

# Phase II Small MS4 Permit Attachment G: TMDL Requirements



Ali Dunn, Environmental Scientist  
Municipal Storm Water  
State Water Resources Control Board

# Background: TMDLs and MS4 Permits

- TMDLs are not self-implementing and need other regulatory mechanisms for implementation and enforcement (hammer and nails)
- MS4 permit serves as conduit for TMDL implementation
  - E.g., Caltrans MS4 permit, Phase II Small MS4 permit, Phase I permits

# Background: Attachment G

- Includes region specific TMDL requirements
  - Purpose of provisions
  - Requirements for implementation
- Regional Board language inserted into Attachment G

Phase II Small MS4 General Permit Order No. 2013-0001-DWQ - Attachment G		NPDES General Permit No.S000004	
<b>ATTACHMENT G – Region Specific Requirements</b> Regional Water Board Approved TMDLs where urban runoff is listed as a source			
TMDL Effective Date/BPA/Res. No.	Entity	Impaired water body	Deliverables/Actions Required/Waste Load Allocations
Region 1: North Coast Regional Water Board			
Laguna de Santa Rosa <i>Ammonia &amp; Dissolved Oxygen</i>  Effective Date: May 4, 1995  BPA: none  Resolution No.:	City of Cotati  City of Rohnert Park  City of Sebastopol	Laguna de Santa Rosa	<p><b>Purpose of Provisions</b> The purpose of these provisions is to implement the requirements of the Waste Reduction Strategy for the Laguna de Santa Rosa which includes TMDLs for nitrogen and ammonia to address low dissolved oxygen and high ammonia impairments.</p> <p><b>Requirements for Implementing the Waste Reduction Strategy for the Laguna de Santa Rosa</b> Implement a storm water runoff program that is aimed at nutrient load reduction and pollution control through the execution of the provisions of this Phase II Small MS4 General Permit.</p>

# What does the permit say about the TMDL consultation process?

Because not all Permittees have had a chance to meet with RBs to review and discuss TMDL-specific requirements in Attachment G...



RBs consult with Permittees and propose revisions to State Board...



Revisions incorporated into permit through reopener.

# What kind of “necessary revisions” are we talking about?

- **Absent** implementation language
- General, minor **errors**
- **Inconsistent and/or redundant** implementation language (i.e., Basin Plan Amendment (BPA) language does not match Attachment G language)
- **Unclear, “un-implementable”** language

**ATTACHMENT G – Region Specific Requirements**  
 Regional Water Board Approved TMDLs where urban runoff is listed as a source

TMDL Effective Date/BPA/Res. No.	<u>Municipality</u>	Impaired Water body	<u>Deliverables/Actions Required/Waste Load Allc</u>
Region 4 <sup>1</sup> : Los Angeles Regional Board			
<b>Santa Monica Bay Beaches Bacteria</b>  Effective Date: July 15, 2003  BPA: Chapter 7-4  Resolution Nos.: 2002-04 (dry weather) 2002-022 (wet weather) R12-007 revision		Santa Monica Bay	
<b>Upper Santa Clara River Chloride TMDL</b>  Effective Date: May 4, 2005  BPA Chapter 7-6  Resolution Nos.: R04-004, R06-016 revision, and R08-012 revision		Santa Clara River	
<b>Los Angeles River Nitrogen and Related Effects TMDL</b>  Effective Date: March 23, 2004  BPA Chapter 7-8  Resolution Nos.: R03-009 and R03-016 revision		Los Angeles River	

Example: Absent

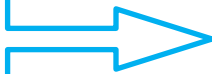
<sup>1</sup> 'Municipality' and 'Deliverables/Actions Required/Waste Load Allocations' headers deliberately left blank. Los Angeles Regional Board TMDL requirements are currently under development and will be completed one year from the effective date of the permit. Please see Fact Sheet d

**ATTACHMENT G – Region Specific Requirements**  
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**Example: Error**

TMDL Effective Date/BPA/Res.No.	Municipality	Impaired Water Body	Deliverables/Actions Required/Waste Load Allocations												
<b>Region 9: San Diego Regional Water Board</b>															
Chollas Creek Dissolved Copper, Lead, and Zinc Effective Date: October 22, 2008 Resolution No. R9-2007-0043	City of San Diego	Chollas Creek	WLA WLA for point sources is concentration-based, equals to 90% of Numeric TMDL (from the CTR equations) after applying 10% of Margin of Safety. TMDLs = WLAs = CTR WQOs * 0.9  <i>Wasteload Allocations for dissolved copper, lead, and zinc</i> <table border="1"> <thead> <tr> <th>Metal</th> <th>WLA for Acute Conditions – One-Hour Average = Loading Capacity * MOS</th> <th>WLA for Chronic Conditions – Four-Day Average = Loading Capacity</th> </tr> </thead> <tbody> <tr> <td>Copper</td> <td><math>(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * 0.9</math></td> <td><math>(0.96) * \{e^{[0.884 * \ln(\text{hardness}) - 1.7]}\}</math></td> </tr> <tr> <td>Lead</td> <td><math>[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9</math></td> <td><math>[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9</math></td> </tr> <tr> <td>Zinc</td> <td><math>(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * 0.9</math></td> <td><math>(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}</math></td> </tr> </tbody> </table> WLAs are regulated through San Diego Municipal Storm Water Permit (MS4 R9-2007-0001). The municipalities regulated by this permit that have discharges to the Chollas Creek watershed are the City of San Diego, the City of Lemon Grove, the County of San Diego, and the San Diego Unified Port District. These municipalities are responsible for virtually all discharges to and from the municipal storm water watershed through mechanisms such as enforcing existing or adopting or implementing waste load reduction plans and conducting public outreach/education.	Metal	WLA for Acute Conditions – One-Hour Average = Loading Capacity * MOS	WLA for Chronic Conditions – Four-Day Average = Loading Capacity	Copper	$(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * 0.9$	$(0.96) * \{e^{[0.884 * \ln(\text{hardness}) - 1.7]}\}$	Lead	$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9$	$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9$	Zinc	$(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * 0.9$	$(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$
	Metal			WLA for Acute Conditions – One-Hour Average = Loading Capacity * MOS	WLA for Chronic Conditions – Four-Day Average = Loading Capacity										
	Copper			$(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * 0.9$	$(0.96) * \{e^{[0.884 * \ln(\text{hardness}) - 1.7]}\}$										
	Lead			$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9$	$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9$										
Zinc	$(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * 0.9$	$(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\}$													
City of Lemon Grove															
City of La Mesa															
County of San Diego															

**Municipalities removed from permit (covered under regional permit)**



## Example: Inconsistent

- BPA says: Phase I Permittees responsible for implementation

However...

- Attachment G says: Phase II Permittees responsible for implementation



## Example: Unclear

- Language states: “Demonstrate that Waste Load Allocations are being met”
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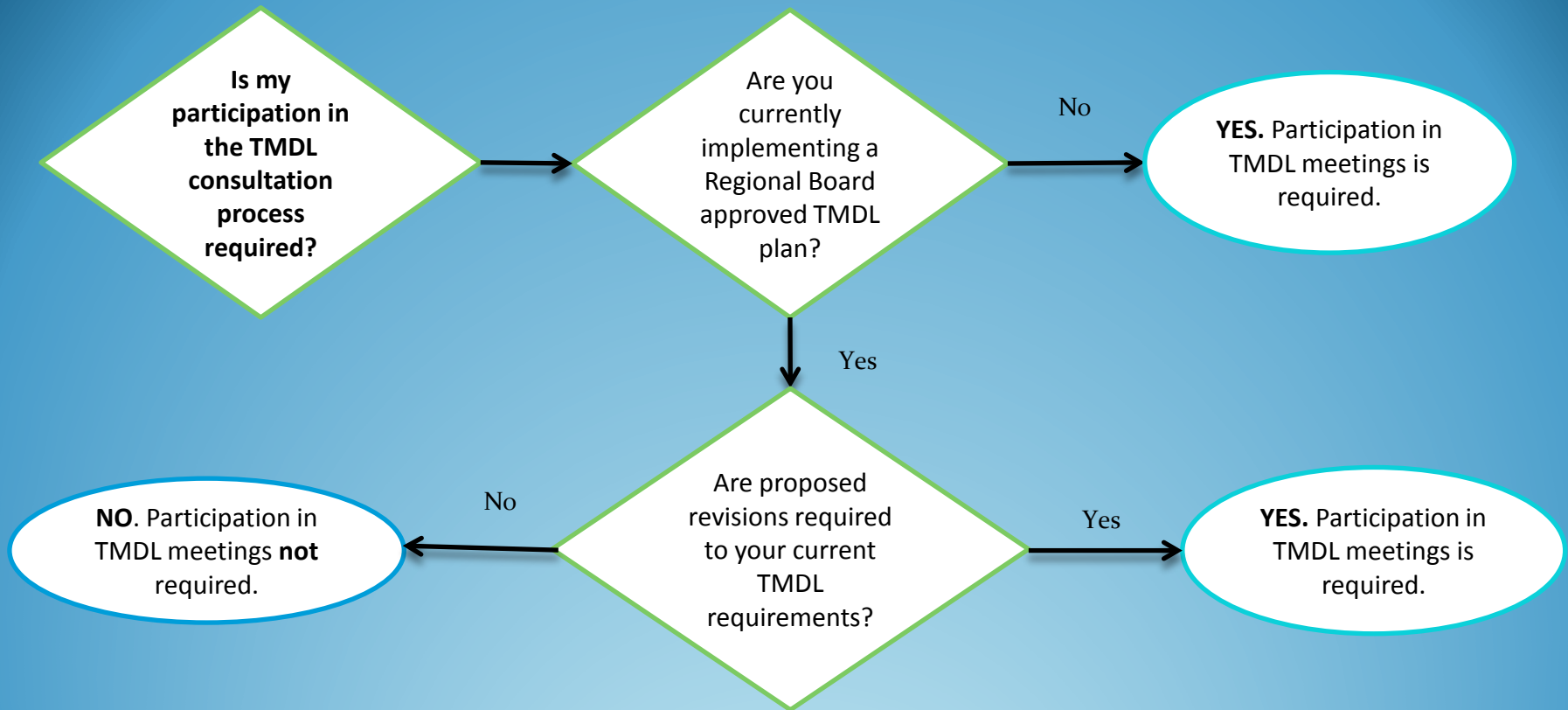
*Wasteload Allocations for dissolved copper, lead, and zinc*

Metal	WLA for Acute Conditions – One-Hour Average = Loading Capacity* MOS	WLA for Chronic Conditions – Four-Day Average =Loading Capacity*MOS
Copper	$(0.96) * \{e^{[0.9422 * \ln(\text{hardness}) - 1.700]}\} * 0.9$	$(0.96) * \{e^{[0.8545 * \ln(\text{hardness}) - 1.702]}\} * 0.9$
Lead	$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 1.460]}\} * 0.9$	$[1.46203 - 0.145712 * \ln(\text{hardness})] * \{e^{[1.273 * \ln(\text{hardness}) - 4.705]}\} * 0.9$
Zinc	$(0.978) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * 0.9$	$(0.986) * \{e^{[0.8473 * \ln(\text{hardness}) + 0.884]}\} * 0.9$

# More specifics

- TMDL-specific requirements for **RBs 4 and 8** that apply to non-traditional permittees are not included in Attachment G...
- We will need to incorporate those requirements during this process as well

# Phase II Small MS4 Permit – Proposed TMDL Consultation Process September 2013



# The Meetings

- **WHO:** Water Boards and permittees listed Attachment G
- **WHAT:** Attachment G Revisions
- **WHERE:** Throughout the State
- **WHEN:** September – November
- **WHY:** Incorporate necessary revisions to Attachment G

# Meeting Design

- Region-specific and TMDL- specific
- Vary by region and type of revision
  
- For example:
  - Meeting 1
    - WHO: RB 5 staff, RB 5 permittees listed on Attachment G
    - WHAT: Lower San Joaquin River, Diazinon and Chlorpyrifos
    - WHERE: Sacramento



# Meeting Purpose

# Regional Board Revisions: Overview

Regional Board	Revisions	Revision Type (error, absent language, unclear language)
1	Yes	Unclear language
2	Yes	Minor error
3	Yes	Minor error (typo)
4	Yes	Absent language
5F/5S/5R	Yes/Yes/No	Minor error/Unclear language
6	Yes	Minor error
7	No	-----
8	Yes	Absent language
9	No	-----

# Regional Board 1

<b>TMDL</b>	<b>Permittee</b>	<b>Revisions Proposed? (Y/N)</b>	<b>Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)</b>
Laguna de Santa Rosa	Cotati, Rohnert Park, Sebastopol, and Windsor	Yes	Clarification
Shasta River	Yreka	Yes	Clarification



# Regional Board 2

TMDL	Permittee	Revisions Proposed? (Y/N)	Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)
Urban Creek Diazinon & Pesticide Toxicity	City of Sonoma	Yes	Remove <b>City of Sonoma</b> , mistakenly listed
Urban Creek Diazinon & Pesticide Toxicity	County of Sonoma	Yes	Remove "Calabazas Creek" listing p.9

# Regional Board 3

<b>TMDL</b>	<b>Permittee</b>	<b>Revisions Proposed? (Y/N)</b>	<b>Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)</b>
TMDL for Fecal Coliform in Pajaro River...	County of Santa Cruz, City of Hollister, City of Morgan Hill, City of Gilroy, City of Watsonville, County of Monterey, County of Santa Clara	Y	There is a typo in item 6. Some language has been deleted and needs to be replaced.



# Regional Board 4

- DETAILS IN DEVELOPMENT

# Regional Board 5- Fresno

<b>TMDL</b>	<b>Permittee</b>	<b>Revisions Proposed? (Y/N)</b>	<b>Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)</b>
Diazinon & Chlorpyrifos	County of Tulare	Y	Remove from list

# Regional Board 5 - Redding

- NO REVISIONS PROPOSED

# Region Board 5 - Sacramento

TMDL	Permittee	Revisions Proposed? (Y/N)	Type of revision? (absent language, error, inconsistent language, unclear language)
Lower San Joaquin River Diazinon & Chlorpyrifos	listed in Attch G	y	Clarify implementation language
Sacramento and San Joaquin Delta - Diazinon & Chlorpyrifos	listed in Attch G	y	Clarify implementation language
Sacramento and Feather Rivers Diazinon & Chlorpyrifos	listed in Attch G	y	Clarify implementation language
Lower San Joaquin River San Joaquin River, Stockton DWSC TMDL Organic Enrichment and Low Dissolved Oxygen	listed in Attch G	y	Clarify implementation language
Delta TMDL- Methylmercury	listed in Attch G	y	Clarify implementation language
Clear Lake TMDL Nutrients	listed in Attch G	y	Clarify implementation language

# Regional Board 6

<b>TMDL</b>	<b>Permittee</b>	<b>Revisions Proposed? (Y/N)</b>	<b>Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)</b>
Squaw Creek, Sediment	Placer County	Yes	Absent, add; implementation language
Truckee River, Sediment	Placer County	Yes	Add implementation language
	Town of Truckee	Yes	Add implementation language

# Regional Board 7

- NO REVISIONS PROPOSED



# Regional Board 8

TMDL	Permittee	Revisions Proposed? (Y/N)	Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)
Lake Elsinore/Canyon Lake Nutrient TMDLs	March ARB	Y	Absent implementation language
Middle Santa Ana River Bacterial Indicator TMDL	CA Institute for Men	Y	Absent implementation language
	CA Institute for Women	Y	Absent implementation language
	CA Rehab Center	Y	Absent implementation language
	Cal Poly Pomona	Y	Absent implementation language
	University of California, Riverside	Y	Absent implementation language

# Regional Board 8 – cont'd

TMDL	Permittee	Revisions Proposed? (Y/N)	Type of revision? (Absent implementation language, minor error, inconsistent language, unclear/non-implementable language)
San Diego Creek/Newport Bay Watershed Nutrient TMDL	University of California, Irvine	Y	Absent implementation language
	Orange County Fairgrounds	Y	Absent implementation language
San Diego Creek and Newport Bay Sediment TMDL	University of California, Irvine	Y	Absent implementation language
	Orange County Fairgrounds	Y	Absent implementation language
Newport Bay Fecal Coliform TMDL	University of California, Irvine	Y	Absent implementation language
	Orange County Fairgrounds	Y	Absent implementation language
Santa Ana RB Newport Bay Watershed Organochlorine Compounds TMDLs	University of California, Irvine	Y	Absent implementation language
	Orange County Fairgrounds	Y	Absent implementation language

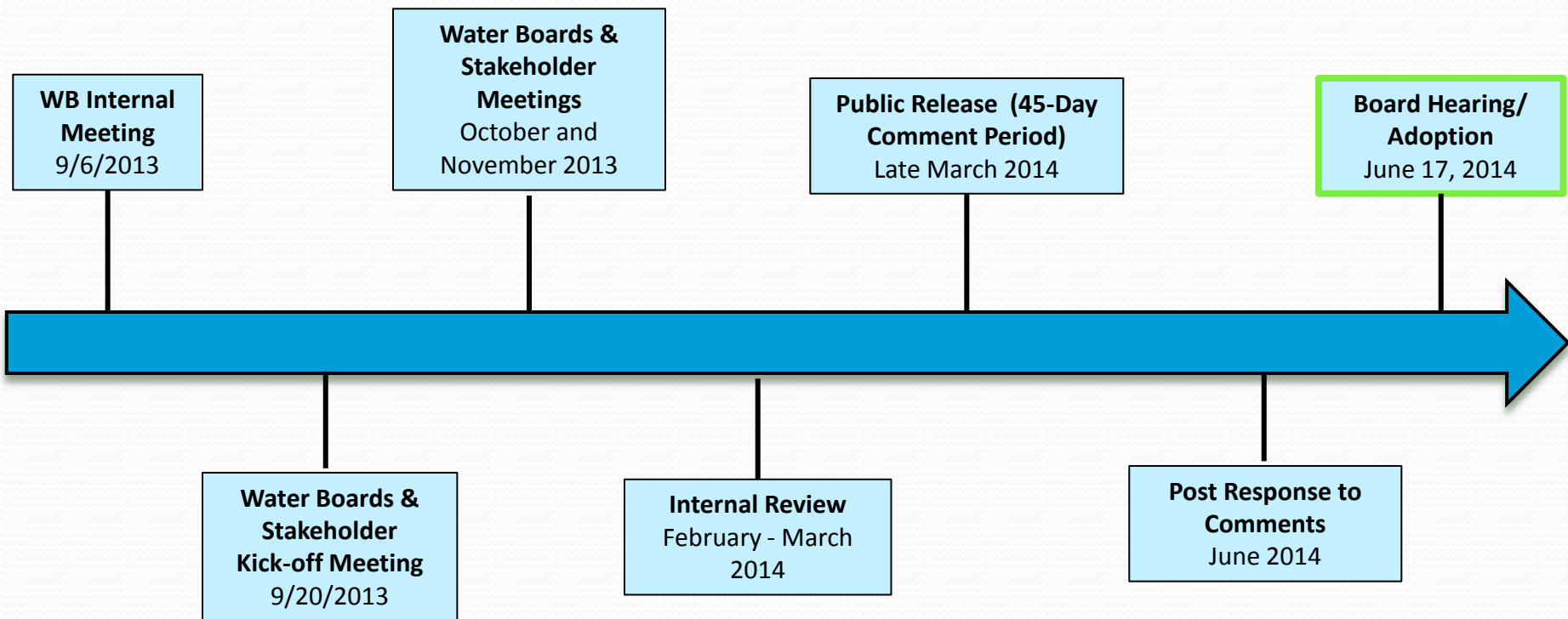
# Regional Board 9

- NO REVISIONS PROPOSED

# Proposed Implementation Language Approach : Options

- Caltrans TMDL approach – categorical
- Develop general implementation language (template) for specific TMDLs

# Timeline



# Proposed Schedule

<b>Region</b>	<b>Date</b>	<b># of Meetings</b>
1	November 2013	1
2	October 2013	1
3	October 2013	1
4	November 2013	2
5	November 2013	3
6	October 2013	1
7	-----	0
8	October 2013	2
9	-----	0

# Thank you



Photo credit: LA Times

# Contact Information

Ali Dunn, Environmental Scientist

Phone: 916.341.6899

Email: [ali.dunn@waterboards.ca.gov](mailto:ali.dunn@waterboards.ca.gov)