

# **California Total Maximum Daily Load (TMDL)**

## **Program Status Summary Report**

**Fiscal Year 2011 – 2012**

August 2012

State Water Resources Control Board  
Regional Water Quality Control Boards

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## Foreword

### Summary of the status of California's TMDL Program

The purpose of this Program Status Summary Report is to provide State Water Resources Control Board, Regional Water Quality Control Boards management, U.S. Environmental Protection Agency and the public with a succinct presentation of fiscal year 2011 – 2012 performance and long term development of the TMDL program. The graphs and tables used in the report provide multiple lenses to assess program status and trends.

The first section lays out the magnitude of the problem and examines the progress the State has made from several perspectives. It looks at:

- The current amount of impaired, i.e., Clean Water Act sect. 303(d) listed, waters;
- As the number of waters monitored increased, the number of waters listed as impaired increased correspondingly over time and the rate at which TMDL development chases the number of 303(d) listed waters;
- Fiscal year 2011 – 2012 commitments and achievements;
- TMDLs adopted and approved;
- Resources needed to make the current level of progress; and
- How those resources are being expended.

Information is reported for the Statewide Program and for each Region.

The second section is essays which provide a way of capturing Regional Water Board accomplishments and challenges that are not amenable to graphic display or numerical interpretations.

### Program Evaluation

The last 303(d) listing cycle resulted in a sharp increase, by over half again, in the number of impaired waters. Therefore the number of TMDLs needed to address all impaired waters correspondingly increased. Significant progress was made during FY 11-12, over 100 impaired water listings were addressed.

Adopted TMDLs must be implemented in order to actually achieve the intended water quality improvements. As the number of adopted TMDLs has increased greater effort and more resources have gone into implementing those TMDLs. The TMDL program has been faced with an increased work load and reductions in staffing and research (contract) funds. To try to maintain productivity the TMDL program is exploring multiple ways of increasing TMDL adoption efficiency at the Regional level and at the State level including the development of a Statewide TMDL for mercury in reservoirs.

## TMDL Program Performance Summary

# TMDL Program Performance Summary

## Long Term Program Performance

Number of TMDLs Adopted through June FY 11-12 = 180  
Number of Listings addressed through TMDL Adoptions through June FY 11-12 = 1108  
Number of Listings addressed by delisting through June FY 11-12 = 516  
Total Number of CWA 303(d) Listings Addressed through June FY 11-12 = 1,624  
Percentage of current 2010 CWA 303(d) Listings Addressed by TMDLs through June FY 11-12 = 32%

## Fiscal Year 2011 - 2012 Program Performance

### Region 1

156/156 = 100% Workplan TMDL Commitments Completed  
0/1 TMDLs Completed/Scheduled  
0 303d Listings addressed in 11-12  
183 Tasks scheduled for completion in FY 11-12  
1 TMDLs scheduled for adoption in FY 11-12  
1 Number 303d listings scheduled in FY11-12

### Region 2

36/46 = 78% Workplan TMDL Commitments Completed  
2/5 TMDLs Completed/Scheduled  
5 303d Listings addressed in 11-12  
51 Tasks scheduled for completion in FY 11-12  
5 TMDLs scheduled for adoption in FY 11-12  
19 Number 303d listings scheduled in FY11-12

### Region 3

48/51 = 94% Workplan TMDL Commitments Completed  
3/4 TMDLs Completed/Scheduled  
23 303d Listings addressed in 11-12  
49 Tasks scheduled for completion in FY 11-12  
4 TMDLs scheduled for adoption in FY 11-12  
39 Number 303d listings scheduled in FY11-12

### Region 4

34/57 = 60% Workplan TMDL Commitments Completed  
7/11 TMDLs Completed/Scheduled  
78 303d Listings addressed in 11-12  
57 Tasks scheduled for completion in FY 11-12  
11 TMDLs scheduled for adoption in FY 11-12  
155 Number 303d listings scheduled in FY11-12

### Region 5

52/60 = 87% Workplan TMDL Commitments Completed  
0/1 TMDLs Completed/Scheduled  
0 303d Listings addressed in 11-12  
63 Tasks scheduled for completion in FY 11-12  
1 TMDLs scheduled for adoption in FY 11-12  
22 Number 303d listings scheduled in FY11-12

### Region 6

29/37 = 78% Workplan TMDL Commitments Completed  
0/0 TMDLs Completed/Scheduled  
0 303d Listings addressed in 11-12  
38 Tasks scheduled for completion in FY 11-12  
0 TMDLs scheduled for adoption in FY 11-12  
0 Number 303d listings scheduled in FY11-12

### Region 7

14/21 67% Workplan TMDL Commitments Completed  
0/2 TMDLs Completed/Scheduled  
0 303d Listings addressed in 11-12  
21 Tasks scheduled for completion in FY 11-12  
2 TMDLs scheduled for adoption in FY 11-12  
13 Number 303d listings scheduled in FY11-12

### Region 8

43/62 = 69% Workplan TMDL Commitments Completed  
0/2 TMDLs Completed/Scheduled  
0 303d Listings addressed in 11-12  
64 Tasks scheduled for completion in FY 11-12  
2 TMDLs scheduled for adoption in FY 11-12  
4 Number 303d listings scheduled in FY11-12

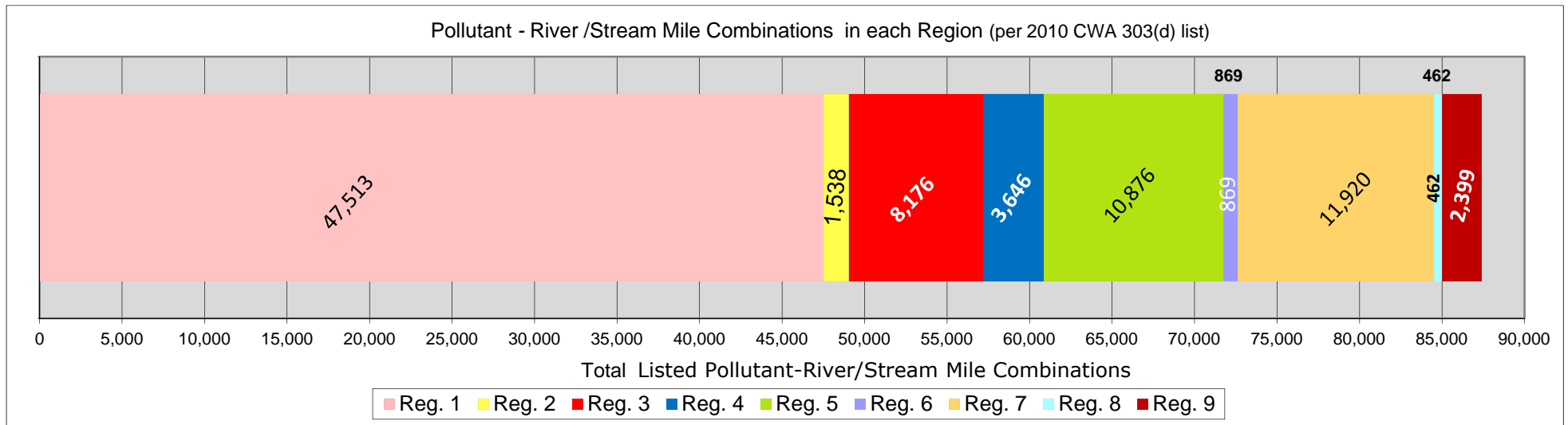
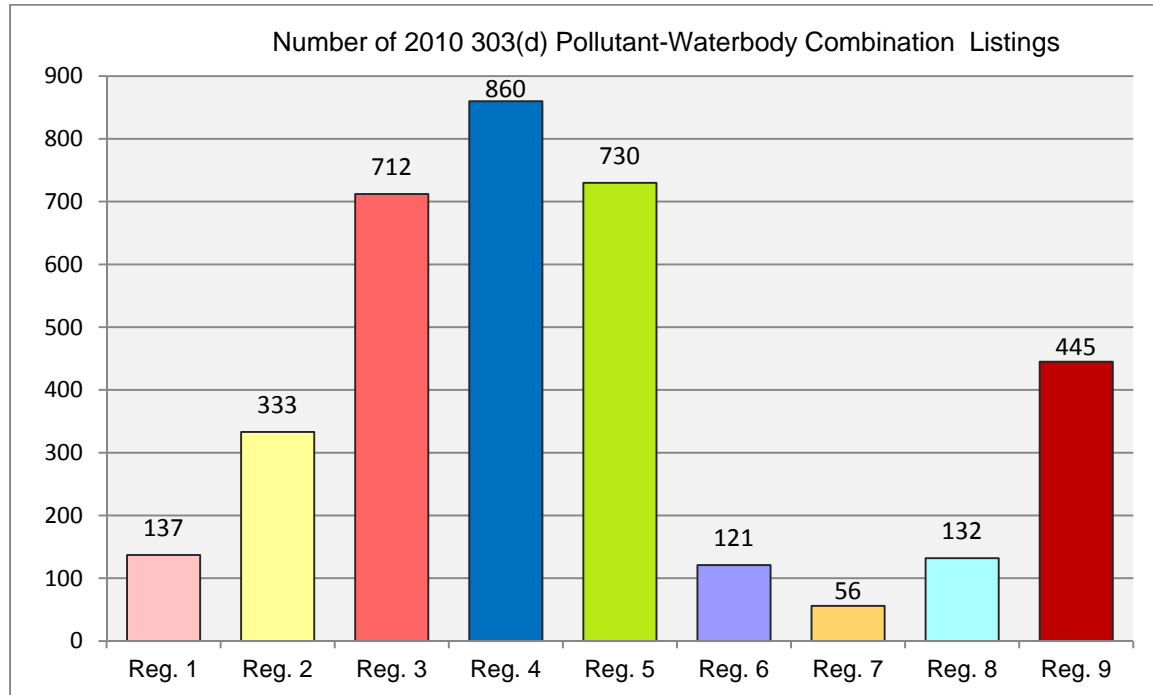
### Region 9

21/57 = 37% Workplan TMDL Commitments Completed  
2/5 TMDLs Completed/Scheduled  
6 303d Listings addressed in 11-12  
59 Tasks scheduled for completion in FY 11-12  
5 TMDLs scheduled for adoption in FY 11-12  
12 Number 303d listings scheduled in FY11-12

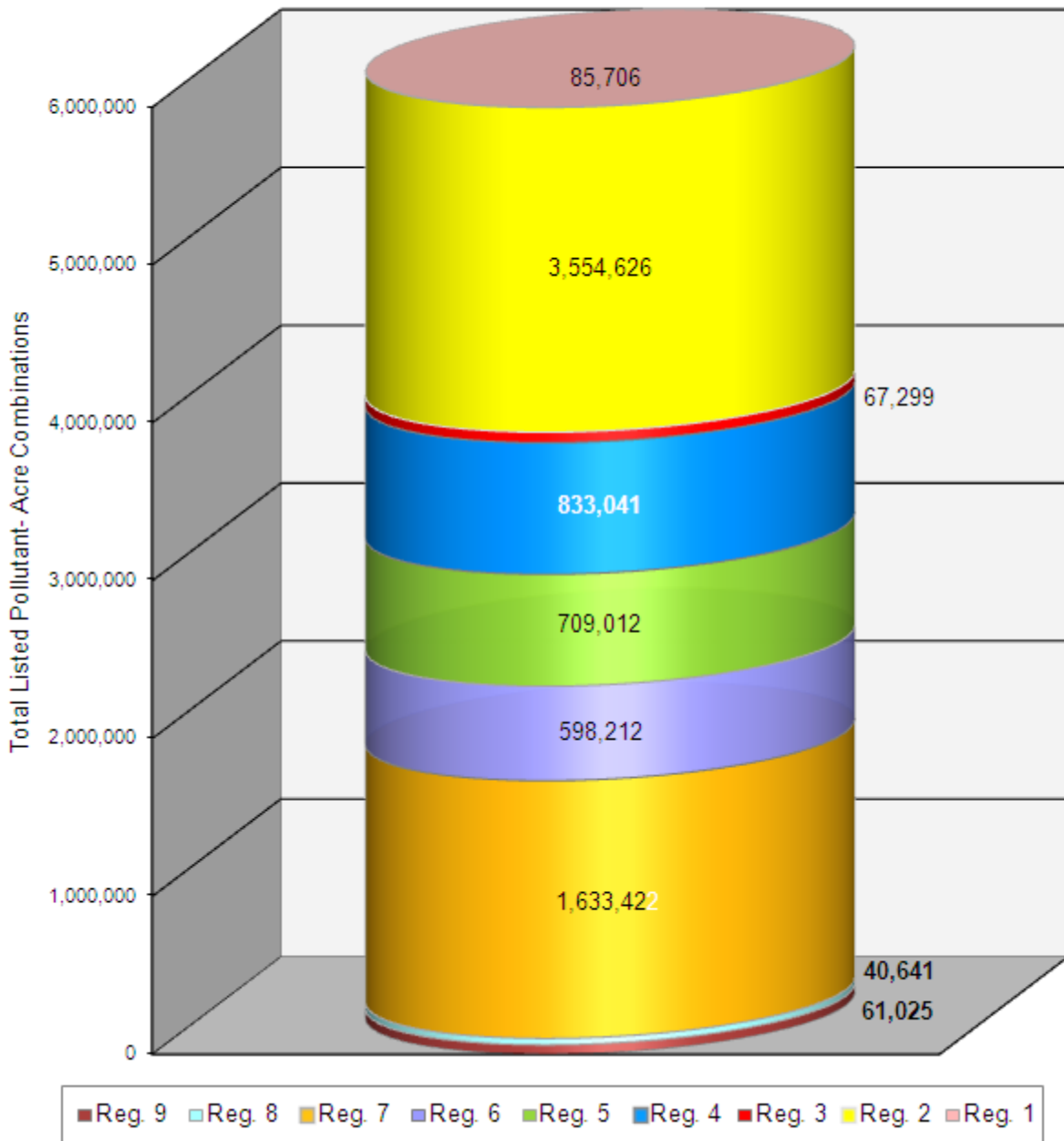
"TMDL Commitments Completed" is based upon data entered into TMDL Tracking Database as of the 5th of the month following the report period.

## TMDL Program Status

### The Measure of the Problem

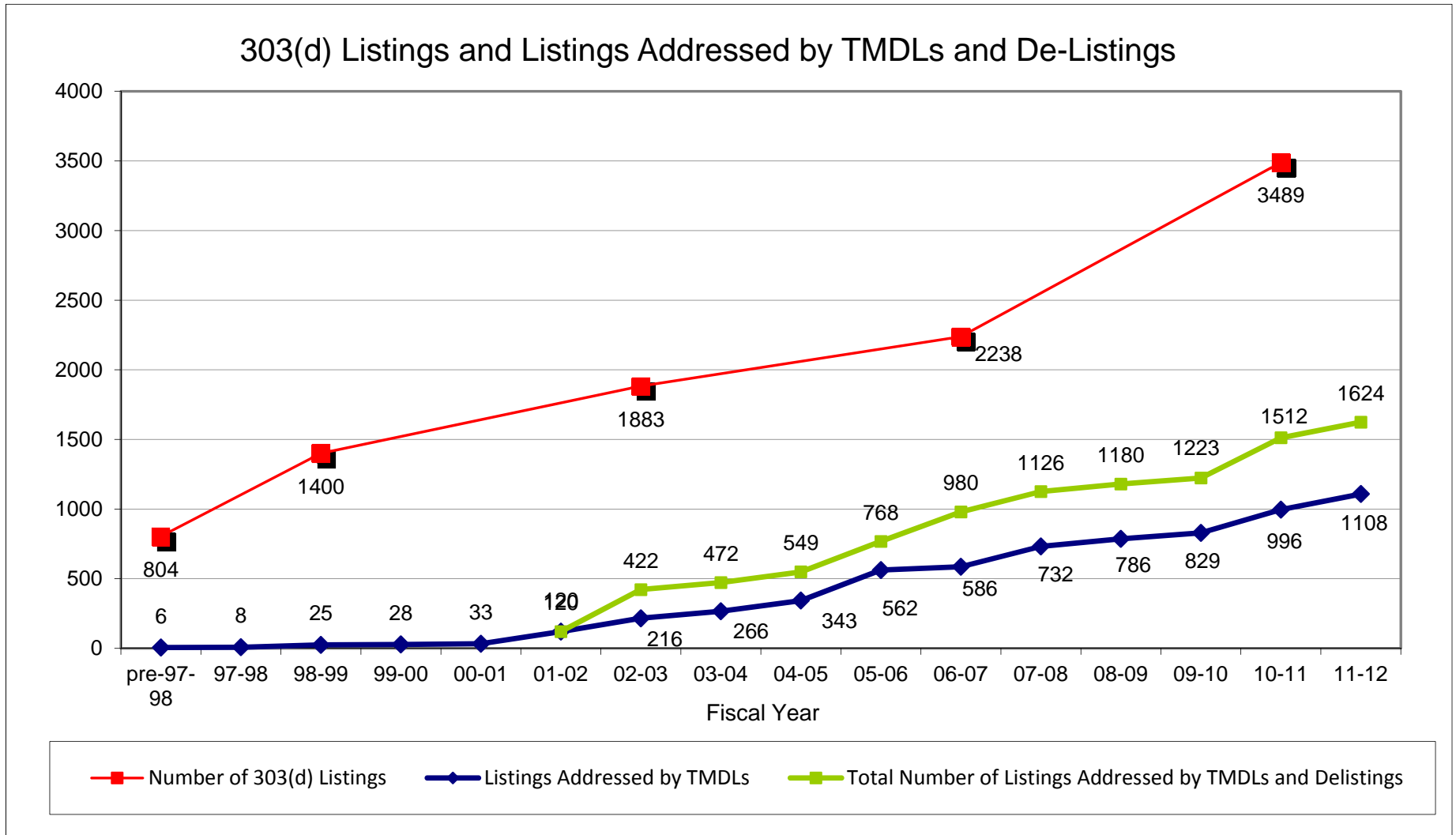


Pollutant - Acres of Lakes, Bays and Estuaries in each Region  
(per 2010 CWA 303(d) list)

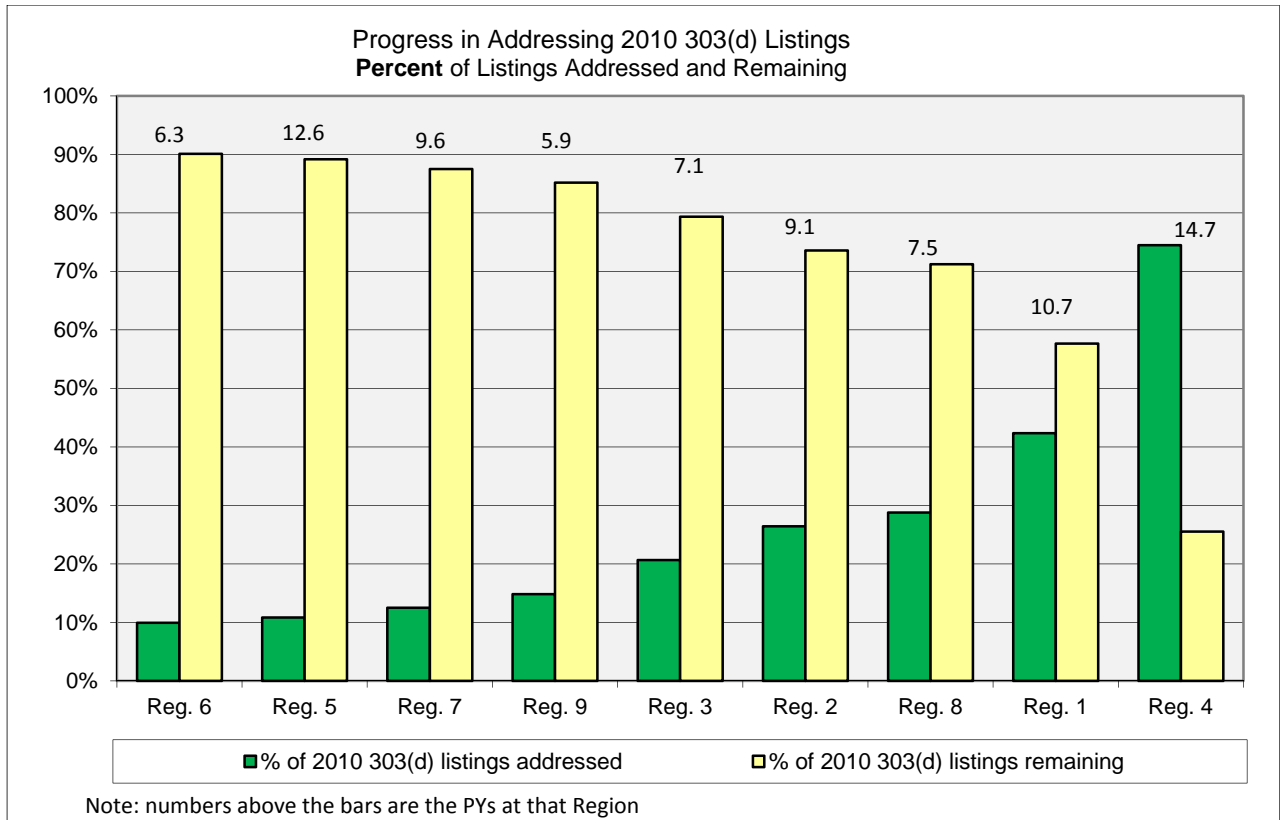
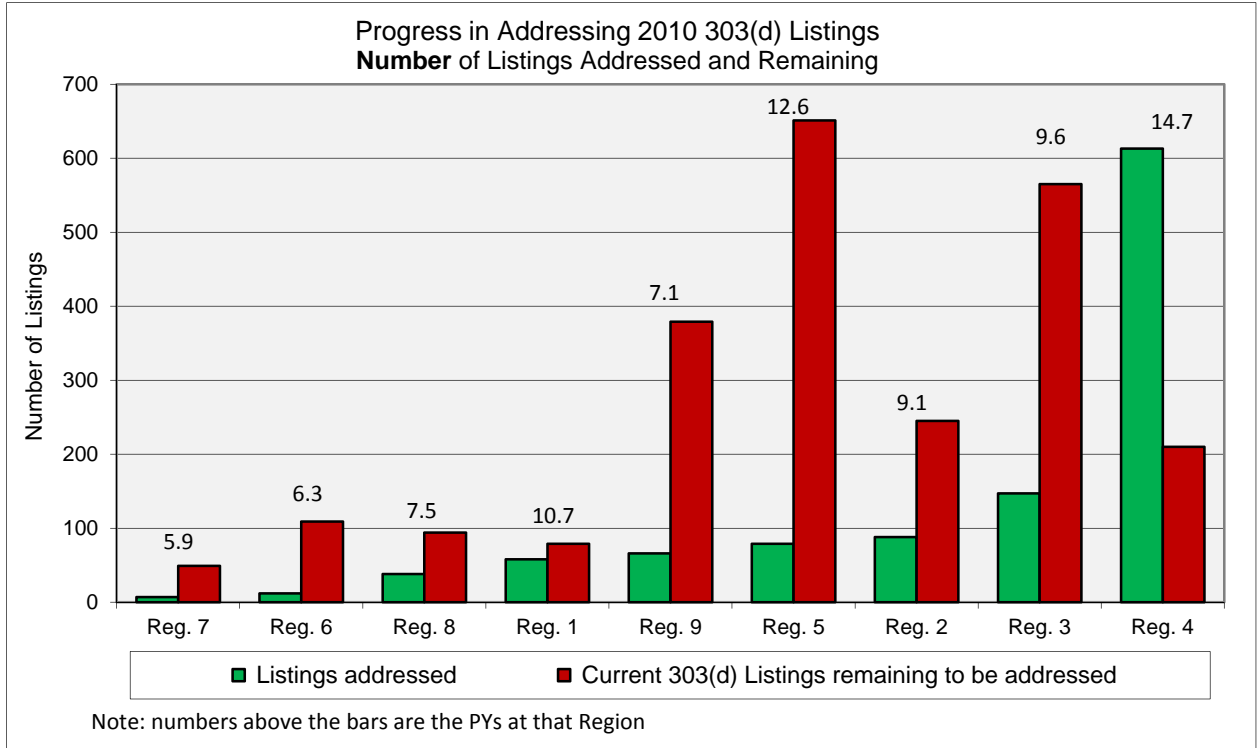




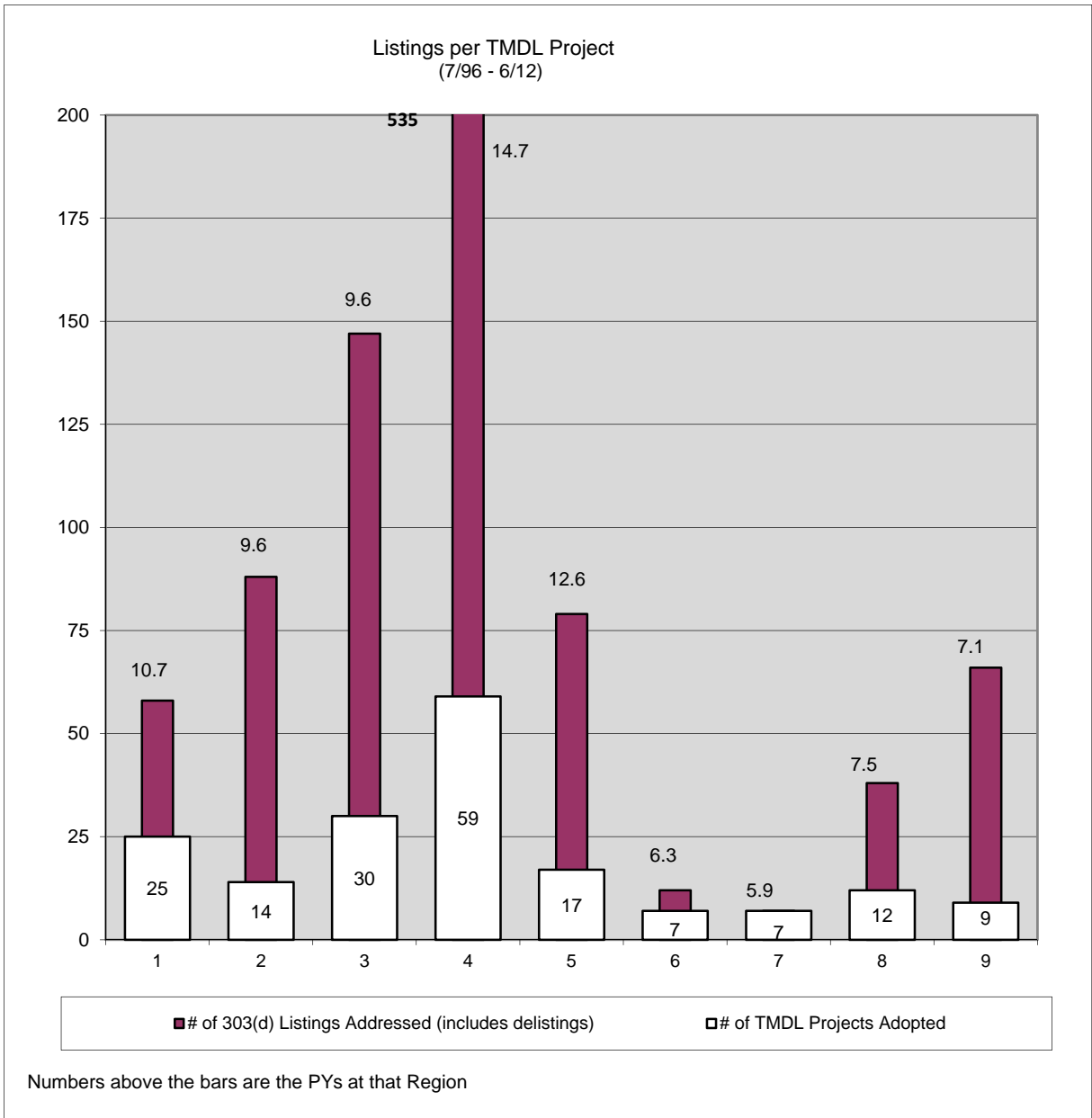
## Decreasing the Gap: The Difference Between Number of Listings and Listings Addressed



## Progress in Addressing CWA 2010 303(d) Listings



## Progress in Addressing CWA 2010 303(d) Listings



Regional Water Board  
TMDL Adoption Commitments for FY 11-12

Region	TMDL Project	Scheduled Adoption Date	Adopted	# listings
1	<i>Laguna de Santa Rosa</i> dissolved oxygen objective	5/12	no	1
2	<i>Napa and Sonoma Counties</i> Grazing Waiver	9/11	Yes	4
	<i>Tomales Bay</i> Mercury	3/12	Yes	1
	Dairy Waiver for <i>Napa and Sonoma counties</i>	4/12	no	9
	<i>San Mateo Coast</i> Pathogens (Pacifica Beaches and San Pedro Creek)	5/12	no	3
	Vineyard Waiver for <i>Napa and Sonoma Counties</i>	5/12	no	2
3	<i>Santa Maria River</i> Watershed fecal coliform	2/12	Yes	21
	<i>Salinas River</i> Nutrients (delayed lacked peer reviewers)	5/12	no	16
	<i>San Antonio Creek</i> chloryrifos	5/12	Yes	1
	<i>Los Berros Creek</i> nitrate	5/12	Yes	1
4	<i>El Dorado Lakes, Puddingstone Reservoir and Santa Fe Dam Park Lake</i> copper (42)	1/12	Yes	6
	<i>Ballona Creek</i> Coliform (49)	2/12	Yes	4
	<i>Los Angeles Harbor</i> Beaches - Beach Closures (72)	2/12	Yes	2
	<i>Malibu</i> Pathogens (47 in part)	2/12	Yes	12
	<i>Marina del Rey</i> Pathogens (46)	2/12	Yes	2
	<i>Santa Monica Bay</i> Beach Closures/Coliform/Bacteria Indicators (48)	2/12	Yes	51
	<i>Ventura River</i> Algae/Nutrients (88)	2/12	no	4
	<i>Avalon Beach</i> Bacteria Indicators (nonCD)	3/12	Yes	1
	<i>San Gabriel River</i> Metals (39)	4/12		9
	<i>Los Cerritos Channel</i> Metals (84)	4/12	no	3
	<i>Los Angeles River</i> Nitrogen (11)	5/12	no	34
	<i>Calleguas Creek</i> Toxicity (2)	6/12	no	27
5	<i>Sacramento and San Joaquin</i> Pesticides	3/12	no	22
6	none			0
7	<i>Alamo &amp; New Rivers</i> chlorpyrifos & diazinon	10/11	no	3
	Legacy Pesticides for the Colorado River Basin Region	1/12	no	10
8	<i>Canyon Lake</i> Bacteria TMDL	4/12	no	1
	<i>Newport Bay Watershed</i> selenium	3/12	no	3
9	<i>Mouth of Switzer Creek</i> pesticides, PAHS	9/11	no	2
	<i>Mouth of Chollas Creek</i> , benethic effects, sediment toxicity	9/11	no	2
	<i>7th Street Channel (Paleta Creek Mouth)</i> sediment toxicity	9/11	no	2
	<i>Los Penasquitos Lagoon</i> Sedimentation	12/11	Yes	1
	NASSCO and BAE (aka Southwest Marine)	12/11	Yes	5

#TMDLs adopted/addressed: 14  
 # TMDLs Listings addressed: 112  
 TMDL adoption commitments: 32  
 Total number of listings **to be** addressed: 265  
 # TMDLs not adopted/addressed: 17  
 % of FY 10-11 adoption commitments met: 44%

## TMDLs Submitted to the State Board for Consideration

TMDLs Actions by the State Board in FY 11-12 (July 2011 - June 2012)		
	State Board Action	Date
<b>Region 1</b>		
<b>Region 2</b>		
<b>Region 3</b>		
Salinas River fecal coliform	Approved	9/19/11
<b>Region 4</b>		
Santa Clara River Coliform (23b & 34)	Approved	10/4/11
Los Angeles River Pathogens (15)	Approved	11/1/11
Machado Lake Toxics (73b)	Approved	12/6/11
Santa Monica Bay offshore/nearshore debris (66)	Approved	12/6/11
Dominguez, LA/LB Harbors, San Pedro Bay Metals (75 & 78), toxics(73a) and PAHs (74)	Approved	2/7/12
<b>Region 5</b>		
<b>Region 6</b>		
<b>Region 7</b>		
Coachella Valley Storm Channel pathogen	Approved	7/19/11
New River Dissolved Oxygen	Approved	12/6/11
<b>Region 8</b>		
<b>Region 9</b>		
Number of State Bd. Approvals	8	
Number of State Bd. Remands	0	

### Adopted TMDLs

Region	TMDL Project	Listings	RB Adopted	SB Approved	EPA Approved	
1	Laguna de Santa Rosa ammonia and D.O.	2	3/95		5/95	
1	Stemple Creek nutrients and sediment	2	12/97			RB adopted and in implementation no SB approval.
1	Garcia River sediment	1	5/98, 12/98 6/01	9/00, 11/01	3/02	
1	Redwood Creek sediment [workplan]	1	11/04		12/98	RB resolution directing staff to implement EPA established TMDL
1	Eel River South Fork sediment (HA111.30)	1	11/04		12/99	RB resolution directing staff to implement EPA established TMDL
	Eel River South Fork temperature (HA111.30)	1	--		12/99	EPA established TMDL with RB assistance
1	Noyo River sediment	1	11/04		12/99	RB resolution directing staff to implement EPA established TMDL
1	Van Duzen River sediment	1	11/04		12/99	RB resolution directing staff to implement EPA established TMDL
1	Navarro River sediment	2	11/04		12/00	RB resolution directing staff to implement EPA established TMDL
1	Ten Mile River sediment	1	11/04		12/00	RB resolution directing staff to implement EPA established TMDL
1	Albion River sediment	1	11/04		12/01	RB resolution directing staff to implement EPA established TMDL
1	Big River sediment	1	11/04		12/01	RB resolution directing staff to implement EPA established TMDL
1	Gualala River sediment	1	11/04		12/01	RB resolution directing staff to implement EPA established TMDL
1	Trinity River sediment	5	11/04		12/01	RB resolution directing staff to implement EPA established TMDL
1	Eel River North Fork sediment (HA111.50)	1	11/04		12/02	RB resolution directing staff to implement EPA established TMDL
	Eel River North Fork temperature (HA111.50)	1	--		12/02	EPA established TMDL with RB assistance
1	Eel River Middle Fork sediment (HA111.70)	1	11/04		12/03	RB resolution directing staff to implement EPA established TMDL
	Eel River Middle Fork temperature (HA111.70)	1	--		12/03	EPA established TMDL with RB assistance
1	Mattole River sediment	1	11/04		12/03	RB resolution directing staff to implement EPA established TMDL
1	Eel River Upper Main sediment (HA111.60)	1	11/04		12/04	RB resolution directing staff to implement EPA established TMDL
	Eel River Upper Main temperature (HA111.60)	1	--		12/04	EPA established TMDL with RB assistance
1	Salmon River temperature	1	6/05		8/05	Single action TMDL: MOU with US Forest Service
1	Eel River Middle Main sediment (HA111.40)	1	--		12/05	EPA established with RB assistance, implement under R1-2004-0087
	Eel River Middle Main temperature (HA111.40)	1	--		12/05	EPA established TMDL with RB assistance
1	Scott River sediment and temperature	2	12/05	6/06	9/06	
1	Shasta River D.O. and temperature	2	6/06	11/06	1/07	
1	Eel River Lower Main sediment (HA111.10)	1	--		12/07	EPA established with RB assistance, implement under R1-2004-0087
	Eel River Lower Main temperature (HA111.10)	1	--		12/07	EPA established TMDL with RB assistance
1	Mad River sediment	2	--		12/07	EPA established with RB assistance, implement under R1-2004-0087
1	Lower Lost River (technical TMDL)	2	--		12/08	EPA established with RB assistance, implement under R1-2004-0087
1	Klamath River nutrients, temperature, D.O., microcystin	17	3/10	9/10	12/10	3 microcystin listings were added between listing cycles by EPA
<b>Listings Addressed</b>		<b>58</b>				
2	San Francisco Bay copper & nickel site-specific objectives	2	5/02	10/02	1/03	SSO
2	San Francisco Bay mercury	16	9/04; 8/06	7/07	2/08	SB remanded TMDL 9/05; R2 readopted TMDL 8/06
2	Tomales Bay pathogen	2	9/05	5/06	1/07	
2	San Francisco Bay urban creeks diazinon	37	10/05	10/06	5/07	
2	Napa River pathogens	1	6/06	9/07	2/08	
2	Sonoma Creek pathogens	1	6/06	9/07	2/08	
2	Napa River sediment	1	1/07, 9/09	10/10	1/11	Withdrawn for CEQA considerations; re-adopted.
2	Walker Creek mercury	1	1/07	7/08	9/08	SB consideration extended to allow E.O. Corrections
2	San Francisco Bay PCBs	15	2/08	10/09	3/10	
2	Richardson Bay pathogens	1	7/08	8/09	12/09	
2	Guadalupe River mercury	5	10/08	11/09	6/10	

### Adopted TMDLs

Region	TMDL Project	Listings	RB Adopted	SB Approved	EPA Approved	
2	Somoma Creek sediment	1	12/08	3/10	9/10	
2	Grazing Waiver - Napa and Sonoma Counties	4	9/11	--	--	TMDL adopted as a waiver of waste discharge requirements.
2	Tomales Bay Mercury	1	5/12			Technical TMDL Adopted by RB Resolution/Order.
<b>Listings Addressed</b>		<b>88</b>				
3	Morro Bay siltation	3	5/02	9/03	1/04	
3	San Lorenzo River nitrate	4	9/02	11/01	8/03	Adopted by RB Resolution/Order
3	Las Tablas Creek - Nacimiento Reservoir mercury	2	11/02			Revisions to implementation plan needed. No responsible party due to history of recalcitrant discharger.
3	Morro Bay pathogens	10	5/03	9/03	1/04	
3	Morro Bay, Chorro & Los Osos Creeks sediment	3	5/03	9/03	1/04	
3	San Lorenzo River sediment	4	5/03	9/03	1/04	
3	Clear Creek-Hernandez Reservoir mercury	2	3/04	--	6/04	Technical TMDL Adopted by RB Resolution submitted to EPA
3	Dairy Creek dissolved oxygen	1	12/04	--		Technical TMDL Adopted by RB Resolution submitted to EPA
3	Los Osos Creek nutrients	1	12/04	--	3/05	Technical TMDL Adopted by RB Resolution submitted to EPA
3	San Luis Obispo Creek pathogen	1	12/04	5/05	9/05	
3	San Luis Obispo Creek nutrients	1	9/05	6/06	1/07	
3	Pajaro River siltation/sedimentation	4	12/05	9/06	5/07	
3	Pajaro River nutrients	2	12/05	--	10/07	Technical TMDL Adopted by RB Resolution/Order.
3	Watsonville Slough pathogens	1	3/06	9/06	3/07	Adopted by RB Order and UAA
3	Chorro Creek nutrients and dissolved oxygen	1	7/06	--	7/07	Technical TMDL Adopted by RB Resolution/Order.
3	Aptos and Valencia Creeks pathogens	2	3/08, 5/09			Withdrawn from approval process; RB adopt revised TMDL 6/09.
3	San Lorenzo River watershed pathogen	4	3/08, 5/09			Withdrawn from approval process; RB adopt revised TMDL 6/09.
3	Soquel Lagoon pathogens	1	3/08, 5/09		11/10	Withdrawn from approval process; RB adopt revised TMDL 6/09.
3	Corralitos Creek pathogens	4	3/09	4/11		Also addresses 3 2010 listings
3	Pajaro River fecal coliform (including San Benito R., Llagas Cr., and Tequesquita Slough)	12	3/09	4/10		Technical TMDL Adopted by RB Resolution/Order.
3	Salinas River fecal coliform	18	9/10			Technical TMDL Adopted by RB Resolution/Order.
3	Lower Salinas River chlorpyrifos and diazinon	35	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	Arroyo de la Cruz bacteria	1	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	Cholame Creek Bacteria	2	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	San Antonia River Bacteria	2	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	San Lorenzo Creek Bacteria	2	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	Tularcitos Creek Bacteria	1	5/11			Technical TMDL Adopted by RB Resolution/Order.
3	Santa Maria River Watershed fecal coliform	21	3/12			
3	San Antonio Creek chlopyrifos	1	5/12			
3	Los Berros Creek nitrate	1	5/12			
<b>Listings Addressed</b>		<b>147</b>				
4	East Fork San Gabriel River Trash	1	10/99	6/00	12/00	
4	Ballona Creek Trash	1	9/01, 3/04	2/02, 9/04	8/02	
4	Los Angeles River Trash	7	9/01	2/02	8/02	
4	Los Angeles River Watershed Lakes Trash	3	9/01			
4	Santa Monica Bay Beaches Coliform dry weather	51	1/02	9/02	6/03	Dry-Weather and Wet-Weather may be considered one TMDL. Listing did not differentiate between seasons. Only counted once in number of
4	Calleguas Creek Chloride	6	--	--	3/02	Technical TMDL drafted by RB, established by EPA
4	Santa Monica Bay Beaches Wet Weather Bacteria	51	12/02	3/03	6/03	see note above
4	Calleguas Creek Nitrogen	30	10/02	3/03	6/03	

### Adopted TMDLs

Region	TMDL Project	Listings	RB Adopted	SB Approved	EPA Approved	
4	Santa Clara River Chloride Reach 3	1	10/02	--	6/03	Remanded by SB, Objective change BPA 11/03; EPA established with Reg. Bd. Assistance
4	Malibu Creek nutrients	28	--	--	3/03	EPA established with RB technical assistance
4	Santa Clara River Chloride Reach 7 & 8	2	10/03, 5/04, 8/06	7/04, 5/07	4/05,	Remanded by SB, Revised approved by SB 7/04; 8/06 revised implementation plan only, EPA approval not needed.
4	Los Angeles River Nitrogen	33	7/03, 12/03	11/03, 3/04	3/04	
4	Santa Clara River Nitrogen	6	7/03	11/03	3/04	
4	Marina del Rey Pathogens	3	8/03	11/03	3/04	
4	McGrath Beach Coliform	1	8/03	--	--	CAO
4	Los Angeles Harbor Beach Closures	2	7/04	10/04	3/05	
4	Malibu Creek Pathogens	12	12/04	9/05	1/06	
4	Los Angeles River Metals/Toxics	18	6/05	10/05	12/05	
4	Ballona Creek Metals	9	7/05	10/05	12/05	
4	Ballona Creek Toxics	11	7/05	10/05	12/05	
4	Calleguas Creek Historic pesticides	62	7/05	9/05	3/06	
4	Calleguas Creek Toxicity	10	7/05	9/05	3/06	
4	Calleguas Creek PCBs	5	7/05	9/05	3/06	
4	Marina del Rey Toxics	6	10/05	1/06	3/06	
4	Marina del Rey Harbor-Back Basin Metals (AU #56)	3	10/05	1/06	3/06	
4	Ballona Creek Coliform	4	6/06	11/06	3/07	
4	Calleguas Creek metals	6	6/06	10/06	3/07	
4	San Gabriel River metals	7	7/06	--	3/07	Withdrawn by Region; EPA established with Reg. Bd. Assistance
4	Calleguas Creek trash	2	6/07	12/07	2/08	
4	Legg Lake trash	1	6/07	12/07	2/08	
4	Machado Lake trash	1	6/07	12/07	2/08	
4	Santa Clara River trash	3	6/07	12/07	2/08	
4	Ventura River Estuary trash	1	6/07	12/07	2/08	
4	Los Angeles River trash (re-adoption)	7	8/07	4/08	7/08	Re-adoption in compliance with Court decision; original TMDL addressed 7 listings, current TMDL addresses 14.
4	Los Angeles River metals (re-adopted in compliance with a writ of mandate)	--	9/07	6/08	10/08	Re-adoption in compliance with Court decision
4	Ballona Creek metals (re-adoption)	--	9/07	6/08	10/08	Re-adoption in compliance with Court decision
4	Calleguas Creek boron/sulfate/TDS	31	10/07	5/08	12/08	
4	Harbor Beaches of Ventura County	2	10/07	10/08	12/08	
4	Malibu Creek Watershed trash	7	5/08	3/09	6/09	
4	Machado Lake nitrogen	4	5/08	12/08	3/09	
4	Calleguas Creek Nitrogen Compounds and Related Effects	27	9/08	6/09	10/09	
4	Santa Clara River reconsideration of chloride water quality objectives	2	12/08	10/09	4/10	
4	Colorado Lagoon pesticides, PAH's, PCB's, metals, etc.	8	10/09	11/10	6/11	
4	McGrath Lake Pesticides	5	10/09	12/10	6/11	
4	Los Cerritos Metals	3	--	--	3/10	EPA established with RB technical assistance
4	Los Angeles River metals (re-opened & modified))	--	5/10	4/11	11/11	Modified to incorporate discharger generated WER
4	Santa Clara River Coliform (23b & 34)	5	7/10	10/11	1/12	Reach 3 is not on the 303(d) list, but is impaired per RB Res.
4	Los Angeles River Pathogens (15)	17	7/10	11/11	3/12	
4	Machado Lake toxics (73b)	5	9/10	12/11	3/12	
4	Santa Monica Bay offshore/nearshore debris (66)	1	11/10	12/11	3/12	
4	Santa Clara River Estuary (33) Toxaphene	1	11/10	n/a	n/a	Toxaphene adopted by the Regional Board as a single regulatory action



### Adopted TMDLs

Region	TMDL Project	Listings	RB Adopted	SB Approved	EPA Approved	
4	Dominguez, LA/LB Harbors, San Pedor Bay Metal (75 & 78), tox	74	5/11	2/12	3/12	
4	El Dorado Lakes, Puddingstone Reservoir and Santa Fe Dam Park Lake copper (42)	6	1/12	--	3/12	TMDL adopted as an enforcement order.
4	Avalon Beach Bacteria Indicators (nonCD)	1	3/12	--		TMDL adopted as an enforcement order.
4	Ballona Creek Coliform (49)	4	6/12			
4	Los Angeles Harbor Beaches - Beach Closures (72)	2	6/12			
4	Malibu Pathogens (47 in part)	12	6/12			
4	Marina del Rey Pathogens (46)	2	6/12			
4	Santa Monica Bay Beach Closures/Coliform/Bacteria	51	6/12			
<b>Listings Addressed</b>		<b>613</b>				
5	Grasslands Marsh Selenium	1	96	1996	5/00	
5	Salt Slough Selenium	1	96	1996	1999	
5	San Joaquin River Selenium	1	96	1996	3/02	
5	Sacramento River Cadmium, Copper & Zinc	3	5/02			
5	Clear Lake Mercury	1	12/02	5/03	9/03, 10/03	
5	Sacramento and Feather River Diazinon	2	10/03	4/04	8/04	
5	Sacramento Area Urban Creeks diazinon	10	9/04	--	11/04	Adopted by Resolution. Implemented via MS4 permit
5	San Joaquin River Salt and Boron	2	9/04	11/05	2/07	TMDL is complete for the Stanislaus to Vernalis reach only.
5	San Joaquin River Dissolved Oxygen	1	1/05	11/05	2/07	
5	San Joaquin River Diazinon and Chlorpyrifos	8	10/05	5/06	12/06	
5	Cache, Bear and Sulphur Creeks Mercury	4	10/05	7/06	2/07	
5	Clear Lake nutrient	1	6/06	4/07	9/07	
5	Delta Diazinon and Chlorpyrifos	24	6/06	5/07	10/07	Marsh Creek and Old River added per the 2010 Integrated Report
5	Sulphur Creek mercury	2	3/07	3/08		
5	Sacramento/Feather diazinon & chlorpyrifos	2	5/07	2/08	8/08	
5	Stockton Area Sloughs and Rivers pathogens	8	3/08	--	5/08	TMDL adopted as a MS4 permit
5	Sacramento-San Joaquin Delta methylmercury	8	4/10	6/11		
<b>Listings Addressed</b>		<b>79</b>				
6	Heavenly Valley sediment	1	1/01	9/01	9/02	
6	Indian Creek Reservoir phosphorus	1	7/02	1/03	7/03	
6	Squaw Creek sediment	1	4/06	2/07	7/07	
6	West Fork Carson River sodium objectives	2	12/06	9/07	9/08	Site-specific objective for two segments of the West Fork.
6	Blackwood Creek sediment	1	10/07	--	7/08	Adopted by RB Resolution/Order submitted directly to EPA
6	Truckee River, and Bronco and Gray Creeks Sediment	3	5/08	3/09	9/09	
6	Lake Tahoe nutrients/sediment	3	11/10	4/11	8/11	
<b>Listings Addressed</b>		<b>12</b>				
7	Alamo River Sediment	1	6/01	2/02	6/02	
7	New River Pathogen	1	10/01	3/02	8/02	
7	New River Sediment	1	6/02	11/02	3/03	
7	Imperial Valley Drains (Niland 2, P, Pumice) Sediment	1	1/05	7/05	9/05	
7	New River trash	1	6/06	4/07	9/07	
7	Coachella Valley Storm Channel pathogen TMDL	1	5/07, 6/10			Withdrawn by Region
7	New River dissolved oxygen	1	5/10			
<b>Listings Addressed</b>		<b>7</b>				

### Adopted TMDLs

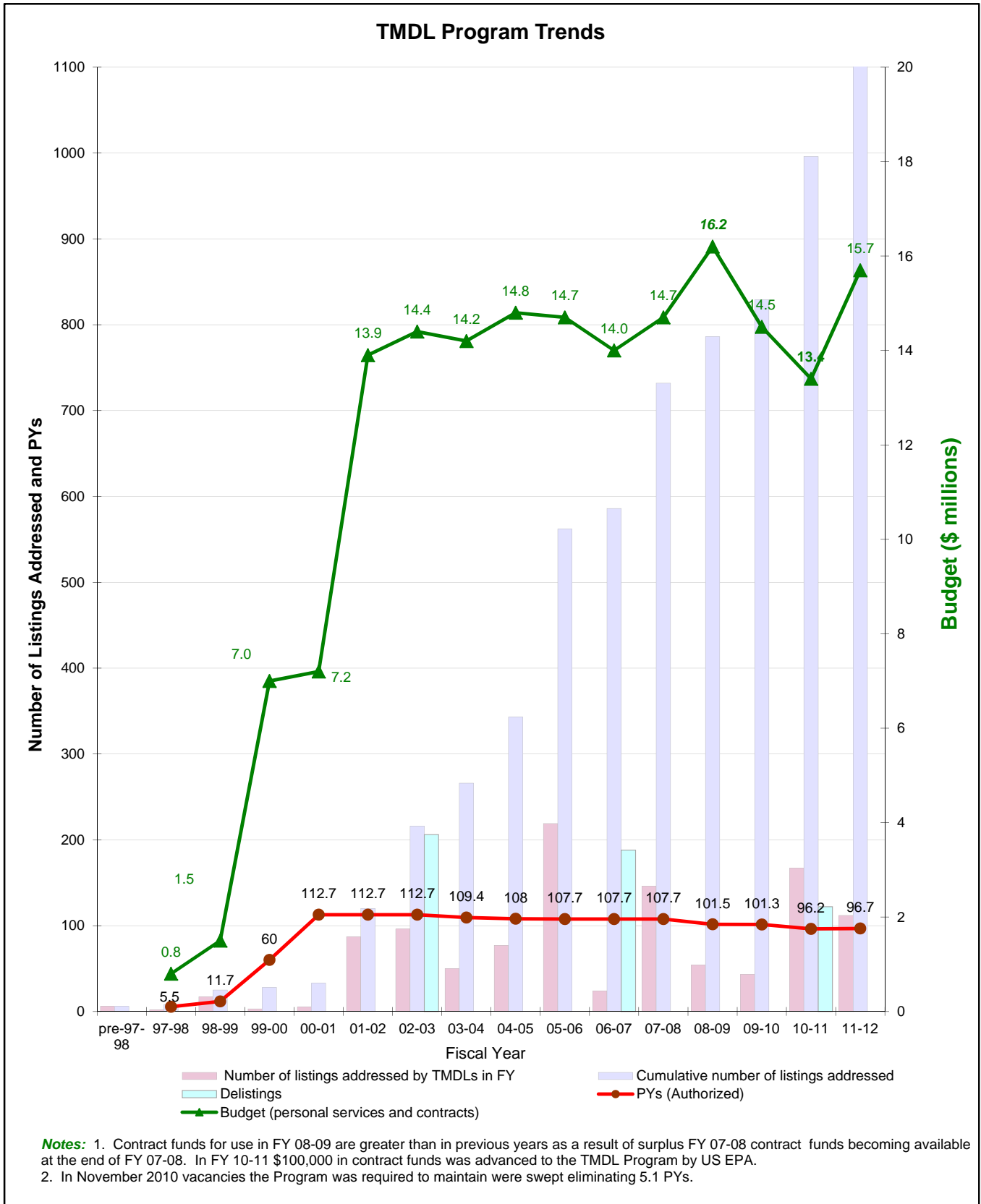
Region	TMDL Project	Listings	RB Adopted	SB Approved	EPA Approved	
8	Santa Ana River Reach 3 Nutrients	1	11/91			
8	Newport Bay & San Diego Creek Nitrogen	4	10/98	11/98	4/99	
8	Newport Bay & San Diego Creek Phosphorus	4	10/98	11/98	4/99	
8	Newport Bay & San Diego Creek Sediment	3	10/98	11/98	4/99	
8	Newport Bay & San Diego Creek Fecal Coliform	2	4/99	7/99	2/00	
8	Newport Bay Watershed Chlorpyrifos	4	4/03	10/03	2/04	
8	Newport Bay Watershed Diazinon	4	4/03	10/03	2/04	
8	Lake Elsinore Watershed Nutrient TMDL	3	12/04	5/05	9/05	
8	Middle Santa Ana R. (Prado area streams) pathogen	6	8/05	5/06	5/07	
8	Knickerbocker Creek Bacteria	1	11/05			Reg. Bd. addressed through enforcement action
8	Big Bear watershed nutrient	2	4/06	4/07	9/07	
8	Newport Bay Watershed Organochlorine Compounds	4	9/07, 7/11			Withdrawn from State Board consideration, re-adopted
<b>Listings Addressed</b>		<b>38</b>				
9	Chollas Creek Diazinon	1	6/02	7/03	11/03	
9	Rainbow Creek nutrient	2	12/04	11/05	3/06	
9	Shelter Island Yacht Basin Dissolved Copper	1	2/05	11/05	2/06	
9	Chollas Creek Metals	3	6/05, 6/07	7/08	12/08	
9	Bacteria impaired waters I (creeks and beach shorelines)	50	12/07, 2/10	12/10	6/11	
9	San Diego Bay & Dana Point Harbor shorelines bacteria	2	6/08	6/09	10/09	
9	Tecolote Creek bacteria	1	2/10	12/10	6/11	
9	NASSCO and BAE (aka Southwest Marine)	5	3/12	--	--	TMDL adopted as a Cleanup and Abatement Order
9	Los Penasquitos Lagoon Sedimentation	1	6/12			
<b>Listings Addressed</b>		<b>66</b>				
<b>Total Number of Listings Addressed Statewide</b>		<b>1108</b>				

Number of 303(d) listings (2010) = 3,489  
     TMDL Adoptions = 180  
 Listings Address by TMDL Adoption = 1108  
 Percentage of 2010 Listings Addressed = 32%

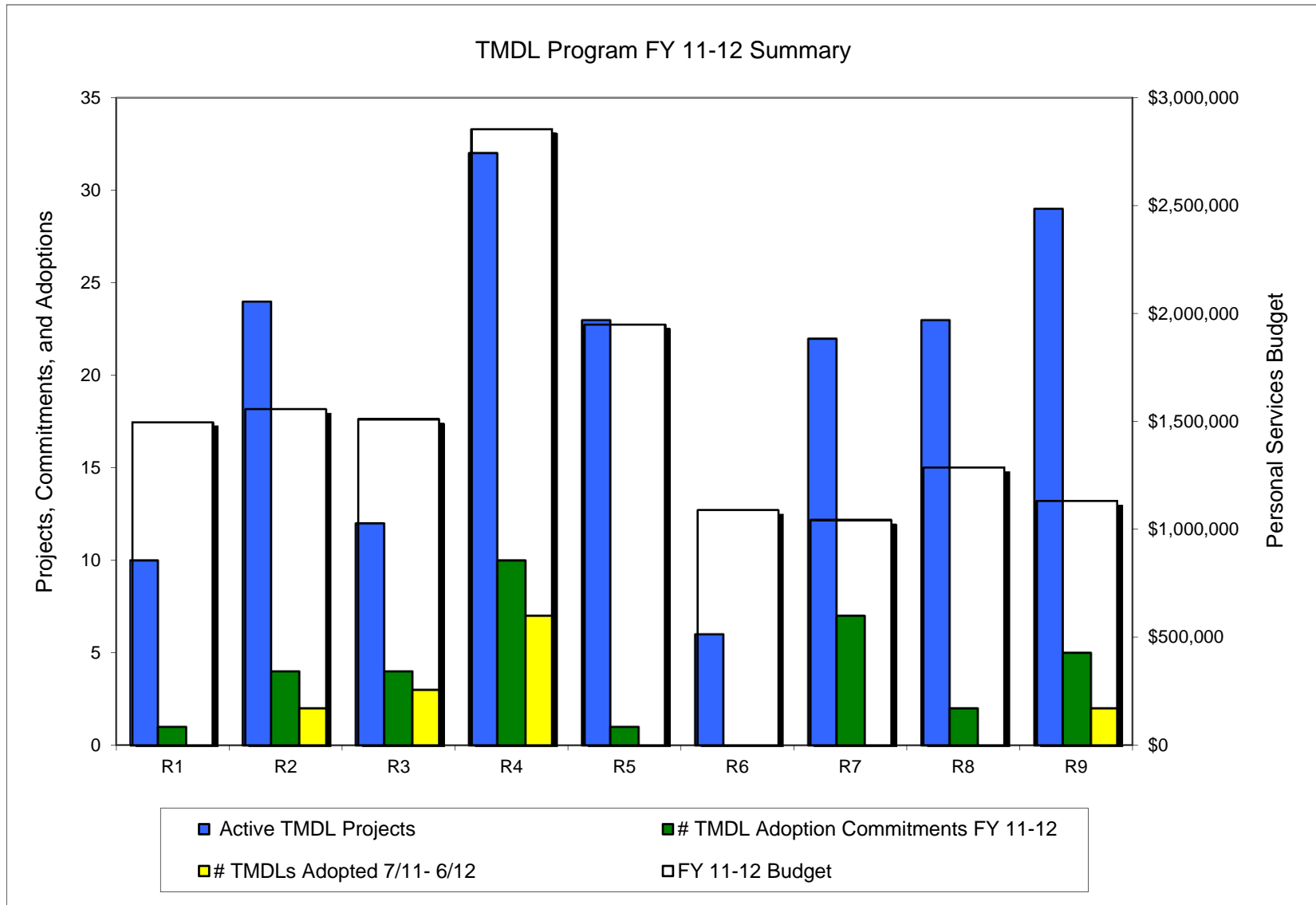
Listings Addressed by Delisting = 516

Total of All Listings Addressed = 1,624

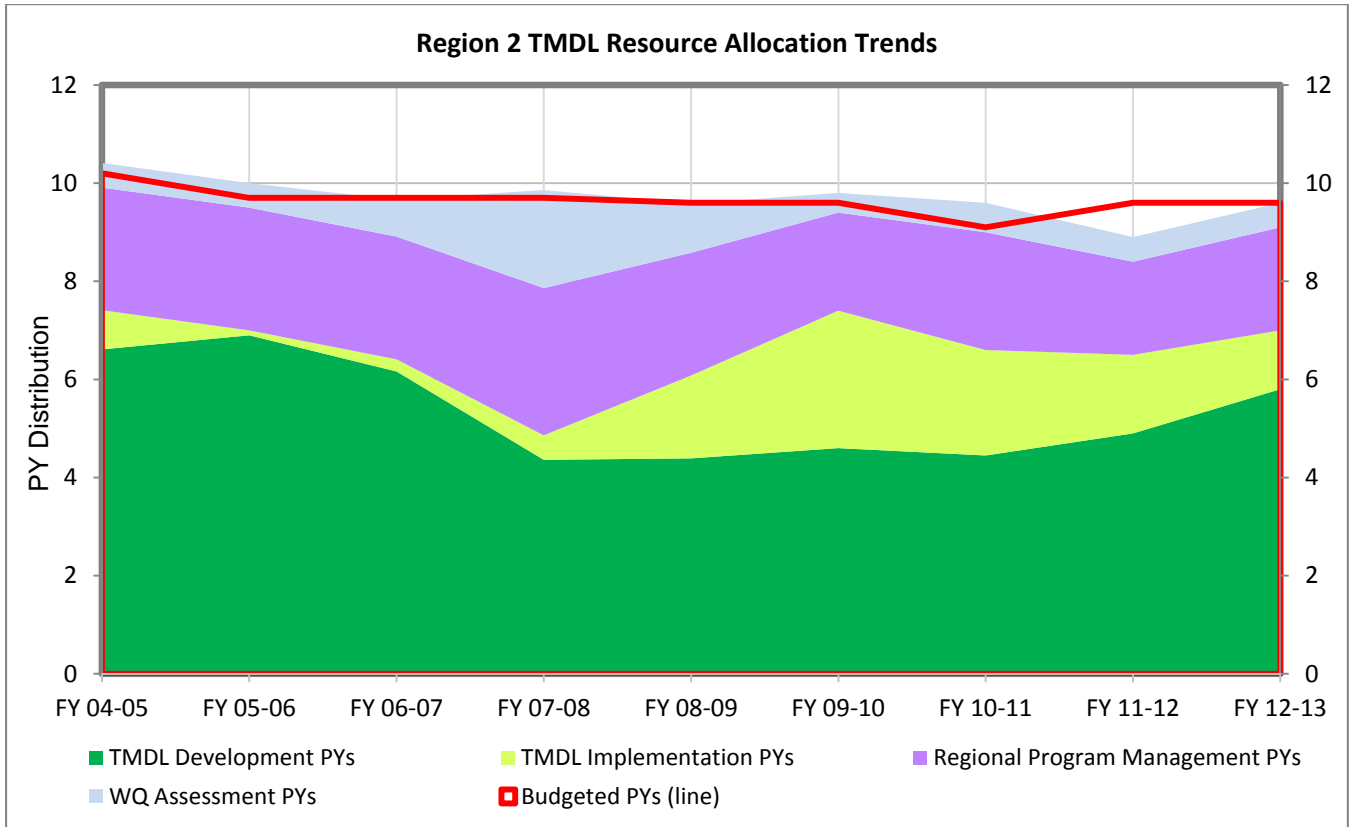
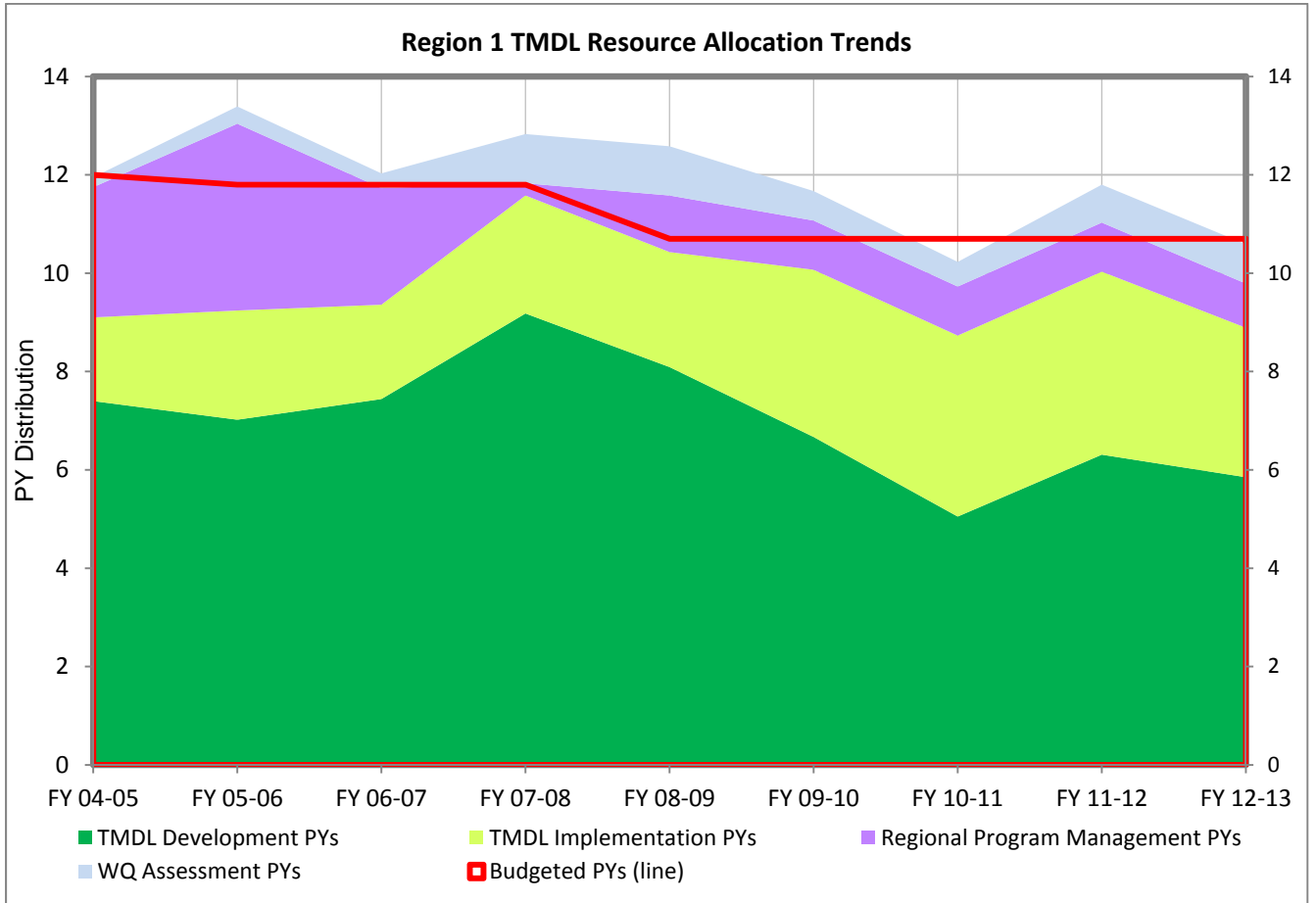
# State-wide TMDL Program Trends Summary



## FY 11-12 TMDL Program Summary By Region

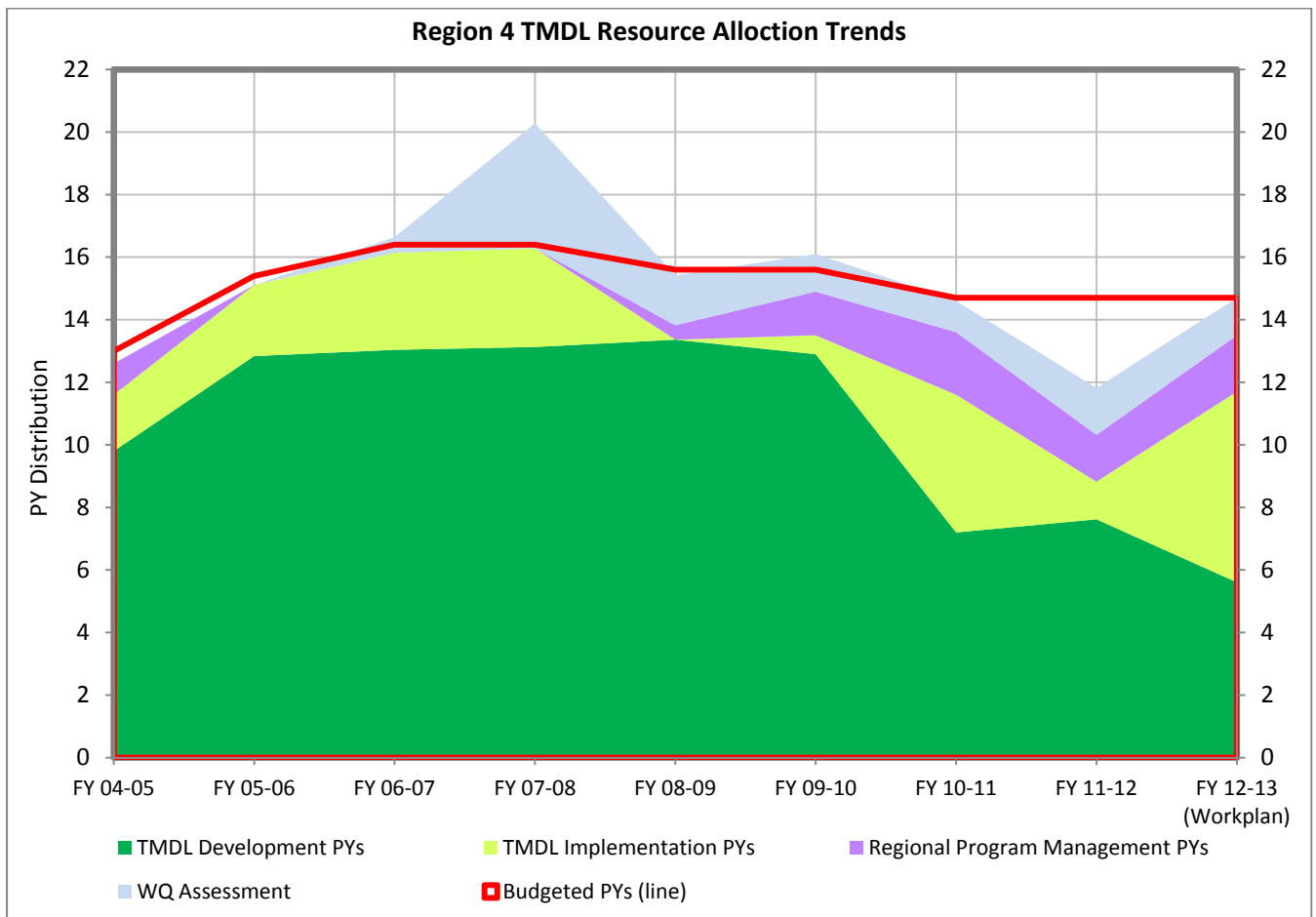
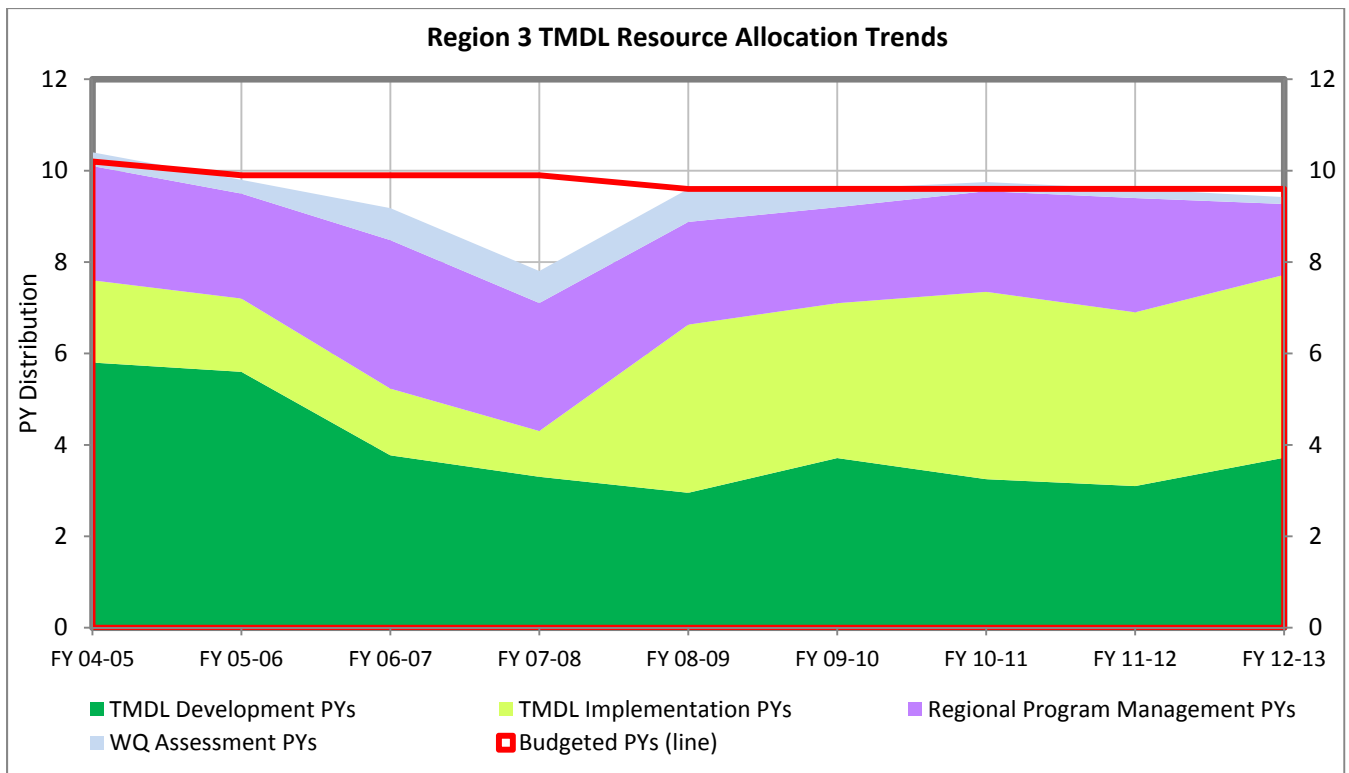


# Resource Allocation Trends



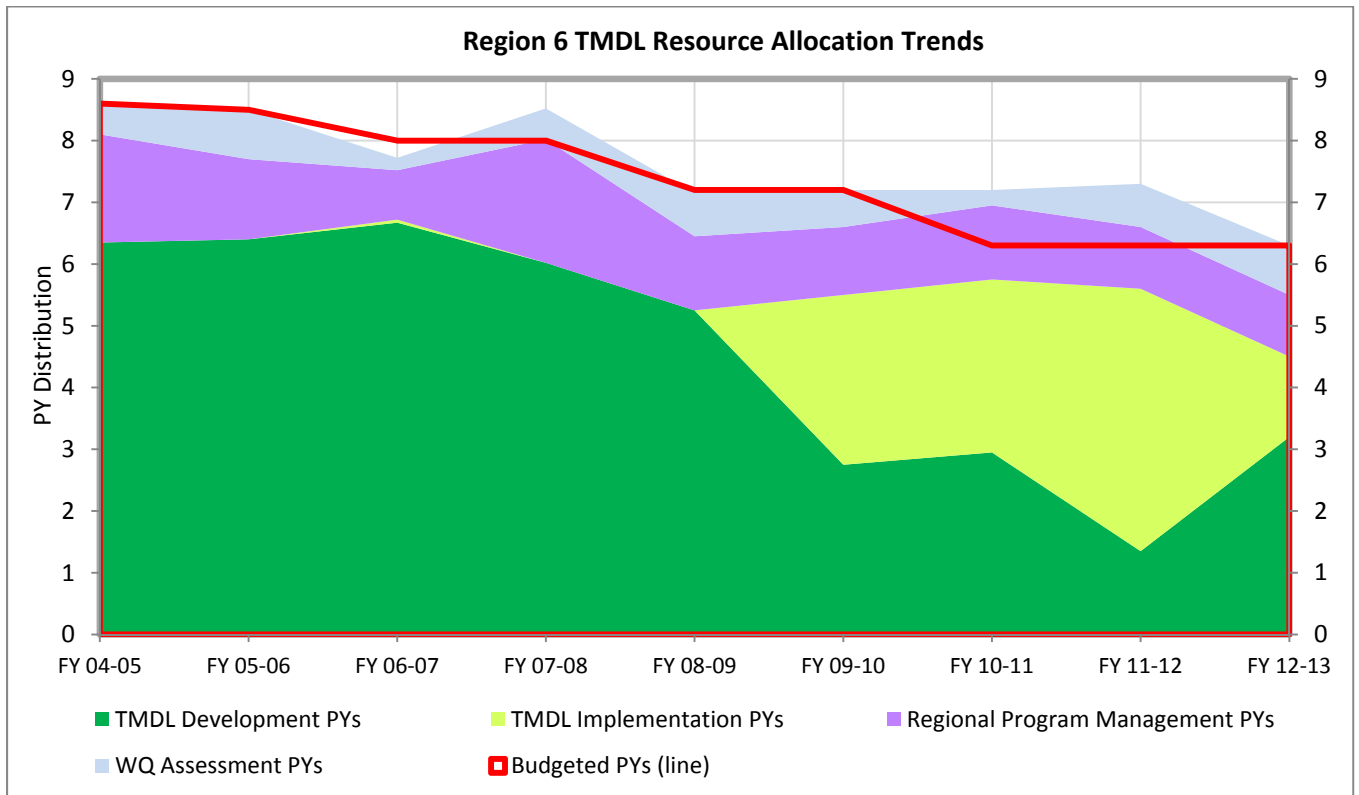
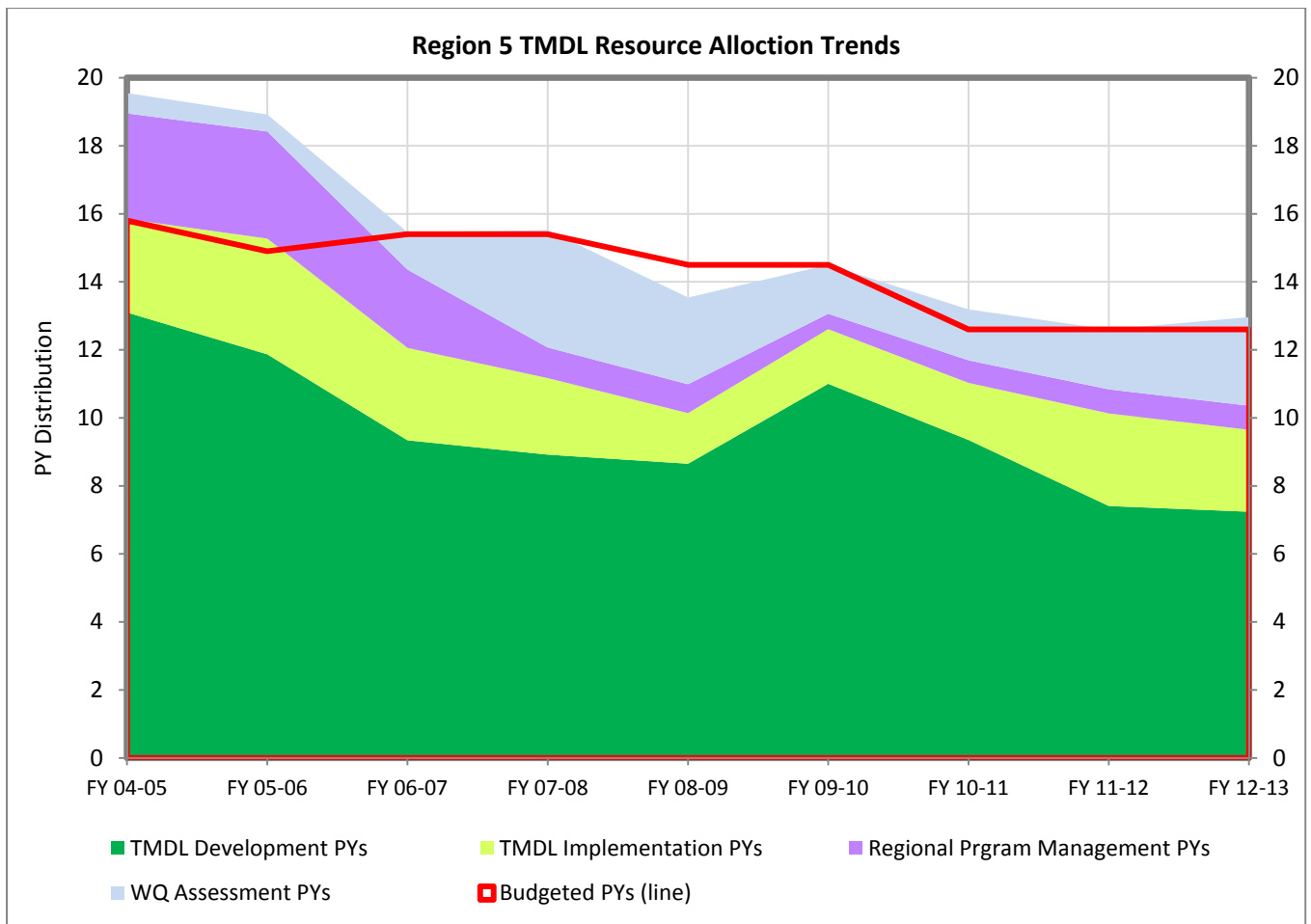
Note: A hiring freeze was in effect in FY 10-11 and part of FY 11-12.

## Resource Allocation Trends



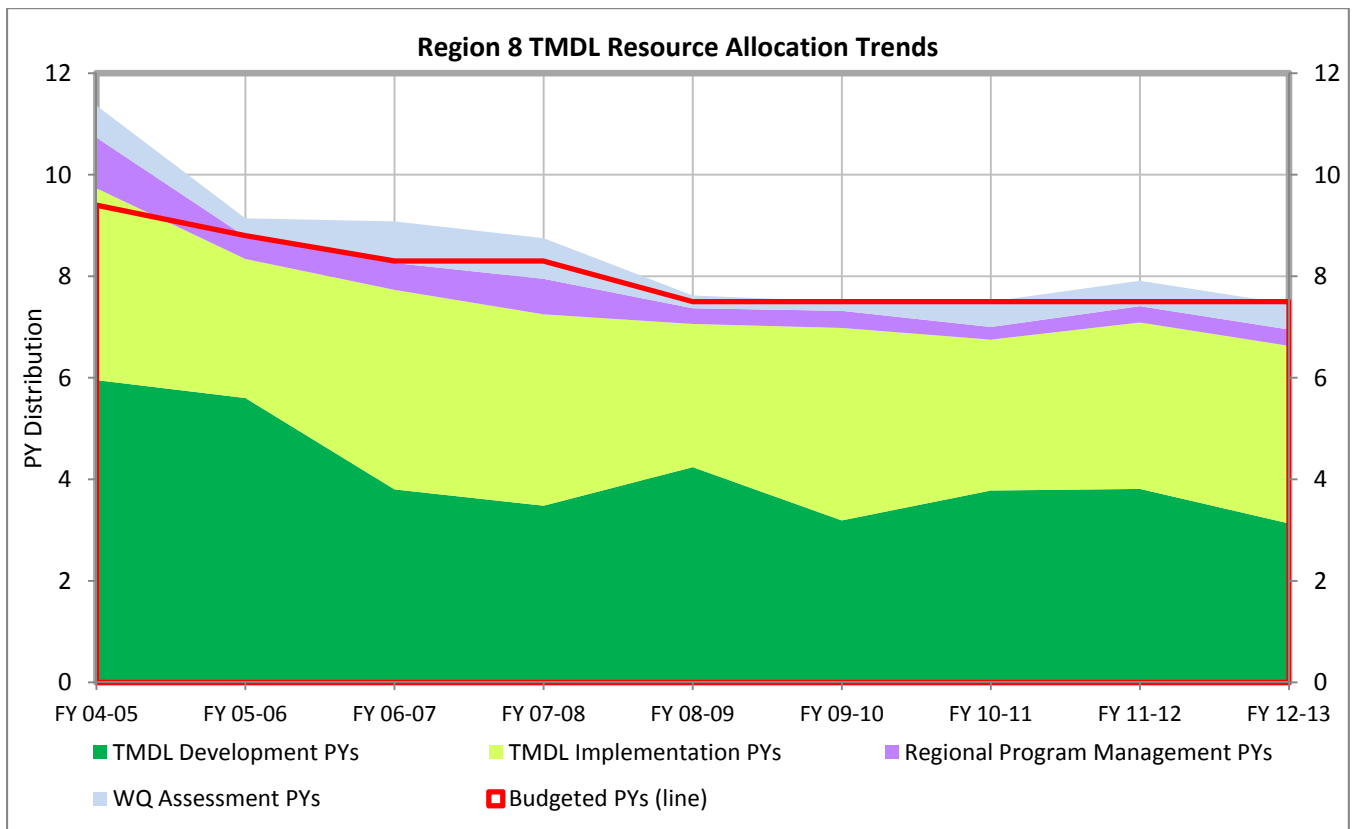
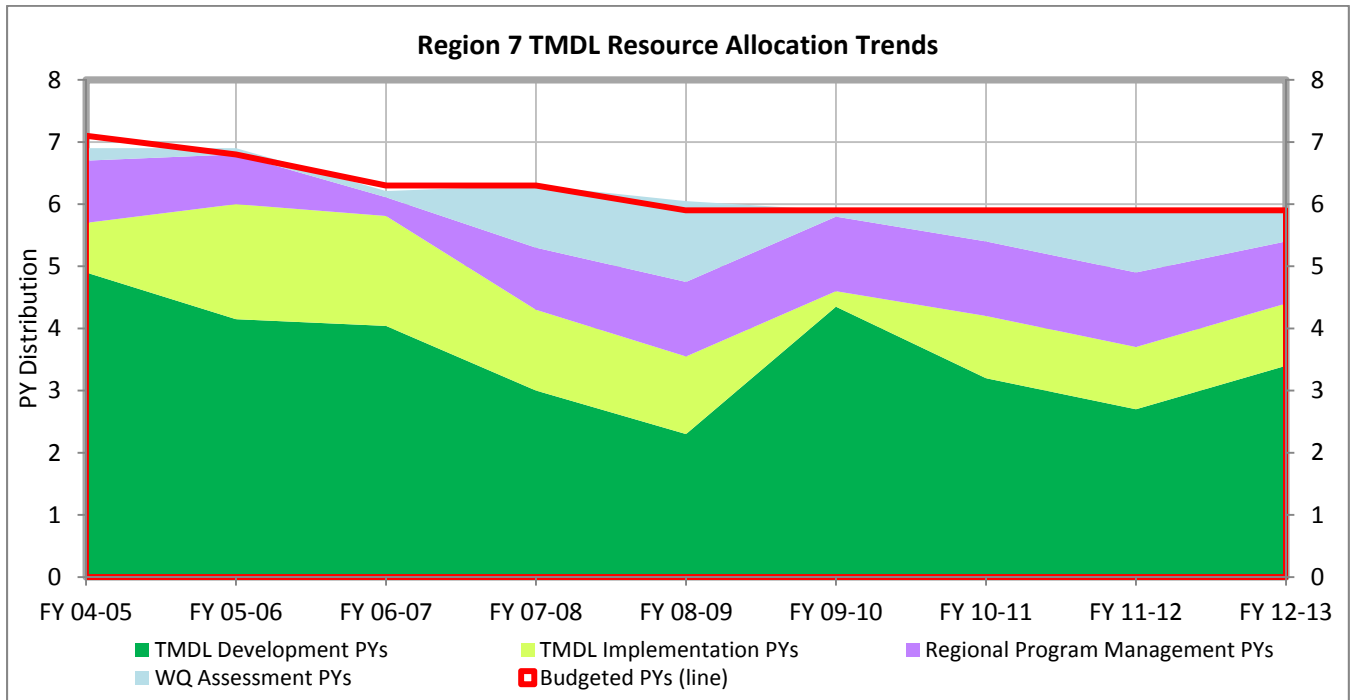
Note: A hiring freeze was in effect in FY 10-11 and part of FY 11-12.

## Resource Allocation Trends



Note: A hiring freeze was in effect in FY 10-11 and part of FY 11-12.

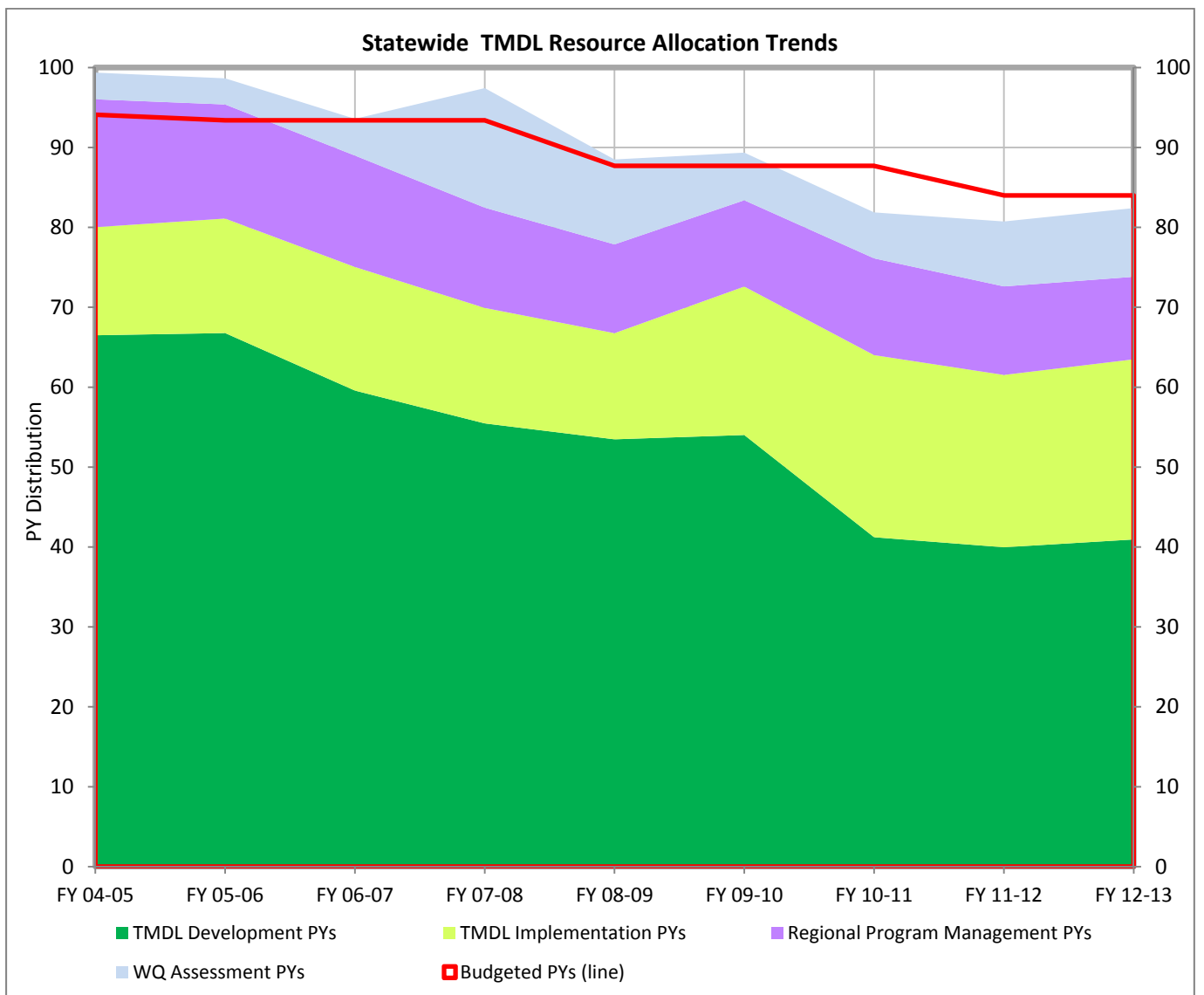
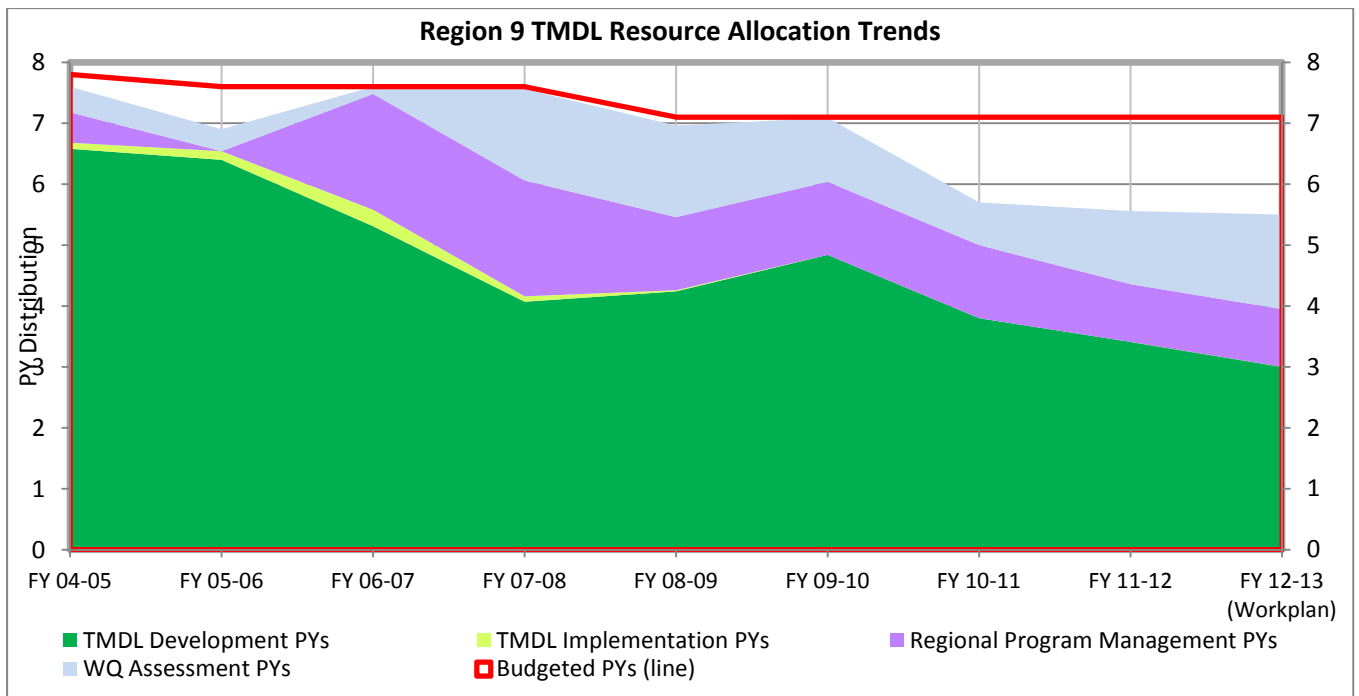
## Resource Allocation Trends



Note: A hiring freeze was in effect in FY 10-11 and part of FY 11-12.

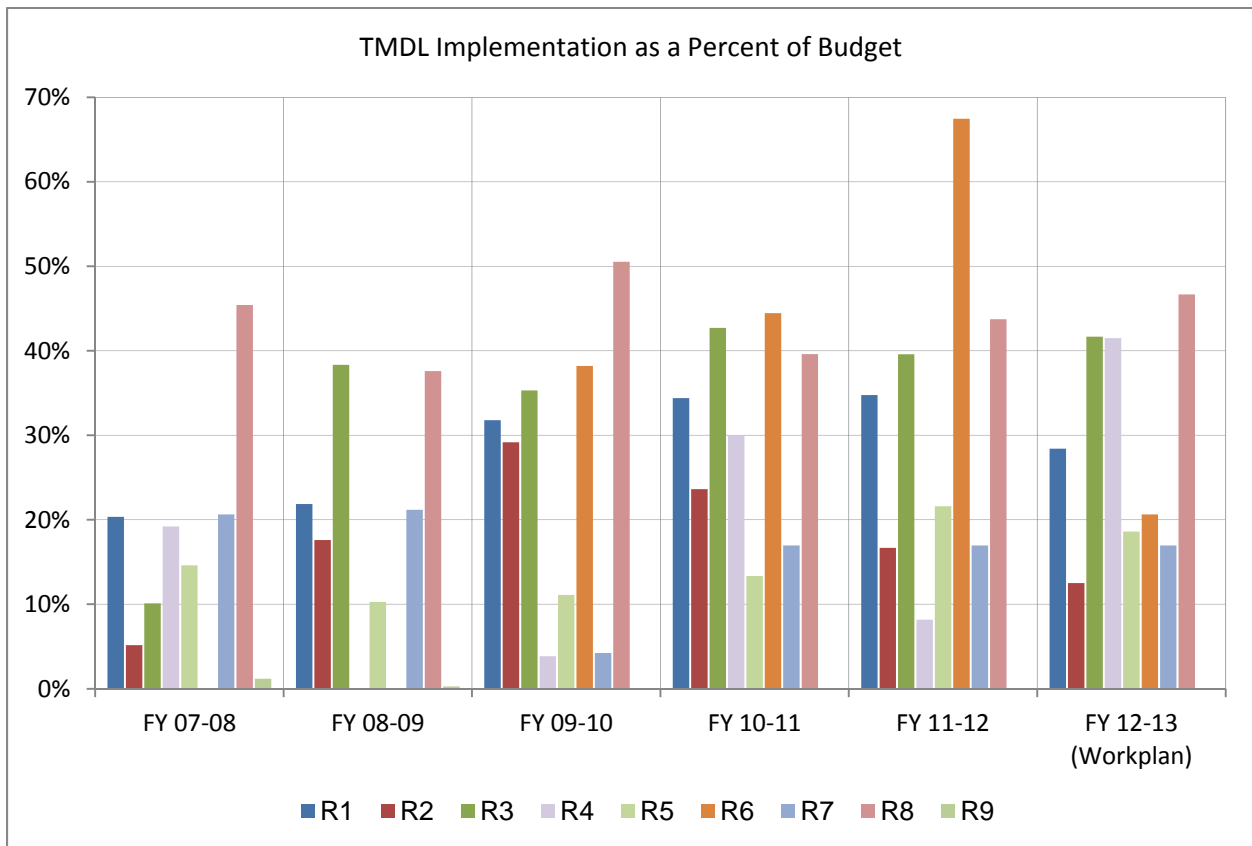
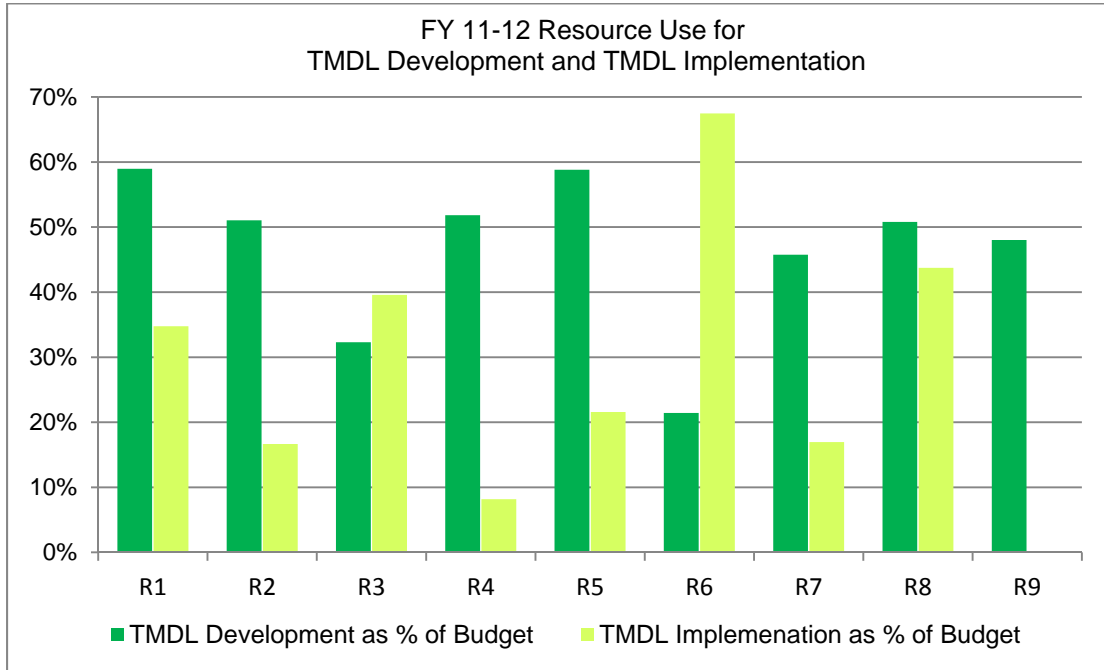


# Resource Allocation Trends

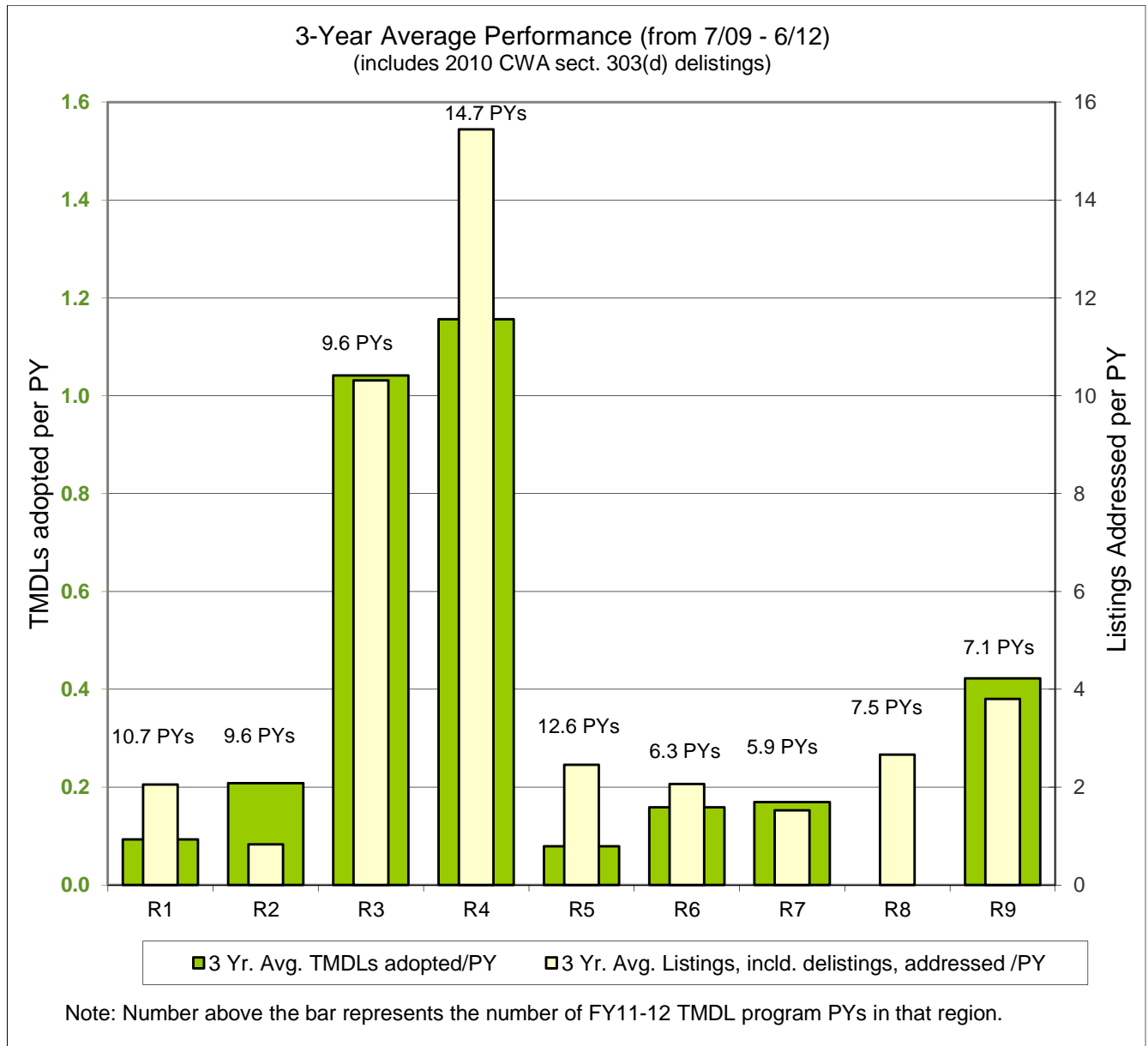


Note: A hiring freeze was in effect in FY 10-11 and part of FY 11-12.

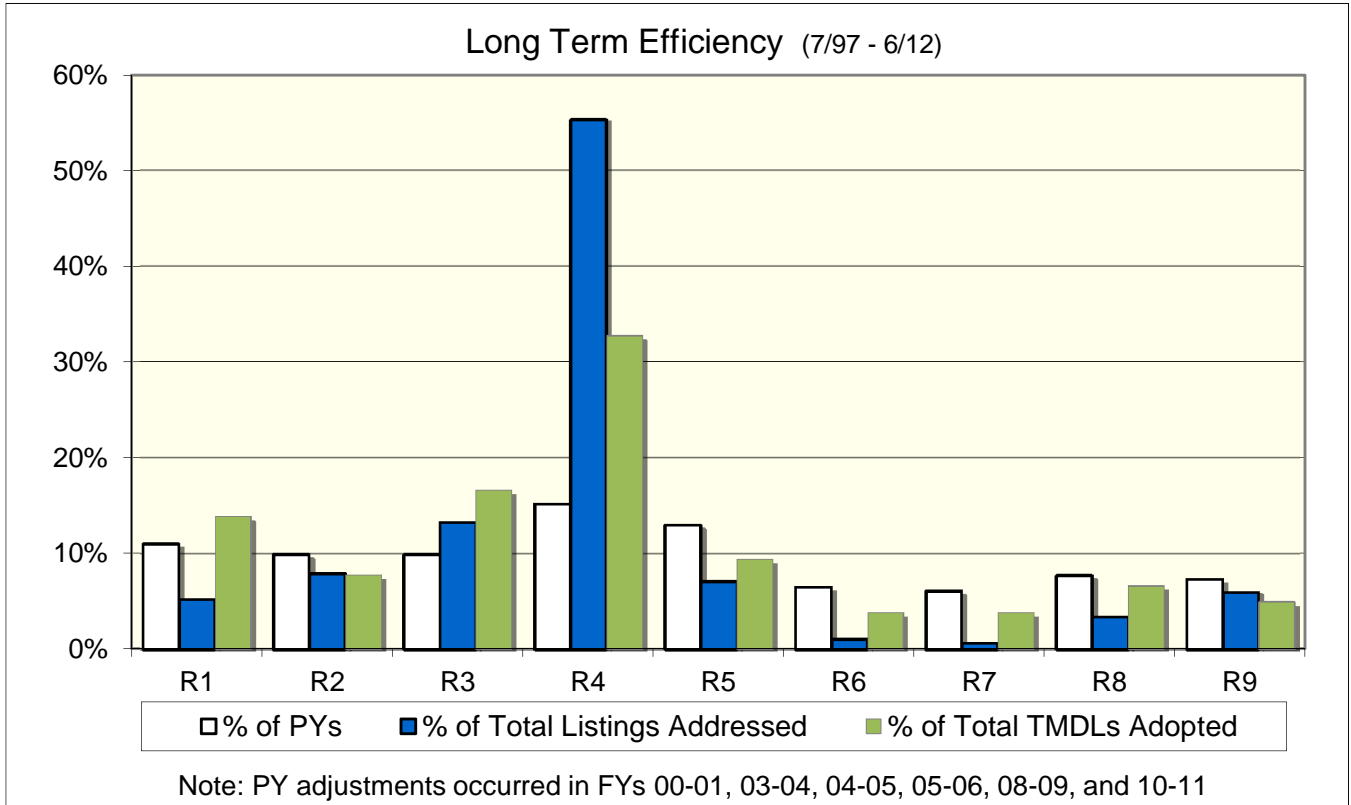
## Resource Allocation Trends



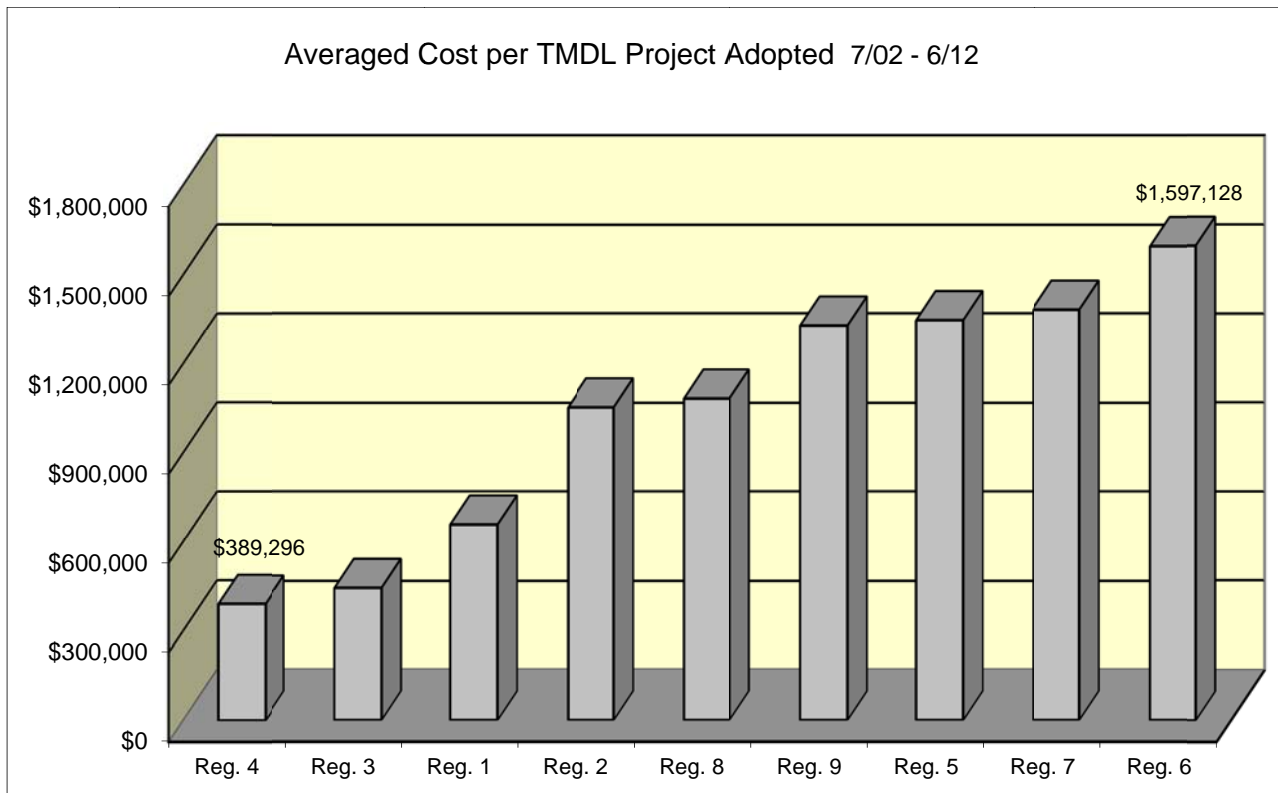
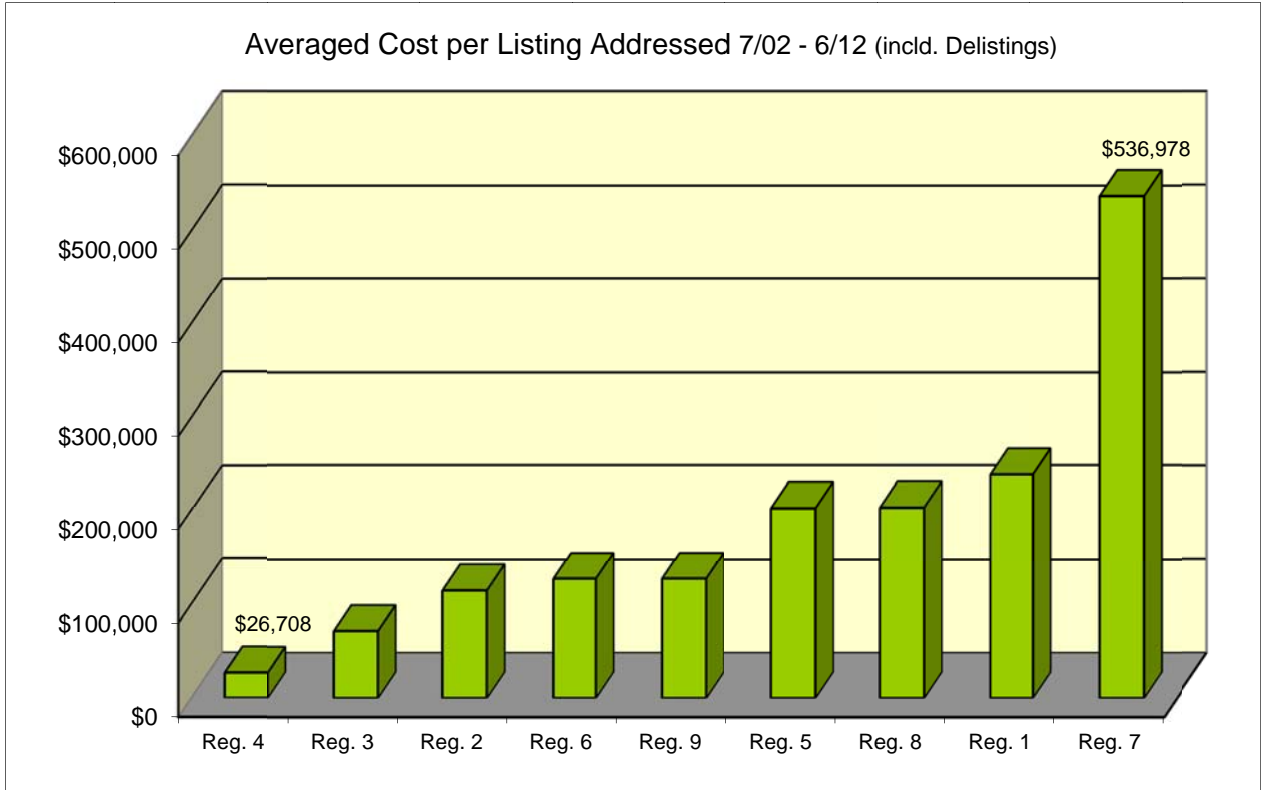
## Short Term TMDL Program Efficiency



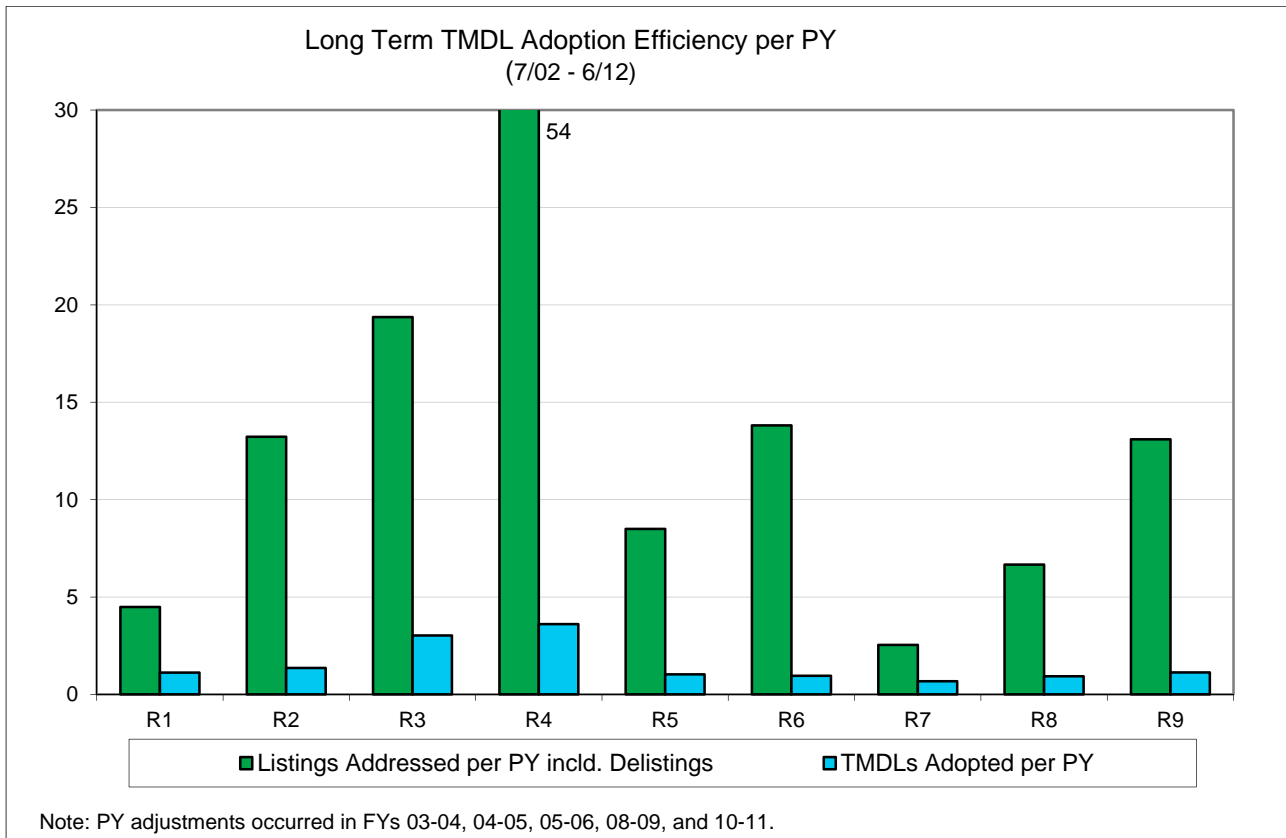
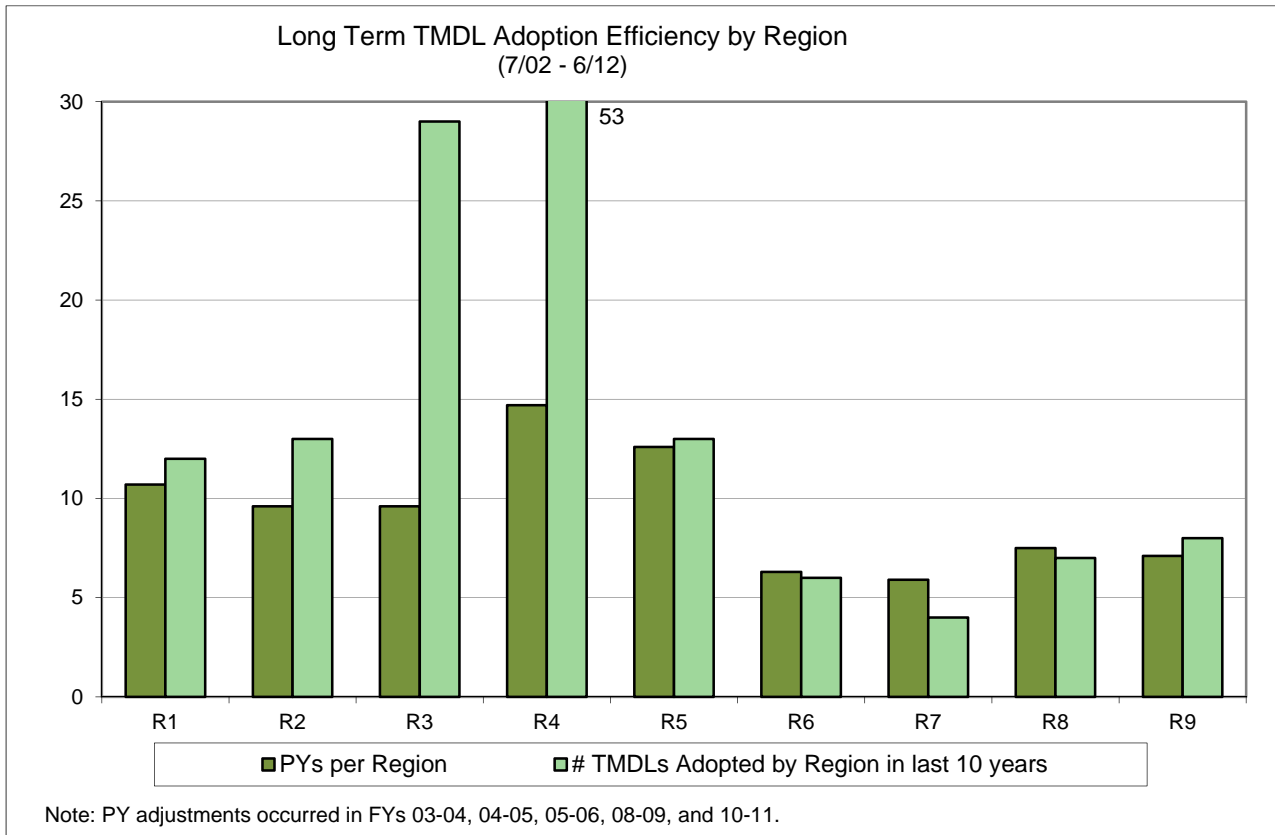
# Long Term Program Efficiency



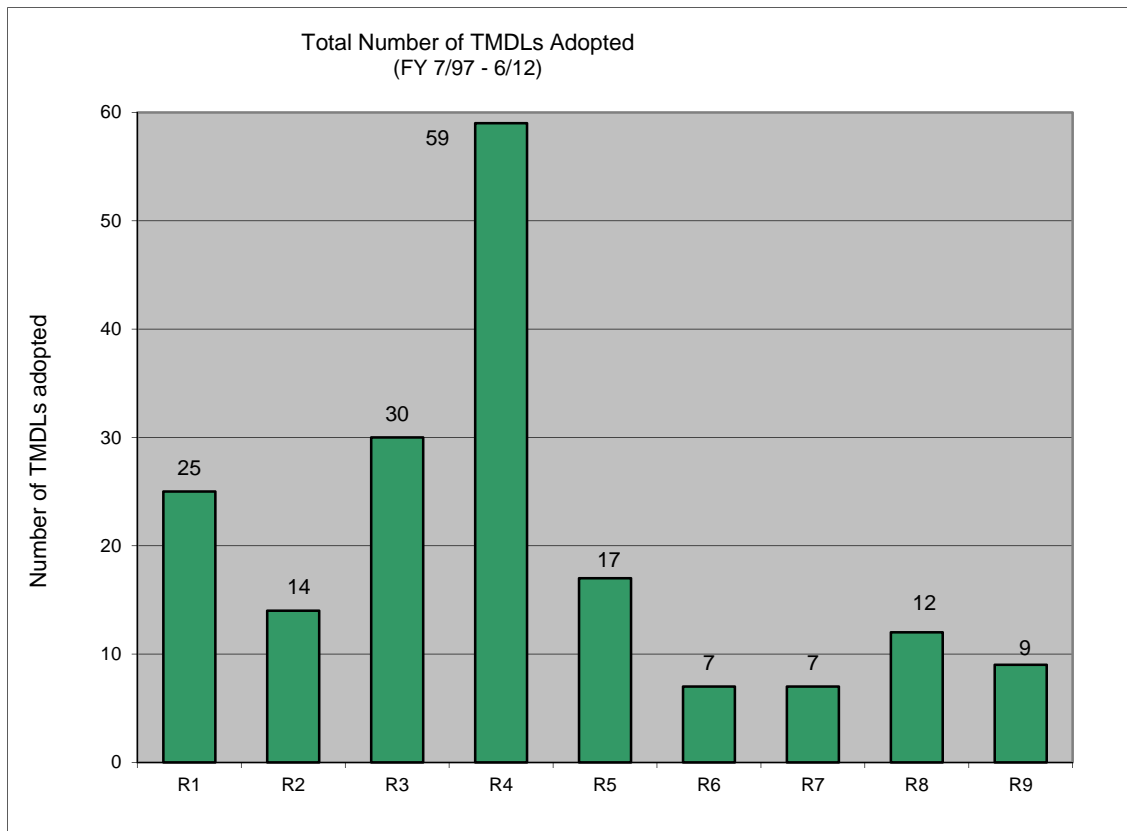
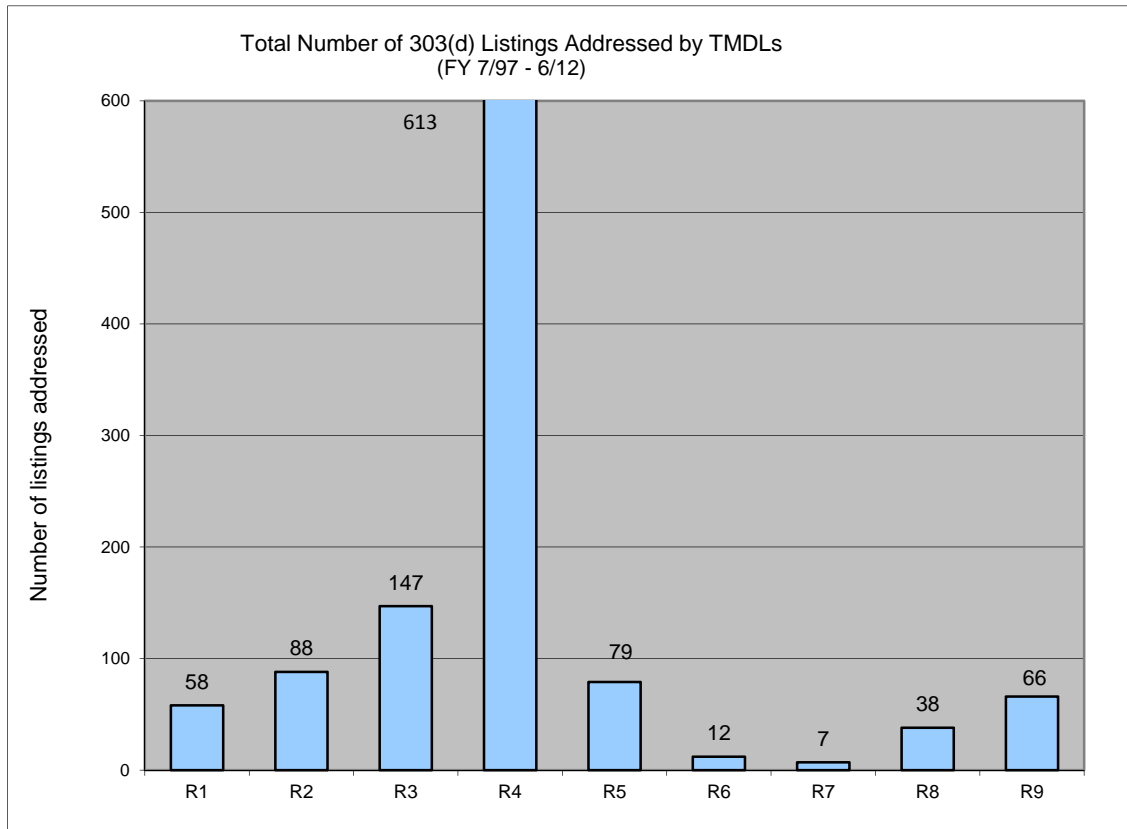
# Long Term Program Efficiency: 10 Year Averages



## Long Term Program Efficiency: 10 Year Averages



## Summary: Listings Addressed and TMDLs Adopted



## Fiscal Year 2011-2012 Accomplishments & Challenges

The following brief statements by the Regional Water Quality Control Boards identify the accomplishments they achieved and the challenges they faced that are not reflected in the complete *California TMDL Program End-Year Progress Report for Fiscal Year 2011/2012*.



## CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

Fiscal Year 2011-2012

### Accomplishments and Challenges

This summary identifies the accomplishments and challenges of the TMDL Program in the Central Coast Region for fiscal year 2011-2012.

#### ACCOMPLISHMENTS

##### TMDL Approvals

We approved three TMDLs for fiscal year 2011-2012. We committed to four approvals in our work plan.

The TMDLs approved in fiscal year 2011-2012 are:

1. Santa Maria River Watershed Fecal Coliform TMDL (21 impairments addressed)
2. San Antonio Creek Watershed Chlorpyrifos TMDL (1 impairment addressed)
3. Los Berros Creek Watershed Nitrate TMDL (1 impairment addressed)

We also committed to approving the Salinas River Watershed TMDL for nutrients that has 34 impairments associated with the project. We would have met our commitments for TMDL approvals if this project would have been approved. This project was not approved because we did not receive the results of scientific peer review in time to present the TMDL to our Regional Board for approval. Results of the peer review took nearly six months, which is considerably longer than normal. This was beyond our control.

##### Work Plan Tasks

We completed 46 out of 49 tasks described in our workplan, resulting in a 94% completion rate. The three tasks we were not able to complete are:

1. Regional Board action for the Salinas River Watershed Nutrient TMDL (discussed above).
2. Santa Maria River Watershed Pesticides TMDL: Develop Final Project Report.
3. Santa Maria River Watershed Salts TMDL: Develop Final Project Report.

The Santa Maria River Watershed Pesticides TMDL project task included development of all the basin plan amendment documents necessary for Regional Board approval. The project addresses all impairments associated with pesticides, including legacy pesticides and toxicity listings. This resulted in a larger and more complex project than originally thought that has taken us more time to develop. We finished the preliminary project report and have submitted it for scientific peer review. We anticipate and have scheduled this TMDL approval for fiscal year 2012-13.

The Santa Maria River Watershed Salts TMDL task included a commitment to develop a report ready for scientific peer review. This goal was too ambitious. A local group is funded through IRWM to develop a salt and nutrient management plan. We believe it is in the best interest of the TMDL project to let the salt and nutrient management planning effort evolve before developing TMDL-related targets and allocations.

##### Streamlining TMDL Development and Approval

The impaired waters list in the Central Coast region exceeds 700 pollutant-waterbody combinations. This large list is in part a result of robust monitoring programs driving the 303(d) listings. The number of listings warrants continued development of streamlined approaches to TMDL development and approval; some streamlined approaches to TMDL development address water quality problems that are not as serious as others. Additionally, we continue to prioritize impairments with serious water quality problems, often requiring more time to develop TMDLs, and include these in our work plan. Therefore, our work plan includes projects that we believe

will have a short turn-around time to develop and approve, as well as projects that address very serious water quality issues that will take longer to develop and approve a TMDL.

To this end, we've accomplished the following in 2011-2012:

- Developed a short, succinct TMDL development approach and report for chlorpyrifos and diazinon listings that will be used for several projects. Our Regional Board approved the San Antonio Creek Watershed Chlorpyrifos TMDL in 2011-2012, and we will develop a similar TMDL for approval in 2012-2013.
- Developed a TMDL development strategy and report for nutrient-related listings that we will use for several projects. This approach has been reviewed by a third-party scientific reviewer, and we are using the scientific review for similar projects. We will reap the benefits in 2012-2013 through Regional Board approval of the Santa Maria Nutrient and Salinas Nutrient TMDLs.

## **CHALLENGES**

### Scientific Peer Review

Third-party scientific peer review of TMDLs is a time-sink. We began a request for review process in October 2011 and received the final review in May 2012. To mitigate this time investment in the future, we are standardizing our TMDL development methods so we can use one scientific peer review across multiple TMDL projects. This implies that we are also addressing similar impairments within a fiscal year or two, which we are. Consequently, the scientific peer review we received for the Salinas River Nutrient TMDL project will be used for the Santa Maria River Nutrient TMDL project, and Pajaro River Nutrient TMDL project, and perhaps more in the future.

Another means of addressing the scientific peer review time investment is to develop TMDLs where basin plan amendments are not required. We developed and approved two such TMDLs in 2011-2012, five in 2010-2011, and will develop two to three in 2012-2013.

### TMDL Report Cards of TMDL Progress

TMDL implementation requires regulation that results in water quality improvement. TMDL report cards and implementation status reports cannot show meaningful water quality progress without associated regulation driving that progress. In the central coast region, robust irrigated lands regulation and phase-2 stormwater regulation are absolutely vital to successful TMDL implementation. These programs continue to strive towards improving their respective regulatory tools. Fellow water board staff and board members need to continue to move forward together and make the difficult decisions necessary for TMDL implementation and verifiable improvement in water quality. Therefore, we continue to support our fellow water board staff working in regulatory programs. We do this through program coordination during TMDL development and investing staff time toward development and implementation of regulation that implements TMDLs.

### Basin Planning and State Board Hearing Preparation

Regional board staff have been tasked with basin planning tasks and preparation for state board hearings; state board staff used to be tasked with this work. Consequently, both state board staff and regional board staff have had to adjust to the new paradigm, which has taken time. Regional board staff will become proficient with these tasks, but the tasks do and will continue to take time away from TMDL development and implementation. We are attempting to minimize this time investment by becoming more efficient at basin planning in the early stages of TMDL development, and of course becoming more proficient at the assigned tasks of basin planning and state board hearing preparation.

## **CENTRAL VALLEY REGIONAL WATER BOARD TMDL PROGRAM**

Fiscal Year 2011-2012

### **Accomplishments, Challenges and Implementation**

This summary identifies those accomplishments, initiatives and challenges of the Central Valley Regional Board's TMDL Program for fiscal year 2011–2012 that are not reflected in the End of Year Report generated by Planner Tracker. In 2010-2011, TMDL Program staff levels remained the same as the previous fiscal year, 12.6 PY.

TMDL program staff are coordinating implementation of 12 previously adopted TMDLs that encompass many of the major rivers in the Region and the Delta. In addition, staff is working on developing 5 new TMDL projects that will address hundreds of impairment listings. Implementing previously adopted TMDLs in a manner that produces the water quality improvements envisioned in the TMDLs is turning out to be a very resource intensive effort.

### **ACCOMPLISHMENTS**

#### **Delta Mercury TMDL**

Control of mercury in the Delta watershed has been a key focus of the Central Valley's pollution prevention and TMDL Program work. We sent out over 45 letters to dischargers named in the TMDL that had responsibility for complying with Basin Plan requirements (methylmercury studies, mercury minimization programs, and exposure reduction program). We worked with the dischargers to get them to work together and submit coordinated methylmercury studies rather than individual studies, and we had over a 90% success rate in hearing back from the dischargers. We are also working with the CA Department of Public Health, dischargers, and stakeholder groups to develop and implement an exposure reduction program to reduce human exposure to mercury-contaminated fish. For both the BMP studies and the exposure reduction efforts, we had numerous public meetings to explain the TMDL requirements and gather stakeholder input.

#### **OP Pesticides Implementation**

TMDL staff and regulatory staff are coordinating implementation of four previously adopted OP pesticide TMDLs that cover the Delta, San Joaquin River and Sacramento/Feather River, and Sacramento County Urban Creeks. This involves 1) making sure TMDL provisions (allocations, requirements for monitoring and development of management plans) are incorporated into NPDES permits and Irrigated Lands Orders and Waste Discharge Requirements, 2) tracking to make sure TMDL provisions are implemented by dischargers, and 3) regularly assessing program effectiveness. The coordinated efforts of the Regional Board, DPR, farmers, University, pesticide manufacturers and others over the past several years has resulted in these pesticides no longer being a major threat in Central Valley waterways and as a result, some water bodies were delisted in the last 303d listing cycle and more delistings are expected in the near future.

#### **Coordination with DPR and EPA's Office of Pesticide Programs**

Staff continues to work with DPR and EPA's Office of Pesticide Programs (OPP) on pesticide registration, use restrictions and label changes in order to address pesticides causing current water quality problems like pyrethroids and OPs and to prevent future pesticide water quality problems. DPR recently finalized regulations for non-agricultural pyrethroid pesticides which are expected to cause significant reductions. DPR also finalized a process and methodology for screening pesticides for potential water quality impacts during registration. OPP's coordination with water quality regulators has greatly improved, and OPP has made significant improvements in several recent pesticide registrations in response to concerns from water quality agencies.

#### **San Joaquin River Dissolved Oxygen**

Internal coordination continues to ensure permits include language implementing the TMDL. Data collection for the Downstream Studies is nearly complete and analysis has begun. Completion of this task is anticipated for fall 2013. Staff is working with DFG staff to fund a complete synthesis

of all SJR DO TMDL data that would advise the Phase II process. CEQA was completed to change ownership of the Aerator from DWR to the Port of Stockton for long-term use and an MOU to maintain and operate the Aerator through at least July 2013 has been signed by interested parties. Staff has also entered into a collaborative monitoring agreement with DWR to investigate high EC readings in the Turning Basin in addition to continuation of previous implementation activities.

## **CHALLENGES AND RESPONSES TO CHALLENGES**

### **Salt TMDL in the San Joaquin River**

The San Joaquin River salinity TMDL adopted by the Board in 2004 established a program to achieve the salinity objective at Vernalis. The TMDL also recognized that it should be a priority to develop upstream salinity objectives. The Salinity Alternatives for Long Term Sustainability (CV-SALTS) program has initiated an effort aimed at developing upstream objective recommendations. CV-SALTS has a goal of developing a salt and nutrient management plan for the Central Valley as required by the Recycled Water Policy, which would eventually become part of a comprehensive Basin Plan amendment addressing salt and nutrient issues in the Central Valley.

### **Central Valley Chlorpyrifos and Diazinon (OP) TMDL**

While considerable progress was made during this year, completion of major tasks for this project was delayed due to staff shortages for most of the year (loss of the senior and one scientist). Ongoing detection in stormwater and wastewater discharges, as well as a renewed focus on TMDL implementation in NPDES permits has necessitated a review of TMDL requirements for NPDES dischargers. Therefore a more significant effort than originally planned was needed to assess NPDES implementation and options for revising the Basin Plan requirements in order to provide controls without unnecessary expenses for sources that are no longer discharging significant amounts of these chemicals. As of May 2012 the unit is now fully staffed. The schedule and project plan for this project have been updated and the project is scheduled for completion (Board Approval) in 2012/13.

### **2012 303(d) List Update**

The Regional Board staff workload associated with the current update effort has exceeded our projections. There were more than 25,000 separate Lines of Evidence (LOEs) that State Board sent us to review. We have needed to spend significant time and resources helping define appropriate beneficial uses and water quality criteria. We provided State Board staff with draft write-ups for mercury assessments for fish tissue and pesticide assessments in both water column and sediment. We presented the mercury tissue and pesticide sediment write-ups during Roundtable meetings and answered questions from State Board and other Regional Board staff regarding the proposed approaches. We also provided tables with water bodies and associated beneficial uses to State Board staff for accurate LOE production. We are also developing a metals assessment write-up. Our efforts should help improve the 303d list that is adopted by State Board.

## **INITIATIVES IN TMDL DEVELOPMENT AND IMPLEMENTATION**

### **Statewide Reservoir Mercury TMDL**

In 2010-2011, Central Valley Regional Board staff, other regions and State Board have been collaborating in the planning and development of a Statewide Reservoir Hg TMDL. It is anticipated that this TMDL will address more than 74 impaired reservoirs and lay the groundwork for addressing impairments that are identified in the future. This collaborative approach was initiated with the anticipation that it would make the development process more efficient and produce a product that was consistent on a statewide basis. Region 5 staff has played a key role in development of the technical analysis, staff report, and the draft policy for this project. Staff has collected all relevant data and has been working on the linkage and source analysis. In the spring, staff from Regions 2, 5, 7, and the State Board coordinated and held four CEQA scoping meetings across the state. Region 5 has been very involved with all 4 teams that have been

created for the project: Steering Committee, Stakeholder Planning and Outreach, Technical Analysis, and CEQA.

### **OP Pesticide TMDL Development**

Most of the work is complete on a valley-wide OP pesticide basin plan amendment that will include 1) numerical pesticide objectives that will apply to most waterways in the Sacramento and San Joaquin River watersheds (downstream from the major dams), 2) a TMDL that will address 57 impaired water bodies, and 3) implementation provisions that will address future listings for these pesticides. We believe this valley-wide TMDL approach is significantly more efficient than the traditional water body by water body approach. This amendment is expected to be considered by the Regional Board in the middle of next FY.

### **Pesticide Criteria Development by University of California Davis**

TMDL contract funds and staff continue to support UC Davis contractors' development of criteria for pesticides in water and sediment. All of the criteria can be used statewide. The water quality criteria for the pyrethroid bifenthrin developed by UCD in a previous phase of this project were used by EPA in establishing a TMDL for Oxnard Drain #3 in Region 4.

**COLORADO RIVER BASIN REGIONAL WATER BOARD TMDL PROGRAM**  
Fiscal Year 2011-2012  
**ACCOMPLISHMENTS, CHALLENGES AND INITIATIVES**

This summary identifies those accomplishments, initiatives and challenges of the Colorado River Basin Regional Board's TMDL Program for fiscal year 2011–2012 that are not reflected in the End of Year Report generated by Planner Tracker. Accomplishments include: 1) Continue monitoring and assessing the New River at the International Boundary; 2) Continue assisting in developing and approving a Strategic Plan to improve the New River; and 3) Continue assisting Imperial County Farm Bureau (ICFB) and Imperial Irrigation District (IID) in implementing the Imperial Valley Sediment TMDLs and Prohibition (ICFB & IID TMDL Programs). Working with the USEPA on addressing legacy pesticide listings in Imperial Valley resulted in rescheduling the Legacy Pesticides TMDL adoption. Also, working with ICFB on revising its TMDL Program to address current use pesticides resulted in rescheduling the chlorpyrifos and diazinon TMDL adoption. Finding financial assistances and/or contracts to support revising the ICFB TMDL Program and continuing the Regional Board Monitoring Program were and continue to be big challenges.

**ACCOMPLISHMENTS:**

***Monitoring and Assessing the New River at the International Boundary***

Regional Board staff has been conducting monthly monitoring activities on the New River at the International Boundary for about 12 years. In addition, in cooperation with the U.S. Section of the International Boundary and Water Commission, Regional Board members and staff participate in bimonthly tours in Mexicali, Mexico to survey and report water quality activities on the New River in Mexico. Both the monitoring activities and the tours continue to provide the TMDL Program with valuable information for the implementation of New River TMDLs for dissolved oxygen, pathogens, sediments, and trash, and for assessing other New River impairments in the 303(d) List.

***AB 1079 – The New River Improvement Project.***

The Regional Board TMDL unit has been heavily involved in our Assistant Executive Officer's efforts to develop a Strategic Plan for the New River Improvement Project, which was mandated by the Legislature in 2009 (AB 1079). The Plan is completed and was released by California-Mexico Border Relations Council of the Cal EPA by end of FY 2011-2012. Regional Board staff were key players on the Technical Advisory Committee for the California-Mexico Border Relations Council, notably on two key committee workgroups: Impairments, and Remediation. The deliverables quantified current and projected New River water quality impairments and their threat to public health, and included management practices to address the impairments.

***Long Term TMDL Implementation for the Agricultural Community in Imperial County***

Staff conducted several watershed meetings with Imperial County Farm Bureau, Imperial Irrigation District, and local farmers to address and coordinate implementation of all TMDLs in the Imperial Valley. These important stakeholder efforts are ongoing and part of a greater effort to address impairments in Imperial Valley. Regional Board staff has been managing grants related to this effort since 2003.

## **CHALLENGES AND RESPONSES TO CHALLENGES**

### ***Chlorpyrifos and Diazinon for the Alamo and New Rivers***

Our current use pesticide TMDLs (chlorpyrifos and diazinon for the Alamo and New Rivers) are still being developed with the assistance of Tetratech Inc. These TMDLs were not adopted as scheduled because the ICFB showed its commitment to including pesticide control measures in its current TMDL Program. As a result, we are first working with the ICFB to develop a certified regulatory program addressing these pollutants. If this effort doesn't succeed, the TMDLs may be adopted around Jan-Feb 2013. Finding financial assistance to support revising the ICFB TMDL Program was a big challenge. Regional Board management is working on providing this financial support by September 2012.

### ***Legacy Pesticides for the Colorado River Basin TMDL***

After analyzing recent fish tissue data and in conjunction with the ICFB TMDL Program, we prepared a report for USEPA's review, requesting that all Imperial Valley legacy pesticide pollutants (13 listed pollutants for the Alamo River, Imperial Valley Drains, New River, and Weist Lake) be moved to the being addressed section of the 303(d) List (Section 4B or 5C) as opposed to adopting TMDLs. USEPA staff discussed this report with us, and USEPA is conducting further review of the report. Regional Board staff is waiting for USEPA review to present the regulatory recommendations to the Regional Board for action.

### ***Laboratory contracts***

Laboratory contracts are limited to one fiscal year only if it is just for analysis purposes. Considering the several months required to execute a contract and delays in state budget approval, the Region's TMDL monitoring period is generally limited to approximately 5 to 7 months each year. As a result, staff needed to cancel several important monitoring events. In some instances these challenges are mitigated by use of other programs' laboratory contracts, when available.

**California Regional Water Quality Control Board, Lahontan Region**  
TMDL Program – Fiscal Year 2011-2012  
Accomplishments and Challenges

## **Introduction**

Lahontan Water Board staff accomplished several TMDL implementation tasks during fiscal year 2011-2012, but the TMDL work was dominated by work on two Statewide TMDL Projects: (1) Statewide Mercury in Reservoirs and (2) the multi-region grazing Regulatory Action Project. Also, in August 2011, the USEPA approved the Lake Tahoe TMDL in a public signing event at Lake Tahoe.

## **Accomplishments**

- Lake Tahoe TMDL –The TMDL, after approval by State Board and the Office of Administrative Law, was submitted to US EPA for approval. The USEPA approved the Lake Tahoe TMDL at a federal event in Tahoe on August 16, 2011, attended by Governors and senators from California and Nevada.
- The State and Regional Boards' Management Coordinating Committee (MCC) identified opportunities to use statewide and multi-region collaboration to more effectively and efficiently address waters listed as impaired on the Clean Water Act 303(d) list by developing tools in addition to TMDLs. This collaboration includes the Statewide Grazing Regulatory Action project (RAP) with Lahontan Water Board staff as the lead. As part of the November MCC meeting, Water Board staff presented the Grazing RAP workplan and schedule. The workplan includes these proposed FY 2011-12 activities: development of a problem statement, summary of grazing impacts statewide, an evaluation of grazing management tools and other efforts underway or in the use in the nine Regional Water Boards (such as waste discharge requirements, waivers of waste discharge requirements, TMDLs, financial assistance, enforcement of Basin Plan prohibitions), and identification and/or development of a suite of management tools to best address waters listed as impaired due to grazing impacts. MCC accepted the Grazing RAP workplan.
- Statewide Mercury Program for Reservoirs: Board staff, including the Executive Officer (EO), assisted the effort in various ways. The EO provided guidance to Board staff with comments on the draft framework and suggestions for how this program would translate for mercury-impaired reservoirs (and lakes) in Region 6. Staff participated in the Steering Committee and helping lead the Stakeholder team for this statewide project. Staff helped plan and execute four CEQA Scoping meetings around the state, kept the EO briefed as to the project, helped create a stakeholder plan, performed outreach to interested parties, hosted meetings with internal groups, helped create a webpage and fact sheet, and commented on documents.



## ***Challenges and Responses to Challenges***

### **Challenge**

Lake Tahoe TMDL – The economic issues that are being faced currently have led to stakeholder opposition to meeting TMDL goals based on the estimated implementation cost. Many funding sources that have been available in the past are about to end, with uncertainty about future funding. Funding for much needed urban stormwater treatment, enhanced roadway operations and maintenance, stream restoration funding, and water quality monitoring programs, is too costly to be the sole burden of local jurisdictions and property owners but must be a shared responsibility among federal, state, local, and private entities.

### **Response**

The local jurisdictions petitioned the renewed stormwater NPDES permit in FY 11-12. Board staff met twice with some of the elected officials and their staffs from each of the three jurisdictions to reconcile the differences. As a result of these meetings, and the clarification of the permit requirements, the parties agreed to changes that will cost the jurisdictions less money, provide more certainty in their obligations, and still provide the needed load reductions as specified in the TMDL. The Water Board will hear the revised permit in October 2012.

# LOS ANGELES REGIONAL WATER BOARD TMDL PROGRAM

Fiscal Year 2011-2012

## Accomplishments, Challenges and Initiatives

This summary identifies those accomplishments, initiatives and challenges of the Los Angeles Regional Board's TMDL Program for fiscal year 2011-2012 that are not reflected in the End of Year Report generated by Planner Tracker.

Furloughs, staff losses and continuing vacancies were a challenge to this year's accomplishments, although the Los Angeles Region was able to add new staff during the course of the year.

### Accomplishments

This fiscal year saw the end of the bulk of the 1999 TMDL Consent Decree between Heal the Bay and the USEPA. While one TMDL remains to be completed under a negotiated Consent Decree extension, the vast majority of the required TMDLs are now in effect. These TMDLs included 38 TMDLs developed by the Los Angeles Regional Board and 9 developed by USEPA.

This year the Los Angeles Regional Board completed a TMDL for copper for the El Dorado Lakes, Puddingstone Reservoir and Santa Fe Dam Park Lake and a TMDL for bacteria for Avalon Beach. Both these TMDLs were established by single regulatory action, a Cleanup and Abatement Order and Cease and Desist Order, respectively. The Avalon Beach TMDL was completed ahead of schedule to coincide with other enforcement actions

Also this year, the Los Angeles Regional Board assisted EPA with the development of five TMDLs: the Santa Monica Bay DDT and PCBs TMDL; the Los Angeles Area Lakes Nutrients, Mercury and Trash TMDL; the Long Beach City Beaches Bacteria TMDL, the Ballona Creek Wetlands Sediment and Invasive Vegetation TMDL; and the Oxnard drain No. 3 Pesticides, PCBs and Sediment TMDL.

Regional Board staff provided assistance to the State Board staff with the State Board approval of the Santa Clara River bacteria TMDL; the Los Angeles River bacteria TMDL; and the Machado Lake Toxics TMDL. This year was the first that Regional Board staff instead of State Board staff prepared documents and presented TMDLs to the State Board. Regional Board staff brought the Santa Monica Bay Offshore Debris TMDL and Dominguez Channel and Los Angeles and Long Beach Greater Harbor Waters Toxics TMDL through the entire State Board and OAL approval process. Due to scope and complexity of the Dominguez Channel and Los Angeles and Long Beach Greater Harbor Waters Toxics TMDL which addressed 79 impairments of multiple waterbodies, a significant effort was required of Regional Board staff including extensive negotiations and briefings and two meetings before the State Board.

Also, Regional Board staff brought Basin Plan Amendments before the Regional Board for the re-considerations of certain technical elements of five bacteria TMDLs, including the most appropriate calculation method of the geometric mean. This project had been delayed from previous years.

Los Angeles Regional Board TMDL staff devoted considerable resources to the inclusion of TMDLs in the Los Angeles County MS4 permit. The Los Angeles County MS4 will be critical for the successful implementation of the TMDLs in the largely urban Los Angeles County

Considerable progress was made on the development of the Ventura River algae and nutrients TMDL. This TMDL will be brought before the Los Angeles Regional Board in October of 2012.

In addition, staff contributed to development of the 303(d) list, the Statewide mercury project and a recommendation for Ventura River water pumping and flow impairment.

### Challenges and Responses to Challenges

Loss of an experienced staff member set back the Ventura River Algae and nutrients TMDL. Other delays, in the Los Angeles River Nitrogen TMDL reconsideration and Santa Clara River Chloride work, was due to the staff time required for the Dominguez Channel and Los Angeles and Long Beach Greater Harbor Waters Toxics TMDL and the work to include the effective TMDLs into the Los Angeles County MS4 permit.

The Calleguas toxicity reconsideration was delayed because it depended on new State toxicity policy, which has just now been completed.

Three new staff were brought on during the course of the year; as these staff come up to speed they will contribute to productivity.

### Initiatives in TMDL Implementation

Two new TMDLs this year were completed by single regulatory action. This method of establishment is faster than Basin Plan Amendments and will also streamline implementation.

The inclusion of many TMDLs in the long-overdue Los Angeles County MS4 permit will be a large step forward in implementation.

Regional Board staff intends to develop a waiver to implement control of the nonpoint sources of trash in several of the previously-adopted trash TMDLs.

Regional Board staff is overseeing a special study on quantitative microbial risk assessment (QMRA) to assist in implementation of the bacteria TMDLs.

## NORTH COAST REGIONAL WATER BOARD TMDL PROGRAM

Fiscal Year 2011-2012  
Accomplishments & Challenges

July 15, 2012

This summary identifies accomplishments and challenges of the North Coast Region's TMDL Program for fiscal year 2011-2012 that are not reflected in the End of Year Report generated by Planner Tracker.

The North Coast Region's TMDL priorities are focused on TMDL implementation, addressing impaired waters through existing mechanisms and new policies, and developing TMDLs where analysis is needed. In support of these priorities, the North Coast Region was allocated 10.7 PYs for its TMDL Program in FY 10/11. Staff utilized these resources to address five general categories of projects: water quality assessment through the Integrated Report (7%), TMDL development (33%), TMDL implementation (35%), implementation and basin planning (16%), and program management (9%).

Since 2006, as more TMDLs have been adopted, Region 1 has shifted more of its TMDL resources toward TMDL implementation in an effort to maintain momentum within a watershed and achieve tangible water quality results. This trend continued in FY 11/12 with 35% of PYs devoted directly to TMDL implementation projects in the Garcia, Klamath, Lost, Salmon, Scott, and Shasta River watersheds.

The North Coast Region continued to focus resources on addressing impaired waters by utilizing regulatory implementation mechanisms before, and hopefully in place of, technical TMDL analyses when sources and solutions are well understood. Examples are Region 1's dairy permit program (adopted this year), the county roads general waiver, the general timber harvesting WDRs and waiver, and the U.S. Forest Service waiver. Additional examples specifically funded by TMDL funds in FY 11/12 include the regional *Agricultural Lands Program*, the statewide *Grazing Regulatory Action Plan*, the regional *Temperature Policy*, and amendments to the regional *Dissolved Oxygen Water Quality Objective*. All of these efforts are targeted at improving water quality more efficiently and effectively. Once these programs are in place they should provide reasonable assurance that standards will be achieved in a reasonable period of time, thereby allowing 4b categorization on the 303(d) List and negating the need to develop TMDLs for several impaired waters.

There are, however, instances where impacts, sources, and potential solutions to impairments are poorly understood and TMDLs are absolutely necessary. Impairments to the Laguna de Santa Rosa, Russian River, Elk River, and Freshwater Creek are four such cases in the North Coast Region. Additionally, Region 1 staff are collaborating with other regions and State Board staff to more efficiently use resources to develop TMDLs. For example, the *Statewide Mercury TMDL* will provide a mechanism for addressing five mercury-impaired water bodies in the North Coast Region. In FY 11/12, one third of PYs were devoted to these TMDL development efforts.

### Accomplishments in TMDL Development & Implementation

**2012 Integrated 303(d) & 305(b) Report:** The assessment of water quality data for the 2012 Integrated Report is well underway. North Coast Regional Water Board staff have reviewed and commented on over 1,100 lines of evidence generated by State Water Board staff.

**Elk River Sediment TMDL – Development:** Development of the TMDL progressed significantly in FY 11/12. Staff revised the public review drafts of the introduction, problem statement, and source analysis. Staff also developed the targets, linkage analysis, loading capacity, load

allocation strategy, and implementation framework this fiscal year, allowing the initiation of the peer review process. TMDL development staff coordinated with timber-program staff to develop sediment control implementation measures. Additionally, staff worked toward a strategy for recovery from stored instream deposits which are causing significant impairments, including hosting a restoration summit and developing partnerships for assessment and implementation of recovery actions. Other outreach efforts this year included maintaining a webpage, regular informational e-mails, landowner meetings, and Regional Board updates in March and June.

**Laguna de Santa Rosa TMDLs – Development:** Staff continued to develop the technical TMDL analyses for the phosphorus, nitrogen, dissolved oxygen (DO), temperature, and sediment TMDLs for the Laguna de Santa Rosa, a complex ecosystem of streams, wetlands, and ponds/lagoons. In FY 11/12, staff collected additional data and modeled the linkages between nutrient source inputs and instream dissolved oxygen responses, which led to a clearer understanding of the dynamics of the system and a focus on the legacy sediment oxygen demand in the substrate of the mainstem channel. The modeling work applied both current and pre-European settlement conditions and the results will help estimate the loading capacity. In FY 11/12, staff wrote several key sections of the draft staff report, including the watershed description, a majority of the problem statement, pieces of the nutrient source analysis, and supporting memoranda/appendices. The sediment and temperature TMDLs approaches are outlined and staffed. Outreach efforts also continued. Most importantly, key staff joined the Laguna TMDL team this year, including a new project manager in June and experts in nutrients and geology.

**Dissolved Oxygen Objective Amendment:** Staff continued to develop a Basin Plan amendment to revise the DO water quality objective. The amendment will address DO in free-flowing water, wetlands, estuaries, lakes/reservoirs, and ephemeral streams. The need for revised DO objectives for wetlands has particularly become clear through work currently being conducted on the Laguna TMDLs. In FY 11/12, staff developed internal drafts of revised DO water quality objectives for lakes, reservoirs, wetlands, and estuaries. Additionally, a Technical Advisory Committee for beneficial use review in the Laguna de Santa Rosa was formed to advise staff.

**Russian River Pathogens TMDL - Development:** TMDL staff efforts in the Russian River in FY 11/12 continued to be focused on monitoring and data collection. Staff implemented a comprehensive water quality monitoring program to help answer questions about recreational and land use impacts on pathogenic indicator bacteria occurrence, abundance, and spatial and temporal variability during both wet and dry weather periods. Staff sampled from May 2011 to April 2012. Samples were analyzed using both traditional indicator bacteria and new microbial source tracking methods. Staff completed 3,225 indicator bacteria analyses in the Region's new in-house laboratory. In FY 11/12, staff also improved the webpage to present more data results, developed maps of septic systems in the watershed, developed a draft septic risk model, joined a task force to address recreational sources, and presented status report update. Staff also initiated stakeholder outreach efforts with the Sonoma County Board of Supervisors and key county departments to identify and coordinate long-term solutions to septic system challenges in the lower Russian River.

**Garcia River Sediment TMDL - Implementation:** Staff continued to coordinate the implementation of the Garcia River TMDL, which continues to progress as landowners across more than 75% of the watershed (or 55,000 acres) are now participating in the program. In FY 11/12, additional properties came into compliance, including four large properties totaling more than 8,000 acres. Staff oversaw the 319 grant which funded the evaluation and inventory of erosion control measures along 17 miles of county road. Staff also continued the watershed-wide water quality monitoring program being conducted through a partnership between the Regional Water Board and The Nature Conservancy.

**Mendocino County Sediment TMDLs – Implementation:** One mechanism to help reduce sediment discharges in nine sediment-impaired watersheds in Mendocino County is the *Mendocino County Permit Coordination Program*, which will establish a one-stop-shop for landowners to obtain permits for restoration and sediment control work. In FY 11/12, staff managed a TMDL contract which funded the final CEQA documentation that prepares the way for programmatic permits with pertinent state and federal agencies.

**Klamath River TMDLs - Implementation:** Implementation of the Klamath River Temperature, DO, Nutrient, and Microcystin TMDLs continued in earnest in FY 11/12. Staff have focused on building collaborative partnerships with other agencies, organizations, and entities in the basin. Staff is chairing the steering committee of the *Klamath Basin Monitoring Program*, which created and maintains a basin-wide coordinated monitoring network involving over thirty monitoring entities. Staff participated in the development of the *Klamath Tracking and Accounting Program*, a basin-wide framework for tracking water quality improvement projects and a pollutant offset and trading program, which began its pilot phase. The Regional Water Board also served as a cooperating agency in the Secretarial Determination process evaluating possible removal of four mainstem Klamath River dams, the *Klamath Hydropower Settlement Agreement* (KHSA), and several water quality improvement interim measures. The later includes water quality pilot projects for KHSA Interim Measure 11 and the planning for a *Klamath Basin Water Quality Workshop* for evaluation of large scale pollutant reduction projects. Finally, staff continued involvement in the statewide *Blue-Green Algae Work Groups* and *Nutrient Numeric Endpoint* effort.

**Salmon River Temperature TMDL - Implementation:** Staff continued to implement the 2005 temperature TMDL in the Salmon River watershed and worked closely with the U.S. Forest Service, which manages more than 98% of the watershed. Staff also worked with the *Salmon River Restoration Council* and partially supported their efforts through TMDL contract funds.

**Scott River Sediment and Temperature TMDLs - Implementation:** In FY 11/12, staff spent considerable effort developing the Scott River TMDL Waiver and coordinating its development with the Shasta River TMDL Waiver and regional Agricultural Lands Discharge Program. Staff developed a number of approaches for consideration and undertook outreach to local agricultural representatives, the Scott River Watershed Council, and local Tribes. Staff prepared a short-term renewal of the waiver, that is currently in place, to allow time to adequately incorporate input from stakeholders. In FY 11/12, staff also continued to coordinate two grants with the Siskiyou Resource Conservation District on the Scott Valley Community Groundwater Study Plan and the Riparian Restoration Strategy. Staff also managed a grant to the Northern California Resource Center to construct fencing along 13 miles of stream bank on a major Scott River tributary. Additionally, staff participated in the timber harvest review process and issued timber WDRs consistent with the TMDL Action Plan, made significant progress in developing a waiver to address sediment discharges from county roads, and implemented the US Forest Service Waiver in relation to USFS projects and monitoring in the watershed. Finally, staff continued to respond to complaints, some of which resulted in inspections and water quality sampling.

**Shasta River Temperature and Dissolved Oxygen TMDLs – Implementation:** Staff continued implementation efforts in the Shasta River watershed with a focus on the spring-fed coho salmon refugia areas downstream of Lake Shastina. Staff worked with stakeholders and managed contracts and grants to help develop identify tailwater discharges and develop Ranch Plans to reduce impacts. Additionally, staff worked to revise the *Shasta TMDL Waiver*, implement the *U.S. Forest Service Waiver*, endangered species issues, and other aspects of the *TMDL Action Plan*.

**Irrigated Lands Discharge Program:** Staff continued work in FY 11/12 on this program to address discharges from row crops, irrigated pasture, vineyards, orchards, and other agricultural lands in the North Coast Region. A large stakeholder advisory group process began this year,

with the development of a group charter and membership selection in the fall, followed by the first full group meeting in December of approximately seventy members. Staff hosted another ten meetings between January and June. With the help of the Advisory Group, staff developed a draft scope and tier-based framework for a waiver of waste discharge requirements.

**Temperature Implementation Policy:** Staff continued work this year on a basin planning effort to comprehensively address temperature impairments and prevent new temperature impairments region-wide. The Regional Board adopted a resolution in January that describes the need and rationale for a temperature policy, presents the factors and land use activities that contribute to elevated water temperatures, defines the Board's authority, identifies opportunities for collaboration, and directs staff to implement temperature and shade controls in regulatory actions as appropriate.

**Restoration Policy Amendment:** Staff continued work on *the Restoration Policy Basin Plan Amendment*, formerly known as the Exemption Criteria Amendment. The goal of the amendment is to clarify the mechanism necessary to ease the permitting of large-scale restoration projects which sometimes result in significant short-term water quality impacts before their long-term water quality benefits are realized (e.g., the Trinity River channel reconfiguration project and possible decommissioning of Klamath River dams). In FY 11/12, staff completed the scoping document and drafted amendment language suitable to legal counsel and management.

### **Challenges and Responses to Challenges**

**Contracting:** The contracting process continues to be a challenge. Although Regional Water Board staff submitted contact packages by the December 2011 deadline it took over three months for State Board staff to begin working on the contracts with final approval granted shortly before the new fiscal year began. This delay resulted in less time to implement the contract. For example, our contract with Lawrence Berkeley National Lab of microbial analysis of Russian River pathogen samples took nine months to complete. Samples for analysis had to be collected and then archived frozen while the contract negotiations commenced. In response to this challenge, Regional Board staff are now working to submit contract request packages for FY 12/13 in the first quarter of the new fiscal year. While State Board contract staff provided assistance throughout the year, turnover in liaison assignments added to the challenge of building relationships and processing contracts quickly. Even with assistance from State Board staff, Regional Board environmental scientists and engineers spent a significant amount of valuable time learning the nuances of contracting law and processing administrative paperwork.

**Reporting:** As funds have become more limited, the level of reporting has increased. TMDL staff have devoted time to *TMDL Progress Report Cards*, *Measure W Watershed Reports*, *Performance Measures*, the *TMDL Work Plan*, and *Work Plan progress reports* on a monthly, mid-year, and year-end schedule. It is a challenge to devote time away from TMDL development and implementation priorities to these report obligations. It is also a challenge to provide instream data that could potentially show a trend in water quality conditions. In response, TMDL staff are looking for opportunities to attain needed data through closer coordination with SWAMP staff and regulatory programs.

**Scott River TMDLs:** Public relations challenges continue this year from a large and vocal group of individuals who believe the Regional Board's efforts are part of a larger conspiracy involving the United Nations and federal government to de-populate rural areas, which they refer to as Agenda 21. The ongoing challenges of making regular visits to make inspections, respond to complaints, and conduct outreach in a location over 5 hours away also remain.

# SAN FRANCISCO BAY REGIONAL WATER BOARD TMDL PROGRAM

Fiscal Year 2011 - 2012

## Accomplishments, Challenges and Initiatives

This summary identifies those accomplishments, initiatives and challenges of the San Francisco Bay (Region 2) Water Board's TMDL Program for fiscal year 2011–2012 that are not reflected in the End of Year Report generated by Planner Tracker.

Despite time-base reductions because of the furlough program, staff attrition, and a partial re-direction of staff towards TMDL litigation support, the Region 2 TMDL program maintained a balanced approach towards TMDL development and implementation.

In 2011-12, the Tomales Bay mercury TMDL was adopted and significant progress was made in TMDL implementation in the Napa River and Sonoma Creek watersheds through the continued expansion of our fledgling agricultural pollution control program.

At the programmatic level, the Region 2 Water Board actively participated in several team-based TMDL development and implementation initiatives aimed at addressing listed waters more efficiently through the sharing of our collective technical expertise and experience.

### Accomplishments

- **Adoption by Board Resolution of the Tomales Bay Mercury TMDL** -The Tomales Bay mercury TMDL was adopted on May 9, 2012, and was approved by the US EPA on July 3. The TMDL requires no new watershed management actions to address the mercury impairment of Tomales Bay, beyond those actions that have been completed or are in progress. The TMDL represents a streamlined project approach.
- **Napa/Sonoma Grazing Waiver Adoption** - A conditional Waiver of WDRs for grazing operations in the Napa River and Sonoma Creek watersheds was adopted by our Board on September 9, 2011. It implements the pathogen and sediment TMDLs completed in the Napa River and Sonoma Creek watersheds and was adopted without controversy. This is due to in part to extensive outreach to stakeholders and to using the Tomales Bay Grazing Waiver (2008) as the basis for this effort.
- **Priority Watersheds TMDL Implementation** - TMDL and Non-Point Source program staff continued to coordinate on implementation in our priority watersheds through expanded stakeholder outreach to maximize the stakeholders' ability to obtain grants to conduct TMDL implementation, such as:
  1. Assisted stakeholders in successfully competing for four federal 319(h) grants for planning and TMDL implementation projects in Napa River, Sonoma Creek, and Tomales Bay watersheds.
  2. Worked with local stakeholders on several stream and riparian habitat restoration projects which are recognized as key actions to reduce fine sediment delivery rates, as required in the Napa River sediment TMDL and Lagunitas Creek sediment TMDL (in development).
  3. Worked with the US EPA on projects funded in the Napa River watershed through the San Francisco Bay Water Quality Improvement Fund 2011. Projects include the development of a "Comprehensive Napa River Watershed Sediment TMDL Implementation Program and Habitat Enhancement Plan" submitted by Napa County. US EPA has selected this watershed to focus additional funding efforts building on the existing TMDLs.
- **Statewide Reservoir Mercury TMDL Development** - This project is discussed in greater detail in the Central Valley Region's end-of-year report. Region 2 staff serves as the Project



Manager and Technical Team Lead, coordinating with State Board and Region 5 staff. Significant accomplishments this year included completing CEQA scoping meetings at four locations statewide and finishing numerous project deliverables to give structure and definition to the project. Region 2 staff presented at the CEQA scoping meetings.

### Challenges and Responses to Challenges

State Board approval of the Napa River Sediment TMDL was the subject of a CEQA-related lawsuit this past year by the Living Rivers Council (LRC). In general terms, LRC alleged that the Water Board failed to adequately evaluate potentially significant environmental impacts. As a consequence of this lawsuit, R2 Water Board staff was re-directed from the Lagunitas Creek sediment TMDL to provide technical assistance to the State Attorney General's office in responding to the lawsuit. This unexpected work led to delays in the Lagunitas Creek sediment TMDL project. It should be noted that in early July 2012, R2 was informed that the Superior Court of California issues a proposed Statement of Decision, denying LRC's petition for a writ of mandate, which staff is reviewing.

The R2 TMDL workplan envisioned completing a revision and update to our 2003 Waste Discharge Requirements for Confined Animal Facilities (CAF). In part, due to staff attrition, this work task was cancelled this past year.

GIS support, in light of our expanding agricultural WDR program, remains a critical need. More importantly, continued development and expansion of our agricultural program will require additional staff for outreach, education, program management/tracking, inspections, and enforcement. Responding to this challenge, R2 renewed its contract with the Aquatic Science Center for GIS support on an as-needed basis and made the decision to build on the efforts of other regions for program tracking (database management using Geotracker) as our waiver programs mature. Lastly, we recently cross-trained several R2 staff in vineyard facility and grazing land compliance inspections to help manage the growing caseload.

**Suisun Marsh Multi-Pollutant TMDL** - We continue to make progress on the development of this TMDL which has challenges due to its high level of complexity and the marsh's key relationship to other efforts within the larger Bay-Delta system and the fact that we are. We are addressing the challenges by working with US EPA to obtain available contract dollars to complete various elements of the TMDL. We also identified new available water quality data, planned additional monitoring to address known data gaps, and began outreach to and coordination with the State Department of Water Resources and the local Resource Conservation District, both of which will be critical to TMDL completion.

**San Pedro Creek and Pacifica state Beach Bacteria TMDL** - A significant challenge we faced in this TMDL was addressing the role that natural sources play in the exceedance of bacteria water quality objectives. To address this concern, a decision was made this past year to incorporate the reference system approach into the TMDL. We also plan on amending our Basin Plan to include the "reference system" approach as implementation for pathogen objectives for any impaired water bodies.

### TMDL Implementation

**Guadalupe River Watershed Mercury TMDL** - R2 staff continues to make progress on implementation, with two notable events this year: planned purchase of additional reservoir oxygenation equipment by the Santa Clara Valley Water District (District) to study methylmercury control in reservoirs and completion of the first year of a coordinated watershed monitoring approach.

**PCBs in San Francisco Bay TMDL** – Staff worked collaboratively with dischargers, US EPA and the California Department of Public Health to develop a program to address the risks from recreational sportfishing and establish a small grants program for community-based organizations.

**SAN DIEGO WATER BOARD TMDL PROGRAM**  
**Fiscal Year 2011-2012**  
**Accomplishments, Challenges, and Initiatives**

This summary identifies those accomplishments, challenges, and initiatives of the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) TMDL Program that are not reflected in the End of Year Report generated by Planner Tracker.

**Accomplishments**

**NASSCO and BAE Systems (aka Southwest Marine) Shipyard Sediment Cleanup** – Absent a quorum, a panel hearing was conducted over the course of three days in November 2011. The panel and Advisory Team released recommendations to the public for review and the San Diego Water Board approved the Cleanup and Abatement Order (CAO) and draft Technical Report, and certified the draft Environmental Impact Report on March 14, 2012. This project will direct the clean-up of contaminated bay sediment at two shipyards in Central San Diego Bay to address CWA 303(d) List impairments.

**Los Peñasquitos Lagoon Sedimentation TMDL** – The Los Peñasquitos Lagoon TMDL Project, which was originally scheduled for June 2011 adoption, was revised to include an additional numeric target for the Lagoon (Lagoon Target) and was re-circulated for another public review period in 2012. The Lagoon Target was directed at increasing estuarine habitat in the lagoon to restore its beneficial uses. As a result of a loss of quorum, the May Board meeting was cancelled and the Basin Plan amendment adopting the Los Peñasquitos Lagoon TMDL Project was adopted on June 13, 2012.

**Challenges and Responses to Challenges**

**Staffing Resources** – The two TMDL units currently have a total of six staff filling eight positions, plus the two supervisor positions. One staff position is fully utilized for the Agricultural Waiver and another for Basin Planning. Therefore, in FY2011-12, at most, these two units had only four staff members devoted to advancing TMDL projects.

The TMDL Program has continued to have staffing turn-over and shortages during the past fiscal year:

- In late August 2011, Amy Mecklenborg (Environmental Scientist) transferred out of the TMDL & Basin Planning Unit (TBPU) leaving a current vacancy.
- In February 2012, Chad Loflen (Environmental Scientist) transferred from another unit to the Monitoring, Assessment & Research Unit (MARU) filling a vacancy left by the SWAMP Coordinator, who was promoted to a Staff ES position.
- In May 2012, Cathryn Henning (Engineer) left the San Diego Water Board to pursue other career options.
- In June 2012, Helen Yu (Engineer) was transferred from another unit to the MARU to fill a vacant position.
- Beginning August 21, 2012, a new hire, Carey Nagoda (Engineer) will begin working in the MARU, filling the vacancy left by Cathryn Henning.
- TMDL staff members in the TBPU who have remained in place include Lisa Honma and Charles Cheng.

To respond to these shortages, each of us in the TMDL units has had to take on extra responsibilities, which has caused delays in advancing some projects in order to complete the priority projects. We have had to delay the Loma Alta Slough TMDL and the Chollas, Paleta, and Switzer (CPS) Creek Mouths TMDLs. Chad Loflen, Lisa Honma, and Charles

Cheng were temporarily reassigned to work on the Los Peñasquitos TMDL in order to meet the deadline for approval at the June 2012 Board Meeting.

The MARU supervisor has acted as the primary contact person for the Loma Alta Slough TMDLs project since August 2011, as well as, the Santa Margarita River and Lagoon TMDLs, and the Downtown Anchorage and B Street/ Broadway Piers TMDLs projects. As a result, work needed to complete the Draft Technical Report for the CPS Creek Mouths TMDLs was delayed.

The Shipyards Sediment Cleanup CAO preparation for the 3-day Panel Hearing and Board Meeting required a significant amount of staff time throughout the Regional Board office. This included the TBPU Supervisor, who was appointed to work full-time on the Advisory Team for these proceedings and required 8 months of her time. Other staff members were assigned the supervisor's regular workload during that time period, which further slowed down TMDL productivity in general.

The San Diego Water Board and the TMDL Units continues to suffer from the loss of work time due to mandatory furloughs.

All but one of the vacant positions between the two TMDL units will be filled by the end of August 2012, and it is expected that the three new people in the TMDL units will be able to climb the TMDL learning curve quickly in the months ahead.

### **Initiatives in TMDL Implementation**

**Release of a new Regional Municipal Storm Water Permit** – The San Diego Water Board has released a new Regional Municipal Separate Storm Sewer System (MS4) Storm Water Permit for public review. The Regional MS4 Permit will be issued to the Phase I municipal co-permittees in San Diego, Southern Orange and Southwestern Riverside Counties. This new permit, which is expected to be adopted by the San Diego Water Board in FY12/13, will integrate TMDL planning and implementation into the requirements of the permit. This new approach will not only implement adopted TMDLs, but address additional 303(d) listings and develop and implement new TMDLs as well.

## **SANTA ANA REGIONAL WATER BOARD TMDL PROGRAM**

Fiscal Year 2011-2012

### **Accomplishments, Challenges and Initiatives**

This summary identifies those accomplishments, initiatives and challenges of the Santa Ana Water Board's TMDL development, TMDL implementation and TMDL Program for fiscal year 2011–2012 that are not reflected in the End-of-Year Report generated by Planner-Tracker.

#### **ACCOMPLISHMENTS**

##### **TMDL Development: Big Bear Lake Mercury TMDL**

- Continued to draft Technical Staff Report
- Continued coordination with State Water Board/Regional Board staff on the statewide development of the Mercury Policy for impaired lakes. Staff is participating on the stakeholder committee and on the technical committee.
- Continued discussions with local air quality districts to address atmospheric deposition of mercury
- Initiated Big Bear Lake fishing survey.

##### **TMDL Development: Newport Bay Watershed Selenium TMDLs and SSOs**

- Board staff developed a draft report recommending selenium site-specific objectives (SSOs) and TMDLs. The draft SSOs are being reviewed against the TMDL language to determine the most feasible method to incorporate the new requirements.
- Some pilot selenium removal technologies have already been installed and tested by the regulated stakeholders. These are early implementation measures that are being monitored to evaluate selenium reductions in rising groundwater, which is the primary source of elevated selenium concentrations in surface waters.
- The first phase of independent peer review of the TMDLs was conducted by five scientific reviewers. Several reviewers' comments required staff to spend considerable time and resources to respond appropriately. Another round of peer review is expected as the biological aspects of the SSOs/TMDLs were not fully considered.
- Staff recommended development of a statewide Regional Board staff workgroup to respond to the exceedances in selenium concentrations found in many areas of California. This workgroup could evaluate technical and legal options to regulate selenium.

##### **TMDL Development: Newport Bay Watershed Organochlorine Compounds TMDLs**

- Regional Board adopted a revised TMDL amendment July 15, 2011. Revisions included a change of the final date for TMDL compliance and minor grammatical corrections.
- Regional Board staff and local stakeholders continue to coordinate on early compliance activities, despite the fact that the amendment is not yet fully approved by the State Board, OAL and USEPA.
- Amendment submitted to State Board June 6, 2012 to be considered for approval.

##### **Technical TMDL Implementation: Rhine Channel (Newport Bay) TMDLs**

- Regional Board staff has worked with the City of Newport Beach to initiate remediation of the Rhine Channel contaminated sediment to comply with TMDLs. The sources of the contamination were legacy industries.
- An opportunity to dispose of the sediment at a Port of Long Beach confined facility enabled the City to step up and spend \$4 million to remove and dispose of the sediment; this was a substantially lower cost alternative to the next disposal option costing at least \$20 million.
- The Regional Board, Coastal Commission, US Army Corps of Engineer and other agencies expedited issuance of requirements in order to insure that this severely time constrained opportunity was not missed.

- The project was completed November 2011, and removed at least 80% of the contamination in the Channel.

#### **TMDL Implementation: Middle Santa Ana River Bacterial Indicator TMDL**

- Regional Board approved the MS4 agencies' Dry Season Comprehensive Bacterial Reduction Plan (CBRP)' in compliance with the TMDL and MS4 Permit. The CBRP includes an aggressive source control program for identifying and mitigating dry season discharges by the 2015 dry season TMDL compliance date.

#### **TMDL Implementation: Lake Elsinore/Canyon Lake Nutrient TMDL**

- Provided review of MS4 agencies' draft Comprehensive Nutrient Reduction Plan and the Agriculture Nutrient Management Plan. Both Plans are required pursuant to the TMDL and the MS4 Permit.
- Issued the 2<sup>nd</sup> cycle of 13267 Investigative Orders to approximately 450 Agricultural Owners identified by aerial survey, GIS analysis and County Assessor Parcel data. The 13267 Order requires continued TMDL monitoring and completion of the Final Ag Nutrient Management Plan.
- Continued to work with stakeholders to identify funding sources for projects designed to reduce the flux of in-lake sediment nutrient loads and thereby meet the TMDL in-lake nutrient sediment load reduction requirements.

#### **TMDL Implementation: Big Bear Lake Nutrient TMDL, Newport Bay Watershed Nutrients TMDLs, Newport Bay Watershed Diazinon/Chlorpyrifos TMDLs, Newport Bay Sediment TMDLs, Newport Bay Fecal Coliform TMDL, Newport Bay Watershed Toxics TMDLs**

Oversaw TMDL implementation including the following:

- Provided extensive review and comments on stakeholder proposals for meeting TMDL WLAs.
- Worked with MS4 agencies, Caltrans and US Forest Service to submit required documents pursuant to the Big Bear Lake Nutrient TMDL.

#### **CHALLENGES AND RESPONSES TO CHALLENGES**

One of the primary challenges for this fiscal year's Regional Board TMDL Program was posed by the numerous requests to Board staff to respond to/participate in new activities and programs that involved constituents of TMDL concern in the Santa Ana Region, but that were not necessarily related directly to established TMDL development and/or implementation priorities. New activities in FY2011-12 included the Septic System impact investigations, Statewide TMDLs (e.g., mercury), nutrient numeric endpoint (NNE) committee, state permits/policies review and comment, and Performance Target development/assessment. These activities greatly constrained already limited TMDL Program staff resources. Resources are simply not sufficient to address all the needs. Prioritization of activities is necessary, often resulting in painful delays in tasks.

The development of selenium (Se) site-specific objectives (SSOs) and TMDLs for San Diego Creek and Newport Bay watershed is extraordinarily challenging because (1) rising groundwater at diffuse locations in the watershed is the predominant source of Se loading to surface water; (2) there is no standard conventional treatment technology available to treat selenium; and, (3) Se is a very complex constituent and its nature, fate and biological effects are highly site-specific. Stakeholders in the watershed committed significant resources (in excess of two million dollars) to investigate selenium in the watershed, pilot test potential selenium treatment technologies and develop a recommended BMP Strategic Plan to address both rising groundwater and point source discharges to achieve the proposed TMDLs. However, economic and certain legal difficulties must be addressed in order to proceed with implementation of TMDLs. Board staff coordinated TMDL/SSO development with resource agencies, including State Board staff, USEPA, USFWS,

and USGS. Stakeholders are investigating possible approaches to achieve selenium reductions; Board staff expects to reflect the results, as appropriate, in a TMDL implementation plan.

Peer review of the draft TMDLs/SSOs was completed; however additional review will likely be requested, focusing on the scientific basis of the proposed SSOs.

A major impediment that will more than likely delay compliance with the Big Bear Lake Dry Season Nutrient TMDL beyond 2015, as specified TMD, is the fact that the US Forest Service has indicated they do not have the authority or funds to comply with TMDL requirements and/or the 13267 Order issued last FY. Forest lands comprise approximately 80% of the Big Bear Lake watershed and therefore, discharges from forest lands are significant. Regional Board staff continues to investigate mechanisms to obtain US Forest Service compliance with all of the TMDL requirements; however, limited staff resources prevent staff from aggressively addressing this critical issue. Without an effective regulatory program in place to address forest land discharges (*i.e.*, *WDRs*), Board staff remains unsure about Forest Service TMDL compliance and therefore, achievement of the TMDL targets/allocations. The lack of compliance by the US Forest Service is also encouraging other stakeholders to question their need to comply with the TMDLs in light of their limited public funds.

#### INITIATIVES IN TMDL IMPLEMENTATION

The region continues to place strong emphasis on TMDL implementation activities, including; 1), coordination with Regional Board and State Board permit and TMDL program staff to incorporate TMDL requirements into appropriate permits; 2), reviewing and commenting on TMDL deliverables; 3), interacting with stakeholders to ensure TMDL implementation timelines and requirements are met; and 4), taking appropriate enforcement steps to ensure TMDL implementation actions occur as required.

Many TMDLs, including the priority TMDLs for Newport Bay selenium TMDLs/SSOs and the Big Bear Lake Mercury TMDL, are very complicated and controversial, requiring extensive staff resources to address stakeholder concerns about the targets, allocations and implementation. With respect to the Big Bear Lake mercury TMDL, in addition to stakeholder issues with the proposed target, the major challenge is how to address atmospheric deposition, the primary mercury source to Big Bear Lake. The Regional Board has no regulatory authority over air deposition sources; Board staff has been attempting to work with the responsible air agencies. In addition, Board staff continues to work actively with State Board staff and the other regions on development of the statewide Mercury Policy.

Addressing agricultural (Ag) load allocations and Ag TMDL requirements continues to be a challenge. Most of the Regional Board's adopted TMDLs require specific actions by the Ag operators/owners including load reductions, monitoring, etc. TMDL staff continues to coordinate with NPS staff on the development of an Ag waiver.