

Appendix A – WQIP Crosswalk
Municipal Permit Requirements Considerations

Permit Considerations	Municipal Permit Section	WQIP Document Section/Appendix
Watershed Management Area	B.1 (pg. 17)	Section 1.2
Water Quality Improvement Plan Submittal, Updates, and Implementation	B.6 (pg. 32)	Section 1.3
Priority Water Quality Conditions	B.2 (pg. 19)	Section 2, First Interim Deliverable
1. Assessment of Receiving Water Conditions	B.2.a (pg. 19)	Section 2.1, Appendix D, Appendix E
2. Assessment of Impacts From MS4 Discharges	B.2.b (pg. 20)	Appendix D, Appendix E
3. Identification of Priority Water Quality Conditions	B.2.c (pg. 20)	Section 2.1, Section 2.2, Appendix F
4. Identification of MS4 Sources of Pollutants and/or Stressors	B.2.d (pg. 21)	Section 3, Appendix G
5. Identification of Potential Water Quality Improvement Strategies	B.2.e (pg. 22)	First Interim Deliverable
Water Quality Improvement Goals, Strategies and Schedules	B.3 (pg. 23)	Section 4, Second Interim Deliverable
1. Water Quality Improvement Goals and Schedules	B.3.a (pg. 23)	Section 4, Appendix H
2. Water Quality Improvement Strategies and Schedules	B.3.b (pg. 25)	Section 4, Appendix I
Water Quality Improvement Monitoring and Assessment Program	B.4 (pg. 30)	Section 5, Appendix K
Iterative Approach	B.5 (pg. 30)	Section 6
1. Re-Evaluation of Priority Water Quality Conditions	B.5.a (pg. 30)	Section 6.3
2. Adaptation of Goals, Strategies and Schedules	B.5.b (pg. 31)	Section 6.4
3. Adaptation of Monitoring and Assessment Program	B.5.c (pg. 32)	Section 6.6

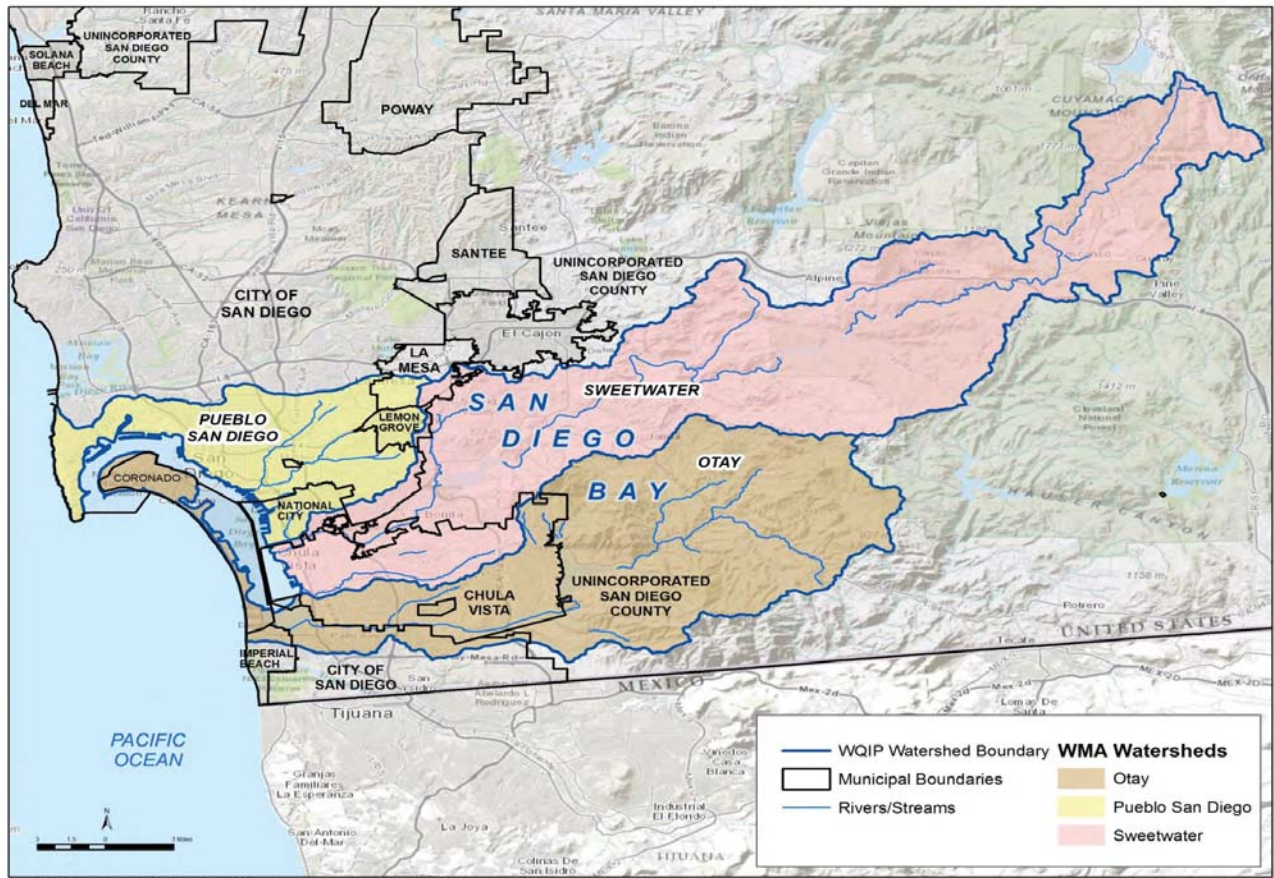
APPENDIX B

San Diego Bay WMA Supporting Data

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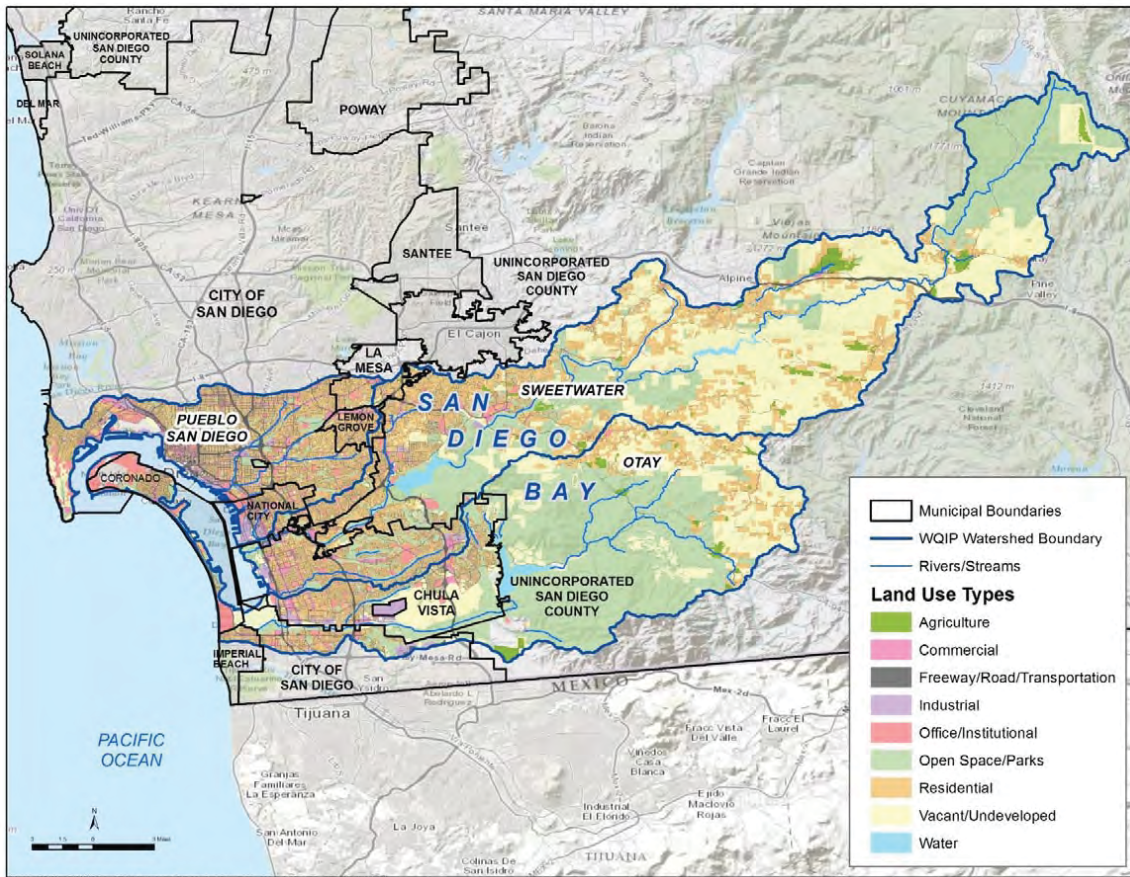
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 SAN DIEGO WATERSHED MANAGEMENT AREA
 SUPPORTING DATA

Figure B-1.
 San Diego Bay WMA Subwatersheds and Responsible Parties



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SAN DIEGO WATERSHED MANAGEMENT AREA
SUPPORTING DATA

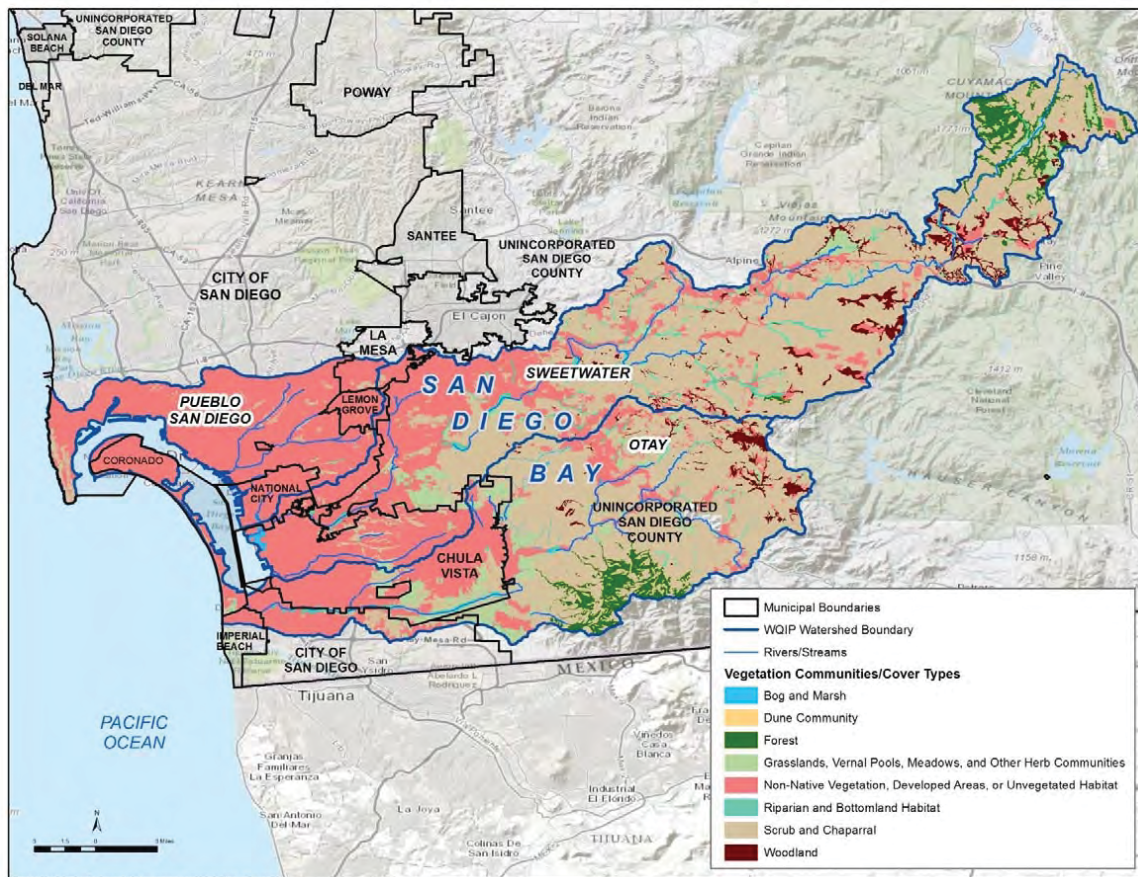
Figure B-2.
San Diego Bay Watershed Management Area—Land Use (SANDAG)



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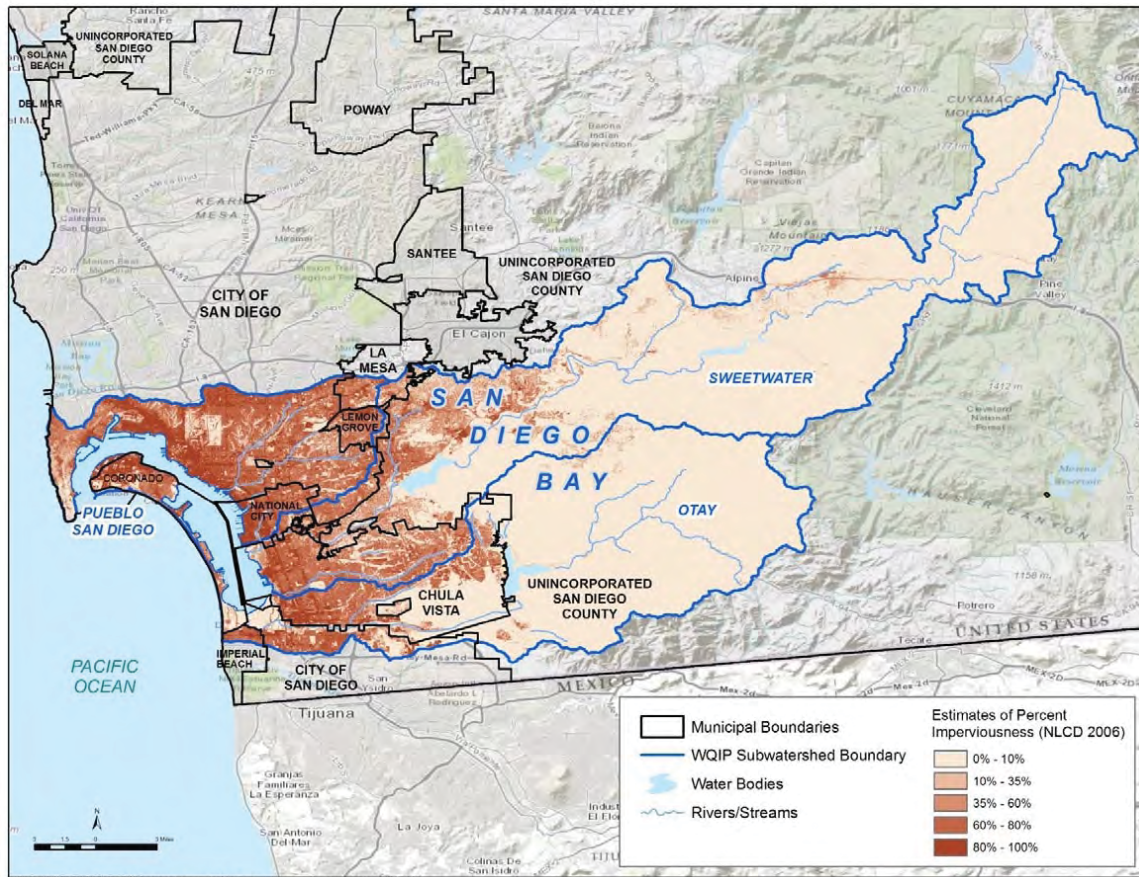
Figure B-3.
 San Diego Bay Watershed Management Area—Vegetative Cover (SANDAG, 2008)



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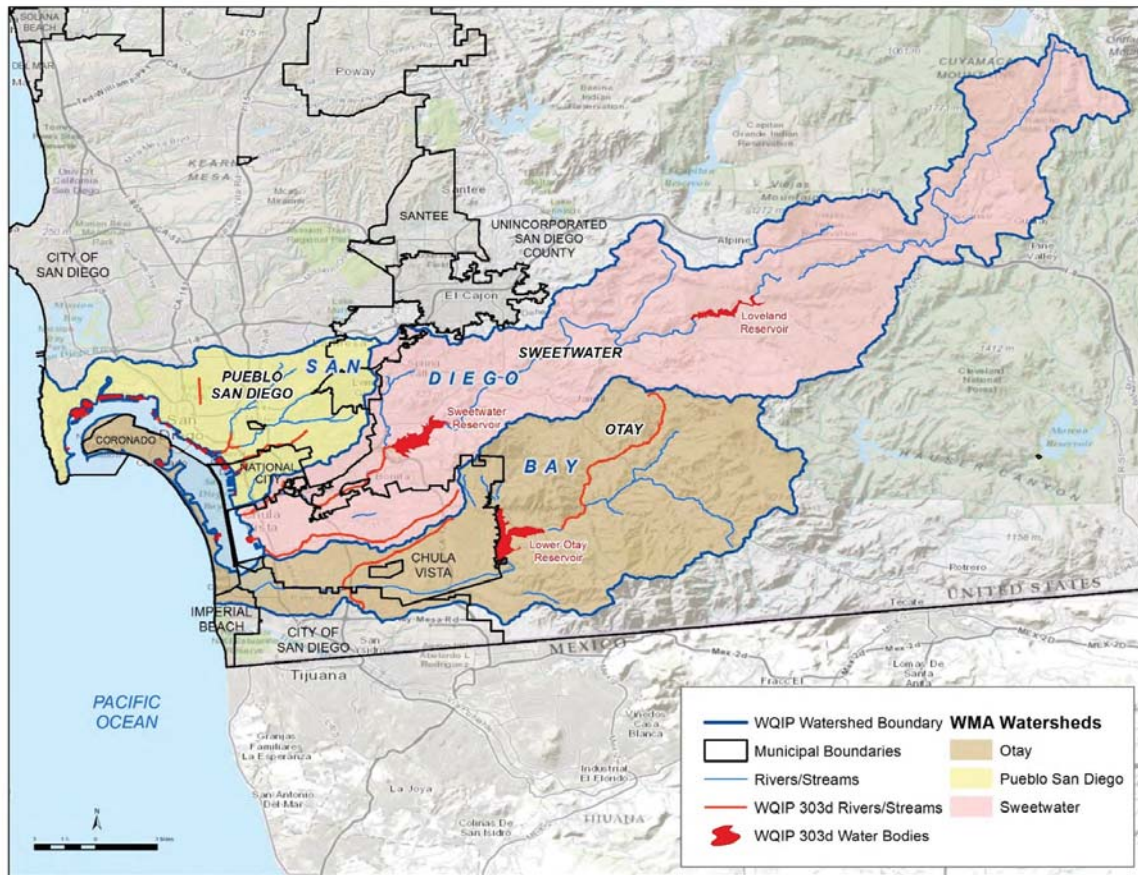
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SAN DIEGO WATERSHED MANAGEMENT AREA
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Figure B-4.
San Diego Bay Watershed Management Area—Percentage Impervious (NLCD, 2006)



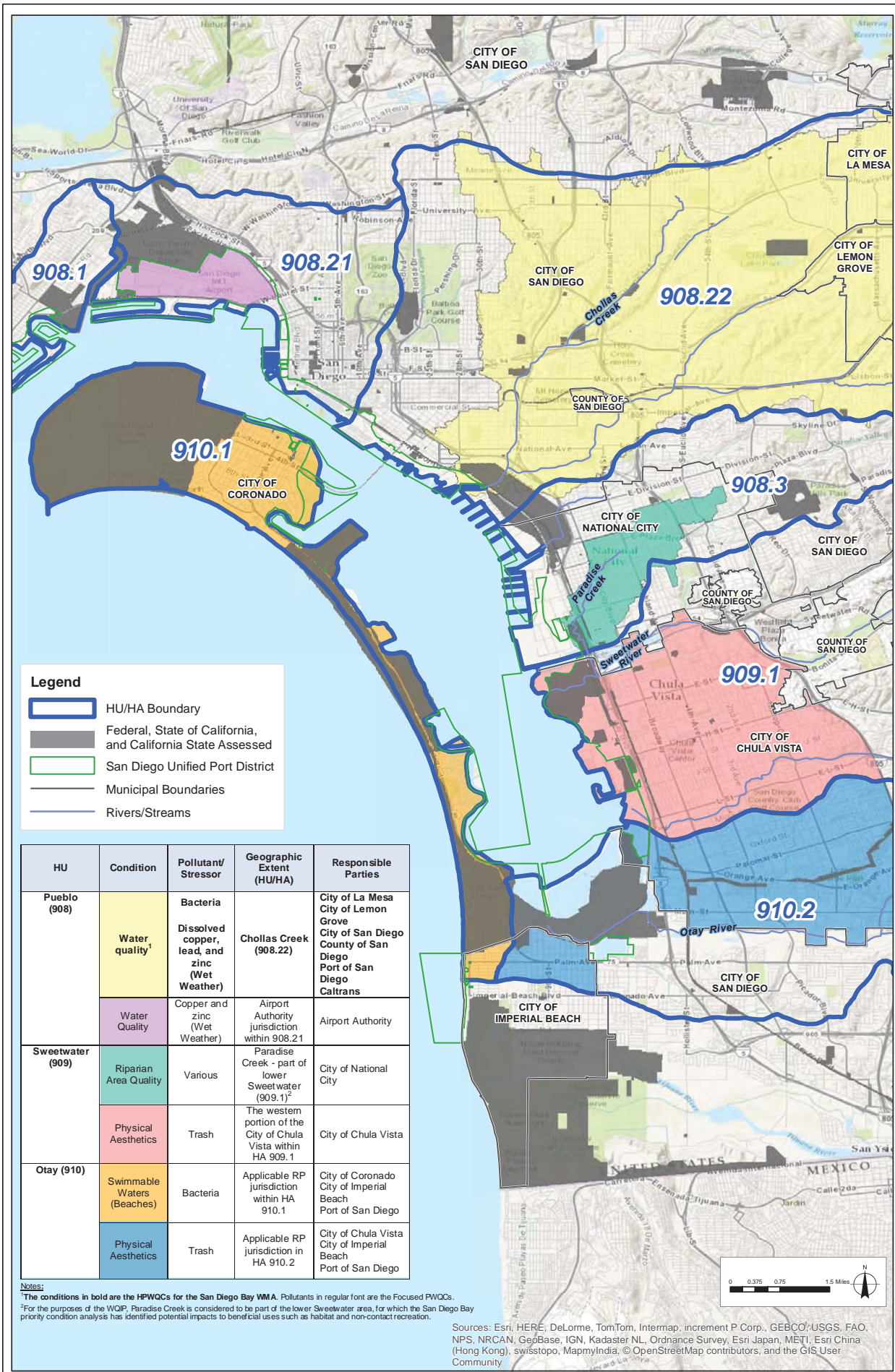
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Figure B-5
 San Diego Bay Watershed Management Area—2010 303(d)-Listed Waterbodies



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SAN DIEGO WATERSHED MANAGEMENT AREA
SUPPORTING DATA

**Table B-1.
San Diego Bay Watershed Management Area–2010 303(d) Listings and Associated Beneficial Uses**

Water Body Name	Beneficial Use																						
	MUN	AGR	IND	NAV	COMM	PROC	GWR	FRSH	POW	REC-1	REC-2	BIOL	WARM	COLD	WILD	RARE	SPWN	MAR	AQUA	MIGR	SHELL	EST	
<i>Pueblo Watershed</i>																							
Paleta Creek	+									○	●		●		●								
San Diego Bay			●	●	●					●	●	●				●	●	●	●		●	●	●
San Diego Bay Shoreline, North of 24th Street Marine Terminal			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, Seventh Street Channel			●	●	●					●	●	●			●	●	●	●	●		●	●	●
Pacific Ocean Shoreline, Point Loma HA, at Bermuda Ave			●	●	●					●	●	●			●	●	●	●	●	●	●	●	●
San Diego Bay Shoreline, at Americas Cup Harbor			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, near sub base			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, Shelter Island Shoreline Park			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay, Shelter Island Yacht Basin			●	●	●					●	●	●			●	●	●	●	●		●	●	●
Chollas Creek	+	■								○	●		●		●								
San Diego Bay Shoreline, 32nd St San Diego Naval Station			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, at Harbor Island (East Basin)			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, at Harbor Island (West Basin)			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, at Marriott Marina			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, at Spanish Landing			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, between Sampson and 28th Streets			●	●	●					●	●	●	■		●	●	●	●	●		●	●	●
San Diego Bay Shoreline, Downtown Anchorage			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, G Street Pier			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, near Chollas Creek			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, near Coronado Bridge			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, near Switzer Creek			●	●	●					●	●	●			●	●	●	●	●		●	●	●
San Diego Bay Shoreline, Vicinity of B St and Broadway Piers			●	●	●					●	●	●			●	●	●	●	●		●	●	●
Switzer Creek	+									○	●		●		●								

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Table B-1.
San Diego Bay Watershed Management Area–2010 303(d) Listings and Associated Beneficial Uses (continued)

Water Body Name	Beneficial Use																						
	MUN	AGR	IND	NAV	COMM	PROC	GWR	FRSH	POW	REC-1	REC-2	BIOL	WARM	COLD	WILD	RARE	SPWN	MAR	AQUA	MIGR	SHELL	EST	
Sweetwater Watershed																							
Paradise Creek, HSA 908.320	+									o	•		•		•								
San Diego Bay Shoreline, at Bayside Park (J Street)			•	•	•					•	•	•			•	•	•	•		•	•	•	
San Diego Bay Shoreline, Chula Vista Marina			•	•	•					•	•	•			•	•	•	•		•	•	•	•
Sweetwater River, Lower (below Sweetwater Reservoir)	+		•							o	•		•		•								
Sweetwater Reservoir	•	•	•			•				•	•		•		•								
Loveland Reservoir	•	•	•			•				•	•		•	•	•								
Otay Watershed																							
Pacific Ocean Shoreline, Coronado HA, at Silver Strand (north end, Oceanside)			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
Pacific Ocean Shoreline, Imperial Beach Pier			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
San Diego Bay Shoreline, at Coronado Cays			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
San Diego Bay Shoreline, at Glorietta Bay			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
San Diego Bay Shoreline, Tidelands Park			•	•	•					•	•	•			•	•	•	•	•	•	•	•	•
Jamul Creek	•	•	•			•				•	•	•	•		•								
Lower Otay Reservoir	•	•	•			•				•	•		•		•								
Poggi Canyon Creek	+	•	o							o	•		•		•								

Notes:

Shaded cells indicate that the beneficial use is listed as impaired in the 303(d) listing.

Striped cells indicate that the beneficial use is listed as impaired in the 2010 303(d) listing, but the 2010303(d)-listed beneficial use is not designated as a beneficial use for the waterbody in the Basin Plan.

- Existing Beneficial Use
- o Potential Beneficial Use
- + Exempted from MUN

Notes:

Beneficial Use Categories: MUN = municipal and domestic supply; AGR = agricultural supply; IND = industrial service supply; NAV = navigation; COMM = commercial and sport fishing; PROC = industrial process supply; GWR = groundwater recharge, FRSH = freshwater replenishment; POW = hydropower generation; REC-1 = contact water recreation; REC-2 = non-contact water recreation; BIOL = preservation of biological habitats of special significance; WARM = warm freshwater habitat; COLD = cold freshwater habitat; WILD = wildlife habitat; RARE = rare, threatened, or endangered species; SPWN = spawning, reproduction, and/or early development; MAR = marine habitat; AQUA = aquaculture; MIGR = migration of aquatic organisms; "SHELL = shellfish harvesting; EST = estuarine habitat.

APPENDIX B
SAN DIEGO WATERSHED MANAGEMENT AREA
SUPPORTING DATA
*San Diego Bay Water Quality Improvement Plan—Phase I
Resource Documents*

Primary References

2011 Long-Term Effectiveness Assessment Final Report. San Diego Stormwater Copermittees Urban Runoff Management Programs
2011-2012 San Diego County Municipal Copermittee Receiving Waters and Urban Runoff Monitoring Report
2011-2012 San Diego Bay WMA WURMP Annual Report
2010 California 303(d) List of Impaired Water Bodies
2013 Municipal Permit Order No. R9-2013-0001
2013 Paleta, Chollas, and Switzer Creeks Sediment TMDL Draft Technical Report
2010 Twenty Beaches and Creeks Bacteria TMDL Resolution No. R9-2010-0001 and Technical Report
2008 Shelter Island Shoreline Park Bacteria TMDL Resolution No. R9-2008-0027 and Technical Report
2007 Shelter Island Shoreline Park Dissolved Copper, Lead, and Zinc TMDL Resolution No. R9-2007-0043 and Technical Report
2005 Shelter Island Yacht Basin Dissolved Copper TMDL Resolution No. R9-2005-0019 and Technical Report
2003 Chollas Creek Diazinon TMDL Resolution No. R9-2002-0123 and Technical Report
San Diego Basin Plan, with amendments
2013 Regional Board Practical Vision
2012 Chollas Creek Watershed Comprehensive Load Reduction Plan
Chollas Creek Total Maximum Daily Load 2012-2013 Water Quality Compliance Monitoring Report
2005 Phase II TMDL Sediment Quality Assessment Study at the B Street/Broadway Piers, Downtown Anchorage, and Switzer Creek, San Diego.
2013 CalRecycle Solid Waste Information System Website
2014 Paradise Creek Selenium Monitoring Final Report
2014 City of National City Transitional Dry Weather MS4 Outfall Monitoring Program
Clean Water Act of 1972, with amendments
2010 Multi-Pollutant TMDL Implementation Plan for the Unincorporated Area of the Los Angeles River Watershed
2012 County of San Diego SUSUMP
2011 National Land Cover Database
1999 National Resources Conservation Service California Watershed Dataset
2008 San Diego Bay WMA WURMP
2003 San Diego Bay WMA WURMP
SANDAG Vegetation GIS Layers
SANDAG Vegetation Land Use Layers
2012 San Diego Coastkeeper Comments on Tentative Order No. R9-2012-0011
2014 SMARTS Online Database

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Primary References (continued)

2014 State Water Resources Control Board NPDES Permit Database
2013 SWAMP Tools for Assessing the Biological Integrity of Surface Waters
2014 USEPA Website discussing Green Infrastructure
2014 USEPA TMDL Glossary
2009 USEPA TMDL Program Results Analysis Fact Sheet
2012 San Diego Bay National Wildlife Refuge Information from the US Fish and Wildlife Service
2009 USGS article on Mercury Contamination of Aquatic Ecosystems
2008 Wanatabe et al. article on Diazinon in the Chollas Creek Watershed
2013 Online article on Eutrophication and Hypoxia

Additional Resources

Armand Ruby Consulting in Association with AMEC. Draft Technical Memorandum. Summary of Literature Review, Bacteria Source Identification and Conceptual Model (2012)
City of Chula Vista 2012 Dry Weather Monitoring Report
Caltrans Stormwater Management Program Annual Report (2012-2013)
Caltrans Stormwater Management Program District 11 Work Plan (2012-2013)
City of Chula Vista Jurisdictional Urban Runoff Monitoring Program (JURMP) Annual Report (2011-2012)
City of Chula Vista JURMP (2007)
City of Chula Vista Selenium Special Study Monitoring Results (2011-2013)
City of Coronado JURMP Annual Report (2011-2012)
City of Coronado JURMP Annual Report (2012-2013)
City of Imperial Beach JURMP (2008)
City of La Mesa Dry Weather Field Screening and Analytical Monitoring Program (2013)
City of La Mesa JURMP (2008)
City of Lemon Grove JURMP Annual Report (2011-2012)
City of National City JURMP (2008)
City of National City JURMP Annual Report (2012-2013)
City of National City Municipal Separate Storm Sewer Dry Weather Outfall Monitoring Analytical Results (2013)
City of San Diego Chollas Creek Copper, Lead, and Zinc Water-Effect Ratio Study (2011)
City of San Diego Chollas Creek Storm Drain Characterization Study (2010)
City of San Diego Chollas Creek TMDL Source Loading, Best Management Practices, and Monitoring Strategy Assessment. Final Report (2006)
City of San Diego Enterococcal Sources and Growth Related to Two Storm Drains in San Diego County. Draft Final Report. (2011)
City of San Diego JURMP (2008)
City of San Diego JURMP Annual Report (2010-2011)
City of San Diego JURMP Annual Report (2011-2012)

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Additional Resources (continued)

City of San Diego Shelter Island Dissolved Copper Total Maximum Daily Load Compliance Monitoring Report (2011-2012)
City of San Diego Targeted Aggressive Street Sweeping Pilot Study Effectiveness Assessment. Final Report (2010)
County of San Diego JURMP (2011-2012)
Otay River Watershed Management Plan (2006)
Port of San Diego Annual Report for Storm Water Discharges Associated with Industrial Activities-Cruise Ship Terminal (2012-2013)
Port of San Diego Annual Report for Storm Water Discharges Associated with Industrial Activities-National City Marine Terminal (2012-2013)
Port of San Diego Annual Report for Storm Water Discharges Associated with Industrial Activities-Tenth Avenue Marine Terminal (2012-2013)
Port of San Diego Bacteriological Data Evaluation for Shelter Island Shoreline Park, 2004 through 2012. Final Report (2012)
Port of San Diego JURMP (2007)
Port of San Diego JURMP Annual Report (2012-2013)
Port of San Diego JURMP Annual Update Part I & II (2012-2013)
Port of San Diego Master Plan Amendment. Draft Chula Vista Bayfront Master Plan & Port Master Plan Amendment (2010)
Port of San Diego San Diego Bay Integrated Natural Resources Management Plan (2013)
Port of San Diego. Shelter Island Yacht Basin Total Maximum Daily Load Monitoring and Progress Report. AMEC. (2013)
Regional Harbor Monitoring Program Copper Literature Review & Biotic Ligand Model Analysis (2011)
Regional Harbor Monitoring Program Final Report (2008)
Regional Harbor Monitoring Program Pilot Project 2005-08 Summary Final Report
Regional Harbor Monitoring Program Special Study Sediment and Water Toxicity Assessment (2011)
San Diego County Regional Airport Authority SAN Storm Water Management Plan (2008)
San Diego County Regional Airport Authority Annual Illicit Discharge Detection and Elimination Report (2011-2012)
San Diego County Regional Airport Authority Municipal Stormwater Permit Annual Report (2011-2012)
San Diego County Regional Airport Authority Municipal Stormwater Permit Annual Report (2012-2013)
San Diego Integrated Regional Water Management Plan, Volume I & II (2013)
SCCWRP 2008 Bight Regional Monitoring Program documents (data incorporated in 2010 LTEA)
SPAWAR Stormwater Toxicity Evaluation: Naval Station San Diego, Naval Submarine Base San Diego, Naval Amphibious Base Coronado, and Naval Air Station North Island. (2006)

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Additional Resources (continued)

TDY Industries, LLC. Post-Remediation Risk Assessment Work Plan for the Airport/Former TDY Site (2013)
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APPENDIX C

Consultation Panel Charter

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San Diego Bay Watershed Water Quality Improvement Plan

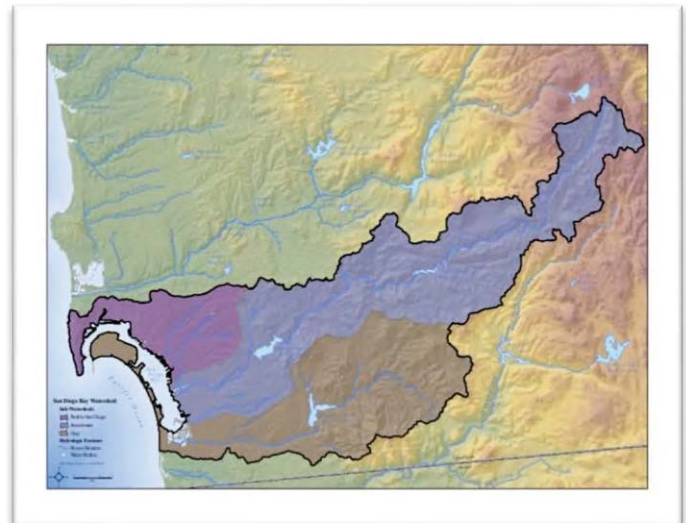
Consultation Panel Charter

I. PURPOSE

The Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, San Diego, the County of San Diego, San Diego County Regional Airport Authority, and the San Diego Unified Port District (Agencies) are collaborating to protect water quality in the San Diego Bay Watershed. The San Diego Bay Watershed is comprised of three sub-watersheds: Pueblo San Diego, Sweetwater, and Otay. The Agencies are required to convene a Consultation Panel to provide recommendations during the development of a Water Quality Improvement Plan (WQIP) as part of their response to new storm water regulations. The Consultation Panel and the development of the WQIP are required by Provision B of the San Diego Regional Water Quality Control Board's (SDRWQCB) Order Number R9-2013-0001 for Discharges from the Municipal Separate Storm Sewer System (MS4 permit).

II. CONSULTATION PANEL ROLE

The Agencies are seeking Consultation Panel members who have knowledge of the San Diego Bay Watershed, have a general knowledge of the requirements and intent of the MS4 permit as well as water quality issues and concerns in the San Diego Bay Watershed. Consultation Panel members will represent the perspectives of the organization they belong to, and be able to provide a broad and collaborative perspective of regional water quality management concepts for the development of the WQIP.



a. CONSULTATION PANEL RESPONSIBILITIES

1. Consultation Panel members are expected to serve throughout the entire WQIP development process, beginning in November 2013 through July 2015.

2. Public workshops: At least two (2) public workshops will be held to obtain input from the public regarding the WQIP development process. The Agencies strongly encourage Consultation Panel members to attend the workshops. The first workshop is tentatively planned for November 22, 2013 and the second workshop in August 2014.

3. Committee meetings: Up to five (5) meetings are currently anticipated. Consultation Panel members are expected to attend all scheduled meetings. These are expected to be up to two (2) hours long. If a Consultation Panel member is unable to attend a meeting, he or she will have an opportunity to provide written comments on the materials discussed according to the project schedule.

4. Consultation Panel members are expected to review up to three (3) WQIP drafts prepared by the Agencies. The Consultation Panel is expected to provide input to the Agencies regarding water quality improvement in the watershed. A tentative schedule of the meetings with general descriptions is provided in Table 1.

5. Each Consultation Panel member is expected to represent the general overall views of the area of representation. A member's personal or employer's opinion or input should be qualified as such and may only be offered following all general input by all other Consultation Panel members.

III. COMPOSITION AND MEMBERSHIP

The Consultation Panel will be comprised of members in the categories listed below. The Agencies may choose to add additional members at-large if there is sufficient interest in a particular sub-watershed. Every effort will be made to ensure a balanced representation of interests and service categories.

a. CORE MEMBERS

1. One (1) required representative assigned by the SDRWQCB.

2. One (1) required representative of the environmental community familiar with the water quality conditions of concern of the receiving waters in the watershed.

3. One (1) required representative of the development community familiar with the opportunities and constraints for implementing structural Best Management Practices (BMPs), retrofitting projects, and stream, channel or habitat rehabilitation projects in the watershed, preferably with relevant engineering, hydrology, and/or geomorphology experience in the watershed.



4. At-Large representative(s) familiar with water quality issues and/or topics pertaining to the three sub-watersheds. These individuals may include, but not be limited to representatives from:

- US EPA; assigned by EPA
- The business community
- Residential tenant/owner or representative of homeowner associations
- The agricultural community
- Water purveyors/waste water/water recycling community
- The academic community
- Other representatives who meet the minimum criteria as identified by the Agencies

b. ADDITIONAL MEMBERS AND REPLACEMENTS

Additional Consultation Panel members may be added at the discretion of the Agencies to provide additional perspectives and recommendations during WQIP development. Additional members must meet the same requirements as described above.

A Consultation Panel member who cannot meet his/her obligations and serve for the entire term will be required to provide the Agencies a 30-day notice in writing. At the Agencies' discretion, previously submitted interest forms may be reviewed to find a member's replacement or publish a new call for Consultation Panel membership. Replacement members must complete the interest form and be screened through the selection process in the same manner as original members (as described below).

IV. CONSULTATION PANEL SOLICITATION AND SELECTION PROCESS

The Agencies will publicize the request for membership in the San Diego Bay Consultation Panel and distribute membership solicitation notices in November 2013 via email and by posting it on the Project Clean Water website (www.projectcleanwater.org). Persons interested in Consultation Panel participation and representation of a core or at-large member seat will be asked to complete a statement of interest form.

The interest forms will be reviewed by the Agencies to ensure that membership candidates are capable of fulfilling the requirements, roles and responsibilities as described in Section II above and as required by the MS4 permit. If more than one person is interested in filling a specific category on the Consultation Panel, the Agencies will request that all those representatives within that category determine among themselves who shall serve. The Agencies reserve the right to appoint a specific individual from the pool of candidates if the applicants cannot reach a consensus among themselves. The Agencies may also select additional individuals for the At-Large category to help ensure a well-balanced and knowledgeable Consultation Panel.

V. CONSULTATION PANEL PARTICIPATION PROCESS

a. DISCUSSION AND DELIBERATIONS (GROUND RULES)

The Consultation Panel will provide input, advice, insight, suggestions and recommendations to the Agencies. Discussions do not have to reach consensus. Input provided by the Consultation Panel will be considered by the Agencies and incorporated into the WQIP as deemed appropriate or necessary. All input provided by the Consultation Panel will be public information.

The following ground rules apply to all Consultation Panel members:

1. All perspectives are welcomed and valued. Everyone is encouraged to share their views and disagreements shall be offered to the Consultation Panel members in a constructive and respectful manner.
2. One person at a time will be invited to speak by the meeting facilitator.
3. Time constraints will be honored by all Consultation Panel members. All will be offered an equal opportunity to address approved agenda items.

b. FACILITATION

Workshops and Consultation Panel meetings will be facilitated and supported by a neutral third party to ensure all perspectives are heard throughout the process.

c. OBSERVERS

Observers are welcome at Consultation Panel meetings. However, meetings are primarily intended for the dialogue between the Consultation Panel representatives and the Agencies and are facilitated to promote balanced, constructive interaction. Observers will be asked to refrain from commenting during the proceedings and may be allowed, time permitting, an opportunity for questions or comments at end of the meetings.

d. MEDIA AND OUTREACH

The Agencies cannot and will not restrict communication with media and others interested in the WQIP development process, they will work to ensure that the comments of individual Consultation Panel members are not construed as being statements made by the Consultation Panel as a whole.

Consultation Panel members will be asked not to make public statements about the Consultation Panel's deliberations to the media that may hamper constructive discussions. Consultation Panel members should also

speak for themselves and not on behalf of other members or the Consultation Panel as a whole. Agency staff and consultants will also refrain from such statements about the Consultation Panel’s deliberations.

VI. SCHEDULE

Two (2) public workshops will be held for the San Diego Bay Watershed. The Consultation Panel will meet up to five (5) times: once before and potentially once after the first and second interim reports are submitted to the SDRWQCB and once prior to submitting the final WQIP to the SDRWQCB. The latest schedule will be posted on the Project Clean Water website (www.projectcleanwater.org) and is subject to change.

TABLE 1. SAN DIEGO BAY WQIP CONSULTATION PANEL SCHEDULE (TENTATIVE)

Events	Description	Date
1 st Public Workshop	<ul style="list-style-type: none"> Project overview, process and schedule Call for data and information from the public Collect public recommendations for priority water quality conditions and potential strategies 	November 22, 2013
1 st Consultation Panel Meeting	<ul style="list-style-type: none"> Provide recommendations on priority water quality conditions and potential strategies 	January, 2014
2 nd Consultation Panel Meeting	<ul style="list-style-type: none"> Review the modified water quality conditions and potential strategies based on SDRWQCB public comment period 	August, 2014
2 nd Public Workshop	<ul style="list-style-type: none"> Collect recommendations from the public on potential numeric goals and strategies 	August, 2014
3 rd Consultation Panel Meeting	<ul style="list-style-type: none"> Review modified potential numeric goals and strategies based on SDRWQCB public comment period 	February, 2015

VII. REGULATORY BACKGROUND

On May 8, 2013, the SDRWQCB adopted Order No. R9-2013-0001 as NPDES Permit No. CAS0109266 for Discharges from Municipal Storm Sewer Systems or MS4 Draining the Watersheds of the San Diego Region (MS4 permit). The MS4 permit went into effect on June 27, 2013 and can be found on the SDRWQCB website.

The MS4 permit is implemented in San Diego County by the cities, the County of San Diego, the San Diego County Regional Airport Authority and San Diego Unified Port District or Copermittees. The MS4 permit requires the Copermittees to develop and implement, for each watershed, a WQIP to further the federal Clean Water Act’s objective to protect, preserve, enhance, and restore the water quality and designated beneficial uses of waters of the state. The process to develop the WQIP is through an adaptive planning and management process that identifies the highest water quality conditions within a watershed and implements strategies through the Copermittees’ jurisdictional runoff management programs to achieve improvements in the quality of the dischargers from the MS4 and receiving waters.

VIII. INTEREST FORM AND INSTRUCTIONS

Persons or organizations interested in participating as a Consultation Panel member shall complete the attached interest form and submit it via email to: gnelson@imperialbeachca.gov by December 2, 2013. Any questions or clarification on the interest form or the San Diego Bay Water Quality Improvement Plan Consultation Panel Charter should be directed via email to: gnelson@imperialbeachca.gov.



San Diego Bay Watershed WQIP Consultation Panel

Membership Interest Form

Due by: December 2, 2013 via email to gnelson@imperialbeachca.gov

I, _____, volunteer to serve on the San Diego Bay WQIP Consultation Panel for the following interest category:

- Representative of the environmental community
- Representative of the development community
- At-Large representative for: _____ (see Charter Section III.a.4)

Applicant Name

Organization Name/Description

Organization Address

Phone number

Website

Email

Please provide an official letter or resolution from the organization, on their letterhead, authorizing you to represent them (attached to this interest form).

Please provide: 1) Past and present experience with San Diego Bay watershed topics and issues; 2) Familiarity with water quality issues in San Diego Bay; 3) Specific knowledge about any one of the three sub-watersheds in the San Diego Bay Watershed (Pueblo San Diego, Sweetwater, or Otay); 4) Experience with implementing joint water quality programs or projects with other agencies or stakeholders; and 5) Other qualifications that you believe will benefit the development of the San Diego Bay Watershed WQIP. Submittal is limited to five (5) pages, plus required attachments.

APPENDIX D
San Diego Bay Watershed Management Area—
Assessment of Impacts of MS4 Discharges on Potential Receiving Water Conditions

HA	Waterbody	Condition	Receiving Water Data or Regulatory Drivers Support Consideration as a Receiving Water Condition		MS4 Monitoring Data Indicates Potential MS4 Impact		MS4 Listed as Source on the 303(d) List	Determining Factors
			Dry	Wet	Dry	Wet		
Pueblo Watershed								
908.1	Pacific Ocean Shoreline, Point Loma HA, at Bermuda Ave	Impairment of REC-1 and SHELL due to total coliform	✓	✓	--	--	✓	2010 303(d)
908.1	San Diego Bay Shelter Island Yacht Basin	Impairment of EST due to copper	✓	✓	✓	✓	--	TMDL ¹ , 2010 303(d), and current and historical monitoring data
908.1	San Diego Bay Shoreline, at Americas Cup Harbor	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d) and current monitoring data
908.1	San Diego Bay Shoreline, at Harbor Island (West Basin)	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d)
908.1	San Diego Bay Shoreline, near sub base	Impairment of MAR due to benthic community effects and sediment toxicity	✓	--	--	✓	--	TMDL ² , 2010 303(d)
908.1	San Diego Bay Shoreline, near sub base	Impairment of MAR due to toxicity	--	✓	--	--	✓	TMDL ² , 2010 303(d), and historical monitoring data
908.1	San Diego Bay Shoreline, Shelter Island Shoreline Park	Impairment of REC-1 due to enterococcus, fecal coliform, and total coliform	✓	✓	--	--	✓	TMDL ³ and 2010 303(d)
908.2	Chollas Creek	Impairment of AGR (WARM) due to copper	✓	✓	✓	✓	--	2010 303(d), current and historical monitoring data, and TMDL ⁴
908.2	Chollas Creek	Impairment of WARM due to zinc	✓	✓	✓	✓	✓	2010 303(d), current and historical monitoring data, and TMDL ⁴
908.2	Chollas Creek	Impairment of WARM due to lead	✓	✓	--	--	✓	2010 303(d), current and historical monitoring data, and TMDL ⁴
908.2	Chollas Creek	Impairment of WARM due to diazinon	✓	✓	--	--	--	2010 303(d) and TMDL ⁵ , and historical monitoring data
908.2	Chollas Creek	Impairment of WARM due to phosphorus	✓	--	--	--	--	2010 303(d) and current and historical monitoring data
908.2	Chollas Creek	Impairment of WARM due to Total Nitrogen as N	✓	✓	✓	✓	--	2010 303(d) and current and historical monitoring data
908.2	Chollas Creek	Impairment of REC-1 due to indicator bacteria	✓	✓	✓	✓	✓	2010 303(d) and TMDL ⁶ and current and historical monitoring data
908.2	Chollas Creek	Impairment of REC-2 due to trash	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
908.2	Chollas Creek	Very poor IBI	✓	✓	--	--	--	Current monitoring data
908.2	Chollas Creek	Elevated enterococcus	✓	--	✓	--	--	Current and historical monitoring data
908.2	Chollas Creek	Elevated bifenthrin and TSS	--	✓	--	✓	--	Current and historical monitoring data
908.2	Chollas Creek	Toxicity	✓	✓	--	--	--	Current and historical monitoring data
908.2	Chollas Creek	Elevated turbidity, BOD, and COD	✓	✓	--	--	--	Current and historical monitoring data
908.2	Chollas Creek	Elevated turbidity	✓	--	✓	--	--	Current and historical monitoring data

Notes: ✓ = Data supports consideration; -- = No data available (data gap) or inapplicable.

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2. Naval Submarine Base San Diego TMDL. In development.

3. TMDL for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay. Approved 09/2009.

4. TMDL for Dissolved Copper, Lead, and Zinc in Chollas Creek, Tributary to San Diego Bay. Approved 10/2008.

5. Chollas Creek Diazinon TMDL. Approved 09/2003.

6. Revised TMDL for Indicator Bacteria, Project I--Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek). Approved 04/2011.

7. TMDL for Toxic Pollutants in Sediment at San Diego Bay Shorelines--Downtown Anchorage and B Street/Broadway Piers. In development.

8. Sediment Toxicity TMDL for the Mouths of Chollas, Paleta, and Switzer Creeks. In development.

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HA	Waterbody	Condition	Receiving Water Data or Regulatory Drivers Support Consideration as a Receiving Water Condition		MS4 Monitoring Data Indicates Potential MS4 Impact		MS4 Listed as Source on the 303(d) List	Determining Factors
			Dry	Wet	Dry	Wet		
908.2	Chollas Creek	Low O/E and California Rapid Assessment Method scores	✓	--	✓	--	--	Historical monitoring data
908.2	Chollas Creek	Poor IBI	✓	--	--	--	--	Historical monitoring data
908.2	Chollas Creek	pH level outside of water quality objective	✓	--	--	--	--	Historical monitoring data
908.2	Chollas Creek	Elevated Ammonia as N, benthic algae, and oil & grease	✓	--	--	--	--	Current and historical monitoring data
908.2	Chollas Creek	Elevated permethrin	--	✓	--	--	--	Historical monitoring data
908.2	Chollas Creek	Elevated fecal coliform and surfactants (MBAS)	✓	✓	--	--	--	Historical monitoring data
908.2	Chollas Creek	Elevated fecal coliform	✓	--	✓	--	--	Historical monitoring data
908.2	San Diego Bay Shoreline, 32nd St San Diego Naval Station	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	--	2010 303(d)
908.2	San Diego Bay Shoreline, at Harbor Island (East Basin)	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d)
908.2	San Diego Bay Shoreline, at Marriott Marina	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d)
908.2	San Diego Bay Shoreline, at Spanish Landing	Impairment of REC-1 and SHELL due to total coliform	✓	✓	--	--	--	2010 303(d)
908.2	San Diego Bay Shoreline, between Sampson and 28th Streets	Impairment of MAR due to copper	✓	✓	✓	✓	--	2010 303(d)
908.2	San Diego Bay Shoreline, between Sampson and 28th Streets	Impairment of MAR due PAHs	✓	✓	✓	✓	--	2010 303(d) and historical data
908.2	San Diego Bay Shoreline, between Sampson and 28th Streets	Impairment of COMM due to mercury	✓	✓	✓	✓	--	2010 303(d) and historical data
908.2	San Diego Bay Shoreline, between Sampson and 28th Streets	Impairment of COMM due to PCBs	✓	✓	✓	✓	✓	2010 303(d) and historical data
908.2	San Diego Bay Shoreline, between Sampson and 28th Streets	Impairment of WARM due to zinc	✓	✓	✓	✓	--	2010 303(d) and historical data
908.2	San Diego Bay Shoreline, Downtown Anchorage	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	✓	2010 303(d) and historical data
908.2	San Diego Bay Shoreline, Downtown Anchorage	Impairment of MAR due to sediment toxicity and benthic community effects	--	✓	--	--	✓	TMDL ⁷ and historical data

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			Dry	Wet	Dry	Wet		
908.2	San Diego Bay Shoreline, G Street Pier	Impairment of REC-1 and SHELL due to total coliform	✓	✓	--	--	--	2010 303(d)
908.2	San Diego Bay Shoreline, near Chollas Creek	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	--	2010 303(d) and TMDL ⁸
908.2	San Diego Bay Shoreline, near Coronado Bridge	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	✓	2010 303(d)
908.2	San Diego Bay Shoreline, near Switzer Creek	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	✓	✓	✓	2010 303(d) and TMDL ⁸
908.2	San Diego Bay Shoreline, near Switzer Creek	Impairment of COMM due to chlordane	✓	✓	--	--	✓	2010 303(d) and TMDL ⁸
908.2	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Impairment of REC-1 and SHELL due to total coliform	✓	✓	--	--	✓	2010 303(d)
908.2	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	--	2010 303(d) and TMDL ⁷
908.2	Switzer Creek	Impairment of WARM due to copper, lead, and zinc	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
908.3	Paleta Creek	Impairment of WARM due to copper and lead	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
908.3	Paradise Creek	Impairment of WARM due to selenium	✓	✓	--	--	--	2010 303(d)
908.3	San Diego Bay Shoreline, North of 24th Street Marine Terminal	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	--	2010 303(d)
908.3	San Diego Bay Shoreline, Seventh Street Channel (Paleta Creek)	Impairment of MAR due to benthic community effects and sediment toxicity	✓	✓	--	--	✓	2010 303(d) and TMDL ⁸
Sweetwater Watershed								
909.1	Lower Sweetwater River, below Sweetwater Reservoir	Impairment of REC-1 due to <i>Enterococcus</i> and fecal coliform	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
909.1	Lower Sweetwater River, below Sweetwater Reservoir	Impairment of WARM due to selenium, nitrogen, phosphorus, TDS, and toxicity	✓	✓	--	--	✓	2010 303(d) and current monitoring data
909.1	Paradise Creek	Impairment of WARM due to selenium	✓	✓	--	--	--	2010 303(d)
909.1	San Diego Bay Shoreline, at Bayside Park (J Street)	Impairment of REC-1 due to <i>Enterococcus</i> and total coliform	✓	✓	--	--	✓	Current monitoring data
909.1	San Diego Bay Shoreline, Chula Vista Marina	Impairment of EST due to copper	✓	✓	--	--	--	Current monitoring data
909.1	San Diego County Wildlife Refuge-Sweetwater Marsh Unit	Preservation of special habitat	✓	✓	--	--	--	Special Habitat
909.1	Sweetwater River MLS	Elevated salinity	✓	--	--	--	--	Current and historical monitoring data
909.1	Sweetwater River MLS	Toxicity to <i>C. dubia</i> reproduction	✓	--	--	--	--	Current and historical monitoring data

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			Dry	Wet	Dry	Wet		
909.1	Sweetwater River MLS	Very poor IBI	✓	✓	--	--	--	Historical monitoring data
909.1	Sweetwater River MLS	Toxicity to <i>C. dubia</i> acute reproduction	✓	✓	--	--	--	Historical monitoring data
909.1	Sweetwater River MLS	Toxicity to <i>C. dubia</i> acute and chronic survival	✓	--	--	--	--	Historical monitoring data
909.1	Sweetwater River MLS	Elevated <i>Enterococcus</i>	✓	--	✓	--	--	Current and historical monitoring data
909.1	Sweetwater River MLS	Elevated dissolved and total phosphorus	✓	--	✓	--	--	Current and historical monitoring data
909.1	Sweetwater River MLS	Elevated total nitrogen	✓	--	✓	--	--	Current and historical monitoring data
909.1	Sweetwater River MLS	Elevated chloride	✓	--	✓	--	--	Historical monitoring data
909.1	Sweetwater River MLS	Low DO	✓	--	✓	--	--	Historical monitoring data
909.1	Sweetwater River MLS	Poor IBI	✓	--	✓	--	--	2010 303(d)
909.1	Sweetwater River MLS	Elevated fecal coliform	--	✓	--	✓	--	Current and historical monitoring data
909.1	Sweetwater River MLS	Toxicity to <i>S. capricornutum</i>	✓	✓	--	--	--	2010 303(d)
909.1	Sweetwater River MLS	Elevated salinity	✓	✓	--	--	--	2010 303(d)
909.1	Sweetwater River MLS	Low O/E and California Rapid Assessment Method scores	✓	--	--	--	--	2010 303(d)
909.1	Sweetwater River MLS	Elevated bifenthrin and turbidity	--	✓	--	--	--	Current monitoring data
909.1	Sweetwater River MLS	Toxicity to <i>C. dubia</i> reproduction	✓	✓	--	--	--	Current monitoring data
909.1	Telegraph Canyon Creek	Impairment of WARM due to selenium	✓	✓	--	--	--	2010 303(d)
909.2	Sweetwater Reservoir	Impairment of MUN due to low DO	✓	✓	--	--	✓	Current and historical monitoring data
909.2	Sweetwater River TWAS	Elevated total phosphorus	✓	--	✓	--	--	Current monitoring data
909.2	Sweetwater River TWAS	Toxicity to <i>S. capricornutum</i> growth	✓	--	--	--	--	Current monitoring data
909.2	Sweetwater River TWAS	Elevated suspended solids	--	✓	--	--	--	Current monitoring data
909.2	Sweetwater River TWAS	Very poor IBI	✓	✓	--	--	--	Current and historical monitoring data
909.2	Sweetwater River TWAS	Elevated <i>Enterococcus</i>	✓	--	✓	--	--	Current and historical monitoring data
909.2	Sweetwater River TWAS	Elevated fecal coliform	--	✓	--	✓	--	Current and historical monitoring data
909.2	Sweetwater River TWAS	Elevated turbidity	--	✓	--	--	--	Current and historical monitoring data
909.2	Sweetwater River TWAS	Elevated salinity	✓	✓	--	--	--	Current and historical monitoring data
909.2	Sweetwater River TWAS	Low O/E	✓	--	--	--	--	Historical monitoring data
909.2	Sweetwater River TWAS	Elevated benthic algae	✓	--	--	--	--	Historical monitoring data
909.2	Sweetwater River TWAS	Poor IBI	✓	--	--	--	--	Historical monitoring data
909.2	Sweetwater River TWAS	Elevated bifenthrin	--	✓	--	--	--	Historical monitoring data
909.2	Sweetwater River TWAS	Toxicity to <i>S. capricornutum</i> acute	✓	✓	--	--	--	2010 303(d)
909.3	Loveland Reservoir	Impairment of MUN due to pH, aluminum, manganese, and low DO	✓	✓	--	--	--	2010 303(d)
909.1, 909.2, 909.3	Not specified	Impairment of unknown condition due to trash	✓	✓	--	--	--	Public input data (from public workshop)

Notes: ✓ = Data supports consideration; -- = No data available (data gap) or inapplicable.

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			Dry	Wet	Dry	Wet		
Otay Watershed								
910.1	Pacific Ocean Shoreline, Coronado HA, at Silver Strand (north end, Oceanside)	Impairment of REC-1 due to <i>Enterococcus</i>	✓	✓	--	--	✓	2010 303(d)
910.1	Pacific Ocean Shoreline, Imperial Beach Pier	Impairment of REC-1 due to fecal coliform and total coliform	✓	✓	--	--	✓	2010 303(d)
910.1	Pacific Ocean Shoreline, Imperial Beach Pier	Impairment of COMM due to PCBs	✓	✓	--	--	--	2010 303(d)
910.1	Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty	Impairment of REC-1 due to total coliform	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
910.1	San Diego Bay Shoreline, at Coronado Cays	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d)
910.1	San Diego Bay Shoreline, at Glorietta Bay	Impairment of EST due to copper	✓	✓	--	--	--	2010 303(d)
910.1	San Diego Bay Shoreline, Tidelands Park	Impairment of REC-1 due to <i>Enterococcus</i>	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
910.1	San Diego Bay Shoreline, Tidelands Park	Impairment of SHELL due to total coliform	✓	✓	✓	✓	✓	2010 303(d) and current monitoring data
910.1	San Diego County Wildlife Refuge-South San Diego Bay Unit	Preservation of special habitat	✓	✓	--	--	--	Special Habitat
910.2	Otay River	Elevated <i>Enterococcus</i>	✓	--	✓	--	--	Historical monitoring data
910.2	Otay River	Elevated <i>E. coli</i> , fecal coliform, malathion and permethrin	--	✓	--	✓	--	Historical monitoring data
910.2	Otay River	Toxicity to <i>C. dubia</i> acute and chronic survival, <i>H. azteca</i> acute, and <i>S. capricornutum</i> growth	--	✓	--	✓	--	Historical monitoring data
910.2	Otay River	Very poor IBI	✓	✓	--	--	--	Historical monitoring data
910.2	Otay River	Toxicity to <i>C. dubia</i> acute reproduction	✓	✓	--	--	--	Historical monitoring data
910.2	Otay River	Elevated dissolved and total phosphorus	✓	--	--	--	--	Historical monitoring data
910.2	Otay River	Elevated total nitrogen	✓	--	✓	--	--	Historical monitoring data
910.2	Otay River	Elevated surfactants (MBAs), bifenthrin, and turbidity	--	✓	--	--	--	Historical monitoring data
910.2	Otay River	Elevated salinity	✓	✓	--	--	--	Historical monitoring data
910.2	Otay River	Low O/E and California Rapid Assessment Method scores	✓	--	--	--	--	Historical monitoring data
910.2	Otay River	Poor IBI	✓	--	--	--	--	2010 303(d)

Notes: ✓ = Data supports consideration; -- = No data available (data gap) or inapplicable.

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			Dry	Wet	Dry	Wet		
910.2	Otay River	Toxicity to <i>C. dubia</i> acute and chronic survival and reproduction	✓	--	--	--	--	2010 303(d)
910.2	Otay River	Elevated dissolved copper, cyfluthrin, and TSS	--	✓	--	--	--	2010 303(d)
910.2	Poggi Canyon Creek	Impairment of WARM due to toxicity	✓	✓	--	--	✓	2010 303(d)
910.3	Jamul Creek	Impairment of WARM due to toxicity	✓	✓	--	--	✓	2010 303(d)
910.3	Lower Otay Reservoir	Impairment of MUN due to high pH, ammonia, color, iron, and manganese	✓	✓	--	--	--	2010 303(d)
910.3	Lower Otay Reservoir	Impairment of WARM due to nitrogen	✓	✓	✓	✓	✓	Historical monitoring data
910.1, 910.2, 910.3	Not specified	Impairment of unknown condition due to trash	✓	✓	--	--	--	Public input data
San Diego Bay (All watersheds)								
908.1, 909.1, 910.1	San Diego Bay (all)	Moderate toxicity at some monitoring stations	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Deep areas)	Elevated mercury in deep area sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Deep areas)	Elevated anthracene in deep area sediments	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Freshwater Influenced Areas)	Elevated pesticides in freshwater influenced areas	✓	--	✓	--	✓	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Freshwater Influenced Areas)	Elevated zinc in freshwater influenced areas	✓	--	✓	--	✓	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Freshwater Influenced Areas)	Benthic community effects	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Freshwater Influenced Areas)	Elevated arsenic in sediments in freshwater influenced areas	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Freshwater Influenced Areas)	Elevated mercury in sediments in freshwater influenced areas	✓	--	✓	--	--	Historical monitoring data

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San Diego Bay Watershed Management Area—
Assessment of Impacts of MS4 Discharges on Potential Receiving Water Conditions

HA	Waterbody	Condition	Receiving Water Data or Regulatory Drivers Support Consideration as a Receiving Water Condition		MS4 Monitoring Data Indicates Potential MS4 Impact		MS4 Listed as Source on the 303(d) List	Determining Factors
			Dry	Wet	Dry	Wet		
908.1, 909.1, 910.1	San Diego Bay (Industrial areas)	Elevated PCBs in industrial area sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Industrial areas)	Elevated copper in industrial area sediments	✓	--	✓	--	✓	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Industrial areas)	Elevated mercury in industrial area sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated copper in marina surface waters and sediments	✓	--	✓	--	✓	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated mercury in marina surface waters and sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated zinc in marina sediments	✓	--	✓	--	✓	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated organics in marina sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated arsenic in marina sediments	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Elevated mercury in marina sediments	✓	--	✓	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Mean ER-M quotients for sediment chemistry were elevated in marinas.	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Marinas)	Benthic community effects	✓	--	--	--	--	Historical monitoring data
908.1, 909.1, 910.1	San Diego Bay (Shallow areas)	Elevated chlordane in shallow area sediments	✓	--	--	--	✓	Historical monitoring data

Notes: ✓ = Data supports consideration; -- = No data available (data gap) or inapplicable.

1. TMDL for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay. Approved 12/2005.

2. Naval Submarine Base San Diego TMDL. In development.

3. TMDL for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay. Approved 09/2009.

4. TMDL for Dissolved Copper, Lead, and Zinc in Chollas Creek, Tributary to San Diego Bay. Approved 10/2008.

5. Chollas Creek Diazinon TMDL. Approved 09/2003.

6. Revised TMDL for Indicator Bacteria, Project I--Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek). Approved 04/2011.

7. TMDL for Toxic Pollutants in Sediment at San Diego Bay Shorelines--Downtown Anchorage and B Street/Broadway Piers. In development.

8. Sediment Toxicity TMDL for the Mouths of Chollas, Paleta, and Switzer Creeks. In development.

APPENDIX E

**San Diego Bay Watershed Management Area—
Initial Receiving Water Quality Conditions Multiple Line of Evidence Assessment**

HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence		
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers
Pueblo Watershed																					
908.1	Impairment of EST in the Shelter Island Yacht Basin	Dissolved Copper	Dry, Wet	San Diego Bay 303(d) Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO					✓				✓		✓	✓	✓	
908.1	Impairment of REC-1 at the San Diego Bay Shoreline, Shelter Island Shoreline Park	Bacteria	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	NO					✓				✓			✓	✓ ³	
908.2	Impairment of WARM in Chollas Creek	Copper and Zinc	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO			✓		✓	✓	✓		✓			✓	✓	✓ ¹
908.2	Impairment of WARM in Chollas Creek	Lead	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	YES	NO			✓		✓	✓	✓		✓			✓	✓	

Notes:
 2010 303(d) = 2010 Section 303(d) of the Clean Water Act; MS4 = municipal separate storm sewer system; NPDES = National Pollutant Discharge Elimination System; TMDL = Total Maximum Daily Load
 1. Chollas Creek Water Effects Ratio Study: Provides site-specific objectives based on adjustment to the waterbody-specific water effect ratio for calculation of California Toxics Rule objectives for Dissolved Copper and Dissolved Zinc in Chollas Creek.
 2. Public Input data from Water Quality Improvement Plan Workshop.
 3. Bacteria Delisting Study in Point Loma HA: Bacteria (Total Coliform, Fecal Coliform, Enterococcus) concentrations below allowable exceedance frequencies for samples collected between 2004 and 2012 (737 analyses).

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						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers	3. Public Input and Additional Studies
908.2	Impairment of WARM in Chollas Creek	Diazinon	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	TMDL, Historic Receiving Water Monitoring, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO			✓		✓		✓	✓		✓			✓	✓	
908.2	Impairment of WARM in Chollas Creek	Phosphorus	Dry	Chollas Creek 2010 303(d)-Listed segment	Current and Historic Receiving Water Monitoring, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO			✓		✓		✓	✓		✓			✓	✓	
908.2	Impairment of WARM in Chollas Creek	Nitrogen	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	Current and Historic Receiving Water Monitoring, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO			✓		✓		✓	✓		✓			✓	✓	

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HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence		
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers
908.2	Impairment of REC-1 in Chollas Creek	Bacteria	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	TMDL, Current and Historic Receiving Water Monitoring, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	NO			✓	✓	✓	✓		✓			✓	✓		
908.2	Impairment of REC-2 in Chollas Creek	Trash	Dry, Wet	Chollas Creek 2010 303(d)-Listed segment	Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	NO			✓	✓	✓	✓		✓			✓	✓	✓ ²	
908.2	Impairment of MAR at the Mouth of Chollas Creek	PAHs	Dry, Wet	San Diego Bay 2010 303(d)-Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	YES	NO			✓	✓	✓	✓		✓		✓	✓	✓		
908.2	Impairment of MAR at the Mouth of Chollas Creek	PCBs	Dry, Wet	San Diego Bay 2010 303(d)-Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	YES	NO			✓	✓	✓	✓		✓		✓	✓	✓		

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HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence		
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers
908.2	Impairment of MAR at the Mouth of Chollas Creek	Chlordane	Dry, Wet	San Diego Bay 2010 303(d)-Listed segment	TMDL, Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	YES	NO			✓		✓	✓	✓		✓		✓	✓		
908.2	Impairment of unknown condition in Chollas Creek	Turbidity	Dry	Near monitoring station	Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	NO			✓		✓	✓	✓		✓		✓	✓		
908.2	Impairment of MAR at the San Diego Bay Shoreline, between Sampson and 28th Streets	Copper	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	YES					✓			✓		✓	✓	✓		
908.2	Impairment of MAR at the San Diego Bay Shoreline, between Sampson and 28th Streets	PAHs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	YES					✓			✓		✓	✓	✓		

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Initial Receiving Water Quality Conditions Multiple Line of Evidence Assessment**

HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence			
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers	3. Public Input and Additional Studies
908.2	Impairment of COMM at the San Diego Bay Shoreline, between Sampson and 28th Streets	Mercury	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	YES						✓					✓		✓	✓	
908.2	Impairment of COMM at the San Diego Bay Shoreline, between Sampson and 28th Streets	PCBs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES						✓					✓		✓	✓	
908.2	Impairment of WARM at the San Diego Bay Shoreline, between Sampson and 28th Streets	Zinc	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	Stressors causing the 2010 303(d) listing unknown and may be MS4 sources	NO	YES						✓					✓		✓	✓	
908.2	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Switzer Creek	PAHs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	NO						✓					✓			✓	
908.2	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Switzer Creek	PCBs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	NO						✓					✓			✓	

Notes:
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**San Diego Bay Watershed Management Area—
Initial Receiving Water Quality Conditions Multiple Line of Evidence Assessment**

HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties										Lines of Evidence				
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers	3. Public Input and Additional Studies
908.2	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Switzer Creek	Chlordane	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	NO					✓					✓			✓		
908.2	Impairment of WARM in Switzer Creek	Copper, Lead and Zinc	Dry, Wet	Switzer Creek 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES					✓					✓			✓	✓	
908.3	Impairment of WARM in Paleta Creek	Copper and Lead	Dry, Wet	Paleta Creek 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES							✓	✓					✓	✓	
908.3	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Paleta Creek	PAHs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	YES					✓		✓	✓				✓		✓	
908.3	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Paleta Creek	PCBs	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	YES					✓		✓	✓				✓		✓	

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Initial Receiving Water Quality Conditions Multiple Line of Evidence Assessment**

HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence		
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers
908.3	Impairment of MAR at the San Diego Bay Shoreline at the Mouth of Paleta Creek	Chlordane	Dry, Wet	San Diego Bay Shoreline 2010 303(d)-Listed segment	TMDL, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	YES						✓			✓	✓		✓		
Sweetwater Watershed																					
909.1	Impairment of REC-1 at Lower Sweetwater River, below Sweetwater Reservoir	Bacteria	Dry, Wet	Lower Sweetwater River 2010 303(d)-Listed segment	Current Receiving Water and Outfall Monitoring Data, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES		✓	✓									✓	✓	
909.1	Impairment of WARM at Lower Sweetwater River, below Sweetwater Reservoir	TDS	Dry, Wet	Lower Sweetwater River 2010 303(d)-Listed segment	Current Receiving Water and Outfall Monitoring Data, Urban runoff/storm sewers listed in 2010 303(d) as a source	YES	NO		✓	✓									✓	✓	

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Initial Receiving Water Quality Conditions Multiple Line of Evidence Assessment**

HA	Initial Water Quality Condition	Potential Stressor(s)	Temporal Extent	Geographic Extent	Determining Factors	Data Gaps		Potentially Responsible Parties											Lines of Evidence					
						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers	3. Public Input and Additional Studies		
909.1	Impairment of WARM at Lower Sweetwater River, below Sweetwater Reservoir	Phosphorus	Dry	Lower Sweetwater River 2010 303(d)-Listed segment	Current Receiving Water and Outfall Monitoring Data, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	NO		✓	✓												✓	✓	
909.1	Impairment of WARM at Lower Sweetwater River, below Sweetwater Reservoir	Nitrogen	Dry	Lower Sweetwater River 2010 303(d)-Listed segment	Current Receiving Water and Outfall Monitoring Data, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	NO		✓	✓												✓	✓	
909.1	Impairment of unknown condition at Lower Sweetwater River, below Sweetwater Reservoir	Trash	Dry, Wet	Near monitoring station	Public Input	YES	YES		✓	✓												✓		✓
909.2	Impairment of unknown condition at Middle Sweetwater River	Bacteria	Dry, Wet	Near monitoring station	Current Receiving Water and Outfall Monitoring Data	NO	NO			✓												✓		

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						Are there gaps in the MS4 data used to characterize contribution to priority water quality condition?	Are there gaps in the RW data used to characterize the priority water quality condition?	Coronado	Chula Vista	County of San Diego	Imperial Beach	Port of San Diego	Lemon Grove	La Mesa	National City	City of San Diego	San Diego Regional Airport Authority	Caltrans	U.S. Navy	1. NPDES Permit-Required Monitoring	2. Regulatory Drivers
Otay Watershed																					
910.1	Impairment of WARM in Lower Otay Reservoir	Nitrogen	Dry, Wet	Lower Otay Reservoir 303(d)-listed segment	Historic monitoring data, Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	NO			✓									✓	✓	
910.1	Impairment of REC-1 at the Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty	Bacteria	Dry, Wet	Pacific Ocean Shoreline 2010 303(d)-Listed segment	Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES	✓											✓	✓	
910.3	Impairment of REC-1 at the San Diego Bay Shoreline, Tidelands Park	Bacteria	Dry, Wet	Pacific Ocean Shoreline 2010 303(d)-Listed segment	Urban runoff/storm sewers listed in 2010 303(d) as a source	NO	YES	✓			✓								✓	✓	

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APPENDIX F
San Diego Bay Watershed Management Area
Priority and Highest Priority Water Quality Conditions Evaluation

HU HA/HSA and Waterbody	Pollutant Category	Priority Water Quality Conditions Criteria					Highest Priority Water Quality Conditions Criteria						
		Condition exceeds Regional Water quality benchmarks in receiving water in wet weather, dry weather, or both (Provision B2c1(c))	Condition is impairment of beneficial uses - 303(d) (Provision B2c1(a))	MS4 conveyances contribute to the condition in the receiving water (Provision B2c1(d))	Monitoring data of acceptable quality and no data gaps (Provision B2c1(e))	Is it a priority condition ?	Dataset is spatially and temporally appropriate and contains robust science-based data No studies indicate water quality standards are now being met	There acceptable standards/ criteria established for condition	Evidence that MS4 Discharges are a predominant source of the condition	The condition impairs an existing beneficial use as defined in the Basin Plan	Water quality improvement strategies to control condition are available to RPs	Would the condition not be addressed by strategies identified for other HIGHEST PRIORITY CONDITIONS ¹	Is it a HIGHEST PRIORITY CONDITION?
Pueblo Watershed													
Pueblo Point Loma/908.1 Shelter Island Yacht Basin	Metals (Dissolved Copper)	Yes	Approved TMDL – automatically a PWQC; Impairment of EST	Yes	Yes	Yes	No, City of San Diego's TMDL compliance monitoring of MS4 discharge indicates WLAs are being met However, the US Navy toxicity study indicates NASSCO MS4 discharges have exhibited toxicity to organisms and the stressors identified were copper and zinc	There is an established numeric standard in the Basin Plan and the California Toxics Rule for dissolved copper	Although LTEA identifies MS4 sources of copper in wet weather, monitoring data indicates the Copermittee's MS4 are not predominant sources of the condition	Yes, EST	LTEA identifies strategies that address MS4 copper issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo Point Loma/908.1 Shelter Island Shoreline Park	Bacteria	Yes	Approved TMDL – automatically a PWQC; Impairment of REC-1	Yes	Yes	Yes	MLOE not supporting	There are established numeric standards in the Basin Plan	No, Port of San Diego completed a delisting study and demonstrated MS4 is not source of bacteria	Yes, REC-1	LTEA identifies strategies that address MS4 bacteria issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Metals (Dissolved Copper, zinc, and lead)	Yes	Approved TMDL – automatically a PWQC; Impairment of WARM	Yes	Yes	Yes	1. LTEA: Water quality data supports elevated levels of copper, lead, and zinc during wet conditions and copper in dry conditions 2. Annual Regional Monitoring: supports elevated levels of copper in receiving water during wet conditions 3. 303(d) listings: supported by data in the lines of evidence	There are established numeric standards (basin plan and California Toxics Rule) for copper, lead, and zinc	LTEA identifies MS4 sources of copper, lead, and zinc in wet weather Atmospheric deposition also noted as uncontrollable source	Yes, WARM	LTEA identifies strategies that address MS4 metals issues	Yes	Yes

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APPENDIX F
San Diego Bay Watershed Management Area
Priority and Highest Priority Water Quality Conditions Evaluation

HU HA/HSA and Waterbody	Pollutant Category	Priority Water Quality Conditions Criteria					Highest Priority Water Quality Conditions Criteria						
		Condition exceeds Regional Water quality benchmarks in receiving water in wet weather, dry weather, or both (Provision B2c1(c))	Condition is impairment of beneficial uses - 303(d) (Provision B2c1(a))	MS4 conveyances contribute to the condition in the receiving water (Provision B2c1(d))	Monitoring data of acceptable quality and no data gaps (Provision B2c1(e))	Is it a priority condition ?	Dataset is spatially and temporally appropriate and contains robust science-based data No studies indicate water quality standards are now being met	There acceptable standards/ criteria established for condition	Evidence that MS4 Discharges are a predominant source of the condition	The condition impairs an existing beneficial use as defined in the Basin Plan	Water quality improvement strategies to control condition are available to RPs	Would the condition not be addressed by strategies identified for other HIGHEST PRIORITY CONDITIONS ¹	Is it a HIGHEST PRIORITY CONDITION?
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Bacteria	Yes, wet weather	Approved TMDL – automatically a PWQC; Impairment of REC-1	Yes	Yes	Yes	1. LTEA: Water quality data supports elevated levels of indicator bacteria during wet and dry conditions 2. Annual Regional Monitoring: supports elevated levels of indicator bacteria during wet and dry conditions 3. 303(d) listings: supported by data in the lines of evidence	There are established numeric standards (basin plan, REC-1 Bacteria TMDL in SD County) for indicator bacteria	LTEA identifies MS4 sources of bacteria; However, natural sources contributed unknown amounts of non-MS4 loadings of bacteria to the receiving waters	No, REC-1 is a potential beneficial use	LTEA identifies strategies that address MS4 bacteria issues	Yes	Yes
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Diazinon	No	Approved TMDL – automatically a PWQC; Impairment of WARM	Yes	Yes	Yes	303(d) listing/TMDL not supported with data in lines of evidence	Basin plan water quality objectives are narrative	MS4 not predominant source due to true source control measures (US EPA ban of product)	Yes, WARM	LTEA identifies strategies that address MS4 diazinon issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Nutrients (Phosphorus, Total Nitrogen)	Yes, Phosphorus - dry weather Total Nitrogen - wet and dry weather	303(d) listing for WARM	Yes	Yes	Yes	1. LTEA: Water quality data supports elevated levels of various nutrients during dry conditions 2. Annual Regional Monitoring: supports elevated levels of various nutrients during dry conditions in receiving water 3. 303(d) listings: supported by data in the lines of evidence	Basin Plan Water Quality Objectives provide a nitrogen to phosphorus ratio with goal objectives for phosphorus	LTEA identifies MS4 sources of nutrients However, groundwater intrusion has also been found to be source of nutrients in MS4 systems	Yes, WARM	LTEA identifies strategies that address MS4 nutrient issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Trash	Yes	13267 Investigative Order – automatically a PWQC; Impairment of REC-2	Yes	Yes	Yes	1. Annual Regional Monitoring: supports elevated levels of trash during dry weather 2. 303(d) listings: supported by data in the lines of evidence 3. Identified as an issue from Public Input	Basin plan water quality objectives are narrative	LTEA identifies MS4 sources of trash in wet weather, but other non-MS4 sources may contribute	Yes, REC-2	LTEA identifies MS4 sources of trash in wet weather, but other non-MS4 sources may contribute	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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HU HA/HSA and Waterbody	Pollutant Category	Priority Water Quality Conditions Criteria					Highest Priority Water Quality Conditions Criteria						
		Condition exceeds Regional Water quality benchmarks in receiving water in wet weather, dry weather, or both (Provision B2c1(c))	Condition is impairment of beneficial uses - 303(d) (Provision B2c1(a))	MS4 conveyances contribute to the condition in the receiving water (Provision B2c1(d))	Monitoring data of acceptable quality and no data gaps (Provision B2c1(e))	Is it a priority condition ?	Dataset is spatially and temporally appropriate and contains robust science-based data No studies indicate water quality standards are now being met	There acceptable standards/ criteria established for condition	Evidence that MS4 Discharges are a predominant source of the condition	The condition impairs an existing beneficial use as defined in the Basin Plan	Water quality improvement strategies to control condition are available to RPs	Would the condition not be addressed by strategies identified for other HIGHEST PRIORITY CONDITIONS ¹	Is it a HIGHEST PRIORITY CONDITION?
Pueblo San Diego Mesa/ 908.22 Chollas Creek	Turbidity	Yes	No	Yes	Yes	No							No
Pueblo San Diego Mesa/ 908.22 Chollas Creek (at Mouth)	PAHs	Yes, wet weather	Draft TMDL – automatically a PWQC; Impairment of MAR	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties Atmospheric deposition noted as uncontrollable source	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.22 Chollas Creek (at Mouth)	Chlordane	Yes, wet weather	Draft TMDL – automatically a PWQC; Impairment of COMM	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, COMM	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Pueblo San Diego Mesa/ 908.22 Chollas Creek (at Mouth)	PCBs	Yes, wet weather	Draft TMDL – automatically a PWQC; Impairment of COMM	Yes	Yes	Yes	MLOE not supporting; Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, COMM	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, between Sampson and 28th Streets	Copper	Yes	303(d) listing for MAR	Yes	No	No							No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, between Sampson and 28th Streets	PAHs	Yes	Draft TMDL – automatically a PWQC; Impairment of MAR	Yes	Yes	Yes	303(d) listing/TMDL not supported with data in lines of evidence	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties Atmospheric deposition noted as uncontrollable source	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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		Condition exceeds Regional Water quality benchmarks in receiving water in wet weather, dry weather, or both (Provision B2c1(c))	Condition is impairment of beneficial uses - 303(d) (Provision B2c1(a))	MS4 conveyances contribute to the condition in the receiving water (Provision B2c1(d))	Monitoring data of acceptable quality and no data gaps (Provision B2c1(e))	Is it a priority condition ?	Dataset is spatially and temporally appropriate and contains robust science-based data No studies indicate water quality standards are now being met	There acceptable standards/ criteria established for condition	Evidence that MS4 Discharges are a predominant source of the condition	The condition impairs an existing beneficial use as defined in the Basin Plan	Water quality improvement strategies to control condition are available to RPs	Would the condition not be addressed by strategies identified for other HIGHEST PRIORITY CONDITIONS ¹	Is it a HIGHEST PRIORITY CONDITION?
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, between Sampson and 28th Streets	Mercury	Yes	Draft TMDL – automatically a PWQC; Impairment of MAR	No	No	Yes	MLOE not supporting	There are established numeric standards in the Basin Plan	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, between Sampson and 28th Streets	PCBs	Yes	Draft TMDL – automatically a PWQC; Impairment of MAR	No	No	Yes	MLOE not supporting	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, between Sampson and 28th Streets	Zinc	Yes	Draft TMDL – automatically a PWQC; Impairment of MAR	No	No	Yes	MLOE not supporting	There are established numeric standards in the Basin Plan and California Toxics Rule	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties Atmospheric deposition noted as uncontrollable source	Yes, MAR	LTEA identifies strategies that address MS4 metals issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, near Switzer Creek (at the Mouth)	PAHs	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties Atmospheric deposition noted as uncontrollable source	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, near Switzer Creek (at the Mouth)	PCBs	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo San Diego Mesa/ 908.2 San Diego Bay Shoreline, near Switzer Creek (at the Mouth)	Chlordane	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Pueblo San Diego Mesa/ 908.22 Switzer Creek	Copper	Yes	303(d) listing for WARM	No	No	No							No
Pueblo San Diego Mesa/ 908.22 Switzer Creek	Lead	Yes	303(d) listing for WARM	No	No	No							No
Pueblo San Diego Mesa/ 908.22 Switzer Creek	Zinc	Yes	303(d) listing for WARM	No	No	No							No
Pueblo National City/908.3 Paleta Creek	Copper	Yes	303(d) listing for Copper	No	No	No							No
Pueblo National City/908.3 Paleta Creek	Lead	Yes	303(d) listing for Copper	No	No	No							No
Pueblo National City/908.3 Mouth of Paleta Creek/Seventh Street Channel	PAHs	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting: Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties Atmospheric deposition noted as uncontrollable source	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Pueblo National City/908.3 Mouth of Paleta Creek/Seventh Street Channel	PCBs	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting; Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Pueblo National City/908.3 Mouth of Paleta Creek/Seventh Street Channel	Chlordane	Yes, wet weather	Draft TMDL – automatically a PWQC Impairment of MAR	Yes	Yes	Yes	MLOE not supporting; Monitoring done for draft TMDL supports listing; However, source identification studies are needed to link to MS4 and potential sources	Basin plan water quality objectives are narrative	Unknown if predominant Draft TMDL identifies Phase I MS4 as source, but Caltrans, US Navy, Phase II MS4s, and enrollees of Industrial and construction general permits also identified as responsible parties	Yes, MAR	LTEA identifies strategies that address MS4 organics issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Sweetwater Watershed													
Sweetwater Lower Sweetwater (909.1) Lower Sweetwater River below reservoir	Bacteria	Yes, wet and dry weather	303(d) listing for REC-1	MS4 listed as source in 303(d) listing and supported by MS4 monitoring data	Yes	Yes	1. LTEA: Water quality data supports elevated levels of indicator bacteria during wet and dry conditions 2. Annual Regional Monitoring: supports elevated levels of indicator bacteria during wet and dry conditions 3. 303(d) listings: supported by data in the lines of evidence	There are established numeric standards in the Basin Plan	LTEA identifies MS4 sources of bacteria; However, natural sources contributed unknown amounts of non-MS4 loadings of bacteria to the receiving waters	No, REC-1 is a potential beneficial use	LTEA identifies strategies that address MS4 bacteria issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Sweetwater Lower Sweetwater (909.1) Lower Sweetwater River below reservoir	TDS	Yes, wet weather	303(d) listing for WARM	303(d) listing indicates MS4 potential source but not supported by MS4 monitoring data	Yes	No	1. LTEA: Water quality data supports elevated levels of TDS during wet and dry conditions 2. Annual Regional Monitoring: supports elevated levels of TDS during dry conditions 3. 303(d) listings: supported by data in the lines of evidence	There are established numeric standards in the Basin Plan	Unknown	Yes, WARM	No strategies available to adequately address	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Sweetwater Lower Sweetwater (909.1) Lower Sweetwater River below reservoir	Nutrients	Yes	303(d) listing for WARM for nitrogen and phosphorous	303(d) listing indicates MS4 potential source but not supported by MS4 monitoring data	Yes	Yes	1. LTEA: Water quality data supports elevated levels of various nutrients during dry conditions 2. Annual Regional Monitoring: supports elevated levels of various nutrients during dry conditions in receiving water 3. 303(d) listings: supported by data in the lines of evidence	Basin Plan Water Quality Objectives provide a nitrogen to phosphorus ratio with goal objectives for phosphorus	LTEA identifies MS4 sources of nutrients; However, groundwater intrusion has been found to be source of nutrients in MS4 systems	Yes, WARM	LTEA identifies strategies that address MS4 nutrient issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Sweetwater Lower Sweetwater (909.1)	Trash	No	Public input	Yes	Yes	Yes	MLOE not supporting	Basin plan water quality objectives are narrative	LTEA identifies MS4 sources of trash in wet weather, but other non-MS4 sources may contribute	No	LTEA identifies strategies that address MS4 trash issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Sweetwater Middle Sweetwater (909.2)	Bacteria	Yes	No	MS4 not indicated in 303(d) as potential source but MS4 monitoring data supports	Yes	Yes	1. LTEA: Water quality data supports elevated levels of various bacteria during wet and dry conditions 2. Annual Regional Monitoring: Although available shows elevated levels of bacteria during wet and dry conditions in receiving water, dry weather in MS4, the dataset is not robust enough to be considered highest priority 3. 303(d) listings: not listed	There are established numeric standards in the Basin Plan	LTEA identifies MS4 sources of bacteria; However, natural sources contributed unknown amounts of non-MS4 loadings of bacteria to the receiving waters	No	LTEA identifies strategies that address MS4 bacteria issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Otay Watershed													
Otay Coronado/ 910.1 Pacific Ocean Shoreline at Carnation Ave and Camp Surf Jetty	Bacteria	Yes	303(d) listed for REC-1	Yes	No	Yes	MLOE not supporting	There are established numeric standards in the Basin Plan	LTEA identifies MS4 sources of bacteria; However, natural sources contributed unknown amounts of non-MS4 loadings of bacteria to the receiving waters	Yes, REC-1	LTEA identifies strategies that address MS4 bacteria issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No
Otay Coronado / 910.1 Pacific Ocean Shoreline at Tidelands Park	Bacteria	Yes	303(d) listing for REC-1 for Enterococcus and SHELL for Total Coliform	Yes	No	Yes	1. 303(d) listing/TMDL not supported with data in lines of evidence (spatial and temporal factors) 2. Annual Regional Monitoring: does not support elevated levels of bacteria during wet and dry conditions in receiving water and MS4 3. RPs reviewing Coastal Stormdrain Monitoring and DEH AB411 data to verify whether the listing is supported	There are established numeric standards in the Basin Plan	LTEA: Water quality data does not support condition	Yes, REC-1	LTEA identifies strategies that address MS4 bacteria issues Diversion of non-stormwater and first flush stormwater in place	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

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Priority and Highest Priority Water Quality Conditions Evaluation

HU HA/HSA and Waterbody	Pollutant Category	Priority Water Quality Conditions Criteria					Highest Priority Water Quality Conditions Criteria						
		Condition exceeds Regional Water quality benchmarks in receiving water in wet weather, dry weather, or both (Provision B2c1(c))	Condition is impairment of beneficial uses - 303(d) (Provision B2c1(a))	MS4 conveyances contribute to the condition in the receiving water (Provision B2c1(d))	Monitoring data of acceptable quality and no data gaps (Provision B2c1(e))	Is it a priority condition ?	Dataset is spatially and temporally appropriate and contains robust science-based data No studies indicate water quality standards are now being met	There acceptable standards/ criteria established for condition	Evidence that MS4 Discharges are a predominant source of the condition	The condition impairs an existing beneficial use as defined in the Basin Plan	Water quality improvement strategies to control condition are available to RPs	Would the condition not be addressed by strategies identified for other HIGHEST PRIORITY CONDITIONS ¹	Is it a HIGHEST PRIORITY CONDITION?
Otay Dulzura / 910.3 Lower Otay Reservoir	Nitrogen	Yes	303(d) listing for WARM	Yes	No	Yes	MLOE not supporting	Basin Plan Water Quality Objectives provide a nitrogen to phosphorus ratio with goal objectives for phosphorus	LTEA identifies MS4 sources of nutrients However, groundwater intrusion has also been found to be source of nutrients in MS4 systems	No	LTEA identifies strategies that address MS4 nutrient issues	No, strategies for other HIGHEST PRIORITY CONDITIONS will address this condition.	No

Notes:

Highest priorities are presented in **boldface font**.

1. 'No' in this column indicates that strategies for other HIGHEST PRIORITY CONDITIONS are expected to also address the condition. 'Yes' in this column indicates that potential strategies for other HIGHEST PRIORITY CONDITIONS are not likely to address this condition.

Appendix G: Potential Sources

Table I-1: Land Use Acreage by Hydrologic Area

Land Use	Hydrologic Area (acres)									Land Use Totals (acres)
	Pueblo			Sweetwater			Otay			
	908.1	908.2	908.3	909.1	909.2	909.3	910.1	910.2	910.3	
Agricultural	-	14.8	-	68.6	584.7	2,163.2	-	429.8	759.2	4,020.3
Automotive and Transportation	36.4	1140.5	134.8	166.2	11.5	10.6	6.8	166.1	55.9	1,728.8
Beach, Bay and Lagoon	7.3	34.2	17.9	66.2	-	-	363.5	11.6	-	500.7
Commercial	240.1	1647.9	244.3	1,024.1	227.4	129.7	125.7	750.5	83.5	4,473.2
Health Services	16.4	131.6	27.7	62.4	11.4	10.1	16.4	71.5	-	347.5
Industrial	6	634.6	276.2	413.6	341.1	-	.1	1,778.6	56.9	3,507
Institutional	166.3	1,060.7	328.3	1,242.4	565.8	15.1	47.8	1,906.7	73.2	5,406.3
Junkyard, Dump, Landfill	-	14.3	-	-	77.3	-	-	785.3	-	876.9
Lake, Reservoir, Large Pond	3.4	14	-	54.6	946.7	427.9	8.3	-	1,040.5	2,495.4
Military	602.8	542.2	400.4	-	-	-	2,837.4	-	-	4,382.8
Mixed Use	-	4.6	1.7	.7	-	-	-	-	-	7
Mobile Home Park	-	121.2	4.6	228.5	139.5	99.8	2.1	383.2	-	978.9
Multi-Family Residential	84.8	1,644.2	305.9	1,033.2	277.9	117.1	121.3	765	14	4,363.4
Municipal	24.9	248.7	22.5	113.8	25.8	2.9	8.9	45.7	14.1	507.3
Open Space	207.2	1,534.7	207.3	4,842.3	14,233.6	19,533.2	77.6	9,903.3	37,127.3	87,666.5
Parks, Golf Courses, Cemeteries	122.3	1,038.2	138.9	1,101.6	923.6	1	367.1	655.3	12.9	4,360.9
Recreation	11.4	90	11.5	125.1	166	146.8	65.2	130.7	370.1	1,116.8
Residential	1	5.7	1.1	5.2	72	10.2	.6	45.9	27.2	168.9
Roads and Freeways	722.1	6,890	1,536	5,829.3	1,794.7	1,182.5	630.7	3,028	616.6	22,229.9
Single Family Residential	1,376	8,929.5	2,421	12,094.8	5,223.4	530.2	735.5	4,198.9	346.6	35,855.9
Spaced Rural Residential	-	14.9	7.9	453.3	10,202.2	7,361.4	-	26.6	7,094.3	25,160.6
Storage and Warehousing	-	75.4	113.8	99.3	31.5	-	.1	105.7	-	425.8
Utilities	50	168.5	16.9	431.9	121	6.5	14.8	338.9	32.1	1,180.6
Vacant and Undeveloped	709.3	618	156.2	1,092.2	17,510.8	30,997.8	111.8	4,043.3	15,532.7	70,772.1
TOTALS	4,388	26,619	6,375	30,549	53,488	62,746	5,542	29,571	63,257	282,533.5

Source: SANDAG 2009

Appendix G: Potential Sources

Table I-2: Pollutant Generating Sources – 908.1 Point Loma Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria
Agriculture	0			L	UL	UL	L	L	L	UK	L
Animal	13			N	L	UL	L	UK	L	UK	L
Automotive	61			L	L	L	UL	UL	UK	L	UL
Cemetery	0			N	N	UL	L	L	L	L	L
Contractor	97			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	174			N	L	L	UL	UK	UK	L	L
Equipment	20			L	L	L	UL	UL	UK	L	UL
Fueling	7			UK	L	L	UK	N	N	UK	N
General Industrial	18			L	L	L	UK	UK	UK	UK	UK
General Retail	38			UL	UL	UL	L	UL	UL	L	UL
Golf	1			N	N	UL	L	L	L	L	L
Health Services	1			N	L	UL	L	UK	L	UK	UL
Institutional	2			L	UK	UK	UK	UK	UK	UK	UL
Manufacturing	4			L	UK	UK	UK	UK	UK	UK	UL
Metal	4			L	L	L	UK	UK	UK	UK	UL
Nursery	2			L	UL	UL	L	L	L	UK	L
Stone	1			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	61			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	15	0									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	8	5	207								
Residential	1,462 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-3: Pollutant Generating Sources – 908.2 San Diego Mesa Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							Bacteria	Trash
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants		
Agriculture	1			L	UL	UL	L	L	L	UK	L	L
Animal	82			N	L	UL	L	UK	L	UK	L	L
Automotive	876			L	L	L	UL	UL	UK	L	UL	L
Contractor	389			UL	UL	UL	L	UL	UL	L	UL	L
Food Establishment	2,316			N	L	L	UL	UK	UK	L	L	L
Equipment	91			L	L	L	UL	UL	UK	L	UL	L
General Industrial	95			L	L	L	UK	UK	UK	UK	UK	L
General Retail	260			UL	UL	UL	L	UL	UL	L	UL	L
Health Services	18			N	L	UL	L	UK	L	UK	UL	L
Institutional	68			L	UK	UK	UK	UK	UK	UK	UL	L
Manufacturing	57			L	UK	UK	UK	UK	UK	UK	UL	L
Metal	40			L	L	L	UK	UK	UK	UK	UL	L
Nursery	18			L	UL	UL	L	L	L	UK	L	L
Stone	9			L	UK	UK	UK	UK	UK	UK	UL	L
Storage & Warehousing	210			L	UK	UK	UK	UK	UK	UK	UL	L
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL	L
	259	39										
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL	L
	4	18	1,066									
Residential	10,716 acres			L	L	L	L	L	L	UK	L	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-4: Pollutant Generating Sources – 908.3 National City Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***								
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens	Trash
Agriculture	0			L	UL	UL	L	L	L	UK	L	L
Animal	3			N	L	UL	L	UK	L	UK	L	L
Automotive	234			L	L	L	UL	UL	UK	L	UL	L
Contractor	82			UL	UL	UL	L	UL	UL	L	UL	L
Food Establishment	233			N	L	L	UL	UK	UK	L	L	L
Equipment	45			L	L	L	UL	UL	UK	L	UL	L
General Industrial	36			L	L	L	UK	UK	UK	UK	UK	L
General Retail	30			UL	UL	UL	L	UL	UL	L	UL	L
Health Services	0			N	L	UL	L	UK	L	UK	UL	L
Manufacturing	10			L	UK	UK	UK	UK	UK	UK	UL	L
Metal	19			L	L	L	UK	UK	UK	UK	UL	L
Nursery	0			L	UL	UL	L	L	L	UK	L	L
Stone	17			L	UK	UK	UK	UK	UK	UK	UL	L
Storage & Warehousing	69			L	UK	UK	UK	UK	UK	UK	UL	L
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL	L
	23	10										
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL	L
	3	11	230									
Residential	2,741 acres			L	L	L	L	L	L	UK	L	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-5: Pollutant Generating Sources – 909.1 Lower Sweetwater Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential****							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Agriculture	0			L	UL	UL	L	L	L	UK	L
Animal	28			N	L	UL	L	UK	L	UK	L
Automotive	452			L	L	L	UL	UL	UK	L	UL
Contractor	113			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	491			N	L	L	UL	UK	UK	L	L
Equipment	40			L	L	L	UL	UL	UK	L	UL
General Industrial	29			L	L	L	UK	UK	UK	UK	UK
General Retail	74			UL	UL	UL	L	UL	UL	L	UL
Manufacturing	3			L	UK	UK	UK	UK	UK	UK	UL
Metal	15			L	L	L	UK	UK	UK	UK	UL
Nursery	9			L	UL	UL	L	L	L	UK	L
Stone	12			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	46			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	69	27									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	12	26	264								
Residential	13,815 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-6: Pollutant Generating Sources – 909.2 Middle Sweetwater Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Agriculture	0			L	UL	UL	L	L	L	UK	L
Animal	8			N	L	UL	L	UK	L	UK	L
Automotive	33			L	L	L	UL	UL	UK	L	UL
Contractor	1			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	76			N	L	L	UL	UK	UK	L	L
Equipment	1			L	L	L	UL	UL	UK	L	UL
General Industrial	0			L	L	L	UK	UK	UK	UK	UK
General Retail	5			UL	UL	UL	L	UL	UL	L	UL
Health Services	0			N	L	UL	L	UK	L	UK	UL
Institutional	0			L	UK	UK	UK	UK	UK	UK	UL
Manufacturing	0			L	UK	UK	UK	UK	UK	UK	UL
Metal	0			L	L	L	UK	UK	UK	UK	UL
Nursery	6			L	UL	UL	L	L	L	UK	L
Stone	0			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	0			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	2	28									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	23	10	126								
Residential	15,915 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-7: Pollutant Generating Sources – 909.3 Upper Sweetwater Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Animal	6			N	L	UL	L	UK	L	UK	L
Automotive	0			L	L	L	UL	UL	UK	L	UL
Contractor	0			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	0			N	L	L	UL	UK	UK	L	L
Equipment	0			L	L	L	UL	UL	UK	L	UL
General Industrial	0			L	L	L	UK	UK	UK	UK	UK
General Retail	1			UL	UL	UL	L	UL	UL	L	UL
Manufacturing	0			L	UK	UK	UK	UK	UK	UK	UL
Metal	0			L	L	L	UK	UK	UK	UK	UL
Nursery	0			L	UL	UL	L	L	L	UK	L
Stone	0			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	0			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High		Non-High	L	L	L	L	UK	UK	UK	UL
	1	3									
Construction	High		Medium	UL	UL	UL	L	UL	UL	L	UL
	0	4	46								
Residential	8,119 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (there are no HPWQP identified for this HA at this time). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Table I-8: Pollutant Generating Sources – 910.1 Coronado Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Animal	4			N	L	UL	L	UK	L	UK	L
Automotive	14			L	L	L	UL	UL	UK	L	UL
Contractor	0			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	118			N	L	L	UL	UK	UK	L	L
Equipment	1			L	L	L	UL	UL	UK	L	UL
General Industrial	0			L	L	L	UK	UK	UK	UK	UK
General Retail	47			UL	UL	UL	L	UL	UL	L	UL
Manufacturing	1			L	UK	UK	UK	UK	UK	UK	UL
Metal	0			L	L	L	UK	UK	UK	UK	UL
Nursery	0			L	UL	UL	L	L	L	UK	L
Stone	0			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	0			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High		Non-High	L	L	L	L	UK	UK	UK	UL
	77		23								
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	52	3	334								
Residential	860 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-9: Pollutant Generating Sources – 910.2 Otay Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Animal	6			N	L	UL	L	UK	L	UK	L
Automotive	420			L	L	L	UL	UL	UK	L	UL
Contractor	71			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	314			N	L	L	UL	UK	UK	L	L
Equipment	26			L	L	L	UL	UL	UK	L	UL
General Industrial	79			L	L	L	UK	UK	UK	UK	UK
General Retail	163			UL	UL	UL	L	UL	UL	L	UL
Manufacturing	15			L	UK	UK	UK	UK	UK	UK	UL
Metal	17			L	L	L	UK	UK	UK	UK	UL
Nursery	3			L	UL	UL	L	L	L	UK	L
Stone	5			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	70			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High	Non-High		L	L	L	L	UK	UK	UK	UL
	45	11									
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	14	14	309								
Residential	5,036 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (yellow highlight signifies HPWQP). The HPWQP is associated with the sources that are likely to generate those pollutants (green highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Appendix G: Potential Sources

Table I-10: Pollutant Generating Sources – 910.3 Dulzura Hydrologic Area*

Inventory Sites/Facilities**	Quantities			Pollutant Source Loading Potential***							
				Heavy Metals	Organics	Oil & Grease	Sediment	Pesticides	Nutrients	Gross Pollutants	Bacteria/Pathogens
Animal	2			N	L	UL	L	UK	L	UK	L
Automotive	1			L	L	L	UL	UL	UK	L	UL
Contractor	0			UL	UL	UL	L	UL	UL	L	UL
Food Establishment	1			N	L	L	UL	UK	UK	L	L
Equipment	0			L	L	L	UL	UL	UK	L	UL
General Industrial	0			L	L	L	UK	UK	UK	UK	UK
General Retail	0			UL	UL	UL	L	UL	UL	L	UL
Manufacturing	0			L	UK	UK	UK	UK	UK	UK	UL
Metal	0			L	L	L	UK	UK	UK	UK	UL
Nursery	1			L	UL	UL	L	L	L	UK	L
Stone	0			L	UK	UK	UK	UK	UK	UK	UL
Storage & Warehousing	0			L	UK	UK	UK	UK	UK	UK	UL
Municipal	High		Non-High	L	L	L	L	UK	UK	UK	UL
	3		2								
Construction	High	Medium	Low	UL	UL	UL	L	UL	UL	L	UL
	8	2	17								
Residential	7,482 acres			L	L	L	L	L	L	UK	L

The highest threat-to-water-quality (TTWQ) rated sources within each HA based on the HPWQPs are identified in the table (there are no HPWQP for this HA identified at this time). The HPWQP is associated with the sources that are likely to generate those pollutants (blue highlight).

*Prepared based on the WURMP Copermittees FY 2012 JURMP Annual Reports.

**Other sources are not reported in this table including: Land Development and Non-inventoried Businesses

***Pollutant Source Loading Potential taken from BLTEA 2005 and LTEA 2011; N = None, UK = Unknown, UL = Unlikely, L = Likely

None (N) includes sources with zero identified pollutant generating activities and low discharge potential.

Unknown (UK) includes sources with one or more identified pollutant generating activities, but very low discharge potential.

Unlikely (UL) includes sources with no pollutant generating activities, but high discharge potential, or sources with moderate discharge potential and one or more pollutant generating activities.

Likely (L) includes sources with high discharge potential and identified pollutant generating activities.

Table I-11: San Diego Bay WMA Sources

Pollutant Generating Sources Inventory	Quantities ¹								
	Point Loma	San Diego Mesa	National City	Lower Sweetwater	Middle Sweetwater	Upper Sweetwater	Coronado	Otay Valley	Dulzura
<i>Hydrologic Area or Sub-area</i>	908.1	908.2	908.3	909.1	909.2	909.3	910.1	910.2	910.3
<i>Area (ac)</i>	4,409	25,890	1,713	35,834	53,488	62,589	5,471	29,623	63,257
<i>Percentages of WMA</i>	1.56%	9.17%	0.61%	12.69%	18.95%	22.17%	1.94%	10.49%	22.4%
Agriculture	0	1	0	0	0	0	0	0	0
Animal Facilities	13	82	3	28	8	6	4	6	2
Automotive	61	876	234	452	33	0	14	420	1
Cemetery	0	0	0	0	0	0	0	0	0
Contractor	97	389	82	113	1	0	0	71	0
Eating or Drinking Establishments	174	2,316	233	491	76	0	118	314	1
Equipment	20	91	45	40	1	0	1	26	0
Fueling	7	0	0	0	0	0	0	0	0
General Industrial	18	95	36	29	0	0	0	79	0
General Retail	38	260	30	74	5	1	47	163	0
Golf	1	0	0	0	0	0	0	0	0
Health Services	1	18	0	0	0	0	0	0	0
Institutional	2	68	0	0	0	0	0	0	0
Manufacturing	4	57	10	3	0	0	1	15	0
Metal	4	40	19	15	0	0	0	17	0
Nurseries/Greenhouses	2	18	0	9	6	0	0	3	1
Stone/Glass Manufacturing	1	9	17	12	0	0	0	5	0
Storage/Warehousing	61	210	69	46	0	0	0	70	0
Municipal	15	298	33	96	30	4	100	56	5
Construction	220	1,088	244	302	159	50	389	337	27
Residential	1,462 acres	10,716 acres	2,741 acres	13,815 acres	15,915 acres	8,119 acres	860 acres	5,036 acres	7,482 acres

1. Quantities from 2011 LTEA and FY 2012 WURMP Annual Report.

Appendix G: Potential Sources

Table I-12: Summary of Source Data Provided During the Public Workshop¹

Pollutant or Stressor	Sources Identified by the Public		
	Pueblo San Diego HU	Sweetwater HU	Otay HU
Trash	Poor housekeeping, trash collection systems, single-use packaging containers		
Specific Stressor not Specified	Not specified	Not specified	Large Horse Population
Grease/Food Waste	Grease bins		
Non-point Source Pollution	Agriculture		
Metals and Organics	Auto-wrecking industry	Not specified	Auto-wrecking industry
Specific Stressor not Specified	Parking lots		
Sediment	Unimproved alleys and poorly maintained roads		
Specific Stressor not Specified	Storm drain systems		
Specific Stressor not Specified	First flush after a fire event		
Flow	Sprinkler systems and fire system maintenance and line flushing		
Specific Stressor not Specified	Abandoned industrial sites		

1. No public data was submitted during the data solicitation period. This table summarizes the verbal input received during the public workshop.

Appendix G: Potential Sources

Table I-13: Monitoring Activities in the San Diego Bay Watershed Management Area

	Program Data Set	Data Assessed	Point Loma	San Diego Mesa	National City	Number of Sites Assessed
		Hydrologic Area or Sub-area	908.1	908.2	908.3, 908.31	
		Area (ac)	4,409	25,890	1,713	
		Percentages of WMA	1.56%	9.17%	0.61%	
Pueblo HU	Receiving Water Monitoring					9
	Ambient Monitoring	Water chemistry, toxicity, bacteria, and trash	0	1-MLS	0	1-MLS
	SMC Regional Monitoring	Water chemistry, toxicity, bacteria, rapid stream bioassessment	0	0	0	0
	Wet Weather Monitoring	Water chemistry, bacteria, toxicity, and trash	0	1-MLS	0	1-MLS
	Post-Storm Sediment Pyrethroid Monitoring	Grain size, synthetic pyrethroid pesticides, and TOC	0	1-MLS	0	1-MLS
	Third-Party Data (Coastkeeper and Chollas TMDL)	General chemistry and bacteria	0	2-Coastkeeper	0	2-Coastkeeper
	Chollas Creek TMDL Compliance Monitoring	Metals, pesticides, bacteria	0	2-MLS	0	2-MLS
	Chollas Creek TMDL Special Studies	Metals, pesticides, bacteria	0	4	0	4
	Urban Runoff Monitoring					328
	Jurisdictional Dry Weather Monitoring	Field and analytical chemistry	116 ¹			
	Jurisdictional Dry Weather Monitoring – Trash Assessment	Trash	193 ¹			
	MS4 Outfall Random Dry Weather Monitoring	Chemistry and bacteria	0	0	0	0
	MS4 Outfall Random Wet Weather Monitoring	Chemistry and bacteria	1	1	0	2
	MS4 Outfall Targeted Dry Weather Monitoring	Chemistry, metals, pesticides, and bacteria	0	4	3	7
	MS4 Outfall Targeted Wet Weather Monitoring	Chemistry, metals, pesticides, and bacteria	0	0	0	0
	Regional Source Identification Monitoring	General chemistry, metals, bacteria, and pesticides	0	0	0	0
	CSDM Program	Coastal outfall and receiving waters	9 ¹			
	Shelter Island Yacht Basin Urban Runoff Monitoring Study	Metals	1	0	0	1

Notes:

Source: FY 2012 WURMP Annual Report.

Appendix G: Potential Sources

1. Data Reported did not specify the HA designation, only the HU designation.

Appendix G: Potential Sources

Table I-13: Monitoring Activities in the San Diego Bay Watershed Management Area (cont.)

Sweetwater HU	Program Data Set	Data Assessed	Lower Sweetwater	Middle Sweetwater	Upper Sweetwater	Number of Sites Assessed
		Hydrologic Area or Sub-area	909.1	909.2	909.3	
		Area (ac)	35,834	53,488	62,589	
		Percentages of WMA	12.69%	18.95%	22.17%	
Receiving Water Monitoring						14
	Ambient Monitoring	Water chemistry, toxicity, bacteria, rapid stream bioassessment, and trash	1-MLS	1-TWAS	0	1-MLS, 1-TWAS
	SMC Regional Monitoring	Water chemistry, toxicity, bacteria, rapid stream bioassessment	1-SMC ¹	0	4-SMC ¹	5-SMC ¹
	Wet Weather Monitoring	Water chemistry, bacteria, toxicity, and trash	1-MLS	1-TWAS	0	1-MLS, 1-TWAS
	Post-Storm Sediment Pyrethroid Monitoring	Grain size, synthetic pyrethroid pesticides, and TOC	1-MLS	1-TWAS	0	1-MLS, 1-TWAS
	Third-Party Data (Coastkeeper)	General chemistry and bacteria	3-Coastkeeper ²			3-Coastkeeper
Urban Runoff Monitoring						167
	Jurisdictional Dry Weather Monitoring	Field and analytical chemistry	68 ²			68
	Jurisdictional Dry Weather Monitoring – Trash Assessment	Trash	76 ²			76
	MS4 Outfall Random Dry Weather Monitoring	Chemistry and bacteria	4	1	0	5
	MS4 Outfall Random Wet Weather Monitoring	Chemistry and bacteria	1	1	0	2
	MS4 Outfall Targeted Dry Weather Monitoring	Chemistry, metals, pesticides, and bacteria	14	1	0	15
	MS4 Outfall Targeted Wet Weather Monitoring	Chemistry, metals, pesticides, and bacteria	0	0	0	0
	CSDM Program	Coastal outfall and receiving waters	1 ²			1

Notes:

Source: FY 2012 WURMP Annual Report.

1. The SMC Monitoring Program uses a random stratified program design and is one sample from a 425 sample point program to be collected over 5 years (<http://socalsmc.org/ProjectThree.aspx>).

Appendix G: Potential Sources

2. Data Reported did not specify the HA designation, only the HU designation.

Table I-13: Monitoring Activities in the San Diego Bay Watershed Management Area (cont.)

Otay HU	Program Data Set	Data Assessed	Coronado	Otay Valley	Dulzura	Number of Sites Assessed
	Hydrologic Area or Sub-area		910.1	910.2	910.3	
	Area (ac)		5,471	29,623	63,257	
	Percentages of WMA		1.94%	10.49%	22.4%	
Receiving Water Monitoring						5
Ambient Monitoring		Water chemistry, toxicity, bacteria, and trash	0	1-TWAS	0	1-TWAS
SMC Regional Monitoring		Water chemistry, toxicity, bacteria, rapid stream bioassessment	0	0	0	0
Wet Weather Monitoring		Water chemistry, bacteria, toxicity, and trash	0	1-TWAS	0	1-TWAS
Post-Storm Pyrethroid Monitoring	Sediment	Grain size, synthetic pyrethroid pesticides, and TOC	0	1-TWAS	0	1-TWAS
Third-Party Data (Coastkeeper)	Data	General chemistry and bacteria	2-Coastkeeper ¹			2-Coastkeeper
Urban Runoff Monitoring						137
Jurisdictional Dry Weather Monitoring		Field and analytical chemistry	47 ¹			47
Jurisdictional Dry Weather Monitoring – Trash Assessment		Trash	79 ¹			79
MS4 Outfall Random Dry Weather Monitoring		Chemistry and bacteria	0	1	0	1
MS4 Outfall Random Wet Weather Monitoring		Chemistry and bacteria	0	2	0	2
MS4 Outfall Targeted Dry Weather Monitoring		Chemistry, metals, pesticides, and bacteria	1	6	0	7
MS4 Outfall Targeted Wet Weather Monitoring		Chemistry, metals, pesticides, and bacteria	0	0	0	0
CSDM Program		Coastal outfall and receiving waters	1 ¹			1

Notes:

Source: FY 2012 WURMP Annual Report.

1. Data Reported did not specify the HA designation, only the HU designation.

APPENDIX H. DEVELOPMENT OF NUMERIC GOALS FOR CHOLLAS CREEK

Chollas Creek is subject to the following Total Maximum Daily Loads (TMDLs), which have been adopted by the California Office of Administrative Law, and are currently being implemented:

- TMDLs for Dissolved Copper, Lead, and Zinc in Chollas Creek (Metals TMDL); San Diego Regional Water Quality Control Board (Regional Board) Resolution No. R9-2007-0043. Approved October 22, 2008 (Regional Board, 2008); and
- The Revised TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek) (Bacteria TMDL); Regional Board Resolution No. R9-2010-0001. Approved February 10, 2010 (Regional Board, 2010).

A TMDL represents the maximum amount of a pollutant of concern that a waterbody can receive and still attain water quality standards. TMDLs can take a variety of forms, including concentration-based TMDLs, which focus on reducing pollutant sources to achieve a maximum pollutant concentration consistent with existing water quality objectives (WQOs), and load-based TMDLs, which focus on reducing sources to achieve a watershed-specific maximum load that is protective of beneficial uses. The Chollas Creek Metals TMDL represents a concentration-based TMDL, whereas the Bacteria TMDL incorporates load-based reductions that were calculated on the basis of watershed modeling results and applicable bacteria WQOs.

The following sections summarize how the Metals TMDL and Bacteria TMDL targets were derived and how these targets were translated into Water Quality Improvement Plan numeric goals. Development of numeric goals for each parameter required consideration of the applicable Basin Plan WQOs, TMDL requirements, and other regulatory requirements (e.g., California Toxics Rule). Based on this information, numeric goals were developed to meet the requirements of the Municipal Permit. Attachment E.4 of the Municipal Permit provides the following options to meet numeric goals and to demonstrate final compliance with established TMDLs:

- (1) There is no direct or indirect discharge from the Responsible Party's (RP's) municipal separate storm sewer systems (MS4s) to the receiving water; OR
- (2) There are no exceedances of the final receiving water limitations in the receiving water at, or downstream of, the RP's MS4 outfalls; OR
- (3) There are no exceedances of the final effluent limitations at the RP's MS4 outfalls; OR

- (4) The RPs develop and implement the Water Quality Improvement Plan as follows:
 - (a) The RPs incorporate best management practices (BMPs) to achieve the receiving water limitations and/or the effluent limitations for Chollas Creek,
 - (b) The RPs include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs achieves compliance with the final receiving water and/or effluent limitations,
 - (c) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (d) The RPs continue to implement the BMPs, and
 - (e) The RPs continue to perform the specific monitoring and assessment specified to demonstrate compliance with the receiving water and effluent limitations (Regional Board, 2013a).

Compliance with the Bacteria TMDL may also be demonstrated via the following methods:

- (1) The pollutant load reductions for discharges from the RP's MS4 outfalls are greater than or equal to the final effluent limitations; or
- (2) The RPs can demonstrate that exceedances of the final receiving water limitations in the receiving water are due to loads from natural sources, AND pollutant loads from the RP's MS4 are not causing or contributing to the exceedances.

These options (and the resulting Water Quality Improvement Plan numeric goals) provide multiple compliance pathways that can be met within the receiving water or within the watershed to comply with the requirements of the TMDLs.

Section 3 presents the Chollas Creek Metals TMDL and Bacteria TMDL numeric goals that were developed by considering these options to demonstrate compliance. Most of the goals were derived directly from the Water Quality-Based Effluent Limitations (WQBELs) that are presented in the TMDLs and incorporated into the applicable Basin Plan WQOs (e.g., final bacteria goal of zero (0) percent dry weather days that are allowed to exceed bacteria WQOs). Goals were calculated on the basis of updated watershed modeling analyses, as described in the following sections. The modeling results provide compliance analysis that the strategies will meet the Water Quality Improvement Plan goals.

J.1 IDENTIFICATION OF METALS TMDL NUMERIC GOALS

The final numeric goals for Chollas Creek were derived from the Water Quality-Based Effluent Limits (WQBELs) that were identified in the Metals TMDL and incorporated into the Municipal Permit. As discussed above, the Metals TMDL is concentration-based, so the WQOs and TMDL receiving water numeric targets are identical (Regional Board, 2008).

J.1.1 Receiving Water and Effluent Limitations for Metals

The Metals TMDL receiving water targets were set to be equal to the California Toxics Rule (CTR) criteria for freshwater, and thus the TMDL targets are identical to the Basin Plan WQOs, as shown in Table A-1. The final receiving water limitations are expressed for acute (1-hour) and chronic (4-day) durations, and are based on hardness (Table A-1). Final effluent limitations are equal to 90 percent of the final receiving water limitations, taking into account an explicit 10 percent margin of safety (MOS) so that discharges from the MS4s will not cause or contribute to exceedances of receiving water limitations (Table A-2).

**Table H-1.
 Metals TMDL Targets and Basin Plan WQOs for Chollas Creek
 (Receiving Water Limitations)**

Metal	Numeric Target for Acute Conditions: CTR Criteria Maximum Concentration (CMC)
Copper	$(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * \text{WER}$
Lead	$\{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * \text{WER}$
Zinc	$(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * \text{WER}$
Metal	Numeric Target for Chronic Conditions: CTR Criteria Continuous Concentration (CCC)
Copper	$(0.96) * \{e^{[0.8545 * \ln(\text{hardness}) - 1.702]}\} * \text{WER}$
Lead	$\{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\} * \text{WER}$
Zinc	$(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * \text{WER}$

Notes:

Hardness is expressed as milligrams per liter (mg/L).

Calculated concentrations should have two significant figures [40 CFR 131.38(b)(2)].

The natural log and exponential functions are represented as "ln" and "e", respectively.

CTR = California Toxics Rule; WER = Water-Effect Ratio

**Table H-2.
 Metals TMDL Targets and Basin Plan WQOs for Chollas Creek
 (Effluent Limitations)**

Metal	Numeric Target for Acute Conditions: CTR Criteria Maximum Concentration (CMC)
Copper	$(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * \text{WER} * 0.9$
Lead	$\{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * \text{WER} * 0.9$
Zinc	$(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * \text{WER} * 0.9$
Metal	Numeric Target for Chronic Conditions: CTR Criteria Continuous Concentration (CCC)
Copper	$(0.96) * \{e^{[0.8545 * \ln(\text{hardness}) - 1.702]}\} * \text{WER} * 0.9$
Lead	$\{1.46203 - [0.145712 * \ln(\text{hardness})]\} * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\} * \text{WER} * 0.9$
Zinc	$(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * \text{WER} * 0.9$

Notes:
 Hardness is expressed as milligrams per liter (mg/L).
 Calculated concentrations should have two significant figures [40 CFR 131.38(b)(2)].
 The natural log and exponential functions are represented as "ln" and "e", respectively.
 CTR = California Toxics Rule; WER = Water-Effect Ratio

The Water Quality Improvement Plan final numeric goals for receiving water compliance and MS4 discharges require zero (0) percent exceedance of the receiving water and effluent limitations presented above. These goals are consistent with the Metals TMDL requirements and WQOs for dissolved metals. As an option, a numeric goal that focuses on eliminating direct and indirect discharges to receiving waters was also included in the plan. Achievement of this goal would demonstrate that MS4s are not causing or contributing to receiving water exceedances and would support the conclusion that any exceedances found would likely be due to loads from non-MS4 sources.

J.1.2 Compliance Analysis for Metals and Other Compliance Pathways

Compliance analysis goals were developed to provide a better understanding of the relationship between BMP implementation and load reduction, leading to more efficient and cost-effective targeting of Water Quality Improvement Plan strategies. Updated watershed modeling analyses were performed to identify the load reduction required for each metal that would achieve the TMDL receiving water limitations, MS4 permit requirements, and Basin Plan WQOs. Load reduction goals were developed on the basis of modeling that was originally completed during development of the Metals and Bacteria TMDLs. The watershed model was first updated during development of the Chollas Creek Comprehensive Load Reduction Plan, Phase II (Chollas Creek CLRP II) (City of San Diego, 2013). During Water Quality Improvement Plan development, the model was updated for a second time to include the site-specific Water Effect Ratios (WERs) currently being finalized as part of the 2014 Chollas Creek WER Study Update (2014 WER Update). These updates provide an analysis of the adequacy and cost-effectiveness of structural and nonstructural BMPs to support evaluation of TMDL compliance through modeling to quantify required load reductions. The analysis

included optimization modeling to evaluate the most cost-effective combination of BMPs to meet the requirements. The updated WER values are provided in Section A.1.2.2. The metals goals presented in Section 3 of the Water Quality Improvement Plan include the load reductions required using the site-specific WERs, anticipated for adoption in 2015.

J.1.2.1 Chollas Creek CLRP II Modeling Analysis and Metals-Related Assumptions

The Chollas Creek watershed model simulates daily flow and receiving water concentrations for metals, bacteria, and other water quality constituents. A representative Water Year (Water Year 2003) was selected to simulate weather conditions. Water Year 2003 represents typical wet and dry weather conditions within the watershed, based on an analysis of rainfall data over a 20-year time period. Implementation planning based on a representative period will allow the RPs to accurately design programs and size BMPs to meet Water Quality Improvement Plan goals.

Because the WQOs are hardness-based equations, load reductions were calculated on the basis of the modeling results and used average hardness values for wet and dry conditions based on recent Metals TMDL compliance monitoring data (95 mg/L wet; 354 mg/L dry). Average values were used because daily monitoring data were not available to calculate the total load for the representative period. Because of the amount of literature and monitoring data available regarding model parameters for total metals, the model simulates total metals rather than dissolved metals. Recent Chollas Creek monitoring data were used to develop site-specific total-to-dissolved metals conversion factors to convert the WQOs and resulting numeric goals from dissolved metals to total metals for comparison with the modeled loads. The resulting percent load reductions required based on total metals are also applicable to dissolved metals for the load reduction goals.

Acute WQOs were used to calculate the wet weather Metals TMDL load, which represents most of the total receiving water loading because of the relatively high volume of discharge during wet weather. Chronic concentrations are typically associated with longer periods of dry weather; therefore, the chronic WQOs were used to calculate the dry weather Metals TMDL receiving water loads. Model results are typically less accurate at smaller time-steps (e.g., hourly); therefore, daily average results were used to compare with the metals WQOs. The required load reduction represents the difference between the modeled load for each parameter and the Metals TMDL loads for wet and dry weather conditions (derived from the acute [CMC] and chronic [CCC] WQOs, respectively).

J.1.2.2 Water-Effect Ratio Update

Metals TMDL targets are currently being reviewed by the Regional Board to include site-specific WERs and a revision to the lead WQO equation as part of the 2014 Chollas Creek WER Study Update (2014 WER Update). Approval and the subsequent Basin Plan amendment required to update the Chollas Creek Metals TMDL is anticipated in

2015. Accordingly, the Water Quality Improvement Plan goals include the anticipated load reductions required to meet the receiving water or effluent limitations using the updated WER, described in more detail below.

The following WERs are anticipated to be adopted and were used to develop updated percent load reduction goals:

- Copper WER = 7
- Zinc WER = 1.71

Zinc will require the greatest load reduction based on the updated WER values (29.1 percent). As discussed above, strategies that are targeted to reduce zinc will result in corresponding load reductions for copper, lead, and other associated pollutants. Note that a revision to the lead WQO is also being considered on the basis of recent United States Environmental Protection Agency (USEPA) guidance and other information that would result in the calculation of an alternative percent load reduction for lead. These results indicate that zinc would remain the limiting metals constituent for the numeric goals.

**Table H-4.
 Chollas Creek Metals Load Reduction Goals Using Updated WER**

Metal	Pollutant Load Reduction for Acute Conditions (CMC) (2014 WER Update)
Copper	0.0%
Lead	0.0%
Zinc	29.1%

Notes:

% = percent; CMC = Criteria Maximum Concentration

The load reduction goals were applied equally to each RP in the compliance analysis to provide accountability on a jurisdictional basis. Because Chollas Creek is primarily influenced by storm water runoff, load reductions required to meet acute (wet weather) conditions were identified as limiting. This assumption is conservative, because the highest load reduction was identified for zinc (29.1 percent) to meet the acute WQO-derived load reduction goal. Water Quality Improvement Plan strategies target sources of metals that can impact water quality conditions during all conditions; therefore, the strategies focus on achieving the highest load reduction required, irrespective of weather or other conditions. In addition, most of the strategies target metals reduction (rather than individual constituents), resulting in significant reductions in metals overall as well as other associated pollutants. These reductions were calculated at the outlet of the Chollas Creek watershed, but will be used to achieve water quality requirements throughout the watershed.

J.1.3 Interim Goals and Schedules

Water Quality Improvement Plan interim numeric goals for receiving water compliance and MS4 discharges allow 20 percent exceedance of the receiving water and effluent limitations presented above. Compliance with numeric goals and TMDL requirements is similar to that for final goals: (1) no direct or indirect discharges from the MS4s, (2) no exceedances of the final receiving water limitations, (3) no exceedances of the interim or final effluent limitations, or (4) submittal and full implementation by the RPs of an accepted Water Quality Improvement Plan that provides compliance analysis that the interim TMDL compliance requirements will be achieved. The Metals TMDL requires compliance with interim targets by October 22, 2018, 10 years after the TMDL effective date.

Interim numeric goals were also included in the Water Quality Improvement Plan schedule to demonstrate progress toward achieving the final load reduction goals. Interim load reduction goals were calculated by multiplying the final load reduction by 80 percent to mirror the 80 percent interim compliance requirement with the receiving water and effluent limitations. Updates to existing programs, changes in municipal ordinances, and collaboration within jurisdictions, watershed management areas (WMAs), and the region have been occurring since the TMDL and the Municipal Permit were adopted. Planning efforts are currently underway, including measures to secure funding and increase general momentum to implement and expand storm water and water conservation measures.

J.2 IDENTIFICATION OF BACTERIA NUMERIC GOALS

The final numeric goals for bacteria in Chollas Creek were derived from the WQBELs that were identified in the Bacteria TMDL and the options for showing compliance with the WQBELs incorporated into the Municipal Permit. The Bacteria TMDL incorporates concentration-based receiving water limitations, and concentration-based and load-based effluent limitations that were calculated on the basis of watershed modeling results and applicable bacteria WQOs (Regional Board, 2010). The Bacteria TMDL included seasonal requirements based on precipitation: wet weather (days with at least 0.2 inch of rainfall and 72 hours after) and dry weather (days with less than 0.2 inch of rainfall observed on each of the prior 3 days).

J.2.1 Receiving Water Limitations

Wet and dry weather receiving water limitations are shown in Table A-4 and discussed below.

**Table H-4.
 Final Receiving Water Limitations for Chollas Creek**

Bacteria Indicator	Chollas Creek WQO (MPN/100mL)	Allowable Exceedance Frequency (% Days Exceeding WQOs)	Final Compliance
Wet Weather (Single Sample Maximum)			
Fecal coliform	400	22%	2031
<i>Enterococcus</i>	61 ¹	22%	
Dry Weather (30-Day Geometric Mean)			
Fecal coliform	200	0%	2021
<i>Enterococcus</i>	33	0%	

Notes:

1. The WQO is determined by usage frequency in the Basin Plan and Chollas Creek is currently listed as a designated creek. If a Basin Plan Amendment designates Chollas Creek as a “moderately to lightly used area” or an “infrequently used area,” the WQO will change (Regional Board, 2010).
 % = percent; mL = milliliters; MPN = most probable number; WQO = water quality objective

The Bacteria WQOs represent concentrations of bacteria indicators that are at acceptable levels for recreational contact beneficial use (REC-1). Wet weather conditions are episodic and short in duration; therefore, single-sample maximum WQOs apply. Geometric mean WQOs apply during dry weather when monitoring results over a longer time period are averaged and assessed. Total coliform WQOs are not applicable to freshwater streams; therefore, receiving water goals for Chollas Creek are identified only for fecal coliform and *Enterococcus*.

The WQOs do not account for the natural increase in bacteria loads during storm events, referred to as background concentrations. To account for background concentrations of bacteria during wet weather, the Bacteria TMDL incorporated an allowable exceedance frequency of the WQO based on a reference (mostly undeveloped) watershed.

The Bacteria TMDL specifies a final receiving water limitation allowable exceedance frequency of 22 percent during wet weather periods based on reference conditions, but allows no exceedances during dry weather. Although the number of wet and dry weather days may change from year to year because of variable weather conditions, the percentage of allowable wet weather exceedance days will remain fixed. For example, the number of wet weather days in Water Year 2003 was 42. Therefore, the number of allowable wet weather exceedance days was 9 (22 percent of 42 days, rounded). Final compliance with the dry weather WQOs and TMDL loads is required by Fiscal Year (FY) 2021. Final compliance with the wet weather WQOs and TMDL loads is required by FY 2031.

J.2.2 Concentration-Based Effluent Limitations

The Bacteria TMDL provides two expressions of effluent limitations. The first expression is equivalent to the receiving water limitations, but is assessed at MS4 outfalls (Table A-5). The second expression is a mass-based load reduction from the watershed discussed below. Per the Municipal Permit, total coliform WQOs and corresponding exceedance frequencies are applicable to MS4 outfalls that drain to the Chollas Creek mouth and are therefore included in both expressions of effluent limitations.

**Table H-5.
 Final Effluent Limitations for Chollas Creek**

Bacteria Indicator	Chollas Creek WQO (MPN/100mL)	Allowable Exceedance Frequency (% Days Exceeding WQOs)	Final Compliance
Wet Weather (Single Sample Maximum)			
Fecal coliform	400	22%	2031
<i>Enterococcus</i>	61 ¹	22%	
Total coliform ²	10,000	22%	
Dry Weather (30-Day Geometric Mean)			
Fecal coliform	200	0%	2021
<i>Enterococcus</i>	33	0%	
Total coliform ²	1,000	0%	

Notes:

1. The WQO is determined by usage frequency in the Basin Plan and Chollas Creek is currently listed as a designated creek. If a Basin Plan Amendment designates Chollas Creek as a “moderately to lightly used area” or an “infrequently used area,” the WQO will change (Regional Board, 2010).
 2. Total coliform WQOs and corresponding allowable exceedance frequencies are applicable only as effluent limitations on MS4 outfalls that discharge to Chollas Creek. Total coliform WQOs and allowable exceedance frequencies are not applicable to freshwater receiving waters, such as Chollas Creek.
- % = percent; mL = milliliters; MPN = most probable number; WQO = water quality objective

J.2.3 Load-Based Effluent Limitations

The Bacteria TMDL calculated the watershed load reductions that were required to achieve the Bacteria TMDL receiving water limitations. The Municipal Permit incorporated these load reductions for wet and dry weather as effluent limitations. Watershed load reductions were recently recalculated during the development of Chollas Creek CLRP II, considering a representative period to facilitate BMP planning and implementation, as noted in Section A.1 for metals. This analysis updated the load reductions that were presented in the Bacteria TMDL and provides compliance analysis that implementation will meet the numeric goals.

Consistent with the calculation of metals numeric goals, a representative period (Water Year 2003) was selected to simulate weather conditions and bacteria loads. Per the Bacteria TMDL, the loading capacity was calculated by multiplying the WQOs by the

average daily modeled flow. Modeled daily loads exceeding this threshold were flagged as an exceedance. The allowable percent exceedance loads for wet weather were calculated by summing the top 9 days (22 percent of the 42 wet weather days in the representative year) with the highest modeled daily loads. This load was then subtracted from the modeled wet weather total for the year. The difference between the remaining modeled load and the updated TMDL load represents the load reduction recommended for wet weather. The percent load reduction is calculated by dividing the exceedance load by the total annual load for the representative year. The final load reductions estimated to meet receiving water goals are presented in Table A-6.

Dry weather numeric goals were calculated using the same formula, but without an allowable load. The difference between the remaining modeled load and the TMDL load represents the required load reduction for dry weather. Dry weather modeling results are typically less reliable than wet weather modeling results because of the episodic nature of irrigation runoff and other water sources during dry periods. The percent load reduction was calculated by dividing the exceedance load by the total annual load for Water Year 2003.

Numeric goals were identified for each RP on the basis of the modeling results. As with metals, percent load reductions were applied equally to each RP to provide accountability on a jurisdictional basis.

**Table H-6.
 Final Numeric Goals Expressed as Percent Load Reduction in
 MS4 Discharges to Chollas Creek**

Bacteria Indicator	Chollas Creek Percent Load Reduction ¹	Final Compliance
Wet Weather (Single Sample Maximum)		
Fecal coliform	28.8%	2031
<i>Enterococcus</i>	23.9%	
Total coliform	17.8%	
Dry Weather (30-day Geometric Mean)		
Fecal coliform	98.8%	2021
<i>Enterococcus</i>	99.3%	
Total coliform	92.1%	

Notes:

- Percent load reductions were derived from updated modeling results and may differ from those presented in the Municipal Permit (see Sections A.2.2 and A.2.3).
 % = percent; N/A = not applicable

J.2.4 Other Compliance Pathways

In addition to demonstrating compliance with receiving water and effluent limitations through implementation of a Water Quality Improvement Plan that includes compliance analysis, two additional compliance pathways are available and have been incorporated as numeric goals. A numeric goal that focuses on eliminating direct and indirect discharges to receiving waters was included as an option. Achievement of this goal would demonstrate that MS4s are not causing or contributing to receiving water exceedances. Finally, compliance could be achieved even if receiving water limitations are being exceeded if the RPs can demonstrate that exceedances are due to loads from natural or non-MS4 sources, and pollutant loads from the MS4s are not causing or contributing to the exceedances.

J.2.5 Interim Goals and Schedules

Bacteria TMDL interim compliance for wet weather was calculated as a 50 percent reduction of the “existing” receiving water load. The interim allowable exceedance frequency goal was calculated as a 50 percent reduction from the existing frequency to the final allowable frequency. For example, the Bacteria TMDL states that the existing wet weather exceedance frequency for fecal coliform at the mouth of Chollas Creek is 60 percent. A 50 percent reduction in the existing exceedance frequency (60 percent) to the final allowable exceedance frequency (22 percent) is equal to 41 percent. In the interim compliance year, the interim goal will be met for fecal coliform if 41 percent or less of the fecal coliform load on wet weather days exceeds the fecal coliform WQO.

The same calculation is conducted for dry weather, but the allowable exceedance frequency is zero (0) percent for dry weather and the Bacteria TMDL does not identify the existing load. The exceedance frequency for dry weather was calculated for each of the indicator bacteria by analyzing the available monitoring data collected between January 1, 1996, and December 31, 2002, for comparison with 30-day geometric mean WQOs. One data point was available during this period; because of the limited sample size, additional data points are necessary to determine a representative dry weather exceedance frequency.

Bacteria TMDL interim compliance for load reductions during dry weather is also 50 percent of the existing load. For example, the updated modeling results estimate that a 28.8 percent load reduction in the Chollas Creek subwatershed is needed during wet weather to meet final goals. Therefore, the Chollas Creek interim load reduction goal is 14.4 percent.

The Municipal Permit allows an alternative interim compliance date from the original TMDL compliance date (Municipal Permit, Attachment E). Interim compliance (50 percent reduction) is most reasonably attained in FY 2024 for wet weather and FY 2019 for dry weather for both expressions of WQBELs. Updates to existing programs, changes in municipal ordinances, and collaboration within jurisdictions, WMAs, and the region have been occurring since the TMDL and the Municipal Permit were adopted. Planning efforts are currently underway, including measures to secure funding and increase general momentum to implement and expand storm water and water

conservation measures. The alternative compliance dates allow for the success of the monitoring, assessment, and goal and strategy adaptation process detailed within this Water Quality Improvement Plan.

REFERENCES

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San Diego Regional Water Quality Control Board (Regional Board). 2008. *Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek, Tributary to San Diego Bay*. Resolution No. R9-2007-0043. Approved October 22, 2008.
http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/docs/chollas_creekmetals/update011509/R9-2007-0043_Signed.pdf.

San Diego Regional Water Quality Control Board (Regional Board). 2010. *Revised TMDL for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (including Chollas Creek)*. Resolution No. R9-2010-0001. Approved February 10, 2010.
http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/docs/bacteria/updates_022410/2010-0210_Bactil_Resolution&BPA_FINAL.pdf.

San Diego Regional Water Quality Control Board (Regional Board). 2013a. *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region*. Order No. R9-2013-0001. Adopted May 8, 2013.

United States. Code of Federal Regulations. Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California. 40 CFR §131.38.

Appendix I. Jurisdictional Strategies

Jurisdictional strategies are required as part of the Water Quality Improvement Plan (WQIP), under Provision B of the San Diego Regional Water Quality Control Board (Regional Board) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer System (MS4) Draining the Watersheds Within the San Diego Region, Order Number R9-2013-0001(Municipal Permit). The Responsible Parties (RPs) have identified water quality improvement strategies that may be implemented to address the Highest Priority Conditions or Focused Priority Conditions. The strategies were selected based on their ability to effectively and efficiently eliminate non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the maximum extent practicable (MEP), and achieve the interim and final numeric goals identified in the San Diego Bay Watershed Management Area (WMA) Second Interim Deliverable (Second Interim Deliverable).

In addition to the strategies discussed in the Second Interim Deliverable, the jurisdictions will implement baseline jurisdictional programs. Nonstructural and structural strategies selected by each RP to address Priority Conditions are presented in this document. RP-specific tables for implementation of the selected strategies that outline the method, cost, and additional stakeholder participation are presented in the sections below.

I.1 San Diego Regional Airport Authority Strategies

The San Diego Regional Airport Authority (Airport Authority) has selected strategies to meet the water quality goals for copper and zinc in wet weather discharges to best suit the unique characteristics of the Airport Authority. For example, the Airport is almost entirely paved, and space available for many traditional BMPs is severely limited. The Airport Authority will continue to implement its core JRMP, which includes many strategies that have positive impacts on the water quality of MS4 discharges. To make progress toward its identified goals, the Airport Authority will enhance some existing JRMP strategies and will implement new strategies that concentrate on the Focused Priority Conditions.

San Diego International Airport (SDIA) was one of the first major U.S. airports to implement a sustainability policy and, as part of the airport expansion, included structural BMPs to address water quality. The project was designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification from the U.S. Green Building Council. The project included Best Management Practices (BMPs) such as permeable pavement, bioretention swales, and modular wetland treatment units. Future projects will continue to consider storm water and water quality improvements in design and implementation, where feasible.

The Airport Authority has identified the jurisdictional strategies, presented in Table B-1, to assist in meeting the WQIP goals. Strategies and implementation schedules were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

Table I-1. Airport Authority Jurisdictional Strategies

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
<i>All Development Projects</i>								
AA-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement Low Impact Development (LID) BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to SWMP (JURMP), Sustainability Policy, and LEED.	Jurisdiction-wide	Jurisdictional	Fiscal Year (FY)16	Ongoing		Environmental Affairs Department, FDD
<i>Priority Development Projects (PDPs)</i>								
AA-2	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Refer to SWMP (JURMP), Sustainability Policy, and LEED.	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
AA-3	Design and administer an alternative compliance program to on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects).	Optional.	Jurisdiction-wide	Optional	FY18 or Trigger			Environmental Affairs Department, FDD
Construction Management								
AA-4	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.		Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
Existing Development								
<i>Commercial, Industrial, and Municipal Facilities and Areas</i>								
AA-5	Administer and enforce a program to require implementation of minimum BMPs for existing development (commercial, industrial, and municipal) that are specific to the pollutant-generating activities (PGAs) and areas, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
	1. Update minimum BMPs for existing commercial and industrial development.		Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
	2. Design, implement, and enforce pollutant-generating-area-based and PGA-based inspections.		Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD

**Table I-1. Airport Authority
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	3. Design, implement, and evaluate source identification study to determine highest potential pollutant generating areas and PGAs.		Jurisdiction-wide	Jurisdictional	FY18			Environmental Affairs Department, FDD
	4. Increased inspection for highest potential pollutant generating areas and PGAs.		Jurisdiction-wide	Jurisdictional	FY19			Environmental Affairs Department, FDD
	5. Phase in advanced BMPs (as defined in Industrial General Permit (IGP)) in high priority areas.	Optional.	Subwatersheds (Runway, Taxiways, Ramps): Drainage basins 1, 3, & 5	Optional	FY17 or Trigger			Environmental Affairs Department, FMD, FDD
MS4 Infrastructure								
AA-6	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.) for water quality improvement.		Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
	1. Determine and implement optimal catch basin cleaning locations and frequencies to maximize pollutant removal.		Subwatersheds (Runway, Taxiways, Ramps): Drainage Basins 1,3, & 5	Jurisdictional	FY17			Environmental Affairs Department, FMD
Hardscapes (Runway, Taxiways, Ramps, Roads, Street, and Parking Lots)								
AA-7	Implement operation and maintenance activities for runway, taxiways, ramp areas, roadways, and parking lots.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FMD
	1. Determine and implement optimal street sweeping locations and frequencies on runway, taxiways, ramp areas, roads, and parking lots to maximize pollutant removal.		Subwatersheds (Runway, Taxiways, Ramps): Drainage Basins 1,3, & 5	Jurisdictional	FY17			Environmental Affairs Department, FMD
	2. Enhance street sweeping through equipment replacement (replace every X years).		Jurisdiction-wide	Optional	Trigger		Budget/Grant	Environmental Affairs Department, FMD
	3. Determine and implement optimal runway rubber removal locations and frequencies to maximize pollutant removal.		Subwatersheds (Runway, Taxiways, Ramps): Drainage Basins 1,3, & 5	Jurisdictional	FY17			Environmental Affairs Department, FMD

**Table I-1. Airport Authority
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	4. Determine and implement potential enhancements to runway rubber removal operations and equipment.		Subwatersheds (Runway, Taxiways, Ramps): Drainage Basins 1,3, & 5	Jurisdictional	FY18			Environmental Affairs Department, FMD
<i>Retrofit and Rehabilitation in Areas of Existing Development</i>								
AA-8	Develop a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
AA-9	Implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.		Jurisdiction-wide but prioritize Drainage Basins 1, 3, & 5	Optional	FY18			Environmental Affairs Department, FDD
<i>Public Education and Participation</i>								
AA-10	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
AA-11	Municipal staff and tenant training.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16			Environmental Affairs Department
<i>Enforcement Response Plan</i>								
AA-12	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to SWMP (JURMP).	Jurisdiction-wide	Jurisdictional	FY16	Ongoing		Environmental Affairs Department, FDD
<i>Additional Nonstructural Strategies</i>								
AA-13	Continue participating in source reduction initiatives.		Jurisdiction-wide	Optional	FY18+			
	1. Replace Authority-owned vehicle brake pads with copper-free brake pads as they become commercially available.		Jurisdiction-wide	Optional	FY18+			
	2. Encourage and facilitate replacement of tenant-owned vehicle brake pads with copper-free brake pads as they become commercially available.		Jurisdiction-wide	Optional	FY18+			

**Table I-1. Airport Authority
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	3. Encourage and facilitate use of maintenance-free, leak-proof batteries for electric vehicles as available.		Jurisdiction-wide	Optional	FY18+		Budget/Grant	
AA-14	Conduct a feasibility study to test Permeable Friction Course (PFC - a porous asphalt that overlays impermeable asphalt) and other permeable surface treatments.		Subwatersheds (Parking Lots, Taxiways): Drainage Basins 1,3,5,8,9,10, & 11	Optional	FY18+			
AA-15	As opportunities arise and funding sources are identified, protect areas that are functioning naturally by avoiding impervious development and degradation on unpaved open space areas.		Jurisdiction-wide	Optional	FY18+			
Green Infrastructure								
AA-16	Since 2013, approximately 6 acres of permeable surface has been installed at the airport.		Jurisdiction-wide	Jurisdictional	Prior to FY16			Environmental Affairs Department, FDD
AA-17	Develop a strategy to identify candidate runoff water capture and reuse projects and facilitate the implementation of such projects.		Jurisdiction-wide	Optional	FY18			Environmental Affairs Department, FDD
Multiuse Treatment Areas								
Infiltration and Detention Basins								
AA-18	Since 2013, approximately 2 acres of bioswales have been installed at the airport.		Jurisdiction-wide	Jurisdictional	Prior to FY16			Environmental Affairs Department, FDD
AA-19	1.25 acres of bioretention swales at the Rental Car Center.		Subwatershed (Rental Car Center)	Jurisdictional	FY17			Environmental Affairs Department, ADC
Water Quality Improvement BMPs								
Proprietary BMPs								
AA-20	Since 2013, the following proprietary TC BMPs have been installed at the airport: 12 modular wetland treatment units, 6 high-rate media filters, and 4 hydrodynamic separators.		Jurisdiction-wide	Jurisdictional	Prior to FY16			Environmental Affairs Department, FDD

K.2 Caltrans Strategies

Caltrans' jurisdiction areas include roadways, land adjacent to roadways, and facilities; Caltrans' jurisdictional strategies specifically focus on BMP implementation to reduce known pollutants within these areas. Caltrans is not permitted within the Municipal Permit; however, Caltrans is subject to similar requirements through its Municipal Permit (SWRCB, 2013). Though not permitted within the MS4 permit, Caltrans has voluntarily contributed to the Water Quality Improvement Plan effort to provide a consistent and subwatershed-wide approach to meeting applicable TMDL requirements. Caltrans voluntary contributions include a detailed list of strategies developed and provided in Table B-2 below. The strategies and schedules presented in Table B-2 are subject to change and are contingent upon annual budget approvals and funding availability. They will be modified through the adaptive management process as needed.

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Table I-2. Caltrans Jurisdictional Strategies

SDB ID	Strategy	Implementation Approach/Level of Effort	Location	Implementation or Construction Year	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies							
Design Stormwater Program							
CT-1	Update and implement design BMPs.	Office of Stormwater Management Design (OSWMD) develops, evaluates, and enhances guidance documents and tools. Refer to Landscape Architecture Program (LAP).	Jurisdiction-wide	FY16	Ongoing		HQ (OSWMD)
	1. Update and implement Landscape Architecture Program (LAP).	LAP provides technical assistance on new and ongoing research related to permanent erosion control and permanent BMPs. In addition, the LAP develops methods to enhance roadside vegetation, which protects slopes from erosion and sediment loss, and may remove pollutants from stormwater runoff.	Jurisdiction-wide	FY16	As needed		HQ (OSWMD)
	2. Implement native landscape/LID Design Guide Strategy.	Require native landscaping/LID in stormwater data report and project plan design guide. Done as part of erosion control. The Project Planning and Design Guide (PPDG) includes an online training program. Projects go through the same review process for native landscape reviews. If project is greater than an acre, subject to a stormwater data report. Minor projects are not subject to as extensive reviews. Try to treat 100% of roadway.	Jurisdiction-wide	FY16	Ongoing		District 11 with HQ (OSWMD)
CT-2	Train staff on Design Stormwater Program.	Train staff on Design Stormwater Program. Curriculum updated to reflect the latest strategies.	Jurisdiction-wide	FY16	Ongoing		District 11
CT-3	Plan and implement treatment BMPs as appropriate.	Treatment BMPs are planned and implemented to comply with Caltrans NPDES Permit project development requirements, TMDL waste load allocations, location specific requirements, and the requirements in the Project Planning and Design Guide (PPDG) according to the Targeted Design Constituent (TDC) approach. The treatment BMP consideration process favors infiltration of stormwater and directs staff to evaluate LID strategies first.	Jurisdiction-wide	FY16	Ongoing		District 11 NPDES and Design with HQ (OSWMD)
CT-4	Develop procedures to encourage mitigation for projects within the same watershed.	Caltrans will investigate procedures to mitigate within the same watershed as new projects.	Jurisdiction-wide	FY16	Ongoing and As needed		District 11 NPDES and Stewardship
CT-5	Implement a self-audit program to ensure BMPs are designed, implemented, and maintained.	Design Compliance Monitoring Program is a self-audit program that uses the SWDR (Stormwater Data Report) as a tool for documenting compliance with the design pollution prevention and treatment BMP requirements of the 1999 NPDES Permit, 2012 NPDES Permit, and the Caltrans' 2003 Statewide SWMP. The SWDR and its checklists are reviewed by District staff to ensure that BMPs are being considered and appropriately incorporated into Caltrans' projects. This review also ensures stormwater compliance throughout the project planning and design phases.	Jurisdiction-wide	FY16	Ongoing		District 11 NPDES

Table I-2. Caltrans Jurisdictional Strategies (continued)

SDB ID	Strategy	Implementation Approach/Level of Effort	Location	Implementation or Construction Year	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Construction Management							
CT-6	Administer a program to oversee implementation of BMPs during the construction phase of Caltrans projects. Includes inspections at an appropriate frequency and enforcement of requirements.	Caltrans complies with the statewide Construction General Permit. The district holds pre-construction meetings for all projects that require a SWPPP. For larger projects, there are year-round, weekly inspections.	Jurisdiction-wide	FY16	Ongoing		District 11 with the Division of Construction
CT-7	Construction stormwater training for District staff.	Continue implementation of the construction stormwater classes offered throughout the Caltrans districts by the Division of Construction. Classes updated to reflect latest permit requirements.	Jurisdiction-wide	FY16	Ongoing		District 11 with the Division of Construction
CT-8	Implement a self-audit program to ensure compliance with water quality requirements.	Continue implementation of the Construction Compliance Evaluation Plan. Evaluates contractor's SWPPP or WPCP implementation and assesses compliance with water quality requirements, evaluates stormwater contract administration, and incorporates quality control, quality assurance, and independent assurance elements.	Jurisdiction-wide	FY16	Ongoing		District 11 NPDES
CT-9	Maintenance training for employees.	The Division of Maintenance has formal stormwater management training sessions for new employees and refresher training for existing staff. Both types of courses are scheduled from one to 15 hours in length. In addition to formal training, Division of Maintenance policy is that Supervisors conduct stormwater BMP tailgate meetings a minimum of every 10 working days or when there is a change in the type of work activity. These meetings are to review BMPs prior to conducting roadside maintenance activities.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
Maintenance							
Facilities and Areas							
CT-10	Administer a program to require implementation of minimum BMPs for facilities and leased space (air space leases).	Refer to SWMP; Leased space is required to meet current stormwater regulations.	Jurisdiction-wide	FY16	Ongoing		District 11 with ROW Department

Table I-2. Caltrans Jurisdictional Strategies (continued)

SDB ID	Strategy	Implementation Approach/Level of Effort	Location	Implementation or Construction Year	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CT-11	Inspection of facilities and leased areas.	<p>The Department will continue to reduce the potential for storm water pollution by the development and implementation of Facility Pollution Prevention Plans (FPPPs), which specify controls to minimize contact between storm water and the various substances at highway maintenance facilities. Per Maintenance Manual Vol.2 under F Family, periodic inspections are conducted to evaluate whether the BMPs are adequate and properly implemented. The SWMP states this provision regarding FPPP.</p> <p><i>Maintenance Facility Pollution Prevention Plans. Facility Pollution Prevention Plans (FPPP) has been developed for each maintenance facility owned or operated by the Department. The FPPPs describe the activities conducted at the facility and the BMPs to be implemented to reduce the discharge of pollutants in storm water runoff from these facilities. Supervisors inspect their maintenance facilities monthly to monitor the implementation and adequacy of the BMPs. A report that includes the date of the inspection, the name of the inspector, observations, and recommended corrective actions is prepared by the Supervisor. All inspection records will be maintained for a period of 3 years. Any observed instances of non-compliance will be reported to the District Maintenance.</i></p>	Jurisdiction-wide	FY16	Ongoing		District 11 with ROW Department
CT-12	Implement BMPs targeting reduction of over-irrigation.	Reduce over irrigation by requiring native, drought tolerant plants and irrigation system improvements.	Jurisdiction-wide	FY16	Ongoing		District 11 Landscape and Stewardship
CT-13	Proactively monitor for erosion, and complete repair and slope stabilization.	Division of Maintenance conduct inspections on a five-year cycle. Program includes self-imposed goal to annually inspect approximately 20% of slopes in each District and includes investigating public complaints and widely understood problem areas (WUPAs).	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
MS4 Infrastructure							
CT-14	Inspect and clean catch basins and conduct source investigations to identify upstream source of materials.	Inspect catch basins once every three years with 1/3 inspected per year. If needed, catch basins are cleaned. If a catch basin is cleaned, a source inspection is conducted to identify source of sediment or other material.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
CT-15	Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	Prioritize MS4 repairs. Funding for repairs based on size of project. Districts are able to conduct small repairs immediately, while larger projects are prioritized for repair out of annual budget.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
Roads and Streets							
CT-16	Implement operation and maintenance activities on streets and roadways.	Refer to Work Plan.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
	1. Implement street sweeping.	Every road swept once a month. To meet performance schedule, street sweepers are replaced on a four-year cycle.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance

Table I-2. Caltrans Jurisdictional Strategies (continued)

SDB ID	Strategy	Implementation Approach/Level of Effort	Location	Implementation or Construction Year	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	2. Perform sweeping of medians on high-volume arterial roadways.	Medians with shoulders are swept approximately once per month.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
<i>Pesticide, Herbicides, and Fertilizer BMP Program</i>							
CT-17	Implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers.	Refer to Vegetation Control Plan. Caltrans is actively reducing fertilizer/pesticide application and only applies to targeted areas. All pesticide use is reported to the California Department of Pesticide Regulation.	Jurisdiction-wide	FY16	Ongoing		District 11 with Roadside Maintenance Office and California DPR
<i>Illicit Connections/Illegal Discharges</i>							
CT-18	Identify and resolve potential illicit connections/illegal discharges (IC/IDs).	Continue maintaining a hotline for reporting of illicit discharges. Majority of calls come from contractors and construction and maintenance staff. Continue coordination with other jurisdictions to address IC/IDs and provide written notification of potential IC/IDs associated with a municipality's jurisdiction.	Jurisdiction-wide	FY16	Ongoing		District 11 with other jurisdictions
CT-19	Identify erosion and slope stabilization issues on private or municipal property and inform the source for repair.	When Caltrans staff or contractors identify erosion or slopes in need of repair, it is treated as an IC/ID and the property owner is notified.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
<i>Public Education and Participation</i>							
CT-20	Implement a public education and participation program to raise awareness of stormwater pollution and prevention on California's freeways and highways.	Continue to implement the "Don't Trash California" Campaign, Adopt-A-Highway program, and partner with local organizations.	Jurisdiction-wide	FY16	Ongoing		District 11 with HQ (OSWMD)
	1. Conduct trash cleanups.	Conduct trash cleanups through local probation and adopt-a-highway programs. Encourage prevention through "Don't Trash California" campaign.	Jurisdiction-wide	FY16	Ongoing		District 11 Division of Maintenance
	2. Target school-based education and outreach.	Provide outreach to schools raising awareness of stormwater pollution through watershed model demonstrations. Hold bring-your-child-to-work days with watershed model.	Jurisdiction-wide	FY16	Ongoing		District 11 with HQ (OSWMD)
<i>Other Nonstructural Strategies</i>							
CT-21	To provide sanitation and trash management, implement access control in targeted areas.	As necessary, implement methods such as rip-rap, chain link fences, and remove low-lying brush to discourage use of right-of-way areas.	Jurisdiction-wide	FY16	Ongoing		District 11 NPDES, Design and Maintenance

Table I-2. Caltrans Jurisdictional Strategies (continued)

SDB ID	Strategy	Implementation Approach/Level of Effort	Location	Implementation or Construction Year	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CT-22	Continue participating in source reduction initiatives.	Continue participation in Brake Pad Partnership through work with California Stormwater Quality Association.	Jurisdiction-wide	FY16	Ongoing		HQ with CASQA
CT-23	Removal of invasive plants.	Removal of invasive plants through maintenance and construction programs.	Jurisdiction-wide	FY16	Ongoing		District 11 with Division of Maintenance
CT-24	Protect areas that are functioning naturally.	Required as part of the stormwater data report (SWDR), the Project Planning and Design Guide (PPDG), and the Natural Environment as Treatment (NEAT) programs, Caltrans minimizes disturbance of exiting vegetation and avoids hardscapes.	Jurisdiction-wide	TBD	As available		District 11 with HQ (OSWMD)
CT-25	Collaborate with RPs on WQIPs.	Voluntarily participate in the development of the WQIP and continue to collaborate with RAs on water quality planning and implementation projects.	Jurisdiction-wide	FY16	Ongoing		District 11
Multiuse Treatment Areas							
<i>Infiltration and Detention Basins</i>							
CT-26	BMP Retrofit (#282401)	Chollas Creek BMP Retrofit Project; Interstate 15 and 94. There are 4 modified infiltration trenches, 1 austin vault sand filter and 3 biofiltration swales. DSA is modified to 3.74 acres from PA&ED of 4.69 acres.	San Diego Bay, Chollas Creek	2014	2014		District 11
CT-27	Construct Lanes and Transit Station) (#2T1301)	Construct BRT Lanes and Transit Station on Interstate 15. Install 2 bioswales and 1 media filter to treat approximately 18 acres.	San Diego Bay, Chollas Creek	2014	2016		District 11
<i>Other Opportunities</i>							
CT-28	Soundwall Construction (#2T1831)	Soundwall Construction; I-805 (BMPs?). Only the last portion of project falls in Chollas Creek.	San Diego Bay, Chollas Creek	2014	2016		District 11

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K.3 City of Chula Vista Strategies

The City of Chula Vista (Chula Vista) is located within the Sweetwater River and Otay River subwatersheds. Jurisdictional strategies will target the Focused Priority Conditions in both subwatersheds. Chula Vista will implement jurisdictional programs city-wide. Additional strategies will be implemented west of Interstate 805, which contains high-density urban land uses with aging infrastructure, to address the Focused Priority Conditions. The area east of Interstate 805 generally has newer development and infrastructure, and more pervious area and BMP implementation, because these areas were developed under more recent permits and land development requirements.

Chula Vista has a robust education and outreach program, which includes Home-Owners Association (HOA) collaboration, bimonthly trash bill inserts, collaboration with “I Love a Clean San Diego” on cleanup events, and a revamped website. Chula Vista also formed the CLEAN Team, which consists of the Conservation, Environmental Services, and Storm Water Management Sections of the City. In addition, a new City Operations Sustainability Plan, detailing water use, energy use, green purchasing, recycling and waste management, pollution prevention, transportation, green buildings, and green infrastructure, was adopted in June 2014.

Strategies and implementation schedules were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

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**Table I-3. City of Chula Vista
 Jurisdictional Strategies**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
CV-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to Jurisdictional Runoff Management Program (JRMP) Development Planning Section.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section, Engineering Section
CV-2	Amend municipal code and ordinances to facilitate and encourage LID opportunities.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	As needed		NPDES Section
CV-3	Train staff on LID regulatory changes and BMP Design Manual.	Training program is already in place.	City-wide	Jurisdictional	Prior to FY16	As needed		NPDES Section
CV-4	Maintain existing floor area ratio requirements to limit impervious surface areas.	Optional.	City-wide	Optional	Trigger (if included in BMP Design Manual requirements)			
Priority Development Projects (PDPs)								
CV-5	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants and manage hydromodification. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Program is included in BMP Design Manual.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section, Engineering Section
	1. Administer self-certification program for treatment control BMP compliance.	Self-certification program and corresponding form are already being used.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section
CV-6	Amend BMP Design Manual for trash areas. Require full four-sided enclosure, siting away from storm drains and cover. Consider the retrofit requirement.	Trash enclosure details are included in Storm Water Ordinance and Recycling and Solid Waste Manual.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Environmental Service Section
CV-7	Administer an alternative compliance program to on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects).	List of sites will be included in WQIP. After approval, implementation will be in 6 months.	City-wide	Jurisdictional	FY16	Ongoing		Development Services Department
Construction Management								
CV-8	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.	Program is included in existing construction program and will update with JRMP.	City-wide	Jurisdictional	Prior to FY16	Monthly		NPDES Section, Construction Inspections Section

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
<i>Existing Development</i>								
<i>Commercial, Industrial, Municipal, and Residential Facilities and Areas</i>								
CV-9	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Program is included in JRMP and trash BMPs will be added.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section
	1. Update minimum BMPs for existing residential, commercial, and industrial development.	Minimum BMPs for over irrigation will be updated.	City-wide	Jurisdictional	FY15	Once		NPDES Section
	2. Design, implement, and enforce property- and PGA-based inspections to focus on trash.	Current inspection program is facilities-based and will also inspect per hot spots map. High priority areas are inspected once a year, and low priority areas are inspected once every five years. An enforcement program is also in place.	City-wide	Jurisdictional	FY15	Ongoing		NPDES Section
	3. Design, implement, and enforce mobile business program.	Chula Vista has a mobile business program in effect. Business License Department administers storm water information packet and questionnaire, and businesses must agree to not discharge pollutants into storm drains. Storm Water Section has final approval. Mobile businesses are inspected as needed.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section
	4. Review policies and procedures to ensure discharges from swimming pools meet permit requirements.	Storm Water Ordinance and JRMP will be updated.	City-wide	Jurisdictional	FY15	Ongoing		NPDES Section
	5. Implement program to require retrofit of trash enclosures.	If a building permit is required, plans are reviewed and trash enclosures are inspected and retrofitted if needed.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Environmental Services Section
	6. Implement Water Efficient Landscape Ordinance.	The Water Efficient Landscape Ordinance will be amended to include new permit requirements, and the Storm Water Ordinance will be updated to disallow over irrigation.	City-wide	Jurisdictional	FY15	Once		Conservation Section
CV-10	Implement pet waste program. May include installation and maintenance of pet waste bag dispensers and trash bins, and signage and education.	Chula Vista distributes pet waste bag holders and has pet waste bag stations in parks. There is also a hotline to report incidences, and public education will be increased.	Parks, trails	Jurisdictional	Prior to FY16	Ongoing		Parks

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CV-11	Promote and encourage implementation of designated BMPs at residential areas.	A residential program will be established. The Conservation Section has programs for water efficiency. In addition, the new City Operations Sustainability Plan was adopted in June 2014.	City-wide	Jurisdictional	FY15	Ongoing		CLEAN Team
	1. Encourage use of compost/soil amendments as opposed to fertilizer to decrease runoff.	Chula Vista is working with landscape architects to require in all new construction.	City-wide	Jurisdictional	FY16	Ongoing		Franchise Holler with Republic
	2. Promote and collaborate with water agencies and other groups to encourage implementation of water conservation programs that improve water quality by reducing over-irrigation with smart products or turf replacement and capturing rain water in residential areas.	Chula Vista works with Otay and Sweetwater Water Agencies.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Otay and Sweetwater Water Agencies
	3. Promote and encourage implementation of designated BMPs in non-residential areas.	The Storm Water Manual includes implementation of BMPs in non-residential areas.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES, Environmental Services Section, Conservation Section
MS4 Infrastructure								
CV-12	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.) for water quality improvement and flood control risk management.	Chula Vista has an MS4 inspection and maintenance program in place. Refer to JRMP for more information.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Wastewater Section
	1. Optimize catch basin cleaning to maximize pollutant removal (prioritize catch basin cleaning based on collected data).	Current catch basin cleaning is once a year, and high PGAs are inspected once a month. Cleanings are prioritized by amount of trash.	City-wide	Jurisdictional	Prior to FY16	Ongoing		
	2. Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	Chula Vista has an MS4 inspection and maintenance program in place and provides surveys and performs repairs ASAP when needed.	City-wide	Jurisdictional	Prior to FY16	As needed		Wastewater Section
	3. Implement and increase annual open-channel cleaning and scour pond repair to reduce pollutant loads and invasive plants and animals.	Chula Vista has an MS4 inspection and maintenance program in place but does not have environmental permits to clean channels with equipment, so channels are cleaned by hand.	City-wide	Jurisdictional	Prior to FY16	Annually		Wastewater Section
CV-13	Implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers.	Chula Vista has a monitoring survey and SSO plan.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Sewer Collection, Point Loma for treatment
	1. Identify sewer leaks and areas for sewer pipe replacement prioritization.	Wastewater Section performs repairs.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Wastewater Section

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Roads, Street, and Parking Lots								
CV-14	Implement operation and maintenance activities for public streets, unpaved roads, paved roads, and paved highways	Street sweeping is contracted out. Commercial, industrial, and business street segments are swept once per two weeks. Residential, center islands, medians, and center lines street segments and public parking lots are swept once per two months. Republic manages Main Street and areas near landfill. Refer to JRMP for more information. Refer to JRMP for more information.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Contractor via Streets Section, Republic
Pesticide, Herbicides, and Fertilizer BMP Program								
CV-15	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Department of Pesticides is responsible. Parks and Open Spaces Section should be examined.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Parks and Open Spaces Section
Retrofit and Rehabilitation in Areas of Existing Development								
CV-16	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	Refer to JRMP.	City-wide	TBD	TBD	TBD		TBD
CV-17	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	Refer to JRMP.	City-wide	TBD	TBD	TBD		TBD
Illicit Discharge, Detection, and Elimination (IDDE) Program								
CV-18	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Chula Vista contracts out outfall monitoring and receives hotline and email complaints. Refer to JRMP for more information.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Contractor
	1. Implement program for employee reporting of potential illicit discharges.	Chula Vista trains employees to look for illegal discharges and report them. Current training frequency is once a year. There is also a hotline dispatch and anyone can call and report.	City-wide	Jurisdictional	Prior to FY16	Annually		NDPES Section, Public Works Operations
	2. Utilize "Act Chula Vista" smartphone application to encourage residents to report potential illicit discharges or other storm water violations.	"Act Chula Vista" smartphone application is currently in use.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Operations

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CV-19	Conduct frequent visual outfall monitoring to identify and eliminate illicit discharges.	Chula Vista will develop a trash program to target more outfalls, increase inspection, and amend the observation form. Additional revisions will be made to the Municipal Permit to include types of trash and sources.	City-wide	Jurisdictional	FY16	Ongoing		NDPES Section, Wastewater Section, Contractor
Public Education and Participation								
CV-20	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	The CLEAN team, Environmental Services Section, and Conservation Section work together on public outreach programs.	City-wide	Jurisdictional	Prior to FY16	Ongoing		CLEAN Team, Environmental Services Section, Conservation Section
	1. Expand outreach to multi-unit family complexes, which is defined as HOAs and apartments.	Chula Vista will outreach to HOAs. Mailers with trash information are sent out twice a year via Environmental Services Section, and information on over irrigation, BMPs, and general stormwater can be included.	City-wide	Jurisdictional	Fall FY15	1-2 times a year		Environmental Services Section
	2. Develop an outreach and training program for residential property managers responsible for HOAs.	The program will target trash and irrigation reduction.	City-wide	Jurisdictional	FY18	As needed		Residential property managers
	3. Enhance and expand trash cleanups through community-based organizations involving target audiences.	Chula Vista partners with "I Love a Clean San Diego" on cleanup events, such as Creek to Bay, Coastal Cleanup, and Adopt a Canyon. Chula Vista also has its own cleanup event called Beautify CV Day.	City-wide	Jurisdictional	Prior to FY16	Ongoing		ILACSD
	4. Improve consistency and content of websites to highlight enforceable conditions and reporting methods.	The Chula Vista website is currently being updated and will include information for the public on environmental programs. Information can also be sent out in bimonthly bill inserts.	City-wide	Jurisdictional	FY15	As needed		CLEAN Team
	5. Community events and clean businesses	The CLEAN team has booths at public festivals and provides information. The clean business program, led by the Environmental Services Section, verifies businesses to become clean businesses.	City-wide	Jurisdictional	Prior to FY16	Ongoing		CLEAN team, Environmental Services Section
	6. Target human behavior in parks and other public areas including trash reduction or other high impact behavior to habitat, wildlife, and water quality.	TBD.	City-wide	TBD	TBD	TBD		TBD
	7. Enhance school and recreation-based education and outreach	Chula Vista works with "I Love a Clean San Diego" on over 30 community events a year for the Boys and Girls Club, schools, high school environment clubs, and adult organizations.	City-wide	Jurisdictional	Prior to FY16	Ongoing		ILACSD

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	8. Collaborate with regional education and outreach efforts.	Optional.	Region-wide	Optional	Trigger (region-wide effort)	Quarterly		Regional groups
	9. Develop education and outreach to reduce over-irrigation	Chula Vista partners with Otay and Sweetwater Water Agencies and will add irrigation reduction information to bimonthly trash bills. Chula Vista will also educate and publicize new Storm Water Ordinance.	City-wide	Jurisdictional	?	?		Otay and Sweetwater Water Agencies
CV-21	Municipal staff training	Chula Vista performs annual storm water trainings.	City-wide	Jurisdictional	Prior to FY16	Annually		NPDES Section
CV-22	Enhance education and outreach based on results of effectiveness survey and changing regulatory requirements.	Chula Vista conducts surveys and could collaborate with CLEAN team.	City-wide	Jurisdictional	FY18 (trash program)	Ongoing		CLEAN Team
Enforcement Response Plan								
CV-23	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	The City has an enforcement program in place, which provides for escalating enforcement. The Enforcement Response Plan will be developed in the JRMP update.	City-wide	Jurisdictional	FY16	Ongoing		NPDES Section
	1. Increase enforcement of over-irrigation. Enforce power washing.	Chula Vista will develop through residential program. There is a mobile business program in place to enforce powerwashing.	City-wide	Jurisdictional	FY16	Ongoing		City in partnership with Sweetwater Water Authority and Otay Water District
	2. Focus locally on enforcement of water-using mobile businesses.	The mobile business program and Enforcement Response Plan are used.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section
CV-24	Enforce minimum BMPs for existing residential, commercial, and industrial development. Includes power washing at non-residential sites.	Minimum BMPs will be included in the JRMP update.	City-wide	Jurisdictional	F16	Ongoing		CLEAN business program, NPDES Section
CV-25	Enforce property- and PGA-based inspections.	The current inspection program will be continued.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section
CV-26	Enforce sweeping and maintenance of private roads and parking lots in targeted areas.	Chula Vista will continue its street sweeping program, which does not include private roads or parking areas.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Contractor via Streets Section
Additional Nonstructural Strategies								
CV-27	Address and clean up pollutants from homeless encampments through Homeless Outreach Team	The City does not have an outreach program, but the NPDES, Wastewater, and Police Department work collaboratively.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section, Wastewater Section, Police Department
CV-28	Continue participating in source reduction initiatives.		City-wide		Prior to FY16	Ongoing		
	1. Continue implementation of cigarette ban on beaches, parks and in commercial areas.	Smoking is banned at City of Chula Vista parks	City-wide	Jurisdictional	Prior to FY16	Ongoing		Code Enforcement

**Table I-3. City of Chula Vista
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	2. Continue program to address and capture trash and debris.	The City will look at enhancements where possible to install capture systems.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section, Wastewater Section
CV-29	Proactively monitor for erosion, and complete minor repair and slope stabilization on municipal property.	This is included in the municipal inspection program.	City-wide	Jurisdictional	Prior to FY16	Ongoing		NPDES Section, Parks
CV-30	Conduct special studies							
	1. Reference watershed study	Chula Vista is participating in the regional water study.	Region-wide	Jurisdictional/ Regional	Prior to FY16	Need end-date	Regional	NPDES Section
CV-31	Proactively repair and replace corrugated metal pipe (CMP) MS4 components to provide source control from MS4 infrastructure.	There is an MS4 inspection and maintenance program in place.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Wastewater Section
CV-32	If a regional social services effort is established, support workgroup to provide sanitation and trash management for person experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	Optional.	?	Optional	?	?		?
CV-33	As opportunities arise and funding sources are identified, protect areas that are functioning naturally by avoiding impervious development and degradation on unpaved open space areas, creating permanent open space protections on undeveloped city-owned land, and acquiring privately-owned undeveloped open areas.	Optional.	?	Optional	?	?		?
CV-34	If invasive plant and animal removal is necessary in key locations, collaborate with Urban Corps of San Diego or other volunteer groups as needed.	Optional.	?	Optional	?	?		?

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K.4 City of San Diego Strategies

The City is currently implementing administrative policies, urban development management programs, and innovative pilot studies, and is investing in research for site locations for green infrastructure and other treatment BMPs throughout its jurisdiction in multiple watersheds. The City has identified water quality improvement strategies that are expected to provide the greatest benefits to the watershed and its residents, businesses, communities within the City’s jurisdictional boundaries.

Strategies were selected by evaluating the following considerations, in descending priority:

- Potential to reduce pollutant loads for the Highest Priority Conditions;
- Potential to reduce loads for other pollutants (including Priority Conditions);
- Cost effectiveness;
- Feasibility and ease of implementation;
- Social impacts and benefits;
- Other¹ impacts and benefits.

The strategies that provide the best value, most sustainable return on investment, and greatest range of benefits were selected, as needed, as the City moves forward in its water quality improvement efforts. These strategies are consistent with those already identified in the Comprehensive Load Reduction Plans (CLRPs) for various TMDLs in the San Diego Region.

The City is currently developing a framework to evaluate the potential additional benefits the strategies may provide beyond improved water quality. These additional benefits may be financial, environmental, or societal. The strategies will be evaluated based on these benefits and assigned a potential benefit level which may guide future updates to the WQIP.

The cumulative storm water quality benefits of the strategies identified in this WQIP represent the level of effort needed to demonstrate progress toward achieving the WQIP interim and final numeric goals. It is important to note that these strategies are subject to change through the iterative, adaptive management process set forth in this Water Quality Improvement Plan. Through the adaptive management process the Responsible Parties will be able to implement strategies and assess their impact to water quality and use new available information to refine, modify, remove, replace, or add strategies which will ensure the most effective suite of strategies are being implemented. Therefore, actual implementation of strategies is dependent upon both

¹ Other benefits refer to *additional* outcomes of a strategy beyond water quality improvements. Other benefits can include reduced air pollution, increased water conservation, aesthetics-induced property value increases, and increased business investments.

approval of funding in future annual budgets and adjustments that may occur as part of the iterative process. If the City elects to use the WQIP as a TMDL compliance document per Attachment E of the Municipal Permit, then the compliance analysis under Attachment E will be updated to ensure that any modifications to strategies will continue to achieve compliance with the TMDL targets.

The recommended strategies selected are presented in Table B-4. These strategies will be implemented by the City; they are not intended to be implemented by private entities (e.g., development, business, industry, etc.). Some of the City's strategies, such as development planning, may have implications for private entities. The City has also developed a schedule as a best estimate of the shortest amount of time required to plan and implement the strategies. The City's schedule table is found in Table B-5. A compliance analysis using a watershed model was conducted to identify the strategies required to be implemented to meet interim and final goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the compliance analysis will be updated as needed to provide assurance that numeric goals will be met.

Optional strategies are activities that may be implemented by the City at its discretion through the iterative approach. Optional strategies may or may not be necessary in order to achieve the WQIP goals, depending on the performance of the near-term strategies. The City may select from the optional strategies if the current suite of strategies is not demonstrating sufficient progress toward achieving interim or final numeric goals, or if grant funding or partnership opportunities arise for one of the optional strategies. These optional strategies are also subject to approval of City's budget and availability of funding.

San Diego's jurisdiction includes a dense population and increased impervious urban land uses. The following strategies address the Highest Priority Conditions in San Diego's jurisdiction within the San Diego Bay WMA and other jurisdictional areas outside of the boundaries where the Highest Priority Condition has been identified. For example, the City implements a trash mitigation strategy in western Otay River Valley Park. Although the City is focusing efforts in the Chollas Creek Watershed, many strategies presented are implemented in jurisdictional areas outside of Chollas Creek Watershed.

**Table I-4. City of San Diego
 Jurisdictional Strategies**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies							
Development Planning							
All Development Projects							
CSD-1	Establish guidelines and standards for all development projects; provide technical support related to implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area or implement easements to protect water quality, where applicable and feasible.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-1.1	Investigation and research of emerging technology.	Annually the Construction & Development Standards Group identifies new tasks to conduct literature review, communication with researchers outside of the City, physical testing and experimentation of new or emerging technologies, and other research with the goal of updating tools available for reducing pollutant loads from development and redevelopment sites.	City-wide	Jurisdictional	Prior to FY16	As needed	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-1.2	Approve and implement a green infrastructure policy.	The City will begin developing a policy in FY16 that will increase the green infrastructure requirements for City CIP projects. This policy will be coordinated with ongoing efforts to update City design manuals and LID design standards for public LID BMPs.	City-wide on public parcels	Jurisdictional	FY16 (Begin)	As needed	T&SW with DSD and PWD
CSD-1.3	Develop Design Standards for Public LID BMPs.	Improve quality of design to ensure efficiency and reliability in public designs.	City-wide	Jurisdictional	FY14-FY15	As needed	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-1.4	Outreach to impacted industry regarding minimum BMP requirement updates.	Affects commercial, industrial, and residential development.	City-wide	Jurisdictional	FY15	As needed	TBD
CSD-2	Train staff on LID regulatory changes and LID practices.	Formal training is required for all staff involved in development plan review to increase knowledge of LID BMPs. Goal of training associated with LID practices and regulations is to promote LID implementation and to avoid adverse conditions such as trees planted within swales, or planned drainage patterns which obstruct or inhibit LID performance.	City-wide	Jurisdictional	FY16	As needed	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-3	Amend municipal code and ordinances, including zoning ordinances, to facilitate and encourage LID opportunities. Ensure consistency with the City of San Diego's BMP Design Manual. Update the Storm Water Standards Manual accordingly.	Municipal codes and ordinances will be brought to City Council for consideration to encourage LID implementation (e.g., runoff detention and filtration using natural filters and stormwater retention for reuse). LID stormwater management will be encouraged in proposed codes and ordinances associated with development and redevelopment projects, which are brought to City Council for consideration.	City-wide	Jurisdictional	FY15	As needed	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-4	Create a manual that outlines right-of-way design standards.	Create a manual that includes flood control performance standards, permanent BMP elements design standards, design standards for green streets and other BMPs, and maintenance access. Provides drainage and streets design standards. Opportunity to merge various existing manuals and provide consistency.	City-wide	Jurisdictional	FY15	One time	T&SW with DSD and PWD
CSD-5	Provide technical education and outreach to the development community on the design and implementation requirements of the Municipal Permit and Water Quality Improvement Plan requirements.	Technical education and outreach to the development community includes outreach on design standards, City design manuals, and the WMAA.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD
Priority Development Projects (PDPs)							
CSD-6	For PDPs, provide technical support to other City departments to ensure implementation of on-site structural BMPs to control pollutants and manage hydromodification by developing City wide storm water development standards and design guidelines.	Coordinate with other City departments to promote and confirm a thorough understanding of requirements for implementing structural BMPs that control pollutants and manage hydromodification. Included in that understanding are requirements to confirm proper design and construction through processes controlled by other City departments.	City-wide	Jurisdictional	FY16	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-6.1	Institute a program to verify and enforce maintenance and performance of treatment control BMPs.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-7	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY15	Every 5 years/ permit cycle	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-7.1	Amend BMP Design Manual for trash areas. Require full four-sided enclosure, siting away from storm drains and cover. Consider the retrofit requirement.	Amend BMP Design Manual and zoning standards/requirements which address reduction of pollutants for common areas of trash build-up (e.g. restaurants, supermarkets, "big box" retail stores with food, pet stores). Most effective method for source control of bacteria and trash is to employ four-sided trash enclosures with a cover over trash areas.	City-wide	Jurisdictional	FY15	One time	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-7.2	Amend BMP Design Manual for animal-related facilities, such as such as animal shelters, "doggie day care" facilities, veterinary clinics, breeding, boarding and training facilities, groomers, and pet care stores.	Amend BMP Design Manual and zoning requirements (including retrofits) to provide supplemental standards for animal facilities (including animal shelters, dog daycares, veterinary clinics, groomers, pet car stores, and breeding, boarding, and training facilities). Supplemental standards may include requiring covered trash enclosures, identification of landscaped relief areas on site plans, ensuring drainage connections and treatment swales for areas that will not drain to the sanitary sewer, as well as inspection of grading, drainage, and landscaping for outdoor exercise areas.	City-wide	Jurisdictional	FY15	One time	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-7.3	Amend BMP Design Manual for nurseries and garden centers.	Amend BMP Design Manual to provide supplemental standards for plant nurseries and garden centers. Standards will focus on reducing irrigation runoff, and loading of sediment, pesticides, and nutrients. Measures may include: covered outdoor storage, green waste management BMPs, improved irrigation efficiency to reduce dry-weather runoff, and containment of runoff from impervious areas where plants and materials are stored.	City-wide	Jurisdictional	FY15	One time	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-7.4	Amend BMP Design Manual for auto-related uses.	Amend BMP Design Manual to provide supplemental standards for automotive-related uses to reduce loading of metals, oils, grease, and trash. Measures may include: four-sided covered trash enclosures, and careful review of auto-related usage areas (e.g. garage bays at repair shops) for grading, drainage, and drain connections to sanitary sewer systems.	City-wide	Jurisdictional	FY15	One time	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-8	Develop and administer an alternative compliance program for on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects). Refer to Section 4.2.5.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY15	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-8.1	Create a fund that allows habitat acquisition, protection enhancement, and restoration in conjunction with other cooperating entities including community groups, academic institutions, state county, and federal agencies, etc.	This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, 4) partners have been identified and formal MOUs have been developed, and 5) consensus and community support has been achieved.	City-wide	Optional	Optional	TBD	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
Construction Management							
CSD-9	Coordinate with other City departments to promote and confirm a thorough understanding of requirements for implementing temporary BMPs that control sediment and other pollutants during the construction phase of projects. Included in that understanding are requirements to inspect at appropriate frequencies and effectively enforce requirements through process controlled by other City departments.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
Existing Development							
Commercial, Industrial, Municipal, and Residential Facilities and Areas							
CSD-10	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW with DSD, PUD, & PWD
CSD-10.1	Update minimum BMPs for existing residential, commercial, and industrial development. Specific updates to BMPs include required street sweeping, catch basin cleaning, and maintenance of private roads and parking lots in targeted areas.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY15	Every 5 years	T&SW
CSD-10.2	Outreach to property managers and trash haulers to elevate the emphasis of power washing as a pollutant source.	Emphasis will be placed on non-compliant washing as an enforceable violation.	City-wide Residential, commercial and industrial areas	Jurisdictional	FY15	Ongoing	T&SW
CSD-10.3	Implement property based inspections.	Property-based inspections increase awareness and responsibility for individual properties to tackle issues associated with trash, landscapes, and parking areas. Expanding beyond the business-level inspections will achieve different and more effective opportunities for education, outreach, inspection, and enforcement to encourage water conservation strategies.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW
CSD-10.4	Review policies and procedures to ensure discharges from swimming pools meet permit requirements.	Verify and bring to City Council for consideration an update (as needed) for the City's Municipal Code (43.0301) to meet new permit requirements for swimming pool discharges.	City-wide	Jurisdictional	FY15	As needed	T&SW, City Attorney (Civil & Criminal)

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-11	Promote and encourage implementation of designated BMPs for residential and non-residential areas.	Landscape-based rebates are a "gateway" for adoption of other beneficial practices and are one of the nonstructural methods which address impacts from single-family residential areas (City of San Diego 2011 program development background study). Residential incentives can include: education and training (neighborhood watershed field days), and aggressive subsidies or rebates for grass replacement and rainwater harvesting. Existing programs will be expanded overall, and also have targeted expansion within specific subwatershed, particularly with highest water quality priority conditions.	City-wide Residential and Commercial Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PUD, PWD, MWD, CWA & local water agencies
CSD-11.1	Residential and Commercial BMP: Rain Barrel	The existing PUD rebate program will continue for residential properties and expand for commercial properties for water collection, conservation, and reuse with rain barrels.	City-wide Residential Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PUD, PWD, & local water agencies
CSD-11.2	Residential and Commercial BMP: Grass Replacement	The existing PUD grass replacement cash rebate program will continue and expand for residential and commercial properties. Program encourages a reduction in water use through the conversion of non-artificial grass to water wise plant material, while maintaining a high level of living landscape to benefit the environment.	City-wide Residential and Commercial Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PUD, PWD, & local water agencies
CSD-11.3	Residential and Commercial BMP: Downspout Disconnect	Disconnecting downspouts provide alternate runoff pathways from rooftops, sidewalks, driveways, and roads. Disconnecting downspouts from residential areas to pervious land can allow for depression storage and infiltration.	City-wide Residential and Commercial Areas	Jurisdictional	FY16	Ongoing	T&SW with DSD, PUD, PWD, & local water agencies
CSD-11.4	Residential and Commercial BMP: Microirrigation	The existing PUD micro-irrigation rebate program will continue and increase for residential and commercial properties. Application of microirrigation aims to improve the efficiency of landscape irrigation through the precise application of water.	City-wide Residential Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PUD, PWD, & local water agencies
CSD-11.5	Provide Onsite Water Conservation Surveys.	Provide free onsite water conservation surveys to commercial and residential customers to reduce overirrigation and to encourage water conservation.	City-wide Residential and Commercial Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD, PUD, PWD, & local water agencies
MS4 Infrastructure							
CSD-12	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, channels as allowed by resource agencies, detention basins, etc.) for water quality improvement and for flood control risk management.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-12.1	Enhanced catch basin cleaning to increase pollutant removal (up to 4 times per year) in the rainy season.	To increase pollutant load removal, catch basins will be cleaned up to four times per year in the rainy season. The City of San Diego's pilot study found that major pollutants may vary from neighborhood to neighborhood (yard waste versus trash and sediment). Implementation may be adapted based on catch basin record keeping and cleaning optimization. Increase in frequency will be phased over 4 Fiscal Years.	Chollas: High priority areas identified in pilot study	Jurisdictional	FY16	Ongoing	T&SW
CSD-12.2	Increased frequency of catch basin inspection and as-needed cleaning.	Per the Settlement Agreement for the Master Storm Water Maintenance Program and Programmatic EIR, for every segment of channel that is cleared, the City will conduct an inspection and as-needed cleaning of every catch basin within 100 feet of the cleared segment of channel. The additional inspection and as-needed cleaning will occur every three months for one year after the segment of channel is cleared.	Chollas (48 open channel segments)	Jurisdictional	FY13	5 years (ends FY18)	T&SW
CSD-12.3	Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	In order to limit inflow of pollutants and reduce pollutant loads, proactive measures will be taken to improve, repair, and replace MS4 components. The City of San Diego will start a multi-year program of repairing and replacing storm drain pipes to reduce sediment loading to the MS4. Development of an assessment management program and bond issues will be addressed. Exploration of daylighting pipes will take place where feasible and appropriate.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-13	Coordinate with other City departments (PUD) to implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW with PUD
CSD-13.1	Identify sewer leaks and areas for sewer pipe replacement prioritization.	Risk assessment to include identifying targeted areas (age, location, proximity to MS4), coming up with methodology, pilot, desktop exercise/analysis.	City-wide	Jurisdictional	FY16	As needed	T&SW with PUD
Roads, Street, and Parking Lots							
CSD-14	Implement operation and maintenance activities for public streets, unpaved roads, paved roads, and paved highways.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-14.1	Outreach to street sweeping enhancement-targeted areas.	Division staff will conduct a thorough education and outreach effort beginning months in advance of the expansion of sweeping routes. Staff will work with the affected Council offices, community stakeholders, non-governmental organizations and community groups to build community awareness and acceptance of the enhanced sweeping program.	Chollas Watershed	Jurisdictional	FY16	Ongoing	T&SW

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-14.2	Enhance street sweeping through equipment replacement (replace mechanical sweepers with regenerative air sweepers) and route optimization (sweep all routes twice per month) in targeted areas.	Following outreach and posting, street sweeping efforts will be increased in target areas (those with sediment or metals as a highest priority water quality conditions). Replacement of street sweeping equipment with high-efficiency regenerative air and vacuum-assisted sweepers over time is expected to further increase load reductions (even if current routes and frequencies remain unchanged).	Chollas Watershed	Jurisdictional	FY17	Ongoing	T&SW
CSD-14.3	Initiate sweeping of medians on high-volume arterial roadways.	Medians of roadways are also a potential source of pollutants. Consider implementing or increasing sweeping of medians. Consider mechanical and hand sweeping techniques.	City-wide	Jurisdictional	FY17	Ongoing	T&SW
CSD-14.4	Implement additional street sweeping (Settlement Agreement).	City shall increase street sweeping frequency by prioritizing high traffic commercial routes adjacent to maintained channel with vacuum-assisted sweeper for every 400 linear feet of vegetation that is removed (except for removal of invasive species, e.g., Arundo) within a drainage area. Sweeping shall be conducted in median areas that are not subject to regular sweeping routes, and shall occur at a frequency of at least once per quarter for one calendar year after maintenance.	Chollas Watershed	Jurisdictional	FY13	5 years (ends FY18)	T&SW
<i>Pesticide, Herbicides, and Fertilizer BMP Program</i>							
CSD-15	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	FY16	Ongoing	T&SW with Parks and Rec
<i>Retrofit and Rehabilitation in Areas of Existing Development</i>							
CSD-16	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	Refer to JRMP (currently under development). The Offsite Alternative Compliance Program will include methods for identifying and assessing potential retrofit projects in existing development areas. Retrofit project selection will be based upon a variety of factors including proximity to high priority water quality conditions, potential pollutant load removal effectiveness, and feasibility of implementation. The program will include protocols related to funding mechanisms for project construction and long-term maintenance, payment and credit structures, and water quality equivalency standards.	City-wide	Jurisdictional	TBD	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-17	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	Refer to JRMP (currently under development). The Offsite Alternative Compliance Program will include methods for identifying and assessing potential stream, channel, or habitat rehabilitation projects in existing development areas. Rehabilitation project selection will be based upon a variety of factors including existing stream or habitat degradation, potential future cumulative stream or habitat impacts, and feasibility of implementation. The program will include protocols related to funding mechanisms for project construction and long-term maintenance, payment and credit structures, and water quality equivalency standards.	City-wide	Jurisdictional	TBD	Ongoing	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>							
CSD-18	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW
<i>Public Education and Participation</i>							
CSD-19	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW
CSD-19.1	Continue implementation of a Pet Waste Program.	Pet Waste Program includes outreach on "Scoop the poop", installation of posts for dispensers, distribution of lawn signs, and attendance at dog-related community activities.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with Parks and Rec
CSD-19.2	Promote and encourage implementation of designated BMPs in commercial and industrial areas.	Provide education and outreach on BMPs for commercial businesses and industrial facilities.	City-wide Non-residential Areas	Jurisdictional	Prior to FY16	Ongoing	T&SW with PUD; Funding: Prop 84 and water districts (MWD)
CSD-19.3	Expand outreach to homeowners' association (HOA) common lands and HOA incentives.	Approaches to consider include: offering incentives to HOAs and maintenance districts to adopt water-conserving/efficiency and stormwater-reduction changes to their landscapes, irrigation, and maintenance; conducting workshops with property managers; providing supplemental standards, inspection, or enforcement for HOA-managed properties.	City-wide	Jurisdictional	FY16	Ongoing	T&SW

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-19.4	Develop an outreach and training program for property managers responsible for HOAs and maintenance districts.	Approaches to engage HOAs and property managers include: conducting workshops with property managers, providing supplemental standards, inspections or enforcement around HOA properties, and offering incentives to HOAs and maintenance districts to adopt changes to landscapes, irrigation, or maintenance which promote water conservation or stormwater reduction. Property managers are also a target for enhanced outreach.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-19.5	Enhance and expand trash cleanups through community-based organizations involving target audiences.	Increase effectiveness and reach of trash/beach cleanups and community based efforts by engaging community groups to self-define and carry-out trash clean-ups. Longstanding partnerships and sponsorships with I Love A Clean San Diego and others are recommended to be continued and enhanced. To effectively target stream clean-up efforts, focus on partnerships with community organizations which provide strong engagement with target audiences and communities.	City-wide	Jurisdictional	FY16	Ongoing	T&SW with Park and Rec
CSD-19.6	Trash mitigation in the western portion of the Otay River HU.	Longstanding partnerships and sponsorships with I Love A Clean San Diego and Otay Valley Regional Park (OVRP) will be continued and enhanced. The City of San Diego has a Joint Exercise Powers Agreement with the City of Chula Vista and the County of San Diego to manage the OVRP. City of San Diego park rangers perform regular maintenance of the Western OVRP including, but not limited to: overseeing all contract services; patrolling the Park and keeping it as clean and safe as possible; providing educational opportunities for visitors; providing consistent public outreach; maintaining the grounds and facilities; and coordinating with various agencies, public utilities, and other organizations. The park rangers work with WildCoast to educate the local community, and WildCoast supports OVRP's educational programs, such as brochure development and public outreach events like OVRP Day, I Love A Clean San Diego cleanups, and various other events throughout the year.	Otay River HU	Jurisdictional	Prior to FY16	Ongoing	Parks and Rec

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-19.7	Improve consistency and content of websites to highlight enforceable conditions and reporting methods.	Websites will be updated to provide a user-friendly format and clarity for stormwater violations, conditions which citizens can and should report, and how to make such reports. Examples of reports for common incidents will be developed and posted which may vary locally and regionally. Photographs of allowable practices as well as illegal practices should be shown for utmost clarity. Displaying hotline numbers prominently on the website and near the photographs of illegal practices will ensure that those seeking to report will be able to do so easily. Also ensure hotline number and website are searchable and can be retrieved by simple internet searches.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW
CSD-19.8	Enhance school and recreation-based education and outreach.	Develop curriculum and establish distribution in public schools. Includes education on water conservation.	City-wide	Jurisdictional	FY15	Ongoing	T&SW, PUD with community-based organization
CSD-19.9	Develop education and outreach to reduce irrigation runoff.	Example approaches to reduce or eliminate irrigation runoff may include: education and outreach, prohibition, enhanced enforcement of existing prohibitions, and pilot projects such as the City of Del Mar's pilot door hanger project.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with PUD
CSD-19.10	Develop regional training for water-using mobile businesses.	Consider development of supplemental standards for mobile businesses including: covered trash enclosures, careful review of washing areas (grading, drainage, landscaping, sanitary sewer system connectivity), and appropriate signage (either through zoning for retrofits or "best fix" approaches, or through BMP Design Manual standards). Businesses may include carpet cleaners, tile installers, plumbers, etc.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-19.11	Enhance education and outreach based on results of effectiveness survey and changing regulatory requirements.	Use effectiveness surveys to enhance existing education and outreach programs while proactively keeping up with and incorporating changing regulatory requirements.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
Enforcement Response Plan							
CSD-20	Continue to implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Storm Water Code Enforcement Unit's Standard Operating Procedures (SOPs) - Enforcement Response Plan.	Refer to JRMP (currently under development).	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with PUD, other City enforcement compliance programs

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-20.1	Increase enforcement of irrigation runoff.	Increased enforcement policies against irrigation runoff will be established in tandem with the education and outreach programs on how these actions lead to pollutant loading. By shifting to property-based inspections irrigation runoff can be handled as enforceable violations once the public is well-informed.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-20.2	Increase enforcement of water-using mobile businesses.	In addition to education, pollution associated with mobile business sources can be handled through policy, code development, inspections of business practices, and enforcement.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-21	Increase enforcement of all minimum BMPs for existing residential, commercial, and industrial development.	Increased enforcement of existing development minimum BMPs.	City-wide	Jurisdictional	FY16	As needed	T&SW
CSD-22	Increase enforcement associated with property-based inspections.	Shifting inspections from businesses-specific to property-based will increase effectiveness and sense of responsibility and ownership. Education and outreach must be followed up with inspection and enforcement of regulations to encourage proper landscape and water conservation strategies.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-23	Increase enforcement of sweeping and maintenance of private roads and parking lots in targeted areas.	Refer to Minimum BMPs in JRMP.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-24	Increase identification and enforcement of actionable erosion and slope stabilization issues on private property and require stabilization and repair.	Eroding and unstable slope areas on private property (excluding construction sites) will be identified as potential sediment loading sources and subject to enforcement. In the short term, this will target enhanced inspection and enforcement programs to ensure inspectors address erosion and slope instability for the purpose of education.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
Additional Nonstructural Strategies							
CSD-25	Conduct a Comprehensive Benefits Analysis to identify benefits other than water quality that are applicable to each of the specific WQIP strategies.	The analysis identifies which other benefits apply to each strategy, and documents the assumptions making those linkages. The delineation of other benefits to strategies includes a general description of each benefit, and a listing of the assumptions that were made to link those benefits to strategies. In addition, the other benefits are characterized with respect to who is directly affected: the city, local residents, local businesses, or visitors. This analysis may be used as part of the adaptive management process to modify future strategies.	City-wide	Jurisdictional	FY15	One time	T&SW
CSD-26	Address and clean up trash from transient encampments with collaboration from the Homeless Outreach Team.	Coordinate with the Homeless Outreach Team to respond to transient encampment trash complaints.	City-wide	Jurisdictional	FY16	Ongoing	T&SW with Police, ESD, Urban Corps, Alpha Project

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-27	Continue participating in source reduction initiatives.	Source reduction initiatives are ultimately the most effective measure to remove pollutants from surface waters, where feasible. Bans or progressive phase-outs that may be considered include: leaf blowers, plastic bags, architectural copper (generally a legacy issue), as well as prohibiting or more aggressively regulating vehicle washing. Additional source reduction initiatives to consider include pesticide sales at hardware stores and irrigation supply stores.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW
CSD-27.1	Coordinate with Fleet Services to replace City-owned vehicle brake pads with copper-free brake pads as they become commercially available.	Consider legislative mandate and cooperative implementation of copper-free brake pads on city-owned vehicle to reduce pollutant deposition.	City-wide	Jurisdictional	FY18	Ongoing	T&SW, ESD with PWD (Fleet Services)
CSD-27.2	Develop and implement a Zinc Reduction Program.	Develop and implement zinc reduction program. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, and 3) staff resources are identified and secured.	Chollas Watershed	Optional	FY17	2 years (FY17-FY18)	TBD
CSD-27.3	Develop and implement targeted roof replacement incentive program for Chollas Creek Watershed.	If determined feasible and effective upon completion of development of Zinc Reduction Program, rebates or other incentive programs to replace metal roofs will be considered. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, and 3) staff resources are identified and secured.	Chollas Watershed	Optional	Optional	TBD	TBD
CSD-28	Proactively monitor for erosion, and complete minor repair and slope stabilization on municipal property.	Actively identify and repair eroding slopes that may be contributing to sediment loading. Prepare an inventory and assessment of eroding areas and their risk to surface waters. Follow assessment with a schedule for ongoing inspection and stabilization (potentially based on a number or percentage of sites annually). Consider Caltrans program as a template.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-29	Conduct special studies.	Special studies will be conducted to gather data to identify pollutant sources, appropriate targets, or other information. Includes collaboration with universities.	City-wide	Jurisdictional	FY16	Ongoing	T&SW
CSD-29.1	Participate in Reference Watershed Study.	The San Diego Regional Reference Stream Study (currently being conducted by the Southern California Coastal Water Research Project). The study will develop numeric targets that account for "natural sources" to establish the concentrations or loads from streams in a minimally disturbed or "reference" condition. Refer to Section 5.1 for further details.	Region-wide	Jurisdictional	Prior to FY16	One time	T&SW, SCCWRP, Regional copermittees

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-29.2	Conduct a Cost of Service Study.	Conduct a Cost of Service Study that will examine the full cost of flood control and storm water strategies needed to comply with storm water regulations for the City of San Diego. The City of San Diego's Watershed Asset Management Plan will be used as the basis for the study.	City-wide	Jurisdictional	FY16	One time	TBD
CSD-30	Conduct Sustainable Return on Investment (SROI) analysis to estimate strategies' co-benefits and impacts to the public and the private sector on a common scale.	SROI is an economics-based framework for evaluating quantitative and qualitative performance metrics and monetizing them, if possible, along a triple bottom line (i.e. financial, societal, and environmental). This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, 4) partners have been identified and formal MOUs have been developed, and 5) consensus and community support has been achieved.	City-wide	Optional	Optional	TBD	T&SW and public participation
CSD-31	Collaborate with the County, if a County-led regional social services effort is established, to provide sanitation and trash management for individuals experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	Support a non-profit or consortium to provide sanitation services associated with hygiene as well as trash management for persons experiencing homelessness. Rented or purchased shower/sanitary trailers providing mobile showers may be organized at specifically scheduled locations and times. This provision has been proposed as a method for preventing surface water usage for sanitation and bathing, as well as opportunity for outreach and referral by social service agencies. The trash management services will include providing trash bags, trash collection areas, and shower/sanitary facilities at centers which provide daytime shelter to their clients, or on a mobile-basis for known transit camps. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, 4) partners have been identified and formal MOUs have been developed, and 5) consensus and community support has been achieved.	City-wide	Optional	Optional	TBD	T&SW

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-32	Participate in an assessment to determine if implementation of an urban tree canopy (UTC) program would benefit water quality and other City goals, where feasible.	Perform a feasibility study to determine if implementing an UTC program would be beneficial to the City's goals. UTC intercepts rainfall through increased coverage of leaves, branches, and stems and reduces runoff from the storm drainage system. Benefits associated with enhancing an UTC include reducing heat island effects and air pollution in addition to aesthetics and community benefits. Where feasible, native trees will be utilized to prevent invasive trees from migrating to open spaces and to conserve water. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, and 3) staff resources are identified and secured.	City-wide	Optional	Optional	TBD	Planning Dept. with T&SW, SANDAG, and Nature Conservancy
CSD-33	Conduct a feasibility study to test Permeable Friction Course (PFC), a porous asphalt that overlays impermeable asphalt.	Perform an assessment to determine the feasibility of implementing PFC on City streets. PFC, an overlay of porous asphalt, is an innovative roadway material that improves driving conditions in wet weather and water quality. Placed in a layer 25-50mm thick on top of regular impermeable pavement, PFC allows rainfall to drain within the porous layer rather than on top of the pavement. PFC has also been shown to reduce concentrations of pollutants commonly observed in highway runoff. PFC incorporates stormwater treatment into the roadway surface and does not require additional right-of-way. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, and 3) staff resources are identified and secured.	City-wide	Optional	Optional	One time	T&SW with DSD, PWD, BIA, NGOs, Copermittees, and Engineering Community
CSD-34	As opportunities arise and funding sources are identified, protect areas that are functioning naturally by avoiding impervious development and degradation on unpaved open space areas, creating permanent open space protections on undeveloped city-owned land, and accepting privately-owned undeveloped open areas.	This strategy may be implemented if there is interest in participation by the public or private entity with current control of the land. Conditions to be met also include 1) identification of partners, if needed (public, private, non-profit), 2) identification of costs and potential sources of funding, 3) final agreement by public or private entity with current control of the land, 4) final agreement by all other participating partners including acceptance by intended land- or asset-owning City department, 5) funding in place, and 6) if it can be determined that the benefit of preventing increased pollutant loads and minimizing impacts of future growth through land conservation is a more cost effective strategy to meet interim and final numeric goals than other recommended strategies included in this plan (Chesapeake Bay Commission, 2013).	City-wide	Optional	Optional	TBD	TBD

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-35	Participate in a watershed council or group if one is established.	This strategy may be triggered as 1) partners have been identified and formal MOUs have been developed and 2) consensus and community support has been achieved.	City-wide	Optional	Optional	TBD	TBD
CSD-36	Prohibit introduction of invasive plants in new development and redevelopment projects.	Coordinate with the City's Development Services Department to continue to prohibit introduction of invasive species such as <i>Arundo donax</i> and <i>Cortaderia selloana</i> for new development or redevelopment projects as specified in the City's municipal code for landscape.	City-wide	Jurisdictional	Prior to FY16	Ongoing	T&SW with DSD
Green Infrastructure							
CSD-37	North 252 Corridor Park Phase I (Dorothy Petway Park) - Project ID 1002	2 vegetated filter strips and one vegetated swale was implemented at I-5 and Rigel Street.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-38	43rd and Logan Roadway Improvement - Project ID 1387 (bioretention to treat 0.73 acres of drainage area)	The City has implemented a bioretention BMP on the northeast corner of the intersection of 43rd and Logan Avenue to treat storm water runoff from the northerly half of Logan Avenue from Dominion Street to 43rd Street (about 0.73 acres of drainage area). In addition, there are three sets of curbside filters installed along the southeast corner of 43rd Street and Logan Avenue. Storm water from Logan Avenue flows through a curb opening into a pretreatment device to filter out gross solids and some sediment, and then flows into 12 filtration units connected in series. The curbside filtration units treat 5.76 acres (See Proprietary BMP Strategies). The City has received grant funding to conduct BMP effectiveness monitoring for hydrologic performance and pollutant removal over a two-year period.	Chollas Watershed	Jurisdictional	FY14	Ongoing	T&SW with PWD
CSD-39	Green lot in Southcrest Park.	Green lot on Newton Ave. west of 43rd to treat a 36-acre drainage area.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-40	Central Region Public Health Center replacement of impervious pavement with rubberized porous asphalt.	Central Region Public Health Center replaced 6250 ft ² of impervious pavement with rubberized porous asphalt.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-41	Southeast Family Resource Center bio-filtration planters	Southeast Family Resource Center constructed four bio-filtration planters in the parking lot and adjacent to the building to filter runoff from the roof and parking surface. They also installed porous pavers at the entrance and exit of the parking lot.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-42	10.3 acres of bioretention have been identified as potential opportunities for green infrastructure implementation on public parcels to treat a 257.5-acre drainage area.	Staggered construction, operation, and maintenance of 10.3 acres of bioretention to treat a 257.5-acre drainage area.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
Green Streets							
CSD-43	Beta Street	Operation and maintenance of a 0.063 acre green street project at Beta Street and 37th to treat a 2.1-acre drainage area.	Chollas Watershed	Jurisdictional	FY17	Ongoing	T&SW with PWD
CSD-44	32.24 acres of green streets (16.12 acres of bioretention and 16.12 acres of permeable pavement) have been identified as potential opportunities for green street projects to treat a 7260-acre drainage area.	Staggered construction, operation and maintenance of 32.24 acres of green streets (16.12 acres of bioretention and 16.12 acres of permeable pavement) to treat a 7260-acre drainage area.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW
Multiuse Treatment Areas							
Infiltration and Detention Basins							
CSD-45	A dry extended detention basin can be implemented at the Park De La Cruz and Cherokee Point Elementary School site upon detailed site assessment.	Construction, operation and maintenance of a 1.5 acre (footprint) Dry Extended Detention Basin to treat a drainage area of approximately 81 acres (on 5.5 acres of available space, APN 3094130100). Location intersection is Wightman Street and 38th Street.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD
CSD-46	A subsurface detention basin at Joyner Elementary School can be implemented upon detailed site assessment.	Construction, operation and maintenance of a 1.1 acre (footprint) Subsurface Detention Galley to treat a drainage area of approximately 87 acres (on 3.3 acres of available space, APN 4760923000). Location intersection is Myrtle Avenue and 43rd Street. Subsurface detention basins would be designed and constructed per all applicable City safety codes and standards.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD
CSD-47	A subsurface detention basin at Euclid Elementary School can be implemented upon detailed site assessment.	Construction, operation and maintenance of a 0.9 acre (footprint) Subsurface Detention Galley to treat a drainage area of approximately 76 acres (on 3.3 acres of available space, APN 4714023000). Location intersection is Orange Avenue and Euclid Avenue. Subsurface detention basins would be designed and constructed per all applicable City safety codes and standards.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD
CSD-48	A subsurface detention basin at Ibarra Elementary School can be implemented upon detailed site assessment.	Construction, operation and maintenance of a 1.4 acre (footprint) Subsurface Detention Galley to treat a drainage area of approximately 108 acres (on 4.0 acres of available space, APN 4714222800). Location intersection is Orange Avenue and Winona Avenue. Subsurface detention basins would be designed and constructed per all applicable City safety codes and standards.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD
CSD-49	A subsurface detention basin at Alba Middle/High School can be implemented upon detailed site assessment.	Construction, operation and maintenance of a 0.8 acre (footprint) Subsurface Detention Galley to treat a drainage area of approximately 62 acres (on 7.0 acres of available space, APN 4721302700). Location intersection is Trojan Avenue and 56th Street. Subsurface detention basins would be designed and constructed per all applicable City safety codes and standards.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-50	A subsurface detention basin at Clay Park can be implemented upon detailed site assessment.	Construction, operation and maintenance of a 0.5 acre (footprint) Subsurface Detention Galley to treat a drainage area of approximately 26 acres (on 6.0 acres of available space, APN 4674900400). Location intersection is Solita Avenue and Seminole Drive. Subsurface detention basins would be designed and constructed per all applicable City safety codes and standards.	Chollas Watershed	Jurisdictional	FY18	Ongoing	T&SW with PWD
CSD-51	Memorial Park: An infiltration basin has been constructed from the parking on the west side of Memorial Park to treat 1.4 acres of drainage area.	A 0.10 acre infiltration basin has been constructed to treat runoff from the parking on the west side of Memorial Park that has been diverted from the existing storm drain system (1.4 acres of drainage area). Before entering the basin, the runoff passes through a hydrodynamic separator that removes pollutants that settle out or float. Runoff then enters the basin where it infiltrates into the underlying soils. Runoff in excess of the 5-year storm bypasses the BMP via an overflow pipe and returns to the regular storm drain system.	Chollas Watershed	Jurisdictional	FY14	Ongoing	T&SW with PWD
CSD-52	Central Police Facility - K-9 Facility - Project ID 1011. Detention basin treats 1.1 acres of drainage area.	1 extended/dry detention basin with grass and 2 filtration systems was installed at I-805 and Federal Blvd. Basin treats 1.1 acres of drainage area.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-53	Central Police Facility - Vehicle Maintenance - Project ID 1367	1 extended/dry detention basin with grass and 2 filtration systems was installed at Federal Blvd and Home Avenue.	Chollas Watershed	Jurisdictional	Prior to FY16	Ongoing	T&SW with PWD
CSD-54	Memorial Skateboard Park- Addition of detention vault to treat 0.69 acres of drainage area.	A subsurface detention vault is proposed to be installed in line with the existing 12-inch PVC pipe to capture the runoff generated by the 85th percentile storm. Detained runoff is proposed to be reused to irrigate the athletic fields at Memorial Park. Runoff volume in excess of the detention vault capacity is proposed to overflow into an adjacent subsurface infiltration gallery for additional volume reduction and treatment. This project was initially constructed prior to the 2007 Municipal Storm Water Permit, so implementation of the BMP retrofit recommendations exceeds applicable treatment requirements by treating runoff from 30,000 square feet of impervious surface to the 85th percentile storm.	Chollas Watershed	Jurisdictional	FY15	Ongoing	T&SW with PWD

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-55	If interim load reduction goals are not met and additional multiuse treatment areas are required, an infiltration basin(s) may be considered on publicly owned open spaces in canyon areas on a case-by-case basis.	Construction, operation, and maintenance of infiltration basin(s) in canyon areas. Nine potential canyon sites, owned by City of San Diego, have been identified in Chollas watershed that provide up to 30 acres of available space (83 total parcel acreage). This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, 4) partners have been identified and formal MOUs have been developed, and 5) permits required by regulatory agencies are secured.	Chollas Watershed	Optional	Optional	Ongoing	T&SW with PWD
Stream, Channel and Habitat Rehabilitation Projects							
CSD-56	If interim load reduction goals are not met and additional stream, channel, and habitat rehabilitation projects are required, implement as needed.	This strategy may be triggered as 1) funding to address MS4 discharges is identified and secured, 2) staff resources are identified and secured, 3) partners have been identified and formal MOUs have been developed, 4) permits required by regulatory agencies are secured, 5) consensus and community support has been achieved, and 6) it can be determined that the benefit of preventing increased pollutant loads and minimizing impacts of future growth through land conservation is a more cost effective strategy to meet interim and final numeric goals than other recommended strategies included in this plan (Chesapeake Bay Commission, 2013).	Areas identified during feasibility studies	Optional	Optional	TBD	T&SW
Water Quality Improvement BMPs							
Proprietary BMPs							
CSD-57	43rd and Logan Roadway Improvement - Project ID 1387 (filtration units treat 5.76 acres)	Three curbside filtration units were installed along S 43rd street and Logan Avenue. The curbside filtration units treat a total of 5.76 acres. A bioretention BMP is also implemented on this site (See MUTA strategies).	Chollas (Along S 43rd street between Logan Avenue and Keeler Avenue)	Jurisdictional	FY14	Ongoing	T&SW with PWD
CSD-58	N Chollas Community Park Phase 1B - Project ID 855	4 drainage inserts were installed in Chollas Lake Park near College Grove Drive and Caminito Chollas.	Chollas Lake Park	Jurisdictional	Prior to FY14	Ongoing	T&SW with PWD
CSD-59	Lisbon Street Roadway and Utility Improvements - Project ID 858	2 drainage inserts were installed at Imperial Avenue and Lisbon Street.	Chollas (Imperial Avenue and Lisbon Street)	Jurisdictional	Prior to FY14	Ongoing	T&SW with PWD
CSD-60	Fire Station #12 - Project ID 989	1 downspout filter and 10 drainage inserts were installed at Willie James Jones Avenue and Imperial Avenue.	Chollas (Willie James Jones Avenue and Imperial Avenue)	Jurisdictional	Prior to FY14	Ongoing	T&SW with PWD

**Table I-4. City of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach	Location	Jurisdictional or Optional	Implementation or Construction Year Start	Frequency of Implementation	Responsible City Department and Other Collaborating Departments or Agencies
CSD-61	Rigel St Bridge Replacement - Project ID 1008	5 drainage inserts were installed at Rigel Street and Main Street.	Chollas (Rigel Street and Main Street)	Jurisdictional	Prior to FY14	Ongoing	T&SW with PWD
Dry Weather Flow Separation and Treatment Projects							
CSD-62	If interim load reduction goals are not met and additional dry weather flow separation and treatment projects are required, implement as needed.	Construction of dry weather flow separation and treatment projects, where identified. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, and 4) permits required by regulatory agencies are secured.	Downstream reaches where persistent dry weather flows have been observed	Optional	Optional	TBD	T&SW with PWD
Trash Segregation							
CSD-63	If interim load reduction goals are not met and additional trash segregation projects are required, implement as needed.	Construction of trash segregation (Trash Guards, etc.) projects, where identified. This strategy may be triggered as 1) interim goals are not met, 2) funding to address MS4 discharges is identified and secured, 3) staff resources are identified and secured, and 4) permits required by regulatory agencies are secured.	High-loading areas city-wide	Optional	Optional	TBD	T&SW with PWD

Notes: DSD= Development Services Department; PUD = Public Utilities Department; PWD = Public Works Department; T&SW = Transportation and Storm Water Division; WAMP = Watershed Asset Management Plan; “Refer to Section X” will be updated upon submittal of the City’s JRMP in June 2015; TBD = will be determined during the next fiscal year.

Reference: Chesapeake Bay Commission. 2013. *Crediting Conservation: Accounting for the Water Quality Value of Conserved Lands Under the Chesapeake Bay TMDL*. Available online at <http://www.chesbay.us/Publications/CreditingConservationReport.pdf>. June.

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Table I-5 City of San Diego Annual Schedule

Construction
 Ongoing Implementation/ O&M
 As needed/Design

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
Jurisdictional Strategies																								
Development Planning																								
All Development Projects																								
CSD-1	Establish guidelines and standards for all development projects; provide technical support related to implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area or implement easements to protect water quality, where applicable and feasible.	City-wide	Prior to FY16	Ongoing																				
CSD-1.1	Investigation and research of emerging technology.	City-wide	Prior to FY16	As Needed																				
CSD-1.2	Approve and implement a green infrastructure policy.	City-wide on public parcels	FY16 (Begin)	As Needed																				
CSD-1.3	Develop Design Standards for Public LID BMPs.	City-wide	FY14-FY15	As Needed																				
CSD-1.4	Outreach to impacted industry regarding minimum BMP requirement updates.	City-wide	FY15	As Needed																				
CSD-2	Train staff on LID regulatory changes and LID practices.	City-wide	FY16		As Needed																			
CSD-3	Amend municipal code and ordinances, including zoning ordinances, to facilitate and encourage LID opportunities. Ensure consistency with the City of San Diego's BMP Design Manual. Update the Storm Water Standards Manual accordingly.	City-wide	FY15	As Needed																				
CSD-4	Create a manual that outlines right-of-way design standards.	City-wide	FY15	One time																				

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-5	Provide technical education and outreach to the development community on the design and implementation requirements of the Municipal Permit and Water Quality Improvement Plan requirements.	City-wide	Prior to FY16	Ongoing																				
Priority Development Projects (PDPs)																								
CSD-6	For PDPs, provide technical support to other City departments to ensure implementation of on-site structural BMPs to control pollutants and manage hydromodification by developing City wide storm water development standards and design guidelines.	City-wide	FY16		Ongoing																			
CSD-6.1	Institute a program to verify and enforce maintenance and performance of treatment control BMPs.	City-wide	FY16		Ongoing																			
CSD-7	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	City-wide	FY15	Cycle																				
CSD-7.1	Amend BMP Design Manual for trash areas. Require full four-sided enclosure, siting away from storm drains and cover. Consider the retrofit requirement.	City-wide	FY15	One time																				
CSD-7.2	Amend BMP Design Manual for animal-related facilities, such as such as animal shelters, "doggie day care" facilities, veterinary clinics, breeding, boarding and training facilities, groomers, and pet care stores.	City-wide	FY15	One time																				
CSD-7.3	Amend BMP Design Manual for nurseries and garden centers.	City-wide	FY15	One time																				
CSD-7.4	Amend BMP Design Manual for auto-related uses.	City-wide	FY15	One time																				
CSD-8	Develop and administer an alternative compliance program for on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects). Refer to Section 4.2.5.	City-wide	FY15	Ongoing																				

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-8.1	Create a fund that allows habitat acquisition, protection enhancement, and restoration in conjunction with other cooperating entities including community groups, academic institutions, state county, and federal agencies, etc.	City-wide	Optional												If triggered, begin planning, acquiring funding and resources									
Construction Management																								
CSD-9	Coordinate with other City departments to promote and confirm a thorough understanding of requirements for implementing temporary BMPs that control sediment and other pollutants during the construction phase of projects. Included in that understanding are requirements to inspect at appropriate frequencies and effectively enforce requirements through process controlled by other City departments.	City-wide	FY16		Ongoing																			
Existing Development																								
Commercial, Industrial, Municipal, and Residential Facilities and Areas																								
CSD-10	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	City-wide	FY16		Ongoing																			
CSD-10.1	Update minimum BMPs for existing residential, commercial, and industrial development. Specific updates to BMPs include required street sweeping, catch basin cleaning, and maintenance of private roads and parking lots in targeted areas.	City-wide	FY15	Cycle																				
CSD-10.2	Outreach to property managers and trash haulers to elevate the emphasis of power washing as a pollutant source.	City-wide Residential, commercial and industrial areas	FY15	Ongoing																				
CSD-10.3	Implement property based inspections.	City-wide	Prior to FY16	Ongoing																				
CSD-10.4	Review policies and procedures to ensure discharges from swimming pools meet permit requirements.	City-wide	FY15	As Needed																				

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-11	Promote and encourage implementation of designated BMPs for residential and non-residential areas.	City-wide Residential and Commercial Areas	Prior to FY16	Ongoing																				
CSD-11.1	Residential and Commercial BMP: Rain Barrel	City-wide Residential Areas	Prior to FY16	Ongoing																				
CSD-11.2	Residential and Commercial BMP: Grass Replacement	City-wide Residential and Commercial Areas	Prior to FY16	Ongoing																				
CSD-11.3	Residential and Commercial BMP: Downspout Disconnect	City-wide Residential and Commercial Areas	FY16		Ongoing																			
CSD-11.4	Residential and Commercial BMP: Microirrigation	City-wide Residential Areas	Prior to FY16	Ongoing																				
CSD-11.5	Provide Onsite Water Conservation Surveys.	City-wide Residential and Commercial Areas	Prior to FY16	Ongoing																				
MS4 Infrastructure																								
CSD-12	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, channels as allowed by resource agencies, detention basins, etc.) for water quality improvement and for flood control risk management.	City-wide	FY16		Ongoing																			
CSD-12.1	Enhanced catch basin cleaning to increase pollutant removal (up to 4 times per year) in the rainy season.	Chollas: High priority areas identified in pilot study	FY16		Ongoing																			
CSD-12.2	Increased frequency of catch basin inspection and as-needed cleaning.	Chollas (48 open channel segments)	FY13																					

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-12.3	Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	City-wide	FY16		Ongoing																			
CSD-13	Coordinate with other City departments (PUD) to implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers.	City-wide	FY16		Ongoing																			
CSD-13.1	Identify sewer leaks and areas for sewer pipe replacement prioritization.	City-wide	FY16		As Needed																			
Roads, Street, and Parking Lots																								
CSD-14	Implement operation and maintenance activities for public streets, unpaved roads, paved roads, and paved highways.	City-wide	FY16		Ongoing																			
CSD-14.1	Outreach to street sweeping enhancement-targeted areas.	Chollas Watershed	FY16		Ongoing																			
CSD-14.2	Enhance street sweeping through equipment replacement (replace mechanical sweepers with regenerative air sweepers) and route optimization (sweep all routes twice per month) in targeted areas.	Chollas Watershed	FY17			Ongoing																		
CSD-14.3	Initiate sweeping of medians on high-volume arterial roadways.	City-wide	FY17			Ongoing																		
CSD-14.4	Implement additional street sweeping (Settlement Agreement).	Chollas Watershed	FY13																					
Pesticide, Herbicides, and Fertilizer BMP Program																								
CSD-15	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	City-wide	FY16		Ongoing																			
Retrofit and Rehabilitation in Areas of Existing Development																								
CSD-16	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	City-wide	TBD																					
CSD-17	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	City-wide	TBD																					

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
Illicit Discharge, Detection, and Elimination (IDDE) Program																								
CSD-18	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	City-wide	Prior to FY16	Ongoing																				
Public Education and Participation																								
CSD-19	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	City-wide	Prior to FY16	Ongoing																				
CSD-19.1	Continue implementation of a Pet Waste Program.	City-wide	Prior to FY16	Ongoing																				
CSD-19.2	Promote and encourage implementation of designated BMPs in commercial and industrial areas.	City-wide Non-residential Areas	Prior to FY16	Ongoing																				
CSD-19.3	Expand outreach to homeowners' association (HOA) common lands and HOA incentives.	City-wide	FY16		Ongoing																			
CSD-19.4	Develop an outreach and training program for property managers responsible for HOAs and maintenance districts.	City-wide	FY16		Ongoing																			
CSD-19.5	Enhance and expand trash cleanups through community-based organizations involving target audiences.	City-wide	FY16		Ongoing																			
CSD-19.6	Trash mitigation in the western portion of the Otay River HU.	Otay River HU	Prior to FY16	Ongoing																				
CSD-19.7	Improve consistency and content of websites to highlight enforceable conditions and reporting methods.	City-wide	Prior to FY16	Ongoing																				
CSD-19.8	Enhance school and recreation-based education and outreach.	City-wide	FY15	Ongoing																				

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-19.9	Develop education and outreach to reduce irrigation runoff.	City-wide	Prior to FY16	Ongoing																				
CSD-19.10	Develop regional training for water-using mobile businesses.	City-wide	FY16		Ongoing																			
CSD-19.11	Enhance education and outreach based on results of effectiveness survey and changing regulatory requirements.	City-wide	FY16		Ongoing																			
Enforcement Response Plan																								
CSD-20	Continue to implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Storm Water Code Enforcement Unit's Standard Operating Procedures (SOPs) - Enforcement Response Plan.	City-wide	Prior to FY16	Ongoing																				
CSD-20.1	Increase enforcement of irrigation runoff.	City-wide	FY16		Ongoing																			
CSD-20.2	Increase enforcement of water-using mobile businesses.	City-wide	FY16		Ongoing																			
CSD-21	Increase enforcement of all minimum BMPs for existing residential, commercial, and industrial development.	City-wide	FY16		As needed																			
CSD-22	Increase enforcement associated with property-based inspections.	City-wide	FY16		Ongoing																			
CSD-23	Increase enforcement of sweeping and maintenance of private roads and parking lots in targeted areas.	City-wide	FY16		Ongoing																			
CSD-24	Increase identification and enforcement of actionable erosion and slope stabilization issues on private property and require stabilization and repair.	City-wide	FY16		Ongoing																			
Additional Nonstructural Strategies																								
CSD-25	Conduct a Comprehensive Benefits Analysis to identify benefits other than water quality that are applicable to each of the specific WQIP strategies.	City-wide	FY15	One time																				
CSD-26	Address and clean up trash from transient encampments with collaboration from the Homeless Outreach Team.	City-wide	FY16		Ongoing																			
CSD-27	Continue participating in source reduction initiatives.	City-wide	Prior to FY16	Ongoing																				

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	
CSD-27.1	Coordinate with Fleet Services to replace City-owned vehicle brake pads with copper-free brake pads as they become commercially available.	City-wide	FY18				Ongoing																		
CSD-27.2	Develop and implement a Zinc Reduction Program.	Chollas Watershed	FY17																						If triggered, begin planning, acquiring funding and resources
CSD-27.3	Develop and implement targeted roof replacement incentive program for Chollas Creek Watershed.	Chollas Watershed	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-28	Proactively monitor for erosion, and complete minor repair and slope stabilization on municipal property.	City-wide	FY16		Ongoing																				
CSD-29	Conduct special studies.	City-wide	FY16		Ongoing																				
CSD-29.1	Participate in Reference Watershed Study.	Region-wide	Prior to FY16	One time																					
CSD-29.2	Conduct a Cost of Service Study.	City-wide	FY16		One time																				
CSD-30	Conduct Sustainable Return on Investment (SROI) analysis to estimate strategies' co-benefits and impacts to the public and the private sector on a common scale.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-31	Collaborate with the County, if a County-led regional social services effort is established, to provide sanitation and trash management for individuals experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-32	Participate in an assessment to determine if implementation of an urban tree canopy (UTC) program would benefit water quality and other City goals, where feasible.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-33	Conduct a feasibility study to test Permeable Friction Course (PFC), a porous asphalt that overlays impermeable asphalt.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-34	As opportunities arise and funding sources are identified, protect areas that are functioning naturally by avoiding impervious development and degradation on unpaved open space areas, creating permanent open space protections on undeveloped city-owned land, and accepting privately-owned undeveloped open areas.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources
CSD-35	Participate in a watershed council or group if one is established.	City-wide	Optional																						If triggered, begin planning, acquiring funding and resources

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-36	Prohibit introduction of invasive plants in new development and redevelopment projects.	City-wide	Prior to FY16	Ongoing																				
Green Infrastructure																								
CSD-37	North 252 Corridor Park Phase I (Dorothy Petway Park) - Project ID 1002	Chollas Watershed	Prior to FY16																					
CSD-38	43rd and Logan Roadway Improvement - Project ID 1387 (bioretention to treat 0.73 acres of drainage area)	Chollas Watershed	FY14																					
CSD-39	Green lot in Southcrest Park.	Chollas Watershed	Prior to FY16																					
CSD-40	Central Region Public Health Center replacement of impervious pavement with rubberized porous asphalt.	Chollas Watershed	Prior to FY16																					
CSD-41	Southeast Family Resource Center bio-filtration planters	Chollas Watershed	Prior to FY16																					
CSD-42	10.3 acres of bioretention have been identified as potential opportunities for green infrastructure implementation on public parcels to treat a 257.5-acre drainage area.	Chollas Watershed	FY18																					
Green Streets																								
CSD-43	Beta Street	Chollas Watershed	FY17																					
CSD-44	32.24 acres of green streets (16.12 acres of bioretention and 16.12 acres of permeable pavement) have been identified as potential opportunities for green street projects to treat a 7260-acre drainage area.	Chollas Watershed	FY18																					
Multiuse Treatment Areas																								
Infiltration and Detention Basins																								
CSD-45	A dry extended detention basin can be implemented at the Park De La Cruz and Cherokee Point Elementary School site upon detailed site assessment.	Chollas Watershed	FY18																					
CSD-46	A subsurface detention basin at Joyner Elementary School can be implemented upon detailed site assessment.	Chollas Watershed	FY18																					
CSD-47	A subsurface detention basin at Euclid Elementary School can be implemented upon detailed site assessment.	Chollas Watershed	FY18																					

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35
CSD-48	A subsurface detention basin at Ibarra Elementary School can be implemented upon detailed site assessment.	Chollas Watershed	FY18																					
CSD-49	A subsurface detention basin at Alba Middle/High School can be implemented upon detailed site assessment.	Chollas Watershed	FY18																					
CSD-50	A subsurface detention basin at Clay Park can be implemented upon detailed site assessment.	Chollas Watershed	FY18																					
CSD-51	Memorial Park: An infiltration basin has been constructed from the parking on the west side of Memorial Park to treat 1.4 acres of drainage area.	Chollas Watershed	FY14																					
CSD-52	Central Police Facility - K-9 Facility - Project ID 1011. Detention basin treats 1.1 acres of drainage area.	Chollas Watershed	Prior to FY16																					
CSD-53	Central Police Facility - Vehicle Maintenance - Project ID 1367	Chollas Watershed	Prior to FY16																					
CSD-54	Memorial Skateboard Park- Addition of detention vault to treat 0.69 acres of drainage area.	Chollas Watershed	FY15																					
CSD-55	If interim load reduction goals are not met and additional multiuse treatment areas are required, an infiltration basin(s) may be considered on publicly owned open spaces in canyon areas on a case-by-case basis.	Chollas Watershed	Optional																					
Stream, Channel and Habitat Rehabilitation Projects																								
CSD-56	If interim load reduction goals are not met and additional stream, channel, and habitat rehabilitation projects are required, implement as needed.	Areas identified during feasibility studies	Optional																					
Water Quality Improvement BMPs																								
Proprietary BMPs																								
CSD-57	43rd and Logan Roadway Improvement - Project ID 1387 (filtration units treat 5.76 acres)	Chollas (Along S 43rd street between Logan Avenue and Keeler Avenue)	FY14																					
CSD-58	N Chollas Community Park Phase 1B - Project ID 855	Chollas Lake Park	Prior to FY14																					

**Table I-5. City of San Diego
 Annual Schedule (continued)**

ID	Strategy	Location	Implementation or Construction Year Start	FY 15 and Earlier	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	
CSD-59	Lisbon Street Roadway and Utility Improvements - Project ID 858	Chollas (Imperial Avenue and Lison Street)	Prior to FY14																						
CSD-60	Fire Station #12 - Project ID 989	Chollas (Willie James Jones Avenue and Imperial Avenue)	Prior to FY14																						
CSD-61	Rigel St Bridge Replacement - Project ID 1008	Chollas (Rigel Street and Main Street)	Prior to FY14																						
Dry Weather Flow Separation and Treatment Projects																									
CSD-62	If interim load reduction goals are not met and additional dry weather flow separation and treatment projects are required, implement as needed.	Downstream reaches where persistent dry weather flows have been observed	Optional																						If triggered, begin planning (acquire funding and resources, conduct site feasibility analysis and site selection) to implement dry weather flow separation projects.
Trash Segregation																									
CSD-63	If interim load reduction goals are not met and additional trash segregation projects are required, implement as needed.	High-loading areas city-wide	Optional																						If triggered, begin planning (acquire funding and resources, conduct site feasibility analysis and site selection) to implement trash segregation projects.

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K.5 City of Coronado Strategies

The City of Coronado (Coronado) is a small beach community located on an island connected to the mainland via a tombolo, the Silver Strand. Coronado has identified strategies to address the Focused Priority Condition for swimmable waters and implement jurisdictional programs citywide. Maintaining Coronado's streets, sanitary sewer system, storm drain system, and other infrastructure is a high priority for the City. All streets in Coronado are swept once a week, regardless of type. Special events are highly scrutinized, permitted, and conditioned, and Coronado provides extra trash receptacles and traffic control. Since 2005, all newly constructed municipal buildings have been certified LEED Silver. Coronado has also implemented permeable paving, downspout disconnects, and other BMPs on City projects. Coronado also coordinates with the Navy for beach cleanups on the Silver Strand. Strategies and implementation schedules, presented in Table B-6, were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

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**Table I-6. City of Coronado
 Jurisdictional Strategies**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
CO-1	Review projects for potential commercial sources of bacteria and require additional source control BMPs as applicable for persistent problem or high priority areas (e.g., covered trash enclosures).	Refer to JRMP Development Planning Section and BMP Design Manual.	City-wide	Jurisdictional	FY15-16	Ongoing		Community Development, Engineering, Public Services
CO-2	Include staff training to target identification of bacteria pollutant sources during development and building project permitting.	Staff training will be conducted, tailored to implementation tasks and job duties. Training will occur prior to implementation, within 3 months of the start of implementation, and annually thereafter.	City-wide	Jurisdictional	FY15-16	Annually		Community Development, Engineering, Public Services
CO-3	Require projects within the WOSA to implement LID and source control BMPs with focus on potential bacteria sources.	Refer to JRMP Development Planning Section and BMP Design Manual.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Engineering, Public Services
Priority Development Projects (PDPs)								
CO-4	Include in the BMP Design Manual BMP requirements applicable to development projects that have a higher potential to contribute to the Priority Conditions (bacteria). See Table 3-4 in SD Bay WQIP for potential sources.	Refer to JRMP Development Planning Section and BMP Design Manual.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Engineering, Public Services
	1. Amend BMP Design Manual for trash areas. Require full four-sided enclosure, away from storm drains.	Refer to JRMP Development Planning Section, BMP Design Manual, and Coronado Municipal Code.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Engineering, Public Services
	2. Amend BMP Design Manual for animal-related facilities, such as such as animal shelters, "doggie day care" facilities, veterinary clinics, breeding, boarding and training facilities, groomers, and pet care stores.	Refer to JRMP Development Planning Section, BMP Design Manual, and Coronado Municipal Code.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Engineering, Public Services
	3. Consider amendment to Coronado Municipal Code (CMC) to support additional requirements in the BMP Design Manual targeting Priority Conditions.	Refer to JRMP Development Planning Section and BMP Design Manual.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Engineering, Public Services

**Table I-6. City of Coronado
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Construction Management								
CO-5	Implement program to identify and inspect bacteria source potential, and require construction projects within the WQSA to be identified as High Threat to water quality and implement appropriate BMPs.	Refer to JRMP Construction Management Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering, Building
CO-6	Implement program to permit and inspect construction site use of Right-of-Way for debris and trash storage with appropriate BMPs.	Refer to JRMP Construction Management Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering, Building
Existing Development								
Commercial and Residential Facilities and Areas								
CO-7	Implement and enforce property- and PGA-based inspections at increased frequency for identified and targeted high priority sources of bacteria (compared to minimum Permit requirements), as applicable.	Refer to JRMP Existing Development and Public Education and Participation Sections.	Tributary or Basin	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-8	Evaluate sweeping and maintenance of private roads and parking lots in targeted areas. Consider adding to City sweeping program.	Refer to JRMP Existing Development Section.	Otay River HU	Optional	FY15-16	Ongoing	TBD	Public Services
CO-9	Implement program to require retrofit of trash enclosures for persistent and problematic sources.	Refer to JRMP Existing Development and Planning Development Sections.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Community Development, Public Services
CO-10	Maintain existing pet waste program. Including installation and maintenance of pet waste bag dispensers and trash bins. May include signage and education, physical removal of pet waste, or enforcement.	Refer to JRMP Existing Development Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-11	Promote, as available, residential BMP (irrigation, rainwater harvesting, and turf conversion) program that may include a rebate programs in target areas.	Refer to JRMP Existing Development Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-12	Promote and collaborate with water agencies and other groups to encourage implementation of water conservation programs that improve water quality by reducing over-irrigation with smart products or turf replacement and capturing rain water in residential areas.	Refer to JRMP Existing Development Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services

**Table I-6. City of Coronado
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Municipal Facilities and Areas								
CO-13	Conduct enhanced beach maintenance activities to remove trash and debris, additional trash cans during peak periods, and replenish dog bag dispensers.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-14	Identify Focused Priority Conditions in municipal facilities and areas to identified specific BMPs to reduce sources (e.g., special events).	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
MS4 Infrastructure								
CO-15	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, diversion structures, etc.) for optimum water quality.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	1. Perform MS4 inspection and cleaning at higher frequency for high debris areas.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	2. Evaluate MS4 inspection and cleaning locations and adjust high frequency to target new/modified high debris areas.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Annually	TBD	Public Services
	3. Proactively repair and replace MS4 components to maintain proper operation and function.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	4. Proactively operate, maintain, repair and replace urban runoff diverters to sanitary sewer.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	5. Proactively repair and replace corrugated metal pipe (CMP) MS4 components to provide source control from MS4 infrastructure.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-16	Implementation of operation and maintenance activities (inspection and cleaning) for Sanitary Sewer System and related structures for optimum operation.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-17	Implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-18	Identify sewer leaks and areas for sewer pipe replacement prioritization and timely repair.	Refer to JRMP Existing Development Section -Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
Roads, Street, and Parking Lots								
CO-19	Perform sweeping of high-volume streets at enhanced frequency.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-20	Implement street sweeping public education, temporary posting and towing as needed to accomplish sweeping goals.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services

**Table I-6. City of Coronado
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CO-21	Implement maintenance of bike lanes by proactively monitoring for erosion and completing minor repair and slope stabilization.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>								
CO-22	Promote and maintain website to encourage residents to report potential illicit discharges or other storm water violations.	Refer to JRMP IDDE Program and Public Education and Participation Sections.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-23	Conduct inspections in targeted areas designated as high priority for IDDEs - follow-up with outreach/education. Enforcement as needed.	Refer to JRMP IDDE Program and Public Education and Participation Sections.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-24	Conduct "off-hours" inspections to identify and eliminate illicit discharges.	Refer to JRMP IDDE Program.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
<i>Public Education and Participation</i>								
CO-25	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-26	Develop an outreach and training program for property managers responsible for HOAs.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-27	Support trash cleanups through community-based organizations involving target audiences.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-28	Improve consistency and content of websites to highlight enforceable conditions and reporting methods.	Refer to JRMP Public Education and Participation Section.	Otay River HU	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-29	Target education towards activities and human behavior (e.g. signage) in parks and other public areas including trash reduction or other high impact behavior to habitat, wildlife, and water quality.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-30	Engage with the Main Street Association to promote activities and good housekeeping practices.	Refer to JRMP Public Education and Participation Section.	Otay River HU	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-31	Collaborate with regional, watershed or sub-watershed education and outreach efforts.	Refer to JRMP Public Education and Participation Section.	Otay River HU	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-32	Develop and/or distribute existing materials (from other sources) for education and outreach to reduce over-irrigation.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services

**Table I-6. City of Coronado
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
CO-33	Municipal staff training targeted to select groups based on job duties and activities with emphasis on Focused Priority Conditions.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services (Lead).
CO-34	Tailor education and outreach based on results of surveys.	Refer to JRMP Public Education and Participation Section.	City-wide	Optional	FY15-16	Ongoing	TBD	Public Services, Administration
CO-35	Provide technical education and outreach to the development community on the design and implementation requirements with an emphasis on Focused Priority Conditions.	Refer to JRMP Public Education and Participation Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Community Development, Engineering
Enforcement Response Plan								
CO-36	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to JRMP Enforcement Response Plan.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	1. Increase enforcement of over-irrigation.	Refer to JRMP Enforcement Response Plan.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
	2. Focus locally on enforcement of water-using mobile businesses.	Refer to JRMP Enforcement Response Plan.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-37	Enforce minimum BMPs for existing residential and commercial development. Includes power washing at non-residential sites targeting Focused Priority Conditions.	Refer to JRMP Enforcement Response Plan.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
Additional Nonstructural Strategies								
CO-38	Address and clean up pollutants from homeless encampments through homeless outreach activities.	Refer to JRMP IDDE Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services
CO-39	Conduct special studies related to bacteria sources and reduction measures, as applicable.	Refer to JRMP Special Studies Section.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
	1. Reference watershed study.	Refer to JRMP Special Studies Section.	Otay River HU	Optional	FY15-16	Ongoing	TBD	Public Services, Engineering
	2. Evaluate Tidelands Park data and delisting.	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
	3. Evaluate Tidelands Park outfall drainage basin for sources of bacteria, IDDE (including over irrigation), animal waste (birds, pets).	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
	4. Evaluate drainage system including condition of MS4 pipes draining to Tidelands Park outfall.	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering

**Table I-6. City of Coronado
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	5. Develop work plan and/or revised strategies to address sources and conditions at Tidelands Park outfall based on finding (2-4 above).	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
	6. Collaborate with POSD to evaluate conditions in the drainage basin to Tidelands Park outfall.	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
	7. Evaluate data gaps and monitoring plan options for delisting of Tidelands Park.	Refer to JRMP Special Studies Section.	Outfall	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
CO-40	Collaborate with the Navy on water quality-related issues.	Refer to JRMP Special Studies Section.	Otay River HU	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
CO-41	Collaborate with the Caltrans on water quality-related issues.	Refer to JRMP Special Studies Section.	Otay River HU	Jurisdictional	FY15-16	Ongoing	TBD	Public Services, Engineering
CO-42	If invasive plant and pest removal is necessary in key locations, implement remedial measures.	Refer to JRMP Existing Development Section - Municipal Facilities and Areas.	City-wide	Jurisdictional	FY15-16	Ongoing	TBD	Public Services

K.6 County of San Diego Strategies

The County of San Diego's (County's) strategies, found in Table B-7 below, were chosen because they best suit the characteristics of its jurisdiction within the Chollas Creek HA. Potential dry weather flows will be evaluated through inspection of MS4 outfalls and education and outreach. To treat potential runoff from County facilities, retrofit projects utilizing LID approaches in conjunction with drainage and parking improvements were completed at the Southeast Family Resource Center and Central Regional Public Health Center. In Chollas Creek, a compliance analysis using a watershed model was conducted to identify the strategies required to be implemented to meet final goals. The strategies and implementation schedules identified provide that numeric goals will be met. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the compliance analysis will be updated as needed to provide assurance that numeric goals will be met.

**Table I-7. County of San Diego
 Jurisdictional Strategies**

San Diego Bay Watershed CoSD JRMP-WQIP Strategies						
Strategy	Program Type (see notes at bottom)	Permit Reference	Sources	Frequency	Schedule	
Jurisdictional Runoff Management Programs (JRMP) Strategies						
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>						
1	Maintain MS4 map to facilitate IDDE program	Base	MS4 Permit, Section E.2.b(1)	N/A	Annually	FY15
2a	Use municipal personnel/contractors to identify and report ICIDs	Base	MS4 Permit, Section E.2.b(2)	IC/IDs	ongoing	ongoing
	<i>updated focused training for County field staff</i>	Enhanced		all pollutants	Annually	FY16
2b	Collect effluent on the ground (EOG), sanitary sewer overflow (SSO) data	Base	MS4 Permit, Section E.2.b()	OWTS/SSO	ongoing	ongoing
	<i>Address septic system failures where observed</i>	Base		human sources	ongoing	ongoing
3	Maintain a hotline and email address for public reporting of potential ICIDs.	Base	MS4 Permit, Section E.2.b(3)	IC/IDs	ongoing	ongoing
	<i>Refer homeless issue complaints to Sheriff or appropriate jurisdictions</i>	Base		human sources	ongoing	ongoing
	<i>Bilingual hotline answered by I Love a Clean San Diego (ILACSD; live operator) with multiple avenues for online reporting</i>	Enhanced		IC/IDs	ongoing	FY16
	<i>investigate the feasibility of developing a pilot program (including training) - volunteer surveillance program</i>	Optional		IC/IDs	TBD/in dev.	FY16
4	Implement practices and procedures to address spills that may discharge into MS4	Base	MS4 Permit, Section E.2.b(4)	IC/IDs	ongoing	ongoing
	<i>coordinate spill response with responsible sewer agencies</i>	Base		SSOs	ongoing	FY16
	<i>implement septic system rebate program with availability of grant funding</i>	Optional		OWTS	ongoing	FY16
	<i>develop a pilot online septic system maintenance outreach program</i>	Optional committed		OWTS	ongoing	ongoing
5	Implement practices and procedures to prevent/limit infiltration of seepage from sanitary sewers	Base	MS4 Permit, Section E.2.b(5)	Sewer infrastructure	ongoing	ongoing
6	Coordinate with upstream Copermitees and/or entities to prevent ID from upstream sources into the MS4	Base	MS4 Permit, Section E.2.b(6)	IC/IDs	ongoing	ongoing
7	Monitor MS4 outfalls for discharges of potential ICIDs	Base	MS4 Permit, Section E.2.c	Persistent/ transient flows	Annually	ongoing
8	Develop and implement a strategy for investigating and addressing ICIDs.	Base	MS4 Permit, Section E.2.d	IC/IDs	One time	FY15
Development Planning						
9	All development projects: Implement or require implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Base	MS4 Permit, Section E.3.a	new and redevelopment	ongoing	ongoing
10	Priority Development Projects: In addition to requirement for all development projects, implement or require implementation of onsite structural BMPs to control pollutants and manage hydromodification for PDPs.	Base	MS4 Permit, Sections E.3.b & E.3.c	new and redevelopment	ongoing	ongoing
11	Consider feasibility of developing an alternative compliance program to enable "offsite" compliance for new and redevelopment projects.	Optional	MS4 Permit, Section E.3.c(3)	new and redevelopment	in development	future
12	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	Base	MS4 Permit, Section E.3.d	new and redevelopment	in development	FY16
	<i>Conduct BMP Manual Training - Internal</i>	Base		new and redevelopment	one time	FY16
	<i>Conduct BMP Manual Training - External</i>	Enhanced		new and redevelopment	one time	FY16
13	Implement a program that requires and confirms PDP structural BMPs are designed, constructed, and maintained to remove pollutants.	Base	MS4 Permit, Section E.3.e	new and redevelopment	ongoing	ongoing
14	Enforce legal authority established for all development projects to achieve compliance.	Base	MS4 Permit, Section E.3.f	new and redevelopment	ongoing	ongoing
	<i>update county ordinance related to land development; reference to updated BMP manual</i>	Base		new and redevelopment	one time	FY15
	<i>investigate feasibility of developing a Green Streets Program</i>	Optional		All	TBD	TBD
Construction Management						
15	Maintain and update a watershed-based inventory of all construction projects issued a local permit that allows ground disturbance or soil disturbing activities.	Base	MS4 Permit, Section E.4.b(1)	Construction: waste management, portable toilets	quarterly	FY16

San Diego Bay Watershed
 CoSD JRMP-WQIP Strategies

Strategy	Program Type (see notes at bottom)	Permit Reference	Sources	Frequency	Schedule	
16	Implement or require implementation of BMPs that are site specific, seasonally appropriate and construction phase appropriate. Includes inspections at an appropriate frequency and enforcement of requirements.	Base	MS4 Permit, Sections E.4.c & E.4.d(1)	Construction: waste management, portable toilets	TBD/in dev.	ongoing
17	Enforce legal authority established for all its inventoried construction sites to achieve compliance.	Base	MS4 Permit, Section E.4.e	Construction: waste management, portable toilets	as necessary	ongoing
	<i>update county ordinance related to construction; reference to existing grading ordinance</i>	Base		Construction: waste management, portable toilets	one time	FY15
18	Conduct internal training on Construction Management	Base	MS4 Permit, Section E.7.a(3)	Construction: waste management, portable toilets	Annually	ongoing
Existing Development						
19	Maintain and update a watershed-based inventory of all existing development that may discharge a pollutant load to and from the MS4.	Base	MS4 Permit, Section E.5.a	ICMR	Annually	on going
	<i>make improvements to tracking watershed based inventories via consolidated database</i>	Optional committed		ICMR	one time	FY16
20	Designate a minimum set of BMPs required for all existing development inventories, including special event venues. The designated minimum BMPs must be specific to facility or area types and pollutant generating activities, as appropriate.	Base	MS4 Permit, Section E.5.b	ICMR	one time	on going
	<i>Create an Equestrian BMP Handbook</i>	Optional Committed	County Program	equestrian land uses	one time	FY16
	<i>Develop Stormwater Quality Master Plans for Special Drainage Fee Areas</i>	Optional committed		ICMR	ongoing	ongoing
21	Require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types and pollutant generating activities, as appropriate.	Base	MS4 Permit, Section E.5.c	ICMR	ongoing	ongoing
	<i>facilitate pet waste management in County Parks through outreach or bag dispensers</i>	Enhanced		municipal parks	ongoing	ongoing
22	Operate and maintain (inspect and clean) MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.).	Base	MS4 Permit, Section E.5.b.(1)(c)(ii)	MS4	Annually	ongoing
23	Operate and maintain (e.g., inspect, sweep) County maintained streets, unpaved roads, paved roads, and paved highways	Base	MS4 Permit, Section E.5.b.(1)(c)(iii)	transportation corridors	per JRMP	ongoing
24	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Base	MS4 Permit, Section E.5.b(1)(d)	ICMR	ongoing	ongoing
25	Promote and encourage implementation of designated BMPs at residential areas.	Base	MS4 Permit, Section E.5.b(2)	residential	ongoing	FY16
26	Conduct inspections of inventoried existing development to ensure compliance	Base	MS4 Permit, Section E.5.c	ICMR	20% per year, all within 5 years	FY16
	<i>conduct focused residential inspections based on strategic assessments (modeling, MST, persistent flows, regulatory, monitoring data, SFR/MFR (112 RMAs based on HSA)</i>	Enhanced		residential	20% per year, all within 5 years	FY16
	<i>investigate the feasibility of a residential inspections tracking program via mobile platform - miles, violations, etc.</i>	Optional Committed		residential	ongoing with inspections	FY16
	<i>investigate the feasibility of improvements to inspections data tracking through mobile phone applications</i>	Optional		ICRM		FY16
27	Enforce legal authority established for all inventoried existing development to achieve compliance	Base	MS4 Permit, Section E.5.d	ICMR	ongoing	ongoing
	<i>update county ordinance related to existing development; reference to existing guidance documents</i>	Enhanced		ICMR	one time	FY15
28	Develop a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	Base	MS4 Permit, Section E.5.e(1)	municipal areas	internal and WMAA	FY15
	<i>collaborate with partner agencies and groups to promote non-County sponsored incentive programs for BMP retrofits, including rain barrels, smart controllers, soil sensors, turf replacement, etc.</i>	Enhanced		residential/commercial	ongoing	ongoing
	<i>investigate the feasibility of developing and implementing an incentive program for BMP Retrofits (Public-Private Partnerships - a County sponsored program to offer incentives for rain barrel installation, downspout disconnects from the stormwater system, etc)</i>	Optional committed				
29	Develop a strategy to identify candidate areas of existing development for stream, channel, and/or habitat rehabilitation projects and facilitate implementation of such projects.	Base	MS4 Permit, Section E.5.e(2)	municipal	internal and WMAA	FY15

San Diego Bay Watershed
 CoSD JRMP-WQIP Strategies

Strategy	Program Type (see notes at bottom)	Permit Reference	Sources	Frequency	Schedule
Outreach and Public Participation					
Develop Sustainable Landscapes Program based on available grant funding	Optional		residential/ commercial	ongoing	FY16
develop, improve, distribute outreach materials for existing development	Enhanced		ICMR	ongoing	ongoing
conduct outreach presentations to elementary, middle, and high school students	Enhanced		ICMR	ongoing	ongoing
conduct outreach to mobile landscaping service providers	Enhanced		ICMR	ongoing	ongoing
Consider expanding Homeowners Associations Outreach and Coordination (pilot project considered for San Luis Rey, San Dieguito and San Diego River) as needed and as funding is identified	Optional				TBD
Sponsor Trash Collection Events	Enhanced	County Program	existing land use	TBD	ongoing
Conduct Educational Workshops (e.g., IPM, manure management)	Enhanced	County Program	residential	ongoing	ongoing
Conduct Education & Outreach Effectiveness Survey	Enhanced	County Program	ICMR	annual	ongoing
Enforcement Response Plan					
30 Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Base	MS4 Permit, Section E.6	all MS4 related sources	ongoing	ongoing
31 Notify the SDWB by email (Nonfilers_R9waterboards.ca.gov) within five (5) calendar days of issuing escalated enforcement to a construction site that poses a significant threat to water quality as a result of violations or other noncompliance	Base	MS4 Permit E.6.e.(1)	construction	ongoing	FY16
32 Notify the SDWB by email (Nonfilers_R9waterboards.ca.gov) any persons required to obtain coverage under the statewide industrial General Permit and Construction General Permit and failing to do so, within five (5) calendar days from the time the Copermitee become aware of the circumstances.	Base	MS4 Permit E.6.e.(2)	industrial	ongoing	FY16
Public Education and Participation					
33 Implement a public education and participation program to promote and encourage development of programs, management practices and behaviors that reduce the discharge of pollutants in storm water prioritized by high risk behaviors, pollutants of concern, and target audiences.	Base	MS4 Permit, Section E.7	MS4 sources	ongoing	ongoing
Physical Strategies					
Investigate feasibility of Land Acquisitions for habitat restoration or preservation	Optional	WURMP WQ	ICMR	ongoing	
34 Investigate feasibility of planning for Structural BMPs	Optional	MS4 Permit, Section B.2.e	TBD	TBD	land development programs
39 Investigate feasibility of Retrofitting projects in areas of existing development	Optional	MS4 Permit, Section B.2.e	TBD	TBD	potential for implementation via alternative compliance program
40 Investigate feasibility of Stream, channel, and/or habitat rehabilitation projects	Optional	MS4 Permit, Section B.2.e	TBD	TBD	potential for implementation via alternative compliance program
Optional Planning Strategies developed during WQIP process					
42 Consider development of incentive programs for water conservation (turf replacement, smart irrigation controllers, irrigation modifications, sustainable landscapes, rain barrels), in collaboration with water agencies and others, to reduce priority pollutants	Optional				
43 Consider development of incentive programs, in collaboration with DEH, for pumping septic systems in high risk areas adjacent to waterways (within 600 ft) or stormwater system; subject to grant funding	Optional				
44 Consider partnerships with Master Gardeners to provide education opportunities on water use and practices for gardening	Optional				
45 Consider collaboration with community groups to provide "boots on the ground" local information to focus implementation efforts on reducing bacteria and other pollutants, close to the source	Optional				
46 Consider collaboration with COSD internal departments to leverage mutually beneficial projects to promote retrofits to include installation of controls to address priority pollutants, if feasible.	Optional				

San Diego Bay Watershed
CoSD JRMP-WQIP Strategies

Strategy	Program Type (see notes at bottom)	Permit Reference	Sources	Frequency	Schedule
47 Consider collaboration with watershed partners to encourage consistent messaging to specific targeted audiences (commercial, residents, and others) to conserve water and mitigate dry weather flows	Optional				
48 Consider collaboration with watershed partners on Round 4 of Proposition 84 IRWM grant opportunities to fund targeted educational programs, building of structural controls (brick and mortar projects), or incentive programs to reduce runoff	Optional				
49 Consider collaboration with watershed partners and Regional Water Quality Control Board on effective measures to reduce potential impact of pollutant loads to waterways from unauthorized encampments	Optional				
50 Consider collaboration with wastewater agencies to identify where sewer and stormwater infrastructure are in close proximity and confirm the absence of flow at nearby stormwater MS4 outfall during dry weather	Optional				
52 Consider collaboration with watershed partners to remove invasive non-native plants (Arundo) upstream areas rivers or tributaries to increase flood and fire protection and reduce the number of unauthorized encampments on the river bottom	Optional				
53 In collaboration with DEH, consider developing program for on-site wastewater treatment (septic) systems. May include mapping and risk assessment, inspection, or maintenance practices.	Optional				
54 Implement full scale residential pet waste projects (commitments, large property, urban)	Optional				
56 Consider investigating diverting persistent dry weather flows from storm drains to sanitary sewer, where feasible	Optional				
57 Consider the design of structural controls for persistent unpermitted dry weather flows where outreach has been unsuccessful and groundwater or other non-MS4 sources has been ruled out	Optional				
58 Consider developing a strategy to evaluate opportunities to naturalize concrete stormwater conveyances, and identify potential funding sources (such as grants) for design and implementation	Optional				
59 Consider evaluation and reprioritization of the AWM stormwater program to determine inspection priorities for agricultural and related facilities.	Optional				
60 Consider collaboration with Caltrans on their implementation of TMDLs at stream reaches on the Caltrans TMDL Prioritization List that are within the County's jurisdiction.	Optional				

Program Type Notes:

Base - Indicates requirements of the MS4 Permit that the County will implement.

Enhanced - Base program that has been enhanced beyond the MS4 Permit requirements. The enhanced portions of these strategies would be implemented if needed and if funding is available.

Optional - Strategies that are not required by the MS4 Permit. These strategies would be implemented if needed and if funding is available. Those that are "committed" are currently funded this fiscal year (FY14-15) and/or being undertaken or planned for undertaking.

Responsible party notes:

WPP = DPW Watershed Protection Program
 ED = WPP, Existing Development
 PS = WPP, Planning and Science
 DC = WPP, Development and Construction
 FC = DPW Flood Control
 CIP = DPW Capital Improvement Projects
 DEH = Department of Environmental Health
 AWM = Department of Agriculture, Weights and Measures

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K.7 City of Imperial Beach Strategies

The City of Imperial Beach (Imperial Beach) is the southernmost jurisdiction in the San Diego Bay WMA. Long term planning for Imperial Beach includes integration of LID and green street concepts into capital improvement projects (CIPs) and other opportunities as they become available. In addition, Imperial Beach will require source control and LID BMPs as conditions on standard development projects greater than \$50,000.

Low flow and first flush diversions have been installed within Imperial Beach's MS4 that capture trash and dry weather flows. Imperial Beach's Environmental Division incorporates the underserved community in most education activities, which is particularly important to the City due to the large Spanish-speaking community. Imperial Beach maintains ongoing collaboration with the Fish and Wildlife Service on the cleaning and maintenance of MS4 outfall locations along San Diego Bay. In addition, Imperial Beach collaborates with the Navy on annual inspections and operation and maintenance for the portion of the City's MS4 that drains to a detention basin on Navy property. Imperial Beach also actively participates and partners with multiple agencies and stakeholders in the restoration of South San Diego Bay.

Strategies and implementation schedules, presented in Table B-8, were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

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Table I-8. City of Imperial Beach Jurisdictional Strategies

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
IB-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing	Development Permit Fee, General Fund	Community Development, Public Works
IB-2	Update municipal code and ordinances to facilitate and encourage LID and source control BMPs.	Refer to IBMC and BMP Design Manual.	City-wide	Jurisdictional	FY16	As needed	General Fund	Environmental Division, City Attorney
IB-3	Development and redevelopment projects (all projects) with greater than \$50,000 of improvements get reviewed by the Public Works department for public improvement conditions which include enhanced storm water conditions.	Imperial Beach will require source control and LID BMPs as conditions on standard development projects greater than \$50, 0000. The City will develop a list of standard conditions for project review in the JRMP.	City-wide	Jurisdictional	FY15	Ongoing	Development Permit Fee, General Fund	Public Works
IB-4	Develop standard project review conditions for non-priority development projects for storm water.	Imperial Beach will develop standards during this permit cycle. Refer to JRMP.	City-wide	Jurisdictional	FY17	As needed	Environmental Division Budget	Environmental Division
IB-5	Provide education opportunities to developers and project applicants on storm water requirements.	See education component.	City-wide	Jurisdictional	FY15	Ongoing	Environmental Division Budget	Environmental Division
IB-6	Update education materials for developers (brochures, forms, website...).	Education materials will be updated at least once per permit cycle. See education component for more information.	City-wide	Jurisdictional	FY17	As needed	Environmental Division Budget	Environmental Division
IB-7	Train staff on LID regulatory changes, BMP Design Manual, and Municipal Permit elements.	See education component.	City-wide	Jurisdictional	FY15	Ongoing	Environmental Division Budget	Public Works
IB-8	Provide storm water conditions on Encroachment Permits.	Construction BMPs will be reinforced through encroachment permit process. Encroachment permits are routed through Public Works.	City-wide	Jurisdictional	FY16	Ongoing	General Fund	Public Works
IB-9	Develop GIS inventory of storm water BMPs required for conditions of approval on PDP and standard development projects.	Optional.	City-wide	Optional	FY18 or Trigger	As needed	General Fund	Community Development, Public Works, GIS
Priority Development Projects (PDPs)								
IB-10	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants and manage hydromodification. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing	Development Permit Fee, General Fund	Community Development, Public Works
IB-11	Maintain watershed database of PDP and BMPs and link to GIS.	The City will evaluate feasibility.	City-wide	Jurisdictional	FY18	As needed	General Fund	Environmental Division, GIS

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-12	Update IBMC and BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	The City will continue to work with Community Development. Refer to IBMC and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing	General Fund	Environmental Division, Community Development
IB-13	Review and update post construction BMP maintenance agreement for PDPs and review administrative process.	Imperial Beach will provide a comprehensive review of the BMP Maintenance Agreement and aim for simplification. The City also will review and update post construction BMP maintenance during this permit cycle.	City-wide	Optional	FY18 or Trigger	As needed	General Fund	Environmental Division, City Attorney, Department Directors
IB-14	Collaborate with regional Copermittees on implementation of WMAAs and alternative compliance program.	The City will participate in regional groups on WMAA implementation and assessment and consider possible implementation in Imperial Beach.	Region-wide	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
Green Streets								
IB-15	Integrate LID and green street designs into CIP projects where applicable and feasible.	Imperial Beach will integrate LIDs and green street concepts into CIPs and long term planning vision.	City-wide	Jurisdictional	FY15	Ongoing	General Fund, CIPs	Community Development, Public Works
Construction Management								
IB-16	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.	The City inspects before rain events and during any permit inspection. All construction projects are priorities.	City-wide	Jurisdictional	FY 15	Ongoing	Development Permit Fee, General Fund	Public Works, Community Development
IB-17	Maintain and update a quarterly watershed based inventory of active construction projects.	There is a construction inventory in place.	City-wide	Jurisdictional	FY15	Ongoing	Development Permit Fee, General Fund	Public Works, Community Development
IB-18	Maintain a watershed based inventory of construction inspections.	Construction inspections are performed by Community Development for private projects and Public Works for public projects.	City-wide	Jurisdictional	FY 15	Ongoing	Development Permit Fee, General Fund	Public Works, Community Development
IB-19	Require the implementation of minimum BMPs at construction sites.	Refer to JRMP and IBMC.	City-wide	Jurisdictional	FY 15	Ongoing	Development Permit Fee, General Fund	Public Works, Community Development

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Existing Development								
Commercial, Industrial, Municipal, and Residential Facilities and Areas								
IB-20	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Onsite inspections are provided at least once per permit cycle.	City-wide	Jurisdictional	FY 15	Ongoing	General Fund	Public Works
IB-21	Maintain a watershed based inventory of existing development in GIS.	The City will develop inventory in Access and GIS.	City-wide	Jurisdictional	FY 15	Ongoing	General Fund	Environmental Division, GIS
IB-22	Target residential inspections for sediment and over irrigation.	Residential inspections will be targeted for residential on a specific issue.	City-wide	Jurisdictional	FY17	As needed	Environmental Division Budget	Environmental Division
IB-23	Target commercial inspections for trash storage areas and FOG management.	Commercial inspections will be targeted on specific BMPs.	City-wide	Jurisdictional	FY17	As needed	Environmental Division Budget	Environmental Division
IB-24	Target Municipal inspections on landscaping and maintenance of LID areas and existing BMPs.	Municipal inspections will be targeted for specific pollutants.	City-wide	Jurisdictional	FY17	As needed	Environmental Division Budget	Environmental Division, Parks and Facilities
IB-25	Update minimum BMPs for existing residential, commercial, and municipal facilities.	Refer to JRMP and IBMC.	City-wide	Jurisdictional	FY16	As needed	Environmental Division Budget	Environmental Division, City Attorney
IB-26	Implement pet waste program. Includes the installation and maintenance of pet waste bag dispensers and trash bins, signage and education, physical removal of pet waste at parks, and enforcement.	The current pet waste bag program will be maintained.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Parks and Facilities
IB-27	Review and update City GIS database related to storm water.	Significant redevelopment over the past permit cycle requires an update to the City GIS database.	City-wide	Jurisdictional	FY19	As needed	General Fund	Environmental Division, GIS
MS4 Infrastructure								
IB-28	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.) for water quality improvement.	The City annually inspects and cleans all MS4 catch basins and lines that have visual impairments of trash or debris.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Sewer Division
IB-29	Clean and maintain MS4 outfall locations (September-October).	Due to wildlife nesting concerns, Imperial Beach coordinates its cleaning and maintenance of MS4 outfall locations with the Fish and Wildlife Service along San Diego Bay. Annual maintenance is provided for vegetation and debris removal.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Public Works

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-30	Ensure operation and maintenance of Navy outfalls.	A portion of the City's MS4 drains to a detention basin on Navy property. The City coordinates annual inspections and works with the Navy to ensure adequate operation and maintenance.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Public Works
IB-31	Provide operation and maintenance of the 10th Street and Imperial Beach Boulevard CDS unit.	The unit is inspected quarterly.	Tijuana River	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Sewer Division
IB-32	Provide operation and maintenance cleaning of MS4 catch basin filters.	MS4 catch basin filters are inspected and cleaned quarterly.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Sewer Division
IB-33	Provide operation and maintenance of low flow and first flush storm drain diverters at Palm Avenue and Date Avenue.	The storm drain diverters are inspected weekly.	Otay River HU	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Sewer Division
IB-34	Provide operation and maintenance of LID infiltration areas.	Maintenance requirements vary, but at a minimum each infiltration area receives maintenance annually.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, Streets Division, Parks and Facilities
IB-35	Provide operation of maintenance of wash out diverters at PW, lifeguards, and fire stations.	Wash out diverters are inspected annually.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Sewer Division, Tidelands
Roads, Street, and Parking Lots								
IB-36	Implement operation and maintenance activities for public streets, unpaved roads, paved roads, and paved highways.	Refer to JRMP.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Public Works
IB-37	Provide street sweeping of residential areas, commercial areas, paved alleys, medians, and parking lots.	Commercial areas including open stripped and raised curb medians and municipal parking areas are swept weekly. Beachfront areas, such as Seacoast residential area, are swept twice a month. Residential areas including stripped and raised curb medians and paved alleys are swept monthly.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, EDCO
IB-38	Evaluate street sweeping effectiveness for opportunities of enhancement.	The City will hold community meetings, present options to council, and evaluate options with street sweeping contract if needed.	City-wide	Optional	FY18	As needed	General Fund	Environmental Division, EDCO
IB-39	Develop plan for unimproved alleys.	Imperial Beach will develop plans with the community on how best to address unimproved alleys in the City. Any improvements will require community support and be conformant to EPA green streets standards.	City-wide	Optional	FY15	Ongoing	General Fund, CIP	Public Works, Community Development
IB-40	Daily Tidelands maintenance of beachfront property.	Tidelands division provides daily trash collection, sweeping, and maintenance of the beachfront and Seacoast Drive.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Tidelands

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-41	Provide weekly bulky item pickup from alleys of illegally dumped material.	Illegally dumped materials in City alleys are cleaned up every week. Items get reported to Public Works, and EDCO performs the cleanup every week.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division, EDCO
<i>Pesticide, Herbicides, and Fertilizer BMP Program</i>								
IB-42	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Pest management includes this program.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Parks and Facilities
<i>Retrofit and Rehabilitation in Areas of Existing Development</i>								
IB-43	Consider the integration of LID retrofits where feasible as part of street CIP rehabilitation projects.	Imperial Beach will make green streets a standard for future CIP projects.	City-wide	Jurisdictional	FY18	As needed	General Fund	Public Works, Community Development
IB-44	Elimination of residential and commercial curb cuts	Non-permitted curb cuts are eliminated as the City implements street rehabilitation projects.	City-wide	Jurisdictional	FY15	Ongoing	General Fund	Streets Division and CIP
IB-45	Include storm water BMPs, LID, EPA green streets and other applicable storm water treatment systems into the long range planning and design of City projects.	Imperial Beach will make green streets a standard for future CIP projects.	City-wide	Jurisdictional	FY18	As needed	General Fund	Public Works, Community Development
IB-46	Continue to work with the Fish and Wildlife Service for rehabilitation and restoration projects along the San Diego Bay watershed.	The City actively participates and partners with multiple agencies in the restoration of South San Diego Bay.	City-wide	Jurisdictional	FY16	Ongoing	General Fund	Public Works, Community Development
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>								
IB-47	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing	General Fund	Public Works and Community Development
IB-48	Implement proactive enforcement of storm water violations.	All City employees in City vehicles are expected to report storm water violations to the Environmental Division. All Public Works employees are in constant communication through radio phones.	City-wide	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-49	Conduct frequent visual outfall monitoring to identify and eliminate illicit discharges.	Frequency?	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Public Education and Participation								
IB-50	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.		?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-51	Provide education opportunities to commercial businesses.	Imperial Beach provides education to businesses through storm water brochures provided during business license application and renewal. Education is also provided through inspections and enforcement actions.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-52	Provide education opportunities to development community.	Contractors and developers are trained through face-to-face meetings with the Community Development Department and the Publics Works Department during the permitting process, through inspections, and through investigations of illegal discharges. Educational brochures are used as part of the permitting process and web resources are available.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-53	Provide education to municipal departments and personnel.	Multiple training opportunities are provided to municipal staff. Annual training is provided to the Public Works Department. Monthly code enforcement working group, weekly Community Development Department, and weekly staff meetings provide opportunities to discuss storm water issues. The City also provides a weekly FYI that gets emailed to all City staff and City council.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-54	Provide education to residents, general public, and school children.	The general public receives educational information through the City's website, quarterly EDCO newsletter, printed materials at offices, community presentations, ILACSD school presentations, community events, regional events, and various other methods.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-55	Provide education to underserved community.	Education materials are provided in both English and Spanish. The Environmental Division incorporates the underserved community in most education activities, which is particularly important to Imperial Beach due to the large Spanish-speaking community.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-56	Review printed storm water educational materials.	The City will review printed materials, such as brochures, at least once per permit cycle.	?	Jurisdictional	FY17	Ongoing	Environmental Division Budget	Environmental Division
IB-57	Update electronic website information.	Imperial Beach updates storm water information on the City's website annually.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-58	Encourage public participation in community events.	The City provides or supports multiple community cleanup and awareness events throughout the year, such as Creek to Bay, Tijuana River Action Month, Homefront Cleanup, Citywide Garage Sale, Fiesta del Rio, Sun and Sea Festival, and many more.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-59	Collaborate with regional education and outreach efforts.	Imperial Beach will continue in regional education efforts in the San Diego region.	?	Jurisdictional	FY16	Ongoing	Environmental Division Budget	Environmental Division
IB-60	Provide targeted education specific to each WQIP.	The City will provide targeted education in collaboration with WMA partners and to address specific issues raised in the WQIP.	?	Jurisdictional	FY18	Ongoing	Environmental Division Budget	Environmental Division
Enforcement Response Plan								
IB-61	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to JRMP.	?	Jurisdictional	FY16	As needed	Environmental Division Budget	Environmental Division
Additional Nonstructural Strategies								
IB-62	Address and clean up pollutants from homeless encampments.	Imperial Beach will continue to collaborate with Fish and Wildlife Service to cut back vegetation to discourage homeless encampments. The City also will participate in regional actions to address the social issues related to homelessness.	?	Jurisdictional	FY19	As needed	General Fund	Public Works
IB-63	Support source reduction initiatives.	The City will continue to provide support for source reduction, product stewardship, and extended producer responsibility initiatives. The City participates with the Regional Solid Waste TAC.	?	Jurisdictional	FY19	As needed	General Fund	Environmental Division

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-64	Conduct special studies for each WMA as needed to address storm water issues.	Imperial Beach will identify studies and develop plan.	?	Jurisdictional	FY18	As needed	General Fund	Environmental Division
IB-65	Participate in regional partnerships to address water quality issues outside the scope of the Municipal Permit.	The City will continue participation in the following: Tijuana River Recovery Team, Tijuana National Estuarine Research Reserve Advisory Council, IBWC Citizen's Forum, and EPA Border 2020 Program.	?	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division
IB-66	Collaborate/partner with school districts in City (South Bay Union and Sweetwater) on storm water.	Imperial Beach will develop partnerships with schools and identify storm water opportunities for partnership.	?	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division
IB-67	Collaborate/partner with Caltrans on storm water issues.	Imperial Beach will develop partnerships with Caltrans and identify storm water opportunities for partnership along Interstate 75.	?	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division
IB-68	Collaborate/partner with Navy on storm water issues.	Imperial Beach will develop partnerships with Navy and identify storm water opportunities for partnership.	?	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division
IB-69	Collaborate/partner with Scripps Institute of Oceanography on coastal monitoring projects.	The City will continue working with SIO to support research activities and grant applications for work along the Imperial Beach shoreline.	?	Jurisdictional	FY15	Ongoing	Environmental Division Budget	Environmental Division
IB-70	Collaborate/partner with NGOs on storm water issues.	The City will continue working with NGOs for Tijuana River Action Month, Creek to Bay, and School presentations.	?	Jurisdictional	FY15	Ongoing	Environmental Division Budget	Environmental Division
IB-71	Collaborate/partner with on the City of San Diego Pure Water initiative.	Imperial Beach will support the development of a new local water supply for the region.	?	Jurisdictional	FY15	Ongoing	General Fund	Environmental Division
IB-72	If a regional social services effort is established, support workgroup to provide sanitation and trash management for person experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	The City will support a regional effort.	?	Optional	FY19	As needed	General Fund	Public Works
Additional Structural Strategies								
IB-73	Develop a program to address and capture trash and debris.	Imperial Beach will study the best option for trash capture devices in the City that does not contribute to flooding issues.	?	Optional	FY19	As needed	General Fund, Grants	Public Works
IB-74	Study options to capture trash and treat runoff for the E outfall that drain primarily Mar Vista High School and Sports Park.	The City will study the best option for BMP for 5th and Grove.	?	Optional	FY19	As needed	General Fund, Grants	Public Works

**Table I-8. City of Imperial Beach
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Sub watershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
IB-75	Work with Fish and Wildlife Service to continue evaluation of daylighting K outfall.	Imperial Beach will work with Fish and Wildlife Service to prioritize projects and assist in grants.	?	Optional	FY19	As needed	General Fund, Grants	Public Works
IB-76	Study options to capture trash and treat runoff from the H outfall.	The City will study the best option for BMPs for the H outfall.	?	Optional	FY19	As needed	General Fund, Grants	Public Works
IB-77	Study trash capture options for retrofit of MS4 catch basins.	Imperial Beach will study the best option for trash capture devices in the City that does not contribute to flooding issues.	?	Optional	FY19	As needed	General Fund, Grants	Public Works

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K.8 City of La Mesa Strategies

The City of La Mesa (La Mesa) is located in the hills of San Diego County with walkable, tree-lined neighborhoods and retail and commercial areas. La Mesa has received funding to implement green infrastructure along a busy corridor of University Avenue. Other strategies to improve water quality include enhancing MS4 infrastructure maintenance and promoting water efficient landscape BMPs. Strategies and implementation schedules, presented in Table B-9, were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. In Chollas Creek, a compliance analysis using a watershed model was conducted to identify the strategies required to be implemented to meet final goals. The strategies and implementation schedules identified demonstrate that numeric goals will be met. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the compliance analysis will be updated as needed to provide assurance that numeric goals will be met.

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Table I-9. City of La Mesa Jurisdictional Strategies

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
LM-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
LM-2	Amend municipal code and ordinances to require LID implementation.	La Mesa will amend ordinances for dry weather component and per new BMP Manual.	City-wide	Jurisdictional	FY15	As needed		Public Works Department, Engineering Department
LM-3	Train staff on LID regulatory changes and LID Design Manual.	The City performs training on CIP and will examine water quality before scoping and budgeting for projects.	City-wide	Jurisdictional	FY15	Annually		Public Works Department, Engineering Department
Priority Development Projects (PDPs)								
LM-4	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants and manage hydromodification. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
	1. Administer self-certification program for treatment control BMP compliance.	La Mesa has a program in place.	City-wide	Jurisdictional	Prior to FY16	Annually		Public Works Department, Engineering Department
LM-5	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	The City will update its BMP Design Manual by making small changes to the County's.	City-wide	Jurisdictional	Prior to FY16	As needed		Public Works Department, Engineering Department
	1. Amend BMP Design Manual for trash areas. Require full four-sided enclosure, siting away from storm drains and cover. Consider the retrofit requirement.	La Mesa will consider amending the BMP Design Manual for trash areas.	?	Jurisdictional	FY16	As needed		Public Works Department, Engineering Department
	2. Amend BMP Design Manual for mobile businesses.	La Mesa has a mobile business program. A business is required to read and sign a stormwater affidavit and comply with rules in order to receive a permit.	City-wide	Jurisdictional	Prior to FY16	As needed		Public Works Department, Engineering Department
LM-6	Administer an alternative compliance program to on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects).	The City will implement an alternative compliance program to meet City and Developer needs and to fund CIP projects.	City-wide	Jurisdictional	FY18	Ongoing		Public Works Department, Engineering Department

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Construction Management								
LM-7	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.	The City currently implements this program. During wet season, high priority areas are inspected and cleaned every two weeks, medium areas are inspected and cleaned monthly, and low priority areas are inspected and cleaned once per rainy season. Cleanings are prioritized based on previous implementation.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
Existing Development								
Commercial, Industrial, Municipal, and Residential Facilities and Areas								
LM-8	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	All facilities are inspected annually.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
	1. Update minimum BMPs for existing residential, commercial, and industrial development.	The City will update minimum BMPs during JRMP update to include a new residential program. In addition, outdoor exposure will trigger action for BMPs.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
	2. Design, implement, and enforce property- and PGA-based inspections.	La Mesa will implement property- and PGA-based inspections. Each business will be inspected at least once a year, and high priority areas will be inspected more than once.	City-wide	Jurisdictional	FY15	Annually		Public Works Department, Engineering Department
	3. Increased inspection for highest pollutant potential businesses.	The City will increase inspections based on effectiveness of new program. It currently has FOG inspections for restaurants and will prioritize auto-related facilities within Chollas. Every business is inspected every year.	Chollas Creek HA?	Jurisdictional	FY15	Ongoing		Public Works Department, Engineering Department
	4. Provide BMP factsheet to water-using mobile businesses when business license is granted, and require minimum BMPs for mobile businesses.	La Mesa already accomplished this in existing program.	City-wide	Jurisdictional	Prior to FY16	As needed		Public Works Department, Engineering Department
	5. Review policies and procedures to ensure discharges from swimming pools meet permit requirements.	La Mesa will update swimming pool items per changes in code.	City-wide	Jurisdictional	FY15	As needed		Public Works Department, Engineering Department
	6. Require sweeping and maintenance of private roads and parking lots in targeted areas.	Optional.	Targeted? Chollas? City-wide?	Optional	Trigger (upon need)			Public Works Department, Engineering Department

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	7. Implement Water Efficient Landscape Ordinance.	The City already has a State mandated landscape ordinance.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
LM-9	Implement pet waste program. May include installation and maintenance of pet waste bag dispensers and trash bins, signage and education, and physical removal of pet waste.	La Mesa has a preexisting pet waste program.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works, Parks
LM-10	Promote and encourage implementation of designated BMPs at residential areas.		City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	1. Expand residential BMP (irrigation, rainwater harvesting, and turf conversion) rebate programs to multi-family housing in target areas.	La Mesa will potentially collaborate with HOAs for rebates, inspection reduction programs, and more.	City-wide	?	?	?		Public Works, HOAs
	2. Promote and collaborate with water agencies and other groups to encourage implementation of water conservation programs that improve water quality by reducing over-irrigation with smart products or turf replacement and capturing rain water in residential areas.	La Mesa will potentially collaborate with Helix Water District on rebate programs, and more.	City-wide	Jurisdictional	?	?		Public Works, Helix Water District
	3. Residential BMP: Rain Barrel	The City already has been implementing rain barrels.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works, Helix Water District
LM-11	Promote and encourage implementation of designated BMPs in non-residential areas.	La Mesa will work with Helix Water District. There will be dry weather benefits.	City-wide	Jurisdictional	?	Ongoing		Public Works Department, Engineering Department
LM-12	Implement program to investigate illegal grading on private property.	The City already investigates illegal grading.	City-wide	Jurisdictional	Prior to FY16	Weekly		Public Works Department, Engineering Department
MS4 Infrastructure								
LM-13	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.) for water quality improvement and flood control.	La Mesa has an existing program that does this.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
	1. Optimize catch basin cleaning to maximize pollutant removal (4 times per year for metals and sediment TMDLs, elsewhere 1 per year)	La Mesa has 455 catch basins in the Chollas Creek watershed. Current frequency is two times per year, and it will be increased to four times a year.	Chollas Creek HA	Jurisdictional	FY18	Ongoing		Public Works Department, Engineering Department
	2. Repair MS4 components to provide source control from MS4 infrastructure.	The City repairs MS4 components as needed based on condition assessment and prioritization process.	City-wide	Jurisdictional	Prior to FY16	As needed		Public Works Department, Engineering Department

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	3. Implement and increase frequency of annual open-channel cleaning and scour pond repair to reduce pollutant loads and invasive plants and animals as needed.	The City will perform as needed on municipal property via code enforcement on private property.	City-wide	Jurisdictional	Prior to FY16	As needed		Public Works Department, Engineering Department
LM-14	Identify sewer leaks and areas for sewer pipe replacement prioritization.	La Mesa already replaces as needed based on sewer condition assessment and long-term prioritization.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works Department, Engineering Department
	1. Replace pipes as needed in Chollas watershed.	La Mesa currently is performing trunk main pipe replacements. One project is occurring at University and Massachusetts Avenues.	Chollas Creek HA	Jurisdictional	FY17	Time to replace? 2 years?		Public Works Department, Engineering Department
Roads, Street, and Parking Lots								
LM-15	Implement operation and maintenance activities for public streets, unpaved roads, paved roads, and paved highways	The City has a preexisting street sweeping schedule that is prioritized by area.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	1. Perform street sweeping in roads, parking lots, and medians on high-volume arterial roadways.	High traffic and arterial areas are swept once a week, other arterial areas are swept every other week, and residential areas are swept once a month. Parking lots and medians are included in street sweeping program.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	2. Enhance street sweeping through equipment replacement (replace every 4 years) and route optimization (sweep commercial routes bi-weekly and residential every other month)	Street sweeping is contracted out, and the contractor uses Regen Air sweepers. The City plans to increase frequency in high traffic areas in Chollas to two times a week.	Chollas	Jurisdictional	FY18	Ongoing		Public Works
Pesticide, Herbicides, and Fertilizer BMP Program								
LM-16	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	The City does not have authority over application of pesticides but will implement BMPs. Industrial and commercial inspections cover requirement, and Parks and Rec implement municipal program. Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works, Parks and Rec
Retrofit and Rehabilitation in Areas of Existing Development								
LM-17	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	La Mesa will target municipal areas. Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Public Works Department, Engineering Department
LM-18	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Public Works Department, Engineering Department

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>								
LM-19	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	1. Utilize "Request Tracker," an online web-based program, to encourage residents to report potential illicit discharges or other storm water violations.	The City has "Request Tracker," an online program that anyone can report to. Notifications will remain until solved and will be routed to the appropriate department. The City also has a hotline that people can call.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
<i>Public Education and Participation</i>								
LM-20	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	1. Conduct trash cleanups through community-based organizations involving target audiences.	La Mesa works with "I Love a Clean San Diego" and holds two major cleanups in each watershed per year. The City will possibly work with Groundworks Chollas or other NGOs. Private cleanups are conducted through code enforcement.	Chollas Creek HA	Jurisdictional	Prior to FY16	Ongoing		Public Works, ILACSD, Community Development/Code Enforcement
	2. Review City storm water website and identify and implement required updates to reflect WQIP and JRMP revisions.	The City will update the website to include new permit information, such as for irrigation.	City-wide	Jurisdictional	FY15	As needed		Public Works
	3. Target human behavior in parks and other public areas including trash reduction or other high impact behavior to habitat, wildlife, and water quality.	About six kiosks have been built in parks in collaboration with Eagle Scouts and other community groups. Information on trash and other public issues can be included in these kiosks. La Mesa plans to build one more kiosk per fiscal year.	City parks	Jurisdictional	Prior to FY16	Ongoing		Public Works, Eagle Scouts, community groups
	4. Enhance school and recreation-based education and outreach.	"I Love a Clean San Diego" presents in schools.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works, ILACSD

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	5. Continue to support the Environmental Sustainability Commission (ESC), a committee of local residents and business owners working to preserve La Mesa's environment.	The ESC manages the Environmental Awareness Festival, serves as an advisory body to the City Council on how actions and policies of the City may preserve and enhance the quality of La Mesa's environment, and addresses the effects of climate change and assists in the identification of measures that will improve environmental sustainability in La Mesa and the region.	City-wide	Jurisdictional	Prior to FY16	Ongoing		ESC
	6. Collaborate with regional education and outreach efforts.	La Mesa collaborates on regional efforts.	Region-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	7. Develop education and outreach to reduce over-irrigation.	The City will distribute flyers and door hangers City-wide. If over irrigation occurs, a pamphlet will be sent to the offender.	City-wide	Jurisdictional	FY16	Ongoing		Public Works
LM-21	Provide technical education and outreach to the development community on the design and implementation requirements of the Municipal Permit and WQIP requirements.	This will be done regionally and as needed or requested within the City.	Region-wide	Jurisdictional	FY14	As needed		Public Works, regional agencies/groups
Enforcement Response Plan								
LM-22	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to JRMP.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
Additional Nonstructural Strategies								
LM-23	Continue participating in source reduction initiatives.	La Mesa will continue to participate in source reduction initiatives.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
	1. Replace City-owned vehicle brake pads with copper-free brake pads as they become commercially available.	Optional.	City-wide	Optional	Trigger (upon availability of technology)			Public Works
	2. Continue implementation of cigarette ban in parks and commercial areas.	La Mesa will continue the cigarette ban and install more cigarette ash trays.	Targeted for additional ash trays? Or city-wide?	Jurisdictional	Prior to FY16	Ongoing		Public Works
	3. Enhance program to address and capture trash and debris.	The City will install additional capture/trash guards.	Targeted or city-side?	Jurisdictional	FY17	Ongoing		Public Works
LM-24	Proactively monitor for erosion, and complete minor repair and slope stabilization on municipal property.	TBD.	TBD	Jurisdictional	TBD	TBD		Public Works
LM-25	Conduct special studies.			Jurisdictional				Public Works
	1. Reference watershed study.	The City will continue to contribute to the study.	Region-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works

**Table I-9. City of La Mesa
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
LM-26	Proactively repair and replace corrugated metal pipe (CMP) MS4 components to provide source control from MS4 infrastructure.	La Mesa is trying to get rid of CMP as part of the prioritized replacement program.	City-wide	Jurisdictional	Prior to FY16	Ongoing		Public Works
LM-27	If a regional social services effort is established, support workgroup to provide sanitation and trash management for person experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	La Mesa does not have a homeless outreach team. Police and property owners enforce cleanups of encampments. If there is a regional effort, La Mesa will participate.	City-wide	Optional	Trigger (upon regional effort)			Public Works
LM-28	Conduct a feasibility study to test Permeable Friction Course (PFC), porous asphalt that overlays impermeable asphalt.	Optional.	Chollas Creek HA	Optional	Trigger (if interim FYX goals not met)			Public Works
Green Infrastructure								
LM-29	Prop 84 Grant Project on University Ave.	Bioretention medians are approximately 4500 linear feet.	University Ave.	Jurisdictional	FY16	Ongoing maintenance		Public Works, GRANT info
LM-30	Identify any planned or potential green infrastructure projects to be constructed.	The City is still considering GI and multi-use project opportunities.	?	?	FY25	?		Public Works
Water Quality Improvement BMPs								
Proprietary BMPs								
LM-31	Identify any existing proprietary BMP projects constructed after 2002.		?	?	?	?		?
LM-32	Identify any planned or potential proprietary BMP projects to be constructed.		?	?	?	?		
	1. Planned- A city park is proposed to be built in a parcel of barren land along Waite Drive. This area can be included for long-term centralized planning.		Chollas Creek HA	TBD	TBD	TBD		?
	2. Planned- A centralized BMP is proposed to be installed in the Future Rehabilitation Project of Vista La Mesa Park.		Chollas Creek HA	TBD	TBD	TBD		?
	3. Potential- Rolando drainage area. Drainage area is 39 acres and 60% impervious.		Chollas Creek HA	TBD	TBD	TBD		?
	4. Potential- Highwood drainage area. Drainage area is 114.5 acres and 44% impervious.		Chollas Creek HA	TBD	TBD	TBD		?

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K.9 City of Lemon Grove Strategies

The City of Lemon Grove (Lemon Grove) is centrally located within San Diego County and includes residential, commercial, and a small industrial area next to Chollas Creek. Those areas will be targeted through inspections and other jurisdictional programs. Lemon Grove plans to be an example to private land uses within the City by implementing landscape practices, such as Cal-Sense irrigation systems, downspout disconnects, and redirection of parking lot runoff to landscaped areas, on municipal property. Other strategies to improve water quality include enhancing MS4 infrastructure maintenance and promoting water efficient landscape BMPs on private property. Strategies and implementation schedules, presented in Table B-10, were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

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**Table I-10. City of Lemon Grove
 Jurisdictional Strategies**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
LG-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
LG-2	Amend municipal code and ordinances, including zoning ordinances, to facilitate and encourage LID opportunities.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
LG-3	Develop and distribute brochure to encourage downspout disconnection in residential areas.	Lemon Grove will distribute informational brochures.	City-wide	Jurisdictional	FY15	Ongoing		City Manager's Office
LG-4	Require downspout connection and/or other runoff reduction measures, where feasible, for non-Priority Projects.	This is required through the building permitting process.	City-wide	Jurisdictional	FY16	Ongoing		Planning
LG-5	Trash area standards for new development and redevelopment: require full four-sided enclosure, siting away from storm drains, and structural overhead cover.	The City is required to do this through the permitting process for new development and redevelopment.	City-wide	Jurisdictional	FY16	Ongoing		Planning
LG-6	Train staff on LID regulatory changes and LID Design Manual.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
Priority Development Projects (PDPs)								
LG-7	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants and manage hydromodification. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
	1. Administer self-certification program for treatment control BMP compliance.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-8	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
	1. Amend BMP Design Manual for trash areas. Require full four-sided enclosure, siting away from storm drains and cover. Consider the retrofit requirement.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
	2. Amend BMP Design Manual for animal-related facilities, such as animal shelters, "doggie day care" facilities, veterinary clinics, breeding, boarding and training facilities, groomers, and pet care stores.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering

**Table I-10. City of Lemon Grove
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
	3. Amend BMP Design Manual for nurseries and garden centers.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
	4. Amend BMP Design Manual for auto-related uses.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning, Engineering
LG-9	Administer an alternative compliance program to on-site structural BMP implementation (includes identifying Watershed Management Area Analysis [WMAA] candidate projects).	(City still is undecided on this item)	?	?	?	?	?	?
Construction Management								
LG-10	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering
Existing Development								
Commercial, Industrial, Municipal, and Residential Facilities and Areas								
LG-11	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-12	Update minimum BMPs for existing residential, commercial, and industrial development.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-13	Increased inspection frequency for highest pollutant potential businesses.	Additional, more frequent inspections may be targeted only at certain high-threat areas or activities and/or at entire shopping centers.	Chollas Creek HA	Jurisdictional	FY15	Ongoing		Storm Water
LG-14	Implement Water Efficient Landscape Ordinance.	Lemon Grove will implement through the permitting process for development projects.	City-wide	Jurisdictional	FY15	Ongoing		Planning
LG-15	Analyze and encourage sweeping of private roads and parking lots in targeted area.	The City will gather more information about existing sweeping frequency for larger commercial parking lots and for private roads within HOAs, and provide outreach to larger commercial properties and HOAs.	Chollas Creek HA	Jurisdictional	FY15	Ongoing		City Manager's Office
LG-16	Require minimum sweeping frequency for private roads and parking lots in targeted area.	Optional.	Chollas Creek HA	Optional	Trigger (if interim metals goals not met and investigation determines parking lots and private roads are not swept)			Planning

**Table I-10. City of Lemon Grove
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
LG-17	Analyze and encourage indoor used cooking oil storage for food service establishments.	Lemon Grove will work with grease rendering services to educate businesses on availability and benefits of indoor grease storage containers.	City-wide	Jurisdictional	FY15	Ongoing		City Manager's Office
LG-18	Require used cooking oil to be either stored indoors or under a structural canopy.	Require for businesses for which outreach efforts were not successful in achieving outcome of having used cooking oil stored in a covered, contained area (e.g., indoors) and at which poor used cooking oil storage BMPs have been observed.	City-wide	Optional	Trigger (if interim bacteria goals not met)			Planning
LG-19	Residential shared outdoor trash storage areas: require full four-sided enclosure, siting away from storm drains, and structural overhead cover when triggered by a building permit application.	Lemon Grove will require retrofit of trash areas at existing facilities when a building permit is applied for at the same property.	City-wide	Jurisdictional	FY16	Ongoing		Planning
LG-20	Industrial and commercial outdoor trash storage areas: require full four-sided enclosure, siting away from storm drains, and structural overhead cover when triggered by a building permit application.	Lemon Grove will require retrofit of trash areas at existing facilities when a building permit is applied for at the same property.	City-wide	Jurisdictional	FY16	Ongoing		Planning
LG-21	Industrial and commercial outdoor trash storage areas: require full four-sided enclosure, siting away from storm drains, and structural overhead cover when triggered by a building permit application.	Lemon Grove will require retrofit of trash areas at existing businesses or properties with a repeated history of non-compliance for trash area management BMPs.	City-wide	Optional	Trigger (if interim bacteria goals not met)			Planning
LG-22	Work with Regional Board to ensure industrial businesses subject to the Industrial General Permit obtain coverage and implement BMPs to address discharges of pollutants associated with TMDLs.	The City will share inspection results with Regional Board staff and notify of non-filers or potential non-compliance with other IGP requirements, especially requirements specifically related to discharges of Highest Priority Conditions.	Chollas Creek HA	Jurisdictional	FY15	Ongoing		Storm Water
LG-23	Pet waste control program.	Lemon Grove will provide pet waste bags via dispensers in City parks.	City-wide	Jurisdictional	FY15	Ongoing		Public Works
LG-24	Promote and encourage implementation of designated BMPs at residential areas.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-25	Work with water utility (Helix) to publicize incentives for rain barrel installation and turf conversion and/or sprinkler system upgrades (e.g., rain shutoff systems) in residential areas, including multi-family residential.	Lemon Grove will collaborate with Helix Water District.	City-wide	Jurisdictional	FY15	Ongoing		Storm Water
LG-26	Publicize and market any existing outreach and training programs that the water utility (Helix) provides for property managers responsible for homeowner associations (HOAs) and Maintenance Districts. Main focus would be on irrigation runoff reduction.	Lemon Grove will collaborate with Helix Water District.	City-wide	Jurisdictional	FY15	Ongoing		Storm Water

**Table I-10. City of Lemon Grove
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
LG-27	Install smart irrigation controllers at City facilities and convert median landscaping to drip irrigation.	The City has installed 7 Cal-Sense irrigation control systems Citywide and continues to make the transition from area sprinklers to drip irrigation along its medians. The City anticipates installing at least one more by 2018. The current locations of the systems are Berry Street Park, Lemon Grove Park, Civic Center Park, City Hall, Kunkel Park, Lemon Grove Avenue median (near Mt. Vernon), and Lemon Grove Avenue median (near Broadway).	Targeted City facilities	Jurisdictional	FY18	Ongoing, subject to availability of funds		Public Works
MS4 Infrastructure								
LG-28	Implement operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, detention basins, etc.) for water quality improvement: perform catch basin cleaning.	Lemon Grove will clean catch basins per regular maintenance schedule.	City-wide	Jurisdictional	FY16	Ongoing		Public Works
	1. Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	Lemon Grove will repair and replace per standard maintenance schedule.	City-wide	Jurisdictional	FY15	Ongoing		Public Works
	2. Clean open-channels and repair scour ponds (local depressions formed by erosion where water ponds).	The City will clean and repair per standard maintenance procedures.	City-wide	Jurisdictional	FY15	Ongoing		Public Works
LG-29	Implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers: identify sewer leaks and areas for sewer pipe replacement prioritization.	The City will repair and replace per standard maintenance schedule and where leaks are identified.	City-wide	Jurisdictional	FY15	Ongoing		Public Works
Roads, Street, and Parking Lots								
LG-30	Enhance street sweeping through equipment replacement (vacuum enhanced for metals) and route optimization (sweep commercial routes bi-weekly and residential every other month).	Sweeping is completed by City contractor	City-wide	Jurisdictional	FY15	Ongoing		Public Works
LG-31	Sweep medians on high-volume arterial roadways.	Sweeping is completed by City contractor	City-wide	Jurisdictional	FY15	Ongoing		Public Works
Pesticide, Herbicides, and Fertilizer BMP Program								
LG-32	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
Retrofit and Rehabilitation in Areas of Existing Development								
LG-33	Develop pilot project to identify and carry out directing runoff from existing parking lots or other hardscape to landscaping.	Lemon Grove will complete field work to identify where existing grades would allow parking lots to be directed to landscaping, and the most suitable site(s) will be selected for retrofit.	Targeted City facilities	Jurisdictional	FY16	As feasible retrofit locations are identified and funds are available.		Public Works

**Table I-10. City of Lemon Grove
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
LG-34	Develop pilot project to identify and carry out site downspout disconnections for targeted City facilities.	Lemon Grove will complete field work to identify where downspouts exist and could be directed to landscaping. The most suitable site(s) will be selected for retrofit.	Targeted City facilities	Jurisdictional	FY16	As feasible retrofit locations are identified and funds are available.		Public Works
LG-35	Retrofit curb and gutter in selected portions of City to capture and infiltrate or evapotranspire small dry weather flows.	Optional.	Chollas Creek HA	Optional	Trigger (if bacteria interim goals are not met and persistent flows remain persistent)			Public Works, Engineering
LG-36	Material storage retrofits/stricter operational controls for sources of metals.	Optional.	Chollas Creek HA	Optional	Trigger (if metals interim goals are not met)			Planning
LG-37	Parking lot retrofits at industrial, commercial, or multi-family residential properties.	Optional.	Chollas Creek HA	Optional	Trigger (if metals interim goals are not met)			Planning
LG-38	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering, Public Works
LG-39	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering, Public Works
<i>Illicit Discharge, Detection, and Elimination (IDDE) Program</i>								
LG-40	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
<i>Public Education and Participation</i>								
LG-41	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water

**Table I-10. City of Lemon Grove
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
LG-42	Conduct trash cleanups through community-based organizations involving target audiences.	Lemon Grove collaborates with "I Love a Clean San Diego" on trash cleanups. Refer to JRMP for more information.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-43	Collaborate with regional education and outreach efforts.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-44	Municipal staff training.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
Enforcement Response Plan								
LG-45	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
LG-46	Enforce minimum BMPs for existing residential, commercial, and industrial development.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Storm Water
Additional Nonstructural Strategies								
LG-47	Participate in regional bacteria reference study.	Refer to regional bacteria study work plan.	Region-wide	Jurisdictional	FY16	Through study completion		Storm Water
LG-48	Support partnership effort by social service providers to provide sanitation and trash management for homeless persons.	Optional.	City-wide	Optional	Trigger (upon regional effort)	Ongoing		Public Works

K.10 City of National City Strategies

The City of National City (National City) is the second oldest city within San Diego County. National City includes diverse land uses from the San Diego Bay inland. Core jurisdictional programs will target the entire National City jurisdiction. National City will continue to focus on restoration activities within the small Paradise Creek drainage area to improve water quality. A section of the concrete lined channel in Paradise Creek will be removed and buffer area around the channel will be restored to improve riparian habitat. Additionally, upstream of the targeted area, stormwater treatment BMPs are intended to improve and sustain improvement of water and riparian habitat quality. Strategies and implementation schedules, presented in Table B-11, were identified using best information available on efficiency, effectiveness, and level of effort estimated to achieve compliance with numeric goals. The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon annual budget approvals and funding availability.

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Table I-11. City of National City Jurisdictional Strategies

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Planning								
All Development Projects								
NC-1	For all development projects, administer a program to ensure implementation of source control BMPs to minimize pollutant generation at each project and implement LID BMPs to maintain or restore hydrology of the area, where applicable and feasible.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing	(Most recent AR's fiscal analysis?)	Planning & Building, Engineering/Public Works
NC-2	Amend municipal code and ordinances, including zoning ordinances, to facilitate and encourage LID opportunities.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building, Engineering/Public Works
NC-3	Trash area standards for new development and redevelopment: require full four-sided enclosure, siting away from storm drains, and structural overhead cover.	National City will require through permitting process for new development and redevelopment.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building
NC-4	Train staff on LID regulatory changes and LID Design Manual.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building, Engineering/Public Works
Priority Development Projects (PDPs)								
NC-5	For PDPs, administer a program requiring implementation of structural BMPs to control pollutants and manage hydromodification. Includes confirmation of design, construction, and maintenance of PDP structural BMPs.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building, Engineering/Public Works
NC-6	Administer self-certification program for treatment control BMP compliance.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building, Engineering/Public Works
NC-7	Update BMP Design Manual procedures to determine nature and extent of storm water requirements applicable to development projects and to identify conditions of concern for selecting, designing, and maintaining appropriate structural BMPs.	Refer to JRMP and BMP Design Manual.	City-wide	Jurisdictional	FY16	Ongoing		Planning & Building, Engineering/Public Works
Construction Management								
NC-8	Administer a program to oversee implementation of BMPs during the construction phase of land development. Includes inspections at an appropriate frequency and enforcement of requirements.	The City will inspect sites per 2007 Municipal Permit frequencies. Refer to JRMP for details.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Existing Development								
Commercial, Industrial, Municipal, and Residential Facilities and Areas								
NC-9	Administer a program to require implementation of minimum BMPs for existing development (commercial, industrial, municipal, and residential) that are specific to the facility, area types, and PGAs, as appropriate. Includes inspection of existing development at appropriate frequencies and using appropriate methods.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
NC-10	Update minimum BMPs for existing residential, commercial, and industrial development.	Municipal Code update to be completed in FY15. Refer to JRMP for more information.	City-wide	Jurisdictional	FY15	Ongoing		Engineering/Public Works
NC-11	Increased inspection for highest pollutant potential businesses.	Optional.	Paradise Creek HA	Optional	Trigger (if high trash levels are traced back to particular businesses or shopping centers)			Engineering/Public Works
NC-12	Require minimum BMPs for mobile businesses.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
NC-13	Analyze and encourage sweeping of private roads and parking lots in targeted area.	National City will gather more information about existing sweeping frequency for larger commercial parking lots and for private roads within HOAs, and provide outreach to larger commercial properties and HOAs.	Paradise Creek HA	Jurisdictional	FY15	Ongoing		Engineering/Public Works
NC-14	Require minimum sweeping frequency for private roads and parking lots in targeted area.	Optional.	Paradise Creek HA	Optional	Trigger (if investigation determines parking lots and private roads are not swept)			Engineering/Public Works
NC-15	Implement Water Efficient Landscape Ordinance.	The City will implement through permitting process for development projects.	City-wide	Jurisdictional	FY15	Ongoing		Planning & Building
NC-16	Implement pet waste program.	The City will provide pet waste bags via dispensers in City parks.	City-wide	Jurisdictional	FY15	Ongoing		Engineering/Public Works, Community Services
NC-17	Promote and encourage implementation of designated BMPs at residential areas.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
NC-18	Collaborate with local water authority to promote and encourage water conservation and irrigation runoff reduction programs, including utility-funded rebate or other incentive programs.	National City will collaborate with Sweetwater Water Authority.	City-wide	Jurisdictional	FY15	Ongoing		Community Services, Sweetwater Water Authority
NC-19	Promote and encourage implementation of designated BMPs in non-residential areas.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
NC-20	Require used cooking oil to be either stored indoors or under a structural canopy.	The City will incorporate as part of BMP requirement updates. National City also will work with grease rendering services to educate businesses on availability and benefits of indoor grease storage containers.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
NC-21	Notify Regional Board of industrial businesses subject to the Industrial General Permit so that the businesses may obtain coverage as required.	National City will share inspection results with Regional Board staff and notify of non-filers or potential non-compliance with other IGP requirements.	City-wide	Jurisdictional	FY15	Ongoing		Engineering/Public Works, Regional Board
MS4 Infrastructure								
NC-22	Implementation of operation and maintenance activities (inspection and cleaning) for MS4 and related structures (catch basins, storm drain inlets, channels, detention basins, etc.) for water quality improvement.	Channels and creeks will be cleaned once per month. Trash will be removed from channels by hand. Catch basins will be cleaned to remove trash and debris once per year. Drains with filter inserts (19th Street & Harding, 12th Street & A Avenue, R Avenue between 7th Street & 8th Street, National City library, Bay Marina Way & Marina Way north & south of the street) will be cleaned four times per year.	City-wide	Jurisdictional	FY16	Ongoing		Engineering, Public Works
NC-23	Proactively repair and replace MS4 components to provide source control from MS4 infrastructure.	National City will repair and replace per standard maintenance schedule.	City-wide	Jurisdictional	FY15	Ongoing		Engineering, Public Works
NC-24	Install structural BMPs to prevent homeless from entering MS4.	Grates will be placed over the entrances to six box culvert locations along Lower Paradise Creek to prevent the homeless from entering and occupying the drainage ways.	Lower Paradise Creek	Jurisdictional	FY16	FY 16, ongoing maintenance following completion		Engineering, Public Works
NC-25	Implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers.	National City will repair and replace per standard maintenance schedule and where leaks are identified.	City-wide	Jurisdictional	FY15	Ongoing	Sewer fund	Engineering, Public Works
NC-26	Identify sewer leaks and areas for sewer pipe replacement prioritization.	National City will repair and replace per standard maintenance schedule and where leaks are identified.	City-wide	Jurisdictional	FY15	Ongoing	Sewer fund	Engineering, Public Works

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Roads, Street, and Parking Lots								
NC-27	Sweep City streets using sweepers and vacuums.	Major arterials (Highland Avenue, National City Boulevard, Plaza Boulevard, and 8th Street) are swept every day, Monday through Friday. All other streets are swept once per week. A mechanical Mobil sweeper is used west of Highland Avenue from Tuesday through Friday, and A700 Schwarze vacuum sweeper is used east of Highland Avenue from Monday through Thursday.	City-wide	Jurisdictional	FY15	Ongoing		Engineering, Public Works
Pesticide, Herbicides, and Fertilizer BMP Program								
NC-28	Require implementation of BMPs to address application, storage, and disposal of pesticides, herbicides, and fertilizers on commercial, industrial, and municipal properties. Includes education, permits, and certifications.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering, Public Works
Retrofit and Rehabilitation in Areas of Existing Development								
NC-29	Develop and implement a strategy to identify candidate areas of existing development appropriate for retrofitting projects and facilitate the implementation of such projects.	See multiple retrofit projects described later on down in this list. Also refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
NC-30	Develop and implement a strategy to identify candidate areas of existing development for stream, channel, or habitat rehabilitation projects and facilitate implementation of such projects.	See creek restoration project described later on down in this list. Also refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works
Illicit Discharge, Detection, and Elimination (IDDE) Program								
NC-31	Implement Illicit Discharge, Detection, and Elimination (IDDE) Program per the JRMP. Requirements include: maintaining an MS4 map, using municipal personnel and contractors to identify and report illicit discharges, maintaining a hotline for public reporting of illicit discharges, monitoring MS4 outfalls, and investigating and addressing any illicit discharges.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Public Education and Participation								
NC-32	Implement a public education and participation program to promote and encourage development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water prioritized by high-risk behaviors, pollutants of concern, and target audiences.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services
NC-33	Conduct trash cleanups through community-based organizations involving target audiences.	Local organizations regularly conduct cleanups, both on their own and in direct partnership with the City. Paradise Creek Educational Park, Inc. (PCEPI) completes regular cleanups in Paradise Creek. The City also regularly works with "I Love a Clean San Diego" to complete creek cleanups.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services, PCEPI, ILACSD
NC-34	Review City storm water website and identify and implement required updates to reflect WQIP and JRMP revisions.	Website will be updated to reflect new requirements.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services
NC-35	Enhance school and recreation-based education and outreach.	The City partners with National School District to put on a storm water quality themed art contest for elementary students, with a theme of keeping the community clean. Winners' artwork is displayed in a storm water educational calendar distributed throughout the City. Winners are also recognized by the City Council.	City-wide	Jurisdictional	FY15	Ongoing		Engineering/Public Works, National School District
NC-36	Collaborate with regional education and outreach efforts.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services
NC-37	Develop education and outreach to reduce over-irrigation, including partnering with the local water utility to publicize incentive and rebate programs.	Refer to JRMP. The City will also work with local water district (Sweetwater Water Authority).	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works, Community Services, SWA
NC-38	Municipal staff training.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Engineering/Public Works

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
Enforcement Response Plan								
NC-39	Implement escalating enforcement responses to compel compliance with statutes, ordinances, permits, contracts, orders, and other requirements for IDDE, development planning, construction management, and existing development in the Enforcement Response Plan.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Neighborhood Services, Engineering/Public Works
NC-40	Enforce minimum BMPs for existing residential, commercial, and industrial development.	Refer to JRMP.	City-wide	Jurisdictional	FY16	Ongoing		Neighborhood Services, Engineering/Public Works
Additional Nonstructural Strategies								
NC-41	Paradise Creek 303(d) delisting study and removal from 303(d) list.	National City will complete monitoring necessary to support removal of Paradise Creek from 303(d) list for selenium, which relates to habitat beneficial use.	Paradise Creek HA	Jurisdictional	FY15	Complete in FY15. Removal from 303(d) list dependent on SWRCB timeline.		Engineering/Public Works, Regional Board, SWRCB
NC-42	Participate in regional reference study.	National City contributes through cost-share agreement.	Region-wide	Jurisdictional	FY14	Until study completion (FY15 or FY16?)		
NC-43	Develop a program to address and capture trash and debris.	Refer to JRMP.	City-wide	Jurisdictional	FY15	Ongoing		Engineering/Public Works
NC-44	If a regional social services effort is established, support workgroup to provide sanitation and trash management for person experiencing homelessness and determine if the program is suitable and appropriate for jurisdictional needs to meet goals.	Optional.	City-wide	Optional	Trigger (if regional effort is developed and if funds are available)			Engineering/Public Works
NC-45	If invasive plant and animal removal is necessary in key locations, collaborate with Urban Corps of San Diego or other volunteer groups as needed.	Optional.	City-wide	Optional	Trigger (as funds allow)			Engineering/Public Works
Green Infrastructure								
Green Streets								
NC-46	8th Street Smart Growth.	National City is installing bioretention areas along 8th Street from approximately Highland Avenue to National City Boulevard.	Paleta Creek drainage area	Jurisdictional	FY14	Until completed (estimated FY15), ongoing maintenance following completion		Engineering/Public Works

**Table I-11. City of National City
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Implementation Approach/Level of Effort	Location (Subwatershed, Trib, Outfall, etc.)	Jurisdictional or Optional	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Cost or Funding Strategy	Responsible City Department and Other Collaborating Departments or Agencies
NC-47	4th Street Corridor.	The City installed infiltration areas along 4th Street at Clairemont Drive and Belmont Drive.	Paradise Creek HA	Jurisdictional	FY14	Completed in FY14, ongoing maintenance to be provided		Engineering/Public Works
NC-48	"A" Avenue Green Street and Pedestrian Pathway project.	National City is performing green street retrofits for a 49-acre drainage area. Bioretention, infiltration, water harvesting/reuse for irrigation in Kimball Park, and full capture trash removal device will also be installed.	Paradise Creek HA	Jurisdictional	FY14	Until completed (estimated FY16), ongoing maintenance following completion	Prop. 84 SWGP, City match	Engineering/Public Works, SWRCB
Multiuse Treatment Areas								
<i>Stream, Channel and Habitat Rehabilitation Projects</i>								
NC-49	Kimball Park LID and Paradise Creek Restoration project.	The City will restore approximately 1,000 linear feet of channelized stream with concrete bottom. The concrete bottom will be removed to restore wetland habitat. Approximately 30,000 sq. ft. of native vegetation will be planted along the Creek. The project will also include bioretention areas along streets in the neighborhood to the south of the park and a bioretention area and constructed wetland in the park. These LID features will treat a 79 acre tributary drainage area.	Paradise Creek HA	Jurisdictional	FY15	Until completed (estimated FY17), ongoing maintenance following completion	Prop. 84 SWGP, City match	Engineering/Public Works, SWRCB
NC-50	Paradise Creek Educational Park.	Paradise Creek Educational Park is located along Hoover Avenue south of 18th Street and continues south along Paradise Creek to 22nd Street. The project includes removing 13,600 sq. ft. of impervious area, constructing a bioretention area and a cistern to treat 2.27 acres of tributary urbanized area, and establishing approximately 15,000 sq. ft. of native vegetation along Paradise Creek.	Paradise Creek HA	Jurisdictional	FY15	Until completed (estimated FY16), ongoing maintenance following completion	State Urban Greening Grant, City match	Engineering/Public Works, State Council for Strategic Growth, PCEPI
Water Quality Improvement BMPs								
<i>Proprietary BMPs</i>								
NC-51	Coolidge Avenue Pedestrian Improvements.	High-rate biofilters (Filterra or equivalent) were installed at Civic Center & Harding, 14th Street & Wilson, and 18th Street & Hoover.	Paradise Creek HA	Jurisdictional	FY14	Completed in FY14, ongoing maintenance will be completed		Engineering/Public Works

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K.11 Port of San Diego Strategies

The Port of San Diego (Port) identified an approach and strategies to address the Highest Priority Conditions and Focused Priority Conditions that best suit the characteristics of its jurisdiction in the San Diego Bay WMA. The strategies identified by the Port focus on 1) reducing the amount of bacteria, metals, and trash from the Port's MS4, 2) improving water quality, 3) increasing public awareness through education and outreach, and 4) including structural Best Management Practices (BMPs) where feasible.

The strategies identified in Table B-12 are categorized as permit-required administrative type JRMP updates, permit-required JRMP implementation efforts, potential program enhancements to the Port's JRMP program, as well as other non-permit required strategies. The Port will continue to implement their core JRMP program jurisdiction-wide, is updating their program, and have identified new strategies to further assist efforts to address bacteria, trash, and metals jurisdiction-wide and on a targeted basis.

The Port's approach also integrates with other planning efforts, such as the Port's Climate Action Plan (CAP)². The CAP provides the framework for achieving the Port's goals for the reduction of greenhouse gas (GHG) emissions. The CAP identifies policies and measures, or strategies, to reduce GHG emissions that also provide dual benefits to water quality. CAP strategies that will assist the Port in addressing the Highest Priority Conditions and Focused Priority Conditions include water conservation measures and waste reduction and recycling measures (refer to strategies PO-9, PO-12, PO-15, and PO-25 in Table B-12).

The following subsections summarize the key considerations for selecting the appropriate approach and strategies for metals and bacteria in Chollas Creek, Physical Aesthetics (trash) in the Sweetwater and Otay sub-watersheds, and Swimmable Waters (bacteria) in the Otay sub-watershed.

Water Quality (Metals and Bacteria) – Chollas Creek (908.22)

The Highest Priority Conditions in Chollas Creek within the Pueblo sub-watershed (908.2) are water quality impairments due to metals and bacteria. The Port's jurisdiction comprises approximately 115 acres, or 1 percent of the Chollas Creek drainage area. Several factors were considered during the development of the Port's approach to Chollas Creek. A jurisdictional analysis report submitted to the Regional Board in December 2013 provided information and further clarification of the potential for discharges from the Port's jurisdiction in Chollas Creek³. The report provided a detailed jurisdictional analysis that identified the Port's ability to control discharges from within the Tidelands boundary in Chollas Creek, where the Port has jurisdictional authority and

² Port of San Diego's Climate Action Plan (2013) (https://www.portofsandiego.org/environment/clean-water/doc_download/5515-port-of-san-diego-climate-action-plan.html)

³ Port of San Diego. 2013. "Submittal of Information Relating to the Draft Technical Report for Total Maximum Daily Loads at Paleta, Chollas, and Switzer Creek Mouths". Submitted to the San Diego Regional Water Quality Control Board December 2013.

where it does not. The Port's approach and strategies to addressing metals and bacteria in Chollas Creek are based on the findings in the jurisdictional analysis report.

The primary land use in this area is industrial, and is represented by a single tenant, General Dynamics NASSCO (NASSCO). NASSCO has an individual NPDES Industrial Permit requiring that any discharges from the facility meet stringent toxicity standards. NASSCO elected to install a self-contained retention/treatment system that captures and treats all stormwater discharges. As a result, NASSCO has minimized potential discharges to San Diego Bay and eliminated discharges from its facility to Chollas Creek.

The remaining area of San Diego Bay tidelands under the Port's jurisdictional authority is small and there is limited capacity to implement BMPs. The remaining areas consists of a section of a NASSCO parking lot east of Harbor Drive (approximately 0.04 acres) and a small triangle of pavement (approximately 0.02 acres) west of Harbor Drive between the entrance gates of NASSCO and the US Navy facility. There are no storm drain inlets in the parking lot area and stormwater runoff from the parking lot discharges to the rail road easement adjacent to Chollas Creek via sheet flow. The Port's approach will help to demonstrate compliance with the TMDL and WQIP goals by addressing the existing non-diverted/treated area in the Port's jurisdiction, and assist in increasing public awareness through education and outreach activities.

The Port will incorporate many of the same strategies identified in Table B-12 to its jurisdiction within Switzer Creek and the downtown anchorage to address the pollutants identified in the draft *TMDLs for Toxic Pollutants in Sediment at the Mouth of Chollas and Switzer Creeks in San Diego Bay* (draft Tentative Resolution No. R9-2013-0003) and the draft downtown anchorage area regulations. The Jurisdictional Analysis report identified approximately 96 percent of the Port's jurisdiction within Switzer Creek drainage area is comprised of industrial facilities that are regulated under the Industrial General Permit. This land use is similar to the land use in the Port's jurisdiction within Chollas Creek. As such, similar strategies may be effective in reducing pollutants in both areas. The Port's jurisdiction in both creek mouth areas is tidally influenced and is located downstream of the where watershed monitoring has historically occurred. It is anticipated that data collected by the Port at Chollas Creek could potentially be compared to data from Switzer Creek to determine the effectiveness of implementing such strategies at multiple locations.

Physical Aesthetics - Sweetwater River sub-watershed (909.1)

The Focused Priority Condition in the Sweetwater River sub-watershed (909.1) is physical aesthetics due to trash pollution. The Port's jurisdictional area in this sub-watershed is approximately 347 acres. Facilities or land uses that may be potential sources of trash in this area of the Port's jurisdiction include six commercial facilities, seven industrial facilities, two municipal facilities, and two parks. The strategies identified by the Port focus on reducing the amount of trash, adding structural controls where feasible, improving water quality, and increasing public awareness through education and outreach. In addition to identifying strategies to address the current

sources, the Port is also identifying how to address trash in the future development of the Chula Vista Bayfront area as part of the Port's Chula Vista Bayfront Master Plan. This highly visible development area presents the Port opportunities to implement a variety of strategies to address trash from development and existing development sources.

Swimmable Waters – Otay River Sub-watershed (910.1)

The Focused Priority Condition in the Otay River sub-watershed (910.1) is Swimmable Waters (beaches). The Port's jurisdictional area in the Otay River sub-watershed (910.1) is approximately 242 acres. Facilities or land uses in this portion of the Port's jurisdiction includes 32 commercial facilities (ranging from marinas, restaurants, general retail, and hotels) and three parks. However, a targeted effort will focus on potential MS4 discharges from the Port's jurisdiction within the Tidelands Park drainage area, with the goal of removing Tidelands Park from the 303(d) list of impaired water bodies. The Port's strategies identified for Tidelands Park focus on reducing bacteria and trash, improving water quality, obtaining a better understanding of the public's perception of water quality conditions, and increasing public awareness through education and outreach. Tidelands Park is a 22-acre waterfront park that offers a small beach, recreational fields, picnic areas and open space for a variety of outdoor activities. In addition to addressing water quality, the Port is also interested in identifying ways to increase the use of the park by residents, visitors and the local community and promoting the park as a venue for safe waterside activities.

Physical Aesthetics – Otay River sub-watershed (910.2)

The Focused Priority Condition in the Otay River sub-watershed (910.2) is physical aesthetics due to trash pollution. The Port's jurisdictional area in this sub-watershed is approximately 241 acres. Facilities or land uses that may be potential sources of trash in this area of the Port's jurisdiction include one commercial facility and the site of the former South Bay Power Plant. The Port has focused their efforts on trash because the Otay River Watershed Management Plan (ORWMP) and public input identified trash as a priority issue in in the Otay River sub-watershed. The strategies identified by the Port focus on reducing the amount of trash, adding structural controls where feasible, improving water quality, and increasing public awareness through education and outreach. Although current use of the Port's jurisdiction in this area is limited, the Port recognized that the future development of the Chula Vista Bayfront presents the Port opportunities to be able to implement a variety of strategies to address trash from both development and existing development sources.

The adaptive management process provides the framework to evaluate progress toward meeting the goals and allows for modification of strategies. As strategies are modified, the WQIP will be updated. The implementation of each strategy will be contingent upon budget and cost considerations and approvals, and technological feasibility.

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Table I-12. Port of San Diego Jurisdictional Strategies

SDB ID	Strategy	Strategy Type	Location (Subwatershed, Trib, Outfall, etc.)	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Funding Strategy	Cost (Estimated Annual Cost) ¹	Responsible Port Department and Other Collaborating Departments or Agencies
Jurisdictional Strategies								
Development Projects (including Priority Development Projects)								
PO-1	Implement Core JRMP Program for all development [conditions of approval, project design plans, inspections]	Permit-required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$\$	ELUM, Engineering, REO
PO-2	Update Stormwater Requirements Checklist to identify whether a project has a high potential to generate trash, metals, and bacteria	Permit required Administrative Update	Jurisdiction-wide	FY15	One time	ELUM FY Budget	\$	ELUM
PO-3	Update BMP Design Manual to include enhancements for projects (both non-PDP and PDP projects) having a high potential to generate trash, metals, and bacteria	Permit required Administrative Update	Jurisdiction-wide	FY15	One time	ELUM FY Budget	\$\$	ELUM, Engineering, REO
PO-4	Train all applicable departments annually on stormwater requirements for all development projects	Permit-required Implementation	Jurisdiction-wide	FY15	Annually	ELUM FY Budget	\$	ELUM
PO-6	Develop an alternative compliance program that provides options for PDPs	Program Enhancement	Jurisdiction-wide	FY15 To make commitment to do/not do this	One time	ELUM FY Budget	\$\$	ELUM, Engineering, REO, Legal
PO-5	Install fence along southern parameter of Pond 20 and grates at stormdrain inlets to capture trash and debris	Additional Non-Permit Required Strategy	Specific drainage area (Otay Sub-watershed)	FY15	One-time	ENG FY Budget	\$\$\$	ENG, GS, ELUM
PO-7	Conduct project closeout inspection for all development projects to verify that Trash, Metals, and Bacteria BMPs are properly implemented	Permit-required Implementation	Jurisdiction-wide	FY16	Ongoing	ELUM FY Budget	\$	ELUM
PO-8	Provide technical education and outreach to the development community on permit requirements	Permit – required Implementation	Jurisdiction-wide	FY16	Ongoing	ELUM FY Budget	\$	ELUM
PO-9	<i>Require install shutoff irrigation sensors (e.g., Cal-Sense) for MM/CIP development projects, where applicable. [CAP Water Conservation Measure (WC 1.3)]²</i>	<i>Optional / Program Enhancement.</i>	<i>Jurisdiction-wide</i>	<i>Trigger (Submission of MM/CIP development projects that this BMP applies to)</i>	<i>As-needed</i>	<i>Project budgets</i>	<i>\$\$</i>	<i>REO, Engineering, ELUM, GS</i>

**Italics indicate a strategy that is considered optional (per Permit section B.3.b.b. and requiring a trigger to be implemented).*

¹ Estimated Cost Range: \$ = \$1,000-25,000; \$\$ = \$26,000 – 200,000; \$\$\$ = \$201,000 – 500,000; \$\$\$\$ = >501,000

² CAP - Port of San Diego's Climate Action Plan (2013) (https://www.portofsandiego.org/environment/clean-water/doc_download/5515-port-of-san-diego-climate-action-plan.html)

**Table I-12. Port of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Strategy Type	Location (Subwatershed, Trib, Outfall, etc.)	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Funding Strategy	Cost (Estimated Annual Cost) ¹	Responsible Port Department and Other Collaborating Departments or Agencies
Construction Program								
PO-10	Implement Core JRMP Program for construction [SWPPP Review, inspections, BMP Implementation]	Permit-required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$\$	ELUM, Engineering, REO
PO-11	Add BMP to construction BMPs that requires covering construction materials (i.e., metals and treated wood) during wet weather	Permit required Administrative Update	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$	ELUM, Engineering
PO-12	<i>Adopt Construction and Demolition Recycling Ordinance or include language into general requirements for all projects [CAP Waste Reduction and Recycling Measure (SW2)]²</i>	<i>Optional / Program Enhancement.</i>	<i>Jurisdiction-wide</i>	<i>FY16 (Based on evaluation of potential conflicts with member cities)</i>	<i>One-time</i>	<i>ELUM / Eng FY Budget</i>	<i>\$</i>	<i>ELUM, Engineering</i>
Existing Development								
Commercial / Industrial Facilities								
PO-13	Implement Core JRMP Program for existing development [inspections, BMP Implementation, SUSMP BMP inspections, update inventory, enforcement]	Permit-required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$\$	ELUM
PO-14	Perform annual inspection of facilities that are higher sources of trash, metals, and bacteria	Program Enhancement	Jurisdiction-wide	FY16	Annually	ELUM FY Budget	\$\$	ELUM
PO-15	Develop a retrofit program to encourage installation of water conservation measures in existing businesses (e.g. xeriscaping, irrigation sensors, etc.) [CAP Water Conservation Measure (WC 1.3)] ²	Program Enhancement	<i>Phased, targeted areas then jurisdiction-wide</i>	FY17	One-time	Env Fund / Grant	\$	ELUM, GS, REO
PO-16	<i>Installation of structural treatment control BMPs in storm drains in high priority areas to address trash, metals, and bacteria</i>	<i>Optional / Program Enhancement</i>	<i>Phased, targeted areas then jurisdiction-wide</i>	<i>FY16 (facility-specific based on inspections and repeat violations)</i>	<i>As-needed</i>	<i>Tenant</i>	<i>\$</i>	<i>ELUM, REO</i>
Municipal Areas & Facilities								
PO-17	Implement Core JRMP Program for existing development (municipal) [inspections, BMP Implementation, SUSMP BMP inspections, update inventory, enforcement]	Permit-required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$\$	ELUM
PO-18	Provide List of BMPs for Special Events with requirements for trash, metals, and bacteria, and ensure compliance thru inspections	Permit required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$	ELUM, GS
PO-19	Continue pet waste bag dispensers in parks	Program Enhancement	Jurisdiction-wide	FY15	Annually	GS FY Budget	\$	GS, ELUM
PO-20	Implement Preventative Maintenance (PM) Plan to prevent backups in Municipal public restrooms	Additional Non-Permit Required Strategy	Jurisdiction-wide	FY15	Ongoing	GS FY Budget	\$	GS, ELUM

**Italics indicate a strategy that is considered optional (per Permit section B.3.b.b. and requiring a trigger to be implemented).*

¹ Estimated Cost Range: \$ = \$1,000-25,000; \$\$ = \$26,000 – 200,000; \$\$\$ = \$201,000 – 500,000; \$\$\$\$ = >501,000

² CAP - Port of San Diego's Climate Action Plan (2013) (https://www.portofsandiego.org/environment/clean-water/doc_download/5515-port-of-san-diego-climate-action-plan.html)

**Table I-12. Port of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Strategy Type	Location (Subwatershed, Trib, Outfall, etc.)	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Funding Strategy	Cost (Estimated Annual Cost) ¹	Responsible Port Department and Other Collaborating Departments or Agencies
PO-21	Development of BMP guidance document for municipal staff conducting minor maintenance operations	Program Enhancement	Jurisdiction-wide	FY16	One-time	ELUM FY Budget	\$	ELUM, GS
PO-22	Train general services staff on proper BMP implementation during minor maintenance operations	Program Enhancement	Jurisdiction-wide	FY16	As-needed	ELUM FY Budget	\$	ELUM
PO-23	Conduct Trash Receptacle Assessment in municipal areas	Program Enhancement	Jurisdiction-wide	FY16	One-time	GS FY Budget	\$	GS, ELUM,
PO-24	Develop a process to improve data management for tracking waste and materials diverted from waste stream and landfills [CAP Waste Reduction and Recycling Measure (SW)] ²	Program Enhancement	Jurisdiction-wide	FY17	One-time	ELUM FY Budget	\$	ELUM, GS
PO-25	Update Power-washing Standard Operating Procedure Manual	Program Enhancement	Jurisdiction-wide	FY17	One-time	ELUM FY Budget	\$	GS, ELUM
PO-26	Create Standard Operating Procedure for proper washout procedures in public restrooms (for use by municipal staff and contractors)	Additional Non-Permit Required Strategy	Jurisdiction-wide	FY17	One-time	GS FY Budget	\$	GS, ELUM
<i>PO-27</i>	<i>Retrofit trash enclosures, where applicable, in municipal areas</i>	<i>Optional / Program Enhancement</i>	<i>Phased, targeted areas then jurisdiction-wide</i>	<i>FY18 (identifying appropriate action to be taken as result of retrofit program)</i>	<i>As-needed</i>	<i>GS or ELUM FY Budget</i>	<i>\$-\$\$</i>	<i>ELUM, GS</i>
<i>PO-28</i>	<i>Replace/upgrade current maintenance equipment, such as street sweeper or power washer, to new, more efficient and effective options</i>	<i>Optional / Program Enhancement</i>	<i>Jurisdiction-wide</i>	<i>FY16 (based on equipment replacement schedule)</i>	<i>Ongoing</i>	<i>GS FY Budget</i>	<i>\$\$-\$\$\$</i>	<i>GS</i>
MS4 Infrastructure								
PO-29	Implement Core JRMP Program for MS4 Infrastructure [inspection and cleaning]	Permit required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$\$	ELUM
PO-30	Evaluate MS4 inspection and cleaning locations and adjust as-needed for higher trash generating areas	Program Enhancement	Phased, targeted areas then jurisdiction-wide	FY16	Annually	ELUM FY Budget	\$	ELUM
<i>PO-31</i>	<i>Installation of inlet inserts in storm drains in high priority areas</i>	<i>Optional / Additional Non-Permit Required Strategy</i>	<i>Phased, targeted areas then jurisdiction-wide</i>	<i>FY 18 (based on availability of funding)</i>	<i>Once</i>	<i>TBD</i>	<i>\$-\$\$</i>	<i>ELUM, GS</i>
Roads, Streets, and Parking Lots								
PO-32	Implement Core JRMP Program for Street and Parking Lot Maintenance [inspection and cleaning of public streets, paved roads, and parking lots]	Permit required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$	ELUM

**Italics indicate a strategy that is considered optional (per Permit section B.3.b.b. and requiring a trigger to be implemented).*

¹ Estimated Cost Range: \$ = \$1,000-25,000; \$\$ = \$26,000 – 200,000; \$\$\$ = \$201,000 – 500,000; \$\$\$\$ = >501,000

² CAP - Port of San Diego's Climate Action Plan (2013) (https://www.portofsandiego.org/environment/clean-water/doc_download/5515-port-of-san-diego-climate-action-plan.html)

**Table I-12. Port of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Strategy Type	Location (Subwatershed, Trib, Outfall, etc.)	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Funding Strategy	Cost (Estimated Annual Cost) ¹	Responsible Port Department and Other Collaborating Departments or Agencies
Pesticide, Herbicides, and Fertilizers BMP Program								
PO-33	Implement Core JRMP Program for Pesticide, Herbicides, and Fertilizer BMP Program [education, permits, and certifications] (BMPs to minimize pesticides, herbicides, and fertilizer discharges also minimizes trash, bacteria, and metals)	Permit required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$	ELUM
Retrofit and Rehabilitation in Areas of Existing Development								
PO-34	Develop plan that identifies retrofit and rehabilitation opportunities to address trash, bacteria, and metals	Permit – required Administration Update	Jurisdiction-wide	FY15	One-time	ELUM FY Budget	\$	ELUM, GS
Illicit Discharge, Detection, and Elimination (IDDE) Program								
PO-35	Implement Core JRMP Program for IDDE program [maintain MS4 map, identify and report illicit discharges, maintain a hotline for public reporting of illicit discharges, monitor MS4 outfalls, and investigate and address any illicit discharges]	Permit – required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$-\$\$	ELUM
Enforcement Response Plan								
PO-36	Develop approach for the Enforcement Response Plan [escalating enforcement responses; statutes, ordinances, permits, contracts, orders, and other requirements]	Permit – required Administration Update	Jurisdiction-wide	FY15	One-time	ELUM FY Budget	\$-\$\$	ELUM
PO-37	Update Port's stormwater ordinance	Permit - required Administrative Update	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$	ELUM, Legal
Public Education and Participation								
PO-38	Implement Core JRMP Program for Education and Outreach program [promote and encourage programs, management practices, and behaviors]	Permit – required Implementation	Jurisdiction-wide	FY15	Ongoing	ELUM FY Budget	\$-\$\$	ELUM
PO-39	Sponsor, conduct, and host cleanup activities (Operation Clean Sweep, Coastal Cleanup Day, Creek to Bay, etc.). Sponsor regional/watershed collection events for large items or items that may otherwise be illegally dumped. Some events could be considered multi-jurisdictional strategies	Program Enhancement	Jurisdiction-wide	FY16	Ongoing	ELUM FY Budget / Port Environmental Fund/Grant	\$-\$\$	ELUM, GCR, GS, San Diego Bay RPs, San Diego Port Tenants Association, SD Coastkeeper, I Love a Clean San Diego
PO-40	Improve consistency and content of websites to highlight permit requirements and facilitate public reporting	Program Enhancement	Jurisdiction-wide	FY16	Ongoing	MarCom FY Budget	\$	MarCom, ELUM
PO-41	Develop and conduct public perception survey on Physical Aesthetics and Swimmable Waters Conditions	Additional Non-Permit Required Strategy	Targeted drainage areas	FY17	Once per Permit Cycle	MarCom or ELUM FY Budget (could be cost shared with other RPs)	\$-\$\$	MarCom, ELUM, San Diego Bay RPs (Chula Vista, Coronado, Imperial Beach)

**Italics indicate a strategy that is considered optional (per Permit section B.3.b.b. and requiring a trigger to be implemented).*

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**Table I-12. Port of San Diego
 Jurisdictional Strategies (continued)**

SDB ID	Strategy	Strategy Type	Location (Subwatershed, Trib, Outfall, etc.)	Implementation Year (or Trigger if Optional)	Frequency of Implementation	Funding Strategy	Cost (Estimated Annual Cost) ¹	Responsible Port Department and Other Collaborating Departments or Agencies
Additional Non-Structural Strategies								
PO-42	<i>Replace all Port owned/leased vehicle brake pads with copper-free brake pads</i>	<i>Optional / Additional Non-Permit Required Strategy</i>	Jurisdiction-wide	<i>FY17 (based on equipment replacement schedule)</i>	<i>As-needed</i>	<i>GS FY Budget</i>	<i>\$\$</i>	<i>GS, ELUM</i>
PO-43	<i>Support organizations to address homelessness and to provide resources and educational materials to address trash and bacteria</i>	<i>Optional. Additional Non-Permit Required Strategy</i>	Jurisdiction-wide	<i>FY TBD (contingent on ability to modify existing scope of work; or if regional program is established)</i>	<i>Annually</i>	<i>HPD/GCR FY Budget</i>	<i>\$\$</i>	<i>HPD, GCR, ELUM</i>
Special Studies or Pilot Projects								
PO-44	Special Study: Participation in the San Diego Regional Reference Stream Study [The study will develop numeric targets for minimally disturbed or "reference" condition]	Permit – required Implementation	Jurisdiction-wide	FY15	One-time	ELUM FY Budget [Regional Cost Share]	\$	ELUM; Regional MS4 Copermittees (20 other jurisdictions)
PO-45	Special Study: Participation in the Southern California Coastal Water Research Project's (SCCWRP) San Diego Bay Trash Study. SCCWRP will initially assess targeted geographic areas and may include (1) assessment of current conditions to provide a baseline to demonstrate progress in the future, (2) identification of high-priority areas for targeted strategy implementation, and (3) identification of commonalities among jurisdictions for potential collaborative outreach opportunities.	Program Enhancement	Jurisdiction-wide	FY15	One-time	ELUM FY Budget [Cost Shared among participants]	\$	ELUM; San Diego Bay RPs (City of Chula Vista and Imperial Beach); SCCWRP
PO-46	Special Study: Delisting feasibility study for Tidelands Park, Coronado	Additional non-permit required strategy	Targeted drainage areas (Tidelands Park, Coronado)	FY16	One-time	ELUM FY Budget	\$-\$\$	ELUM, San Diego Bay RP (City of Coronado)
PO-47	Special Study: Site/Area prioritization study to identify high volume trash areas	Program Enhancement	Phased, targeted areas then jurisdiction-wide	FY16	One-time	ELUM FY Budget	\$-\$\$	ELUM
PO-48	<i>Pilot project: Installation of trash skimmers in marina basins</i>	<i>Optional. Additional non-permit required strategies</i>	<i>Phased - Specific drainage areas first</i>	<i>Trigger (if marinas are identified as high trash generating area in assessment)</i>	<i>One time</i>	<i>ELUM FY budget/Tenants/ E. Fund</i>	<i>\$\$</i>	<i>ELUM, GS</i>

**Italics indicate a strategy that is considered optional (per Permit section B.3.b.b. and requiring a trigger to be implemented).*

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