessary		
	in accordance with current galacinics, if necessary		

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

Fl \$4	As a stable
Flow Management	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
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan
BMP Installation	See Water Pollution Control Plan
In-Stream Post-Maintenance	None
Erosion Control Recommendation	
Post-Maintenance Procedures	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
Other Notes	None



Facility Maintenance Plan

Tijuana River - Smythe Facility Group

Segment Names (Facility numbers):

Via Encantadoras 1 (6-03-135)

Via Encantadoras 2 (6-03-138)

Via Encantadoras 3 (6-03-143)

Smythe 1 (6-03-147)

Via de la Bandola 1 (6-03-150)



Overview

Watershed Management Area (WMA)	Tijuana River
Watershed (Number)	Tijuana River (6)
Hydrologic Subarea	911.11
Drainage Name (Number)	Tijuana River Unnamed Tributary (03)
Facility Group Name	Tijuana River - Smythe
Segment Name (Facility Number)	Via Encantadoras 1 (6-03-135) Via Encantadoras 2 (6-03-138) Via Encantadoras 3 (6-03-143 Smythe 1 (6-03-147) Via de la Bandola 1 (6-03-150)
Substrate	Via Encantadoras 1 / Earthen Via Encantadoras 2 / Concrete Via Encantadoras 3 / Earthen and concrete Smythe 1 / Earthen Via de la Bandola 1 / Concrete
Location	About 150 feet south of State Route 905, 650 feet east of Dairy Mart Road, and 100 feet northeast of Interstate 5 (I-5)
MMP Map No(s).	129, 130, 130a
Facility Inspection No.	129, 130, 130a
Other Former Names	Smythe Channel



Figure 1: Vicinity Map of Tijuana River - Smythe Facility Group

Water Quality Resource Summary

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

Tijuana River Watershed	Management Area: H	Ivdrologic Subarea 911.1	11
rijudila Kivci vvatci siica	management Area, m	iyai didgic babai ca bi i.,	

None

Adopted TMDLs
Highest Priority Water
Quality Condition

Sediment

В	e	n	ef	i	ci	а	Ιl	J	S	es	
	•			ш	·	ч		•	•		,

303(d) listed Impairments No impairments recorded on the 303(d) List

Tijuana River (First downstream water body)

		Ises

- Non-contact Water Recreation (REC-2)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Warm Freshwater Habitat (WARM)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)

303(d) listed Impairments

Ammonia as Nitrogen, Benthic Community Effects, Cadmium, Eutrophic, Indicator Bacteria, Low Dissolved Oxygen, Pesticides, Phosphorus, Sedimentation/Siltation, Selenium, Solids, Surfactants (MBAS), Synthetic Organics, Total Nitrogen as N, Toxicity, Trace Elements, Trash

Via Encantadoras Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, upstream of Tijuana River
Tributaries (listed from downstream to upstream)	Tijuana River Unnamed Tributary
Facility Length	Approximately 248 feet
Top-of-Bank Width	Approximately 70 feet
Bottom Facility Width	Approximately 48 feet
Facility Depth	Approximately 4–5 feet
Adjacent Land Use	Commercial, Multi-Family Residential, Open Space, Transportation
As-Built Drawing Number	19218-D, 11-086034, 16916-D, & 14427-D
Coastal Zone	No



Figure 1: April 2015, looking downstream at entrance to quadruple 12-foot-wide by 4-foot-high RCB culvert beneath Interstate 5



Figure 2: Vicinity Map of Via Encantadoras Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown
	January 2011 – March 2019: No maintenance conducted
Past Regulatory A	Approvals
CEQA	2011 MMP PEIR No. 42891
CDP	N/A
SDP	SDP No. 2034245 (2017 Addendum)
404	None
401	None
1602	None
Mitigation for Pro	evious 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.¹

Hydrologic Peak Flows Storm Event 2-year 5-year 10-year 25-year 50-year 100-year Q (cubic feet per second [cfs])	Current Conditions Affecting The vegetation The vegetation deposition			on was observed t	to be dense with	no evidence o	f sediment	
Q (cubic feet per second [cfs]) Hydraulic Capacity of Facility Current Capacity Proposed MWMP Maintained Capacity 1,051 1,116 1,116 1,182 1,314 1,314	Hydrologic Peak Flows							
Second [cfs]) Hydraulic Capacity of Facility Current Capacity 1,182 cfs Proposed MWMP Maintained Capacity 1,314 cfs	Storm Event	2-year	5-year	10-year	25-year	50-year	100-year	
Hydraulic Capacity of Facility Current Capacity 1,182 cfs Proposed MWMP Maintained Capacity 1,314 cfs	Q (cubic feet per	657	854	1,051	1,116	1,182	1,314	
Current Capacity 1,182 cfs Proposed MWMP Maintained Capacity 1,314 cfs	second [cfs])							
Proposed MWMP Maintained Capacity 1,314 cfs	Hydraulic Capacity of Facility							
	Current Capacity			1,182 cfs				
Maintenance Recommendation Trim the vegetation from channel bottom from Station 310 to	Proposed MWMP Maintained Capacity 1,314 cfs							
	Maintenance Recommendation			Trim the vegetat	ion from channe	l bottom from	Station 310 to	
Station 430.				Station 430.				
Remove sediment and debris in culvert from Station 430 to				Remove sedimer	nt and debris in o	culvert from St	ation 430 to	
Station 558.				Station 558.				
In-Stream Post-Maintenance Erosion Control None	In-Stream Post-Ma	In-Stream Post-Maintenance Erosion Control			No	ne		
Recommendation	Recommendation							

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

Biological Resource Summary

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

Facility Vegetation	 Disturbed riparian forest (southern willow forest) 	
	Freshwater marsh	
Adjacent Vegetation	 Developed concrete-lined channel Developed land Disturbed land 	
	 Eucalyptus woodland Ornamental plantings 	
Habitat and Wildlife	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo) at the upstream end, the channel extents and area of vegetation present are limited such that it is unlikely for riparian species to use the channel for nesting or foraging. However, raptors could use the eucalyptus woodland present adjacent to the facility for nesting/roosting.	
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 320 feet south of the channel.	
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-6
EP-HAZ-3	Noise (NOI)
Solid Waste (SW)	MM-NOI-1
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

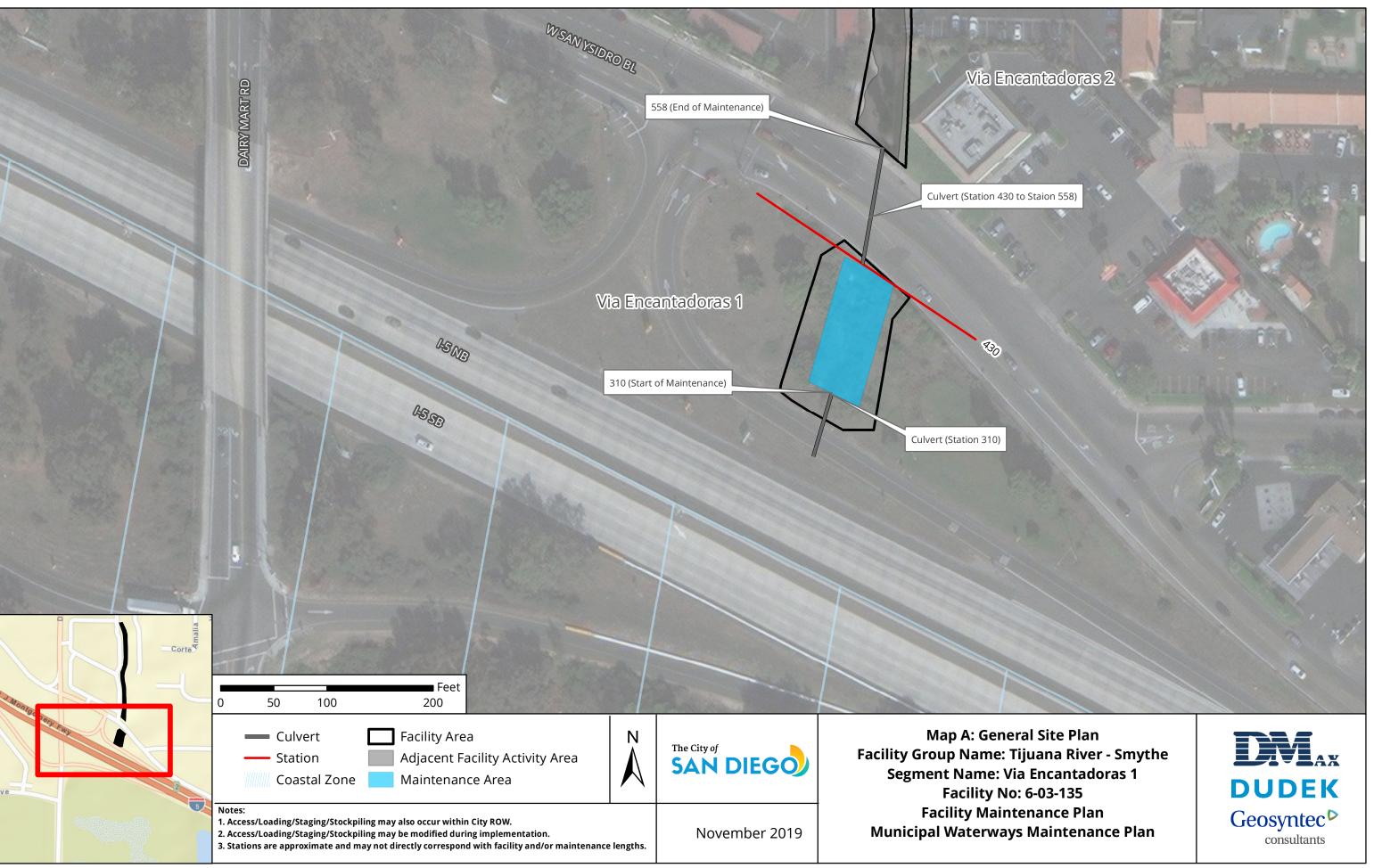
Facility Group	Tijuana River - Smythe
Segment Name	Via Encantadoras 1
Facility No.	6-03-135
Facility Location	From outlet of culvert beneath West San Ysidro Boulevard to inlet of RCB
	culvert beneath Interstate 5 (I-5)
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous
	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Trim the vegetation from channel bottom from Station 310 to Station 430.
Recommendation ²	Remove sediment and debris in culvert from Station 430 to Station 558.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 19218-D, 11-086034, 16916-D, & 14427-D
Substrate Detail	Earthen bottom and banks
Facility Dimensions	Length: 248 feet
(Approximate)	Top width: 70 feet
	Bottom width: 48 feet
	Depth: 4–5 feet

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

Authorized Escility Maintenance	Longth: Channel: 120 feet: Culvert: 129 feet	
Authorized Facility Maintenance	Length: Channel: 120 feet; Culvert: 128 feet	
Area	Width: 52 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City	
Area(s)	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.	
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, backhoe, dump	
	truck, trash pump, vactor, fuel-powered hand tools, sweeper	
Schedule	Up to approximately 7 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer enters or is lowered into channel at access/loading	
	area with Gradall/excavator assistance	
	2. Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	Yes; coordinate with City of San Diego and Caltrans	
	Additional Maintenance Information	
Pre-Maintenance Meeting	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	
Biology	Suitable habitat for sensitive species ³ :	
	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	
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures	
	in accordance with current guidelines, if necessary	
	,,	

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

Flow Management	As needed:	
Tion management	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Via Encantadoras Segment 2 Detail

Facility Type	Concrete channel	
Substrate Detail	Concrete bottom and banks	
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, upstream of Tijuana River unnamed tributary (Via Encantadoras Segment 1)	
Tributaries (listed from downstream to upstream)	Tijuana River Unnamed Tributary	
Facility Length	Approximately 955 feet	
Top-of-Bank Width	Approximately 16–50 feet	
Bottom Facility Width	Approximately 10–50 feet	
Facility Depth	Approximately 5–10 feet	
Adjacent Land Use	Commercial, Multi-Family Residential, Single-Family Residential, Transportation	
As-Built Drawing Number	19218-D, 11-086034, 16916-D, & 14427-D	
Coastal Zone	No	



Figure 1: April 2015, looking downstream at entrance to quadruple 12-foot-wide by 4-foot-high RCB culvert beneath West San Ysidro Boulevard



Figure 2: Vicinity Map of Via Encantadoras Segment 2

Facility Maintenance History

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

	2	
History of Mainte	enance Prior to 2011: Unknown	
	January 2011 – March 2019: Nov-Dec 2014 Emergency Maintenance	
Past Regulatory A	Approvals	
CEQA	MMP PEIR No. 42891; Emergency Exemption NOE No. 400792	
CDP	N/A	
SDP	SDP No. 2034245 (2017 Addendum); SDP Emergency Authorization No. 400792	
404	Exempt Activity	
401	None	
1602	Op Law	
Mitigation for Pre	evious 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.¹

Current Conditions Facility Capacity	Affecting	In April 2015, the channel was observed to be relatively clean with very little evidence of vegetation or sediment deposition				
Hydrologic Peak Flo	WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	657	854	1,051	1,116	1,182	1,314
second [cfs])						
Hydraulic Capacity	Hydraulic Capacity of Facility					
Curr	Current Capacity 1,182 cfs					
Proposed MWM	Proposed MWMP Maintained Capacity 1,314 cfs					
Maintenance Recommendation		No maintenance currently proposed; however vegetation, sediment and debris removal, or concrete repair/replacement activities should be performed if the conditions change. Due to recommended maintenance downstream within Via Encantadoras 1, the conveyance capacity in Via Encantadoras 2 improves.				
	am Post-Maintenance Erosion Control None Recommendation					

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Riparian forest (southern willow forest; concrete-lined)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Disturbed riparian forest (southern willow forest)
	Eucalyptus woodland
	Freshwater marsh
	Ornamental plantings
Habitat and Wildlife	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo) at the upstream end, 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
МНРА	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA boundary is located approximately 580 feet south of the channel.
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A
Resource Type	IVA

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Noise (NOI)
EP-HAZ-3	MM-NOI-1
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Tijuana River - Smythe	
Segment Name	Via Encantadoras 2	
Facility No.	6-03-138	
Facility Location	From outlet of culvert that crosses beneath Vista Lane to inlet of culvert	
	beneath West San Ysidro Boulevard	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and	
	Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	No maintenance currently proposed; however vegetation, sediment and	
Recommendation ²	debris removal, or concrete repair/replacement activities should be	
	performed if the conditions change.	
	Due to recommended maintenance downstream within Via Encantadoras	
	1, the conveyance capacity in Via Encantadoras 2 improves.	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
	Concrete repair	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	Yes; see Appendix A-4	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	No	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Concrete channel	
Existing Plans and/or As-Builts?	Yes; 19218-D, 11-086034, 16916-D, & 14427-D	
Substrate Detail	Concrete bottom and banks	

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

[I		
Facility Dimensions	Length: 955 feet		
(Approximate)	Top width: 16–50 feet		
	Bottom width: 10–50 feet		
	Depth: 5–10 feet		
Authorized Facility Maintenance	Length: Channel: 955 feet		
Area	Width: 16–50 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, loader, dump truck, trash pump,		
	sweeper		
Schedule	Up to approximately 30 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer and loader enter or are lowered into channel at		
	access/loading area		
	2. Bobcat/skid-steer pushes material to loader		
	3. Loader scoops material from channel and loads dump truck at		
	access/loading area		
	4. Dump truck hauls material to legal disposal site		
Traffic Control	No		
	Additional Maintenance Information		
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	1. Within maintenance area: Yes, limited suitable habitat present		
	2. Adjacent to maintenance area: Yes, limited suitable habitat present		
	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		
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures		
	in accordance with current guidelines, if necessary		
	actor action content gardenies, it recessary		

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

Flow Management	As needed:		
Tion management	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	None		



Via Encantadoras Segment 3 Detail

Facility Type	Earthen and concrete channel
Substrate Detail ¹	Stations 1876-2612: Concrete bottom and banks
	Stations 2612-2762: Earthen bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, upstream of Tijuana
	River unnamed tributary (Via Encantadoras Segment 2)
Tributaries (listed from downstream to	Tijuana River Unnamed Tributary
upstream)	
Facility Length	Approximately 886 feet
Top-of-Bank Width	Approximately 30–100 feet
Bottom Facility Width	Approximately 8–55 feet
Facility Depth	Approximately 5–15 feet
Adjacent Land Use	Multi-Family Residential, Single-Family Residential, Transportation
As-Built Drawing Number	19218-D, 11-086034, 16916-D, & 14427-D
Coastal Zone	No



Figure 1: April 2015, entrance to double-barrel 72-inchdiameter RCP culvert under Vista Lane



Figure 2: Vicinity Map of Via Encantadoras Segment 3

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

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown		
	January 2011 – March 2019: Nov-Dec 2014 Emergency Maintenance		
Past Regulatory A	Approvals		
CEQA	MMP PEIR No. 42891; Emergency Exemption NOE No. 400792		
CDP	N/A		
SDP	SDP No. 2034245 (2017 Addendum); SDP Emergency Authorization No. 400792		
404	Exempt Activity		
401	None		
1602	Op Law		
Mitigation for Pre	evious 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.²

Current Conditions Facility Capacity	Affecting	In April 2015, the channel was observed to be relatively clean with patches of vegetation, sediment, and debris				
Hydrologic Peak Flo	WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	610	793	976	1,037	1,098	1,220
second [cfs])						
Hydraulic Capacity	Hydraulic Capacity of Facility					
Curre	ent Capacity	610 cfs				
Proposed MWM	IP Maintained	Capacity	y 610 cfs			
Maintenance Recommendation		Remove accumulated sediment and vegetation from bottom and				
			sides of segment from Station 1876 to Station 2762			2762
In-Stream Post-Maintenance Erosion Control		None				
Recommendation						

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
	 Riparian forest (southern willow forest; concrete-lined)
Adjacent Vegetation	Developed concrete-lined channel
	Developed land
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	Although this channel does contain some suitable vegetation for sensitive wildlife species (e.g., least Bell's vireo) at the upstream end, 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. However, raptors could use the eucalyptus woodland present adjacent to the facility for nesting/roosting.
МНРА	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.
Mitigation Within	None
Facility	

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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources			
Resource Identified in APE	None		
Potential Historical Resources	None		
Constraint Identified			

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-5
EP-HAZ-3	MM-BIO-6
Solid Waste (SW)	Noise (NOI)
EP-SW-2	MM-NOI-1
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Tijuana River - Smythe
Segment Name	Via Encantadoras 3
Facility No.	6-03-143
Facility Location	From outlet of culvert that crosses beneath the San Diego Metropolitan Transit Development Board railroad tracks south of Beyer Boulevard to
	inlet of culvert beneath Vista Lane
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined channel per as-built dimensions and
•	Hydrology and Hydraulics recommendations
Hydrology and Hydraulics	Remove accumulated sediment and vegetation from bottom and sides of
Recommendation ³	segment from Station 1876 to Station 2762
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen and concrete channel
Existing Plans and/or As-Builts?	Yes; 19218-D, 11-086034, 16916-D, & 14427-D
Substrate Detail ³	Stations 1876-2612: Concrete bottom and banks
	Stations 2612-2762: Earthen bottom and banks

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

	I Describe	
Facility Dimensions	Length: 886 feet	
(Approximate)	Top width: 30–100 feet	
	Bottom width: 8–55 feet	
	Depth: 5–15 feet	
Authorized Facility Maintenance	Length: Channel: 886 feet	
Area	Width: 30–100 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City	
Area(s)	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.	
Equipment	Bobcat/skid-steer, bulldozer/track-steer, Gradall/excavator, loader, dump	
	truck, trash pump, sweeper	
Schedule	Up to approximately 30 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bobcat/skid-steer, bulldozer/track-steer, loader, and dump truck enter or	
	are lowered into channel at access/loading area from Vista Lane	
	2. Bobcat/skid-steer or bulldozer/track-steer pushes material to loader	
	3. Loader scoops material from channel and loads dump truck at	
	access/loading area	
	4. Dump truck hauls material to legal disposal site	
Traffic Control	No .	
	Additional Maintenance Information	
Pre-Maintenance Meeting	Prior to the start of any maintenance activity, a qualified specialist(s) shall	
G	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	
Biology	Suitable habitat for sensitive species ⁴ :	
· • • • • • • • • • • • • • • • • • • •	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	
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures	
	in accordance with current guidelines, if necessary	
	in accordance with current galacinies, it fiecessary	

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

Flow Management	As needed:	
1 10W Management		
	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	
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Smythe Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, upstream of Tijuana River unnamed tributary (Via Encantadoras Segment 3)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,355 feet
Top-of-Bank Width	Approximately 47–60 feet
Bottom Facility Width	Approximately 20–30 feet
Facility Depth	Approximately 7 feet
Adjacent Land Use	Industrial, Open Space, Single-Family Residential, Transportation
As-Built Drawing Number	19218-D, 11-086034, 16916-D, & 14427-D
Coastal Zone	No



Figure 1: April 2015, looking upstream at channel



Figure 2: Vicinity Map of Smythe Segment 1

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown
HISTOLA OLIMAILITELIALICE	FIIOI LO ZOTT. OTIKITOWIT

2011 - 2014: No maintenance conducted

2015/2016: Emergency excavation of sediment and vegetation

The vegetation was observed to vary from light to dense with evidence of

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

Current Conditions Affecting

Recommendation

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2015-00942-RAG

401 RGP 63 Verification No. R9-2016-0014;820683;lhonma

1602 LSA Emergency Notification submitted 02/2016

Mitigation for Previous Impacts Smythe Channel and Via de la Bandola Permittee Responsible Mitigation

Project (3.11 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.¹

Facility Capacity		sediment de	sediment deposition			
Hydrologic Peak Flo	Hydrologic Peak Flows					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	550	715	880	935	990	1,100
second [cfs])						
Hydraulic Capacity of Facility						
Curre	ent Capacity	<550 cfs				
Proposed MWM	P Maintaine	d Capacity	935 cfs			
Maintenanc	e Recommen	dation	Remove accumulated sediment, debris, and vegetation from		etation from	
			bottom and sides of segment from Station 4122 to Station 5477			to Station 5477
In-Stream Post-Ma	intenance Er	osion Control	t rol None			

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

Biological Resource Summary

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

Facility Vegetation	Natural flood channel
	Riparian scrub (southern willow scrub)
Adjacent Vegetation	Developed land
	Disturbed land
	Ornamental plantings
Habitat and Wildlife	The facility contains suitable habitat for sensitive bird species, such as least Bell's vireo. Although this habitat is present, the channel is relatively isolated from other riparian areas, resulting in a low potential for sensitive species to occur.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	P-37-031491
Resource Identified Adjacent to APE	None
Resource Type	Historic path of Otay Mesa Road

Historical Resources	
Resource Identified in APE	P-37-031491; Historic path of Otay Mesa Road
Potential Historical Resources	Yes
Constraint Identified	

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

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.

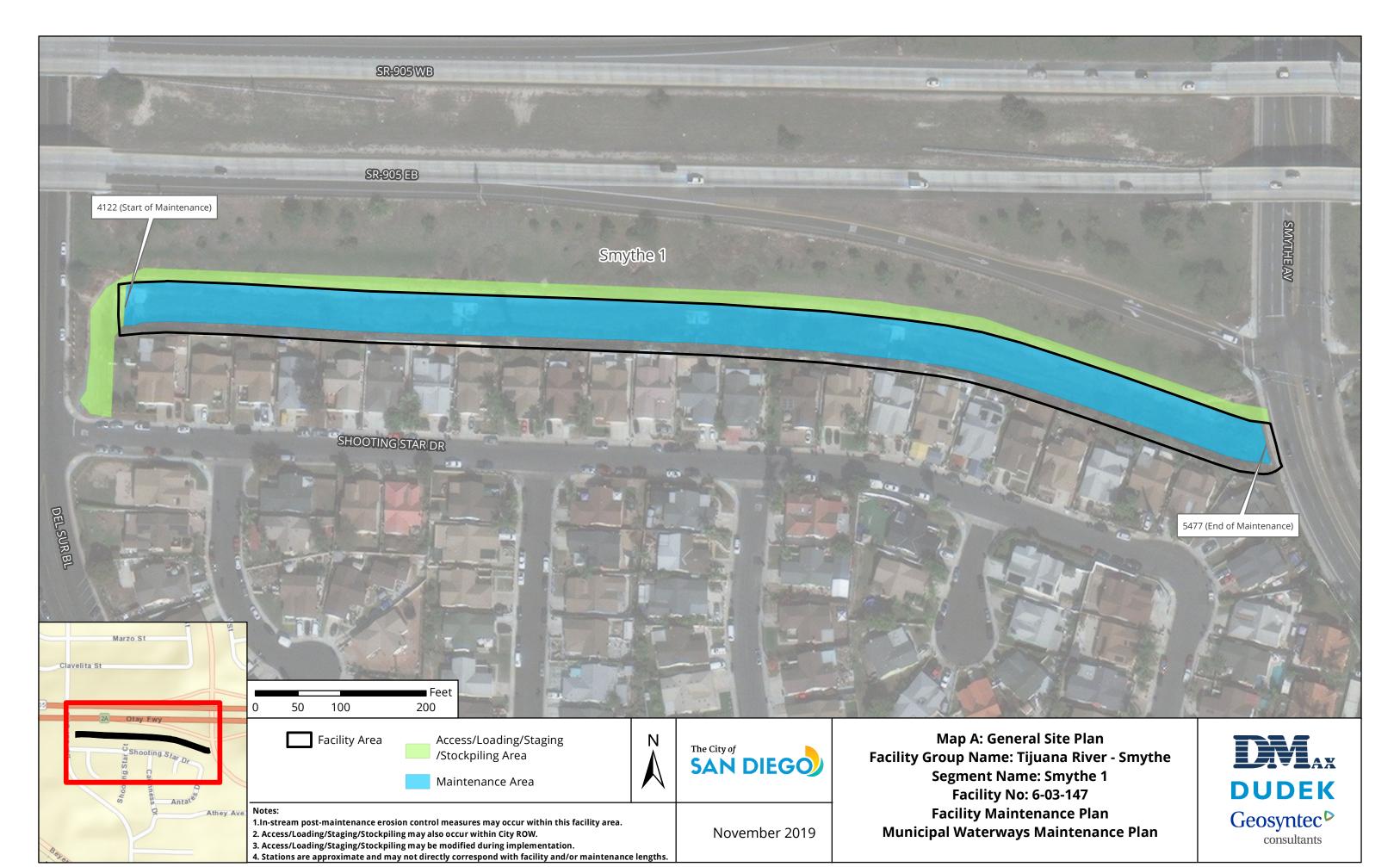
Facility Group	Tijuana River - Smythe
Segment Name	Smythe 1
Facility No.	6-03-147
Facility Location	From outlet of a culvert after it crosses beneath Smythe Avenue to 200 feet
	northeast of the intersection of Del Sur Boulevard and Shooting Star Drive
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of earthen channel per as-built dimensions, previous
	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from bottom and
Recommendation ²	sides of segment from Station 4122 to Station 5477
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
Maintenance Method	Excavation; mechanized equipment inside and outside the channel
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	No
Concrete/Gabion Structure Repair	Yes; see Appendix A-4
and Maintenance	
Culvert Maintenance	No
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Earthen channel
Existing Plans and/or As-Builts?	Yes; 19218-D, 11-086034, 16916-D, & 14427-D
Substrate Detail	Earthen bottom and banks
Facility Dimensions	Length: 1,355 feet
(Approximate)	Top width: 47–60 feet
	Bottom width: 20–30 feet
	Depth: 7 feet

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

Authorized Facility Maintenance	Length: Channel: 1,355 feet	
Area	Width: 60 feet	
Maintenance Quantities	To be determined at time of maintenance	
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City	
Area(s)	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.	
Equipment	Bulldozer/track-steer, Gradall/excavator, dump truck, trash pump, sweeper	
Schedule	Up to approximately 21 working days	
Maintenance Crew	Approximately 8–12 people	
Routine Maintenance Procedures	1. Bulldozer/track-steer and/or Gradall/excavator enters channel at	
	access/loading area	
	2. Bulldozer/track-steer pushes material to Gradall/excavator at	
	access/loading area	
	3. Gradall/excavator scoops material from channel and loads dump truck	
	5. Dump truck hauls material to legal disposal site	
Traffic Control	Yes; coordinate with the City of San Diego	
	Additional Maintenance Information	
Pre-Maintenance Meeting	Prior to the start of any maintenance activity, a qualified specialist(s) shall	
, and the second	conduct the following on site:	
	1. Review sensitive biological, historical, and water quality resources; if	
	present, flag/delineate	
	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	
Biology	Suitable habitat for sensitive species ³ :	
	1. Within maintenance area: Yes	
	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	
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures	
	in accordance with current guidelines, if necessary	
Flow Management	As needed:	
Trow Management	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	

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

Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan	
BMP Installation	See Water Pollution Control Plan	
In-Stream Post-Maintenance	None	
Erosion Control Recommendation		
Post-Maintenance Procedures	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	
Other Notes	None	



Via de la Bandola Segment 1 Detail

Facility Type	Concrete ditch
Substrate Detail	Concrete bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, upstream of Tijuana River unnamed tributary (Via Encantadoras Segment 3)
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 1,986 feet
Top-of-Bank Width	Approximately 24–36 feet
Bottom Facility Width	Approximately 6 feet
Facility Depth	Approximately 6 feet
Adjacent Land Use	Single-Family Residential, Transportation
As-Built Drawing Number	17307-D & 14427-D
Coastal Zone	No



Figure 1: December 2014, looking upstream at dense vegetation, and sediment and debris within ditch



Figure 2: Vicinity Map of Via de la Bandola Segment 1

Facility Maintenance History

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

History of Maintenance	Prior to 2011: Unknown
install value in the state of t	I I I I I I I I I I I I I I I I I I I

2011 - 2014: No maintenance conducted

2015/2016: Emergency excavation of sediment and vegetation

January 2017 - March 2019: No maintenance conducted

Past Regulatory Approvals

CEQA 2011 MMP PEIR No. 42891

CDP N/A

SDP SDP No. 2034245 (2017 Addendum)

404 RGP 63 USACE File #SPL-2015-00850-RAG

401 RGP 63 Verification No. R9-2015-0187

1602 LSA Emergency Notification submitted 02/2016

Mitigation for Previous Impacts Smythe Channel and Via de la Bandola Permittee Responsible Mitigation

Project (0.67 acre)

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.¹

Current Conditions Affecting	In December 2014, the amount of vegetation was observed to be dense with
Facility Capacity	many large trees. Sediment deposition was estimated to be 2 feet. Current
	condition: relatively clean loaf debris

condition: relatively clean, leaf debris.

nydrologic Peak Flows						
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per	550	715	880	935	990	1,100
second [cfs])						

Hydraulic Capacity of Facility

inguitable capacity of facility	
Current Capacity	295 cfs
Proposed MWMP Maintained Capacity	295 cfs

Maintenance RecommendationRemove accumulated sediment and vegetation from bottom and sides of concrete ditch from Station 1418 to Station 2134.

Remove accumulated sediment and debris in the culvert from

Station 148 to Station 1418.

In-Stream Post-Maintenance Erosion Control None Recommendation

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

Biological Resource Summary

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

Facility Vegetation	Developed concrete-lined channel
Adjacent Vegetation	Coastal sage scrub
	Developed land
	Disturbed land
	Eucalyptus woodland
	Ornamental plantings
Habitat and Wildlife	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.
MHPA	The facility is not within or adjacent to the Multi Habitat Planning Area (MHPA)
Mitigation Within Facility	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	
Resource Identified in APE	None
Resource Identified Adjacent to APE	None
Resource Type	N/A

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	Noise (NOI)
EP-HAZ-3	MM-NOI-1
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

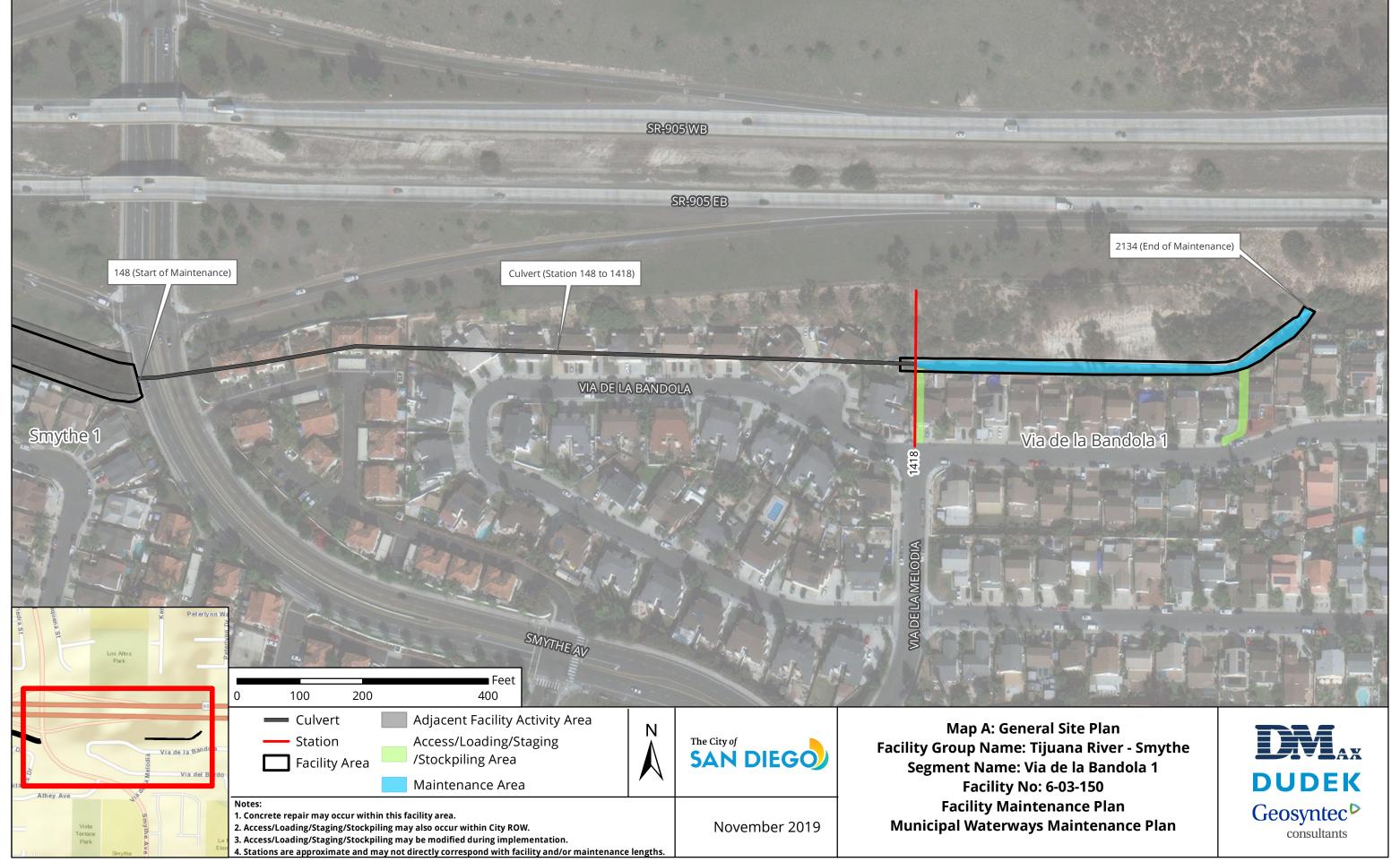
Facility Group	Tijuana River - Smythe
Segment Name	Via de la Bandola 1
Facility No.	6-03-150
Facility Location	From 150 feet south of State Route 905 to 150 feet north of the intersection
	of Via de la Bandola and Via de La Melodia
Coastal Zone	No
MWMP Proposed Maintenance	Maintenance of concrete-lined ditch per as-built dimensions, previous
	emergency maintenance approvals, and Hydrology and Hydraulics
	recommendations
Hydrology and Hydraulics	Remove accumulated sediment and vegetation from bottom and sides of
Recommendation ²	concrete ditch from Station 1418 to Station 2134.
	Remove accumulated sediment and debris in the culvert from Station 148
	to Station 1418.
Maintenance Activities	Vegetation grubbing, trimming, and removal
	Invasive plant species treatment and removal
	Sediment removal
	Concrete repair
Maintenance Method	Excavation; mechanized equipment inside and outside the ditch
	Temporary access/loading
	Temporary staging
	Temporary diversions
	Hand removal of vegetation
Bank Repair	No
Concrete Repair	Yes; see Appendix A-4
Concrete/Gabion Structure Repair	No
and Maintenance	
Culvert Maintenance	Yes; see Appendix A-4
Post-Maintenance Erosion Control	No
Recommendation	
Trash/Debris Fence Repair and	No
Maintenance	
Facility Type	Concrete ditch
Existing Plans and/or As-Builts?	Yes; 17307-D & 14427-D
Substrate Detail	Concrete bottom and banks

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

	L 4 000 C		
Facility Dimensions	Length: 1,986 feet		
(Approximate)	Top width: 24–36 feet		
	Bottom width: 6 feet		
	Depth: 6 feet		
Authorized Facility Maintenance	Length: Ditch: 716 feet; Culvert: 1,270 feet		
Area	Width: 24–36 feet		
Maintenance Quantities	To be determined at time of maintenance		
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City		
Area(s)	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.		
Equipment	Bobcat/skid-steer, Gradall/excavator, dump truck, trash pump, vactor,		
	sweeper		
Schedule	Up to approximately 14 working days		
Maintenance Crew	Approximately 8–12 people		
Routine Maintenance Procedures	1. Bobcat/skid-steer enters or is lowered into ditch at access/loading area		
	with Gradall/excavator assistance		
	2. Bobcat/skid-steer pushes material to Gradall/excavator at access/loading		
	area		
	3. Gradall/excavator scoops material from ditch and loads dump truck		
	4. Dump truck hauls material to legal disposal site		
	5. Vactor used to power wash ditch in accordance with Flow Manageme		
	section, below, and Water Pollution Control Plan		
Traffic Control	No		
Additional Maintenance Information			
Pre-Maintenance Meeting	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		
Biology	Suitable habitat for sensitive species ³ :		
	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		
	Ensure adequate implementation of Shot Hole Borer beetle procedures		
	in accordance with current guidelines, if necessary		
	in accordance with current guidennes, if flecessary		

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

Flow Management	As needed:		
1 10W Management			
	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		
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan		
BMP Installation	See Water Pollution Control Plan		
In-Stream Post-Maintenance	None		
Erosion Control Recommendation			
Post-Maintenance Procedures	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		
Other Notes	80-inch pipe at upstream end of segment		



Facility Maintenance Plan

Tijuana River - La Media Facility Group

Segment Name (Facility number): La Media 1 (6-06-011)



Overview

Watershed Management Area (WMA)	Tijuana River
Watershed (Number)	Tijuana River (6)
Hydrologic Subarea	911.12
Drainage Name (Number)	Tijuana River Unnamed Tributary (06)
Facility Group Name	Tijuana River - La Media
Segment Name (Facility Number)	La Media 1 (6-06-011)
Substrate	La Media 1 / Earthen
Location	About 270 feet north of the intersection of La Media Road and
	Airway Road
MMP Map No(s).	124
Facility Inspection No.	124
Other Former Names	Airway and La Media, Airway



Figure 1: Vicinity Map of Tijuana River - La Media Facility Group

Water Quality Resource Summary

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

Tijuana River Watershed Management Area; Hydrologic Subarea 911.12		
Adopted TMDLs	None	
Highest Priority Water	Sediment	
Quality Condition		

Tijuana River - La Media	
Beneficial Uses • Non-contact Water Recreation (REC-2)	
	Warm Freshwater Habitat (WARM)
	Wildlife Habitat (WILD)
303(d) listed Impairments	No impairments recorded on the 303(d) List

Tijuana River (First downstream water body)		
Beneficial Uses	 Non-contact Water Recreation (REC-2) Preservation of Biological Habitats of Special Significance (BIOL) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Rare, Threatened, or Endangered Species (RARE) 	
303(d) listed Impairments	Ammonia as Nitrogen, Benthic Community Effects, Cadmium, Eutrophic, Indicator Bacteria, Low Dissolved Oxygen, Pesticides, Phosphorus, Sedimentation/Siltation, Selenium, Solids, Surfactants (MBAS), Synthetic Organics, Total Nitrogen as N, Toxicity, Trace Elements, Trash	

La Media Segment 1 Detail

Facility Type	Earthen channel
Substrate Detail	Earthen bottom and banks
Location Within Watershed	Upper reach of Tijuana River unnamed tributary, immediately upstream of Tijuana River unnamed tributary as it flows to Mexico
Tributaries (listed from downstream to upstream)	No named tributaries
Facility Length	Approximately 273 feet
Top-of-Bank Width	Approximately 8–26 feet
Bottom Facility Width	Approximately 2–22 feet
Facility Depth	Approximately 2.5 feet
Adjacent Land Use	Open Space, Single-Family Residential, Transportation, Vacant
As-Built Drawing Number	23787-D & 28063-D
Coastal Zone	No



Figure 1: April 2017, looking upstream at conservation area from Airway Road



Figure 2: Vicinity Map of La Media Segment 1

Facility Maintenance History

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

History of Mainte	enance Prior to 2011: Unknown	
, ,	January 2011 – March 2019: No maintenance conducted	
Past Regulatory A	Approvals	
CEQA	2011 MMP PEIR No. 42891	
CDP	N/A	
SDP	SDP No. 2034245 (2017 Addendum)	
404	None	
401	None	
1602	None	
Mitigation for Pro	evious 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.¹

Current Conditions Affecting Facility Capacity The vegetation estimated to the conditions of		on was observed to be dense and the sediment deposition was b be 1.5 feet				
Hydrologic Peak Flo)WS					
Storm Event	2-year	5-year	10-year	25-year	50-year	100-year
Q (cubic feet per second [cfs])	1,351	1,952	2,252	2,702	3,153	3,453
Hydraulic Capacity	Hydraulic Capacity of Facility					
Current Capacity		19 cfs				
Proposed MWMP Maintained Capacity		19 cfs				
Maintenance Recommendation		Remove accumulated sediment, debris, and vegetation from north side of culvert at Airway Road and extending 4.5 feet upstream. Remove accumulated sediment and debris in culvert from Station 4030 to Station 4080.				
In-Stream Post-Maintenance Erosion Control Recommendation		sion Control		No	ne	

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

Biological Resource Summary

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

Facility Vegetation	Freshwater marsh
Adjacent Vegetation	Developed land
	Disturbed freshwater marsh
	Disturbed land
	Freshwater marsh
	Ornamental plantings
	Riparian forest (southern willow forest)
	Riparian scrub (southern willow scrub)
Habitat and Wildlife	There is limited suitable habitat for sensitive species use within the facility itself, but suitable riparian habitat for least Bell's vireo is present adjacent to the channel
MHPA	The facility is adjacent to the Multi Habitat Planning Area (MHPA). The nearest MHPA
	boundary is located approximately 5 feet west of the channel.
Mitigation Within Facility	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		
Resource Identified in APE	P-37-007208	
Resource Identified Adjacent to APE None		
Resource Type	Prehistoric lithic scatter	

Historical Resources		
Resource Identified in APE	None	
Potential Historical Resources	None	
Constraint Identified		

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)
Biological Resources (BIO)	Air Quality (AQ)
EP-BIO-1	MM-AQ-1
EP-BIO-2	Biological Resources (BIO)
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
Health and Safety/Hazards (HAZ)	MM-BIO-5
EP-HAZ-3	MM-BIO-6
Land Use (LU)	MM-BIO-7
EP-LU-1	Noise (NOI)
Paleontological Resources (PAL)	MM-NOI-1
EP-PAL-1	
Solid Waste (SW)	
EP-SW-2	
EP-SW-3	
EP-SW-4	
EP-SW-5	
EP-SW-6	
EP-SW-7	
EP-SW-8	
Water Quality (WQ)	
EP-WQ-1	

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.

Facility Group	Tijuana River - La Media	
Segment Name	La Media 1	
Facility No.	6-06-011	
Facility Location	From 270 feet northwest of the intersection of La Media Road and Airway	
	Road to a privately maintained ditch	
Coastal Zone	No	
MWMP Proposed Maintenance	Maintenance of earthen channel transition to Airway Road inlet per	
	Hydrology and Hydraulics recommendations	
Hydrology and Hydraulics	Remove accumulated sediment, debris, and vegetation from north side of	
Recommendation ²	culvert at Airway Road and extending 4.5 feet upstream.	
	Remove accumulated sediment and debris in culvert from Station 4030 to	
	Station 4080.	
Maintenance Activities	Vegetation grubbing, trimming, and removal	
	Invasive plant species treatment and removal	
	Sediment removal	
Maintenance Method	Excavation; mechanized equipment inside and outside the channel	
	Temporary access/loading	
	Temporary staging	
	Temporary diversions	
	Hand removal of vegetation	
Bank Repair	No	
Concrete Repair	No	
Concrete/Gabion Structure Repair	No	
and Maintenance		
Culvert Maintenance	Yes; see Appendix A-4	
Post-Maintenance Erosion Control	No	
Recommendation		
Trash/Debris Fence Repair and	No	
Maintenance		
Facility Type	Earthen channel	
Existing Plans and/or As-Builts?	Yes; 23787-D & 28063-D	
Substrate Detail	Earthen bottom and banks	
Facility Dimensions	Length: 273 feet	
(Approximate)	Top width: 8–26 feet	
	Bottom width: 2–22 feet	
	Depth: 2.5 feet	

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

Analoguica de Callino Maintenance	Length Channel 45 feet Colomb 50 feet				
Authorized Facility Maintenance	Length: Channel: 4.5 feet; Culvert: 50 feet				
Area	Width: 26 feet				
Maintenance Quantities	To be determined at time of maintenance				
Access/Loading/Staging/Stockpiling	Designated areas on Map A and Smuggler's Gulch Map B or within City				
Area(s)	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.				
Equipment	Gradall/excavator, backhoe, dump truck, trash pump, vactor, sweeper				
Schedule	Up to approximately 7 working days				
Maintenance Crew	Approximately 8–12 people				
Routine Maintenance Procedures	1. Gradall/excavator and backhoe stationed above channel at				
	access/loading area				
	2. Gradall/excavator and backhoe scoop material in front of culvert/pipes				
	and load dump truck				
	3. Dump truck hauls material to legal disposal site				
	4. Vactor used to flush culverts in accordance with Flow Management				
	section and Water Pollution Control Plan				
Traffic Control	Yes; coordinate with the City of San Diego				
Additional Maintenance Information					
Pre-Maintenance Meeting	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				
Biology	Suitable habitat for sensitive species ³ :				
	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				
	2. Ensure adequate implementation of Shot Hole Borer beetle procedures				
	in accordance with current guidelines, if necessary				

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

Flow Management	As needed:				
Tion management					
	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				
Downstream Sensitive Waters	Yes; implement BMPs per Water Pollution Control Plan				
BMP Installation	See Water Pollution Control Plan				
In-Stream Post-Maintenance	None				
Erosion Control Recommendation					
Post-Maintenance Procedures	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				
Other Notes	None				

