

***Consideration of Petition for Review of EO Approval,
with Conditions, of 9 Watershed Management Programs
Pursuant to the LA County MS4 Permit***

Item 16
Los Angeles Regional Water Board
September 10, 2015



Permit Deadlines

VI.C.4.c	For Permittee(s) that elect to implement the conditions of Part VI.C.4.c.i or c.ii, submit draft plan to Regional Water Board	18 months after Order effective date
VI.C.4.c	Comments provided to Permittees by Regional Water Board	4 months after submittal of draft plan
VI.C.4.c	Submit final plan to Regional Water Board	3 months after receipt of Regional Water Board comments on draft plan
VI.C.4.c	Approval or denial of final plan by Regional Water Board or by the Executive Officer on behalf of the Regional Water Board	3 months after submittal of final plan

Approval, With Conditions

- April 28, 2015 – Executive Officer, on behalf of the Board, approved, with conditions 9 WMPs
 - 3 of 9 approved under Long Beach MS4 Permit
- May and June 2015 – Final WMPs submitted addressing conditions
- July and August 2015 – Executive Officer determined that conditions had been satisfied in all 9 WMPs.

Part VI.A.6 – Regional Board Review

6. Regional Water Board Review

Any formal determination or approval made by the Regional Water Board Executive Officer pursuant to the provisions of this Order may be reviewed by the Regional Water Board. A Permittee(s) or a member of the public may request such review upon petition within 30 days of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Water Board.

Petition and Contentions Raised

- May 28, 2015 – Petition filed
- Petitioners allege that the Executive Officer:
 - Acted outside the scope of delegated authority in “conditionally” approving the WMPs;
 - Improperly modified the permit by failing to comply with state and federal legal requirements; and
 - Improperly imposed conditions in the approvals that are inconsistent with permit requirements and the CWA
- Remedy sought – Invalidate conditional approvals and deny all 9 WMPs.

Responses to the Petition

- Board staff prepared written responses to all contentions.
 - Main response matrix – Response to Petitioners’ Memorandum of Points and Authorities
 - Attachment 1 – Detailed technical comments
 - Attachment 2 – Assessment of Petitioners’ March 25, 2015 letter commenting on the revised WMPs.
- Permittees also responded to the petition.
 - 9 responses received.

Options

- No specific standard of review
- 3 general options - Board may, for each WMP:
 - Ratify the Executive Officer's approvals;
 - Overturn the Executive Officer's approvals; or
 - Conduct further proceedings on the petition as determined by the Board.
- Petition only specifically alleges substantive inadequacies of 3 of the 9 WMPs.
- Staff are not making a recommendation.

Contention #1

Executive Officer acted outside scope of delegated authority in “conditionally” approving the WMPs because the only authority explicitly delegated to the Executive Officer by the Board in the Permit was to approve or deny the WMPs.

VI.C.4.c	Approval or denial of final plan by Regional Water Board or by the Executive Officer on behalf of the Regional Water Board	3 months after submittal of final plan
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Response to Contention #1

- Executive Officer is authorized to conditionally approve documents submitted under the permit.
- Petitioners are interpreting delegation to the Executive Officer literally and narrowly - reading not supported by terms of the permit.
- Well-established principles of administrative law:
 - Unless specifically limited, delegated authority is broadly construed.
 - An agency's authority to approve or disapprove inherently includes the authority to approve with conditions.
- Conditional approvals are consistent with Water Board practice.

Contention #2

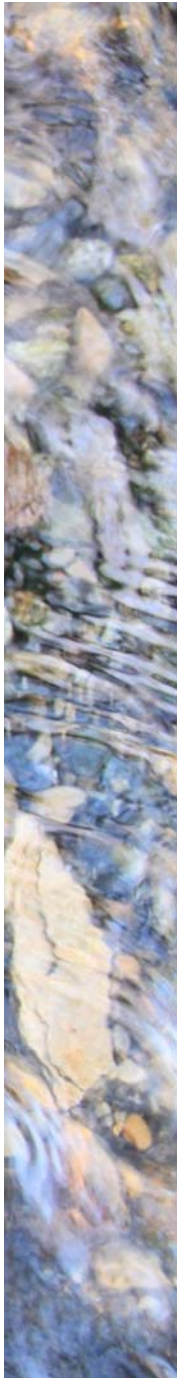
By conditionally approving WMPs, the Executive Officer improperly modified the permit in violation of substantive and procedural requirements of state and federal law. Executive Officer de facto amended permit terms, creating a new process, timeline, and set of standards without circulation of a required draft permit, public notice, fact sheet, or public hearing date.

Response to Contention #2

- Permit did not need to be modified, nor was it modified, when Executive Officer approved with conditions. No circulation of draft permit, public notice, fact sheet, etc. required.
- Did not change permit terms or timeline.
- Board staff complied with permit's public review requirements.
- *Environment Defense Center v. EPA* not on point.

Introduction & Overview

- WMP Review Methodology
- Best Professional Judgment
- Data Considerations & Adaptive Management
- Permit Effectiveness



Locations of 9 WMPs

San Gabriel Valley area

- East San Gabriel Valley WMP
- El Monte
- Walnut

Lower San Gabriel River

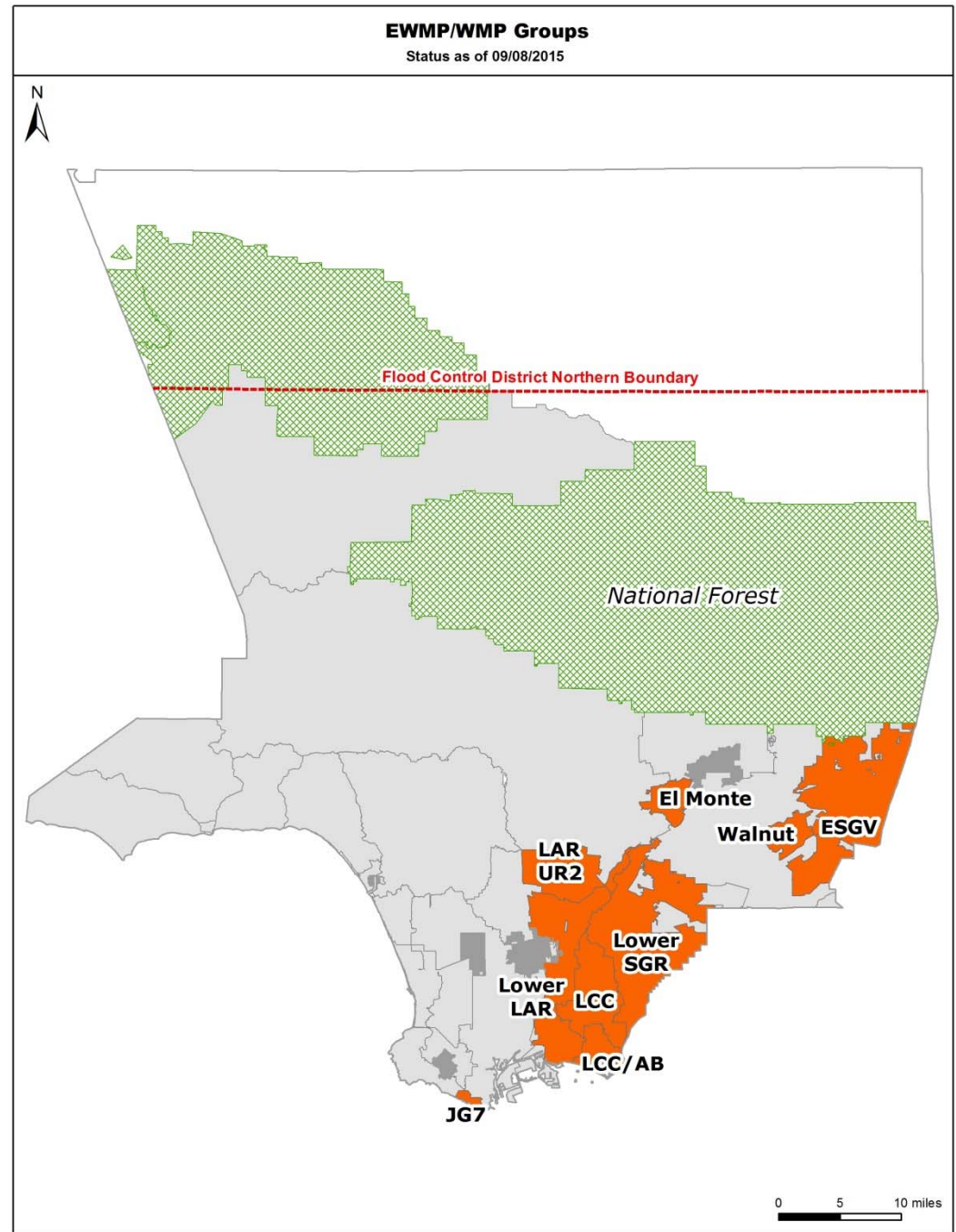
Alamitos Bay/Los Cerritos Channel

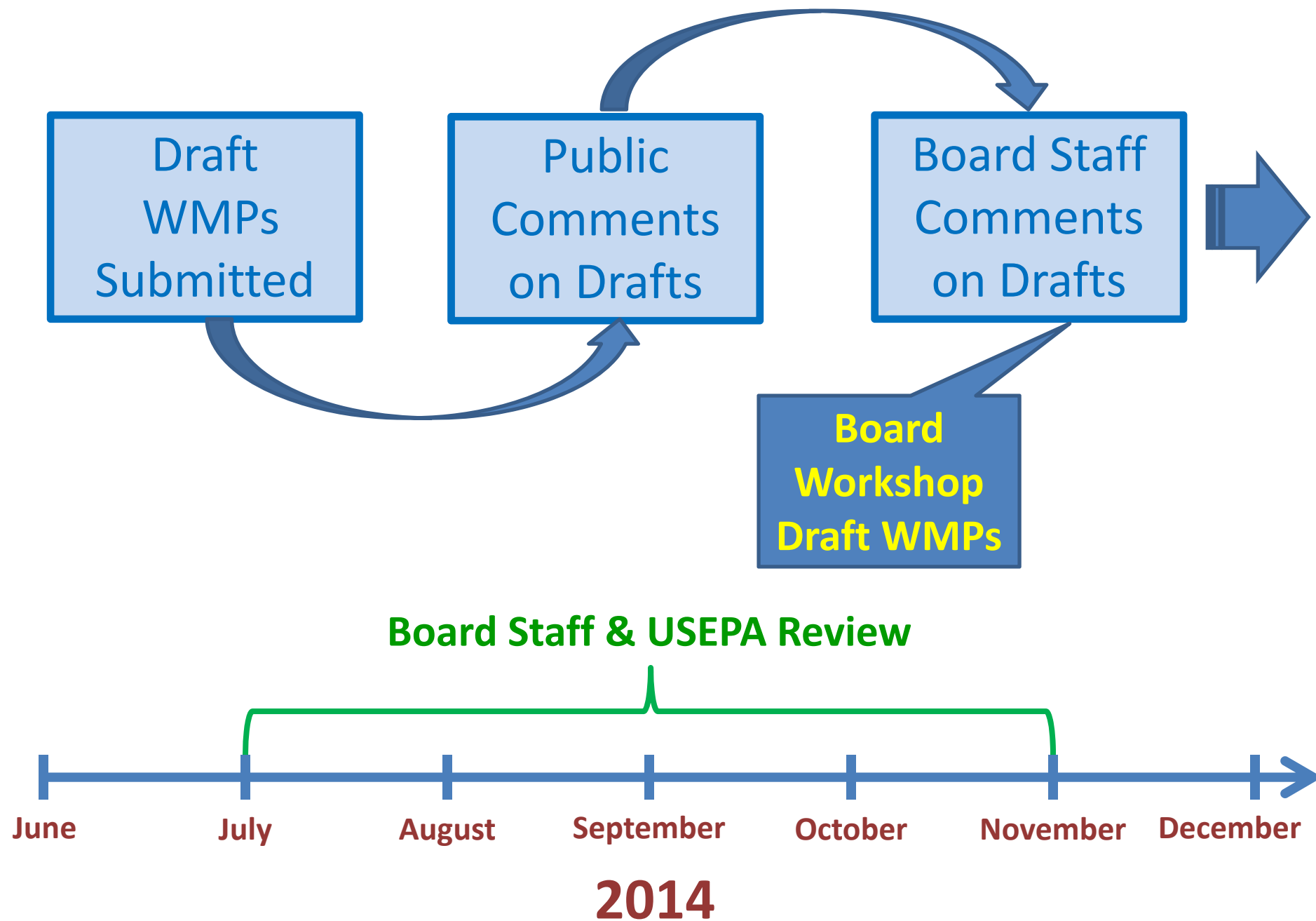
Los Cerritos Channel

Los Angeles River Upper Reach 2

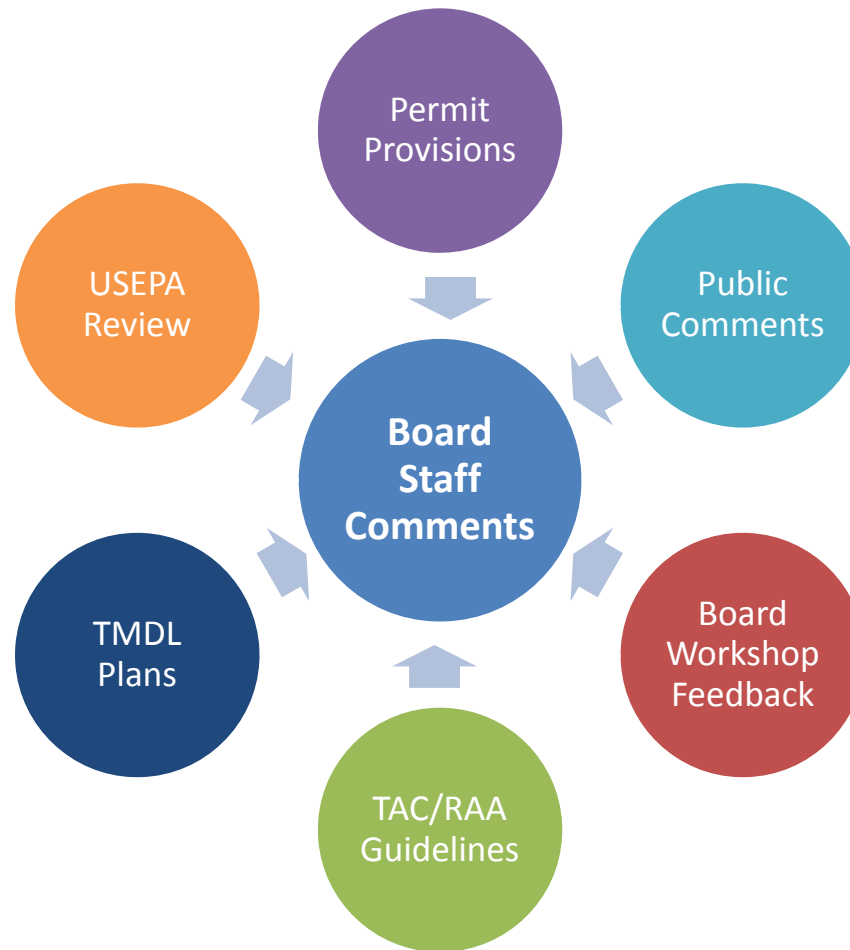
Lower Los Angeles River

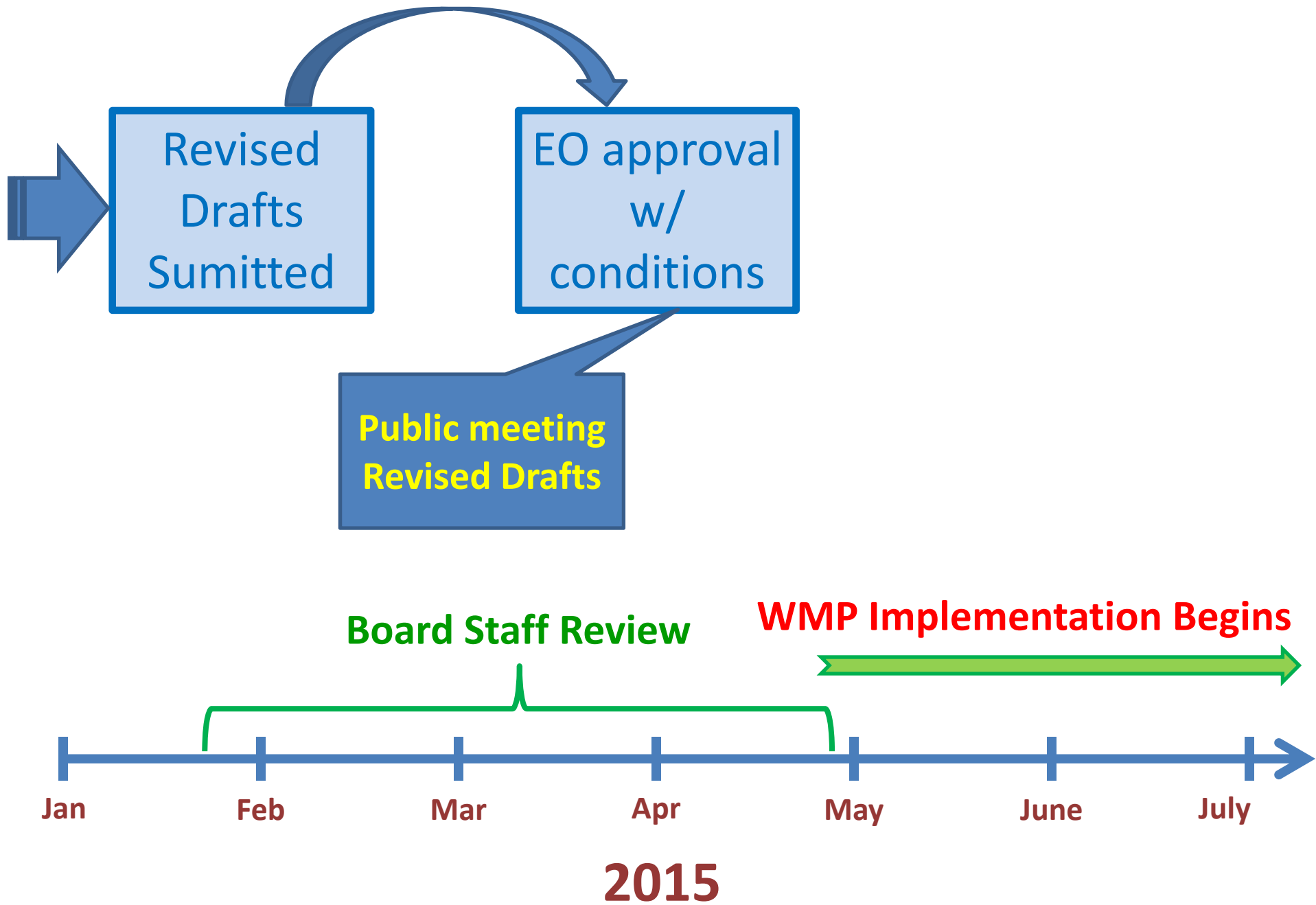
SMB Jurisdictional Group 7 area in City of Los Angeles (PV Peninsula)





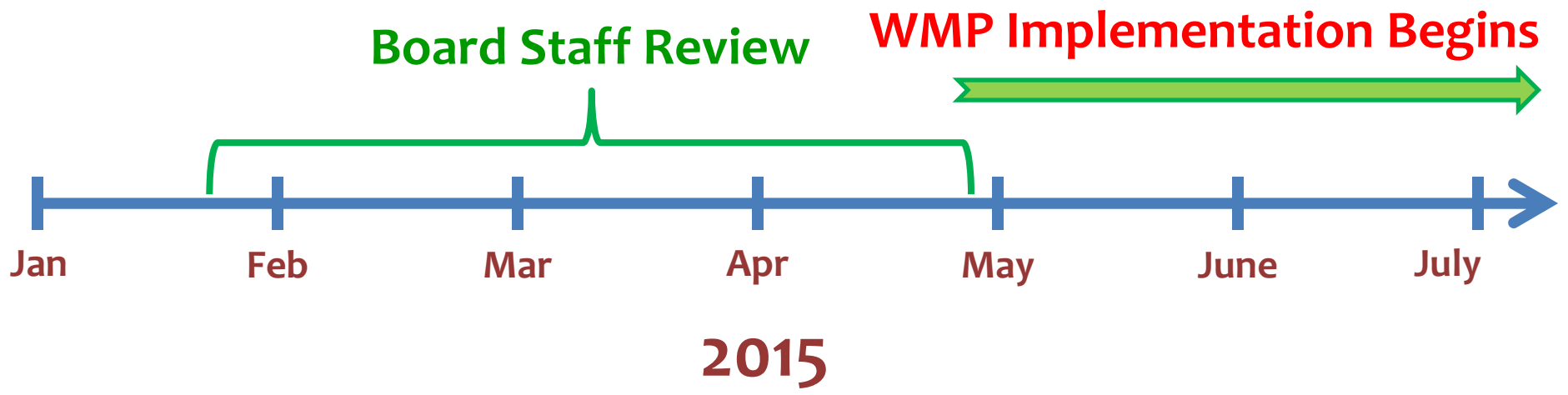
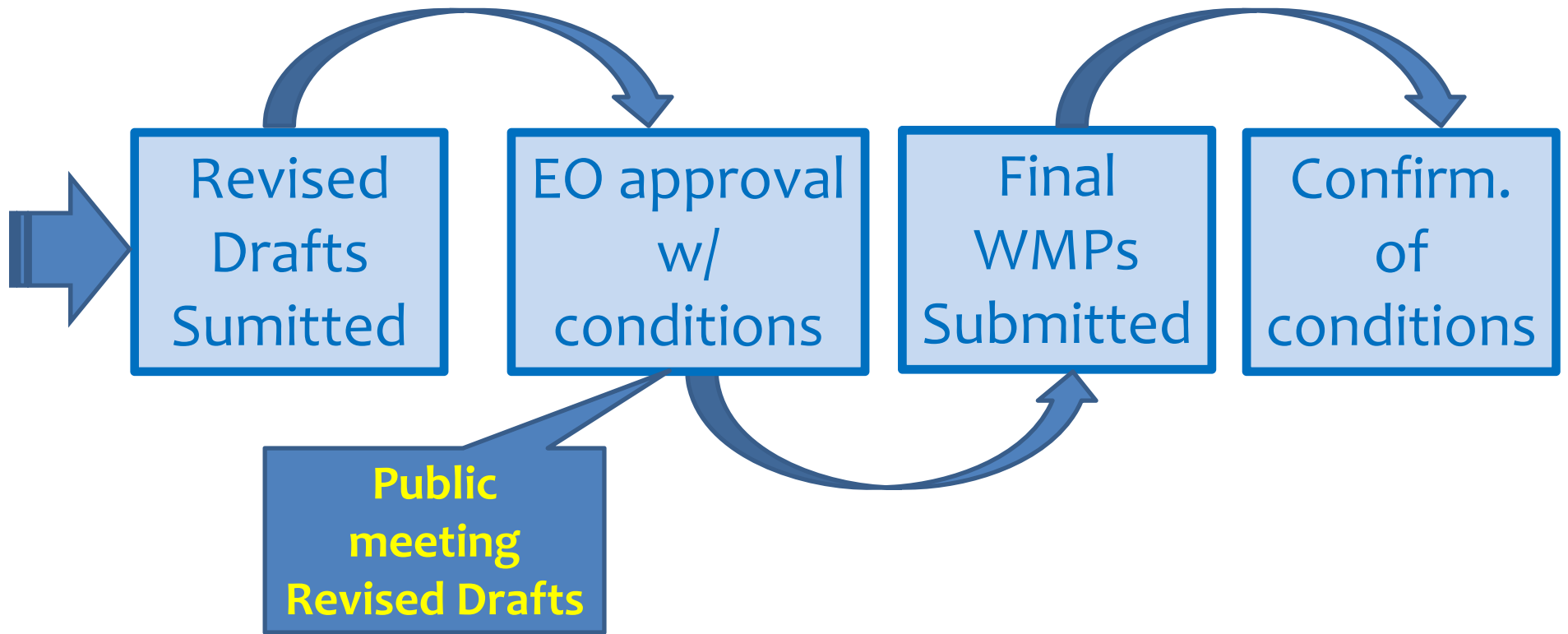
Draft WMP Review Process





Conditions in Approvals

- Not fundamental changes to WMPs
- Generally requiring
 - Additional supporting information
 - Clarification
 - Commitments to reassess & refine analysis
 - Revisions to ensure internal consistency
 - Corrections of typographical errors
- Could be addressed in short time frame or future
- No delay to implementation



Contention #3

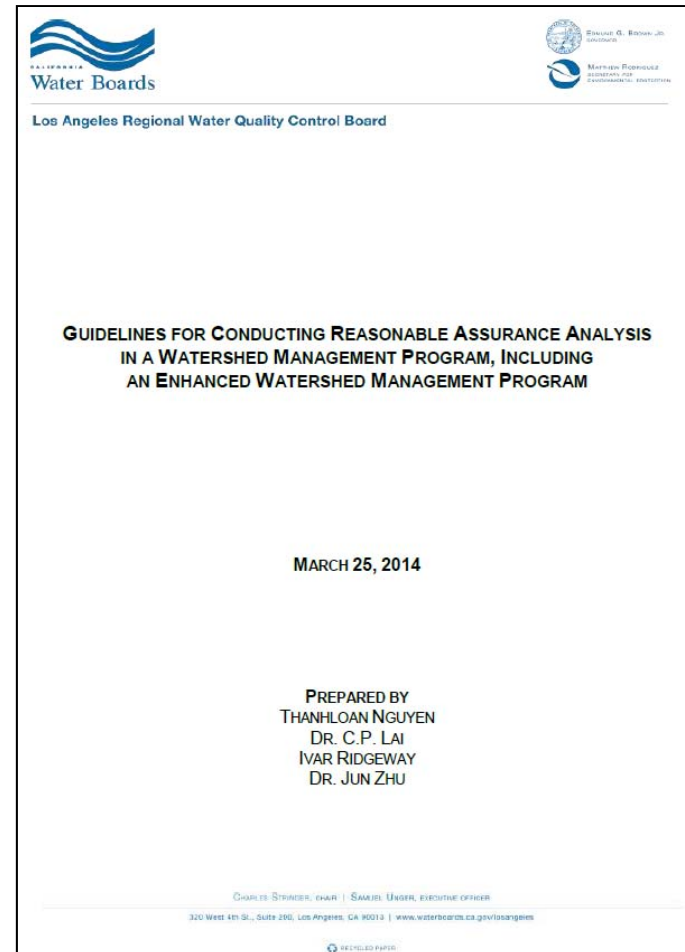
The terms of the conditional approvals are inconsistent with permit requirements and the Clean Water Act and therefore establish that the only course of action for the Executive Officer was to deny the WMPs.

Response to Contention #3

- EO determined that 9 WMPs met permit provisions
- No comment was ignored
- Issues were appropriately addressed
 - Re-analysis
 - Improved documentation/explanations
 - Commitments to data collection
 - Commitments to re-assessment
 - Greater specificity for near-term watershed control measures

Response to Contention Regarding RAA

- WMPs used regionally (LA County) calibrated models
 - Precipitation
 - Stream flow
 - Rainfall-runoff relationships
 - Water quality data
- Models reflect best engineering judgment & available data
- Re-calibration and local refinement with CIMP data
- Complete update of RAA required by State Board Order by 2021



Lower San Gabriel River WMP

Zinc as a limiting pollutant (#2)

- The Group estimated the required pollutant reductions for key metals, organics, and bacteria
- Considered data & implementation actions
- Concluded
 - Zinc - limiting in wet weather
 - Bacteria - limiting in dry weather

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Justifications:

1. WMP emphasizes retention/infiltration BMPs – therefore pollutants are not discharged to receiving waters
2. WMP emphasizes sediment control – therefore it treats pollutants transported by sediment

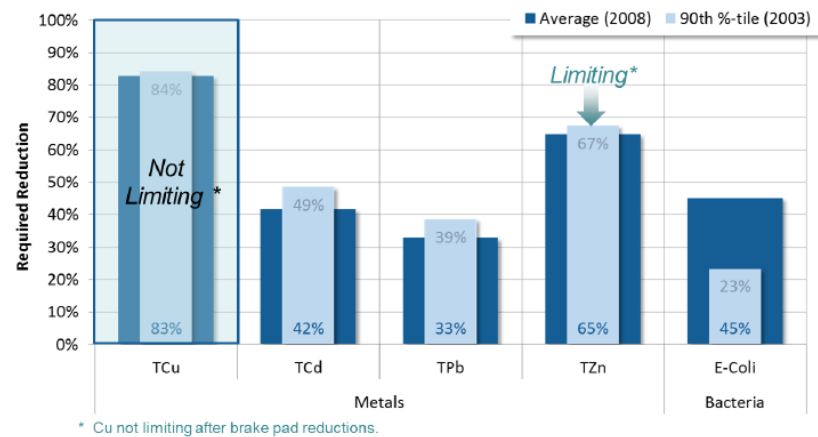


Figure 5-12. Wet-weather pollutant reduction targets and limiting pollutant for Lower Los Angeles River WMP.⁶

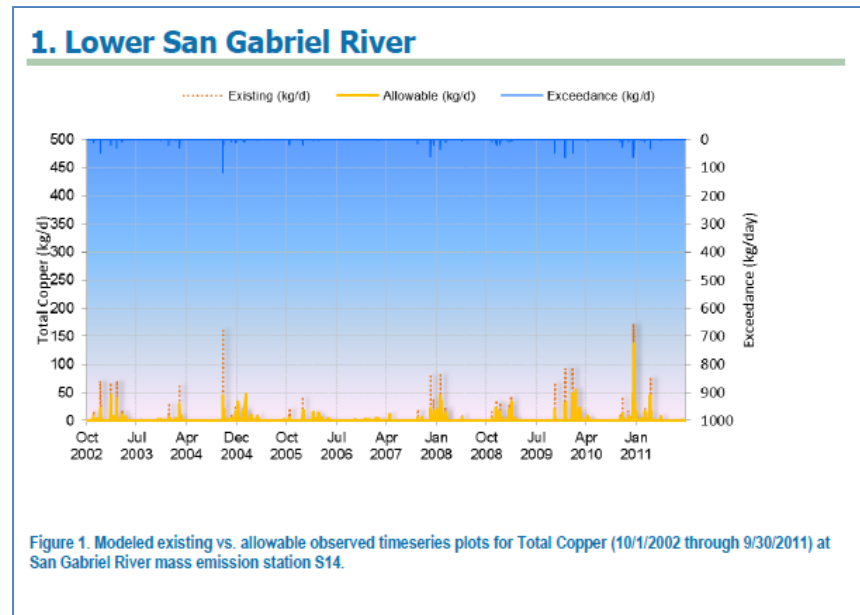
Table 5-10. Required dry-weather percent reductions by water body

WMP	Waterbody	Pollutant	Required Dry-Weather Percent Reductions		
			2003	2008	Mean
LLAR	LAR Reach 1 (freshwater)	Cu	10%	10%	10%
	LAR Reach 1 (freshwater)	Pb	0%	0%	0%
	LAR Reach 1 (freshwater)	<i>E. coli</i>	99.36%	99.36%	99.36%
LCC	LCC	Cu	76.74%	50.85%	68.43%
	LCC	<i>E. coli</i>	99.11%	99.11%	99.11%
LSGR	Coyote Cr.	Cu	31.42%	14.11%	23.73%
	Coyote Cr.	<i>E. coli</i>	98.90%	98.90%	98.90%
	SG Reach 1	Cu	39.78%	39.78%	39.78%
	SG Reach 1	<i>E. coli</i>	94.25%	94.25%	94.25%
	San Jose Cr. Reach 1 & 2	Se	0%	0%	0%
	San Jose Cr. Reach 1 & 2	<i>E. coli</i>	94.25%	94.25%	94.25%

Color Ramp shows relative magnitude of reductions—darker means higher reductions

Lower San Gabriel River WMP No Time Series Comparisons (#4)

- Comparisons provided in WMP Appendices



Lower San Gabriel River WMP

No measurable milestones (#5)

- RAA-Based Overall Volume Reduction Milestones:
 - 2017: 10% Reduction
 - 2020: 35% Reduction
 - 2026: Final Reduction
- Control Measure-Specific Milestones:
 - Nonstructural Control Measures
 - Prop 84 Projects
 - Regional Project site assessment and analysis

Lower San Gabriel River WMP

No table for runoff and reductions by sub-basin (#6)

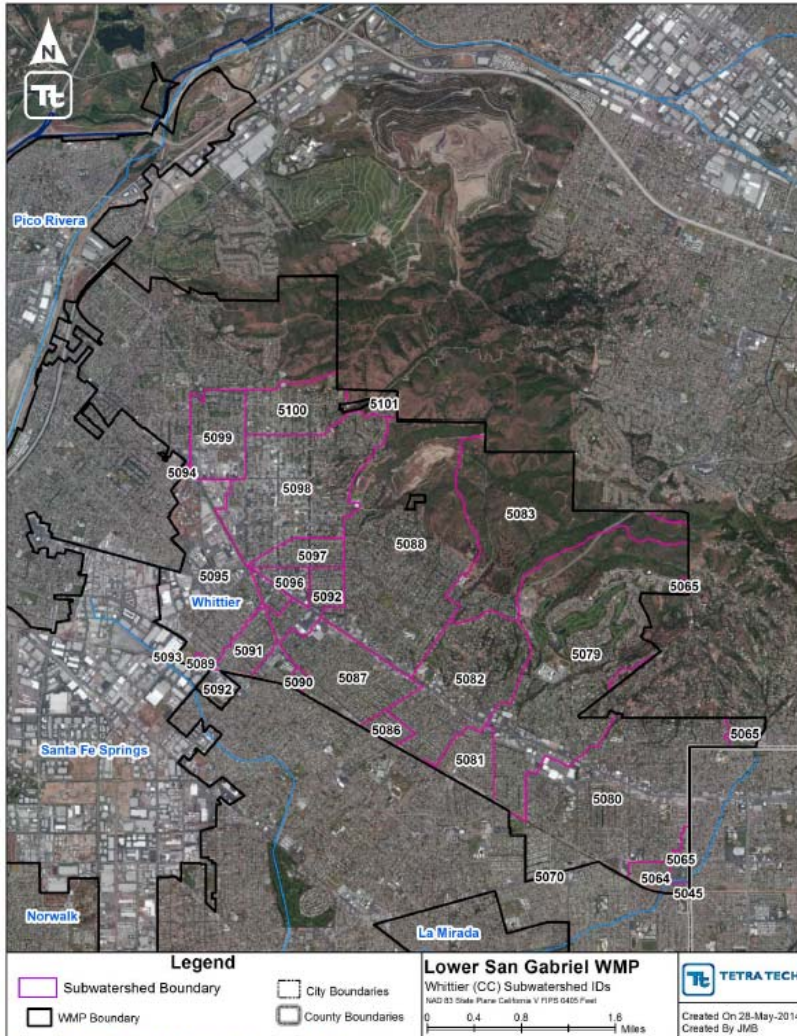


Figure 48. LSGR (CC) Whittier Subwatershed IDs

BB.10. City of Whittier

Subwatershed	Milestone	COMPLIANCE TARGET	POLLUTANT REDUCTION PLAN				
		Remaining MS4 Responsible Critical Year Volume (acre-ft/year)	Existing Distributed BMP Volume (acre-ft)	Total Estimated Right-of-Way BMP Volume (acre-ft)	Estimated Potential LID on Public Parcels Volume (acre-ft)	Remaining BMP Volume (Potentially Regional BMPs) (acre-ft)	Total BMP Volume to Achieve Compliance (acre-ft)
5045	Final	0.0	-	-	-	0.0	0.0
5064	Final	-	-	-	-	-	-
5065	Final	3.7	-	0.8	-	-	0.8
5070	Final	0.0	-	-	-	0.0	0.0
5079	Final	11.7	-	2.5	-	-	2.5
5080	Final	26.0	-	5.5	-	-	5.5
5081	35%	-	-	-	-	-	-
5082	Final	0.2	-	0.0	-	-	0.0
5083	Final	-	-	-	-	-	-
5086	Final	-	-	-	-	-	-
5087	Final	20.8	-	4.1	-	-	4.1
5088	Final	24.7	-	5.4	-	-	5.4
5089	Final	0.5	-	0.1	-	-	0.1
5090	Final	0.8	-	0.2	-	-	0.2
5091	Final	5.7	-	1.1	-	-	1.1
5092	Final	8.9	-	1.7	-	-	1.7
5093	Final	0.0	-	-	-	0.0	0.0
5094	Final	0.6	-	0.1	-	0.0	0.1
5095	Final	21.1	-	3.9	-	-	3.9
5096	Final	3.8	-	0.7	-	-	0.7
5097	Final	5.2	-	1.0	-	-	1.0
5098	Final	47.9	-	8.7	-	-	8.7
5099	Final	10.6	-	1.9	-	-	1.9
5100	Final	7.3	-	1.4	-	-	1.4
5101	Final	0.6	-	0.1	-	-	0.1
Grand Total		200.1	-	39.0	-	0.0	39.1

↑
Sub-basin

↑
Volume of Run-off

↑
BMP Volume Needed

Lower Los Angeles River WMP

San Pedro Bay omitted from WMP (#2)

Original Board Staff Comment:

- “... the WMP should be revised to include... [information and control measures]... as required in the permit for San Pedro Bay unless MS4 discharges ... directly into San Pedro Bay are being addressed under a separate WMP.”
- Discharges into San Pedro Bay are being addressed by a separate City of Long Beach WMP

Excerpt from Long Beach WMP:

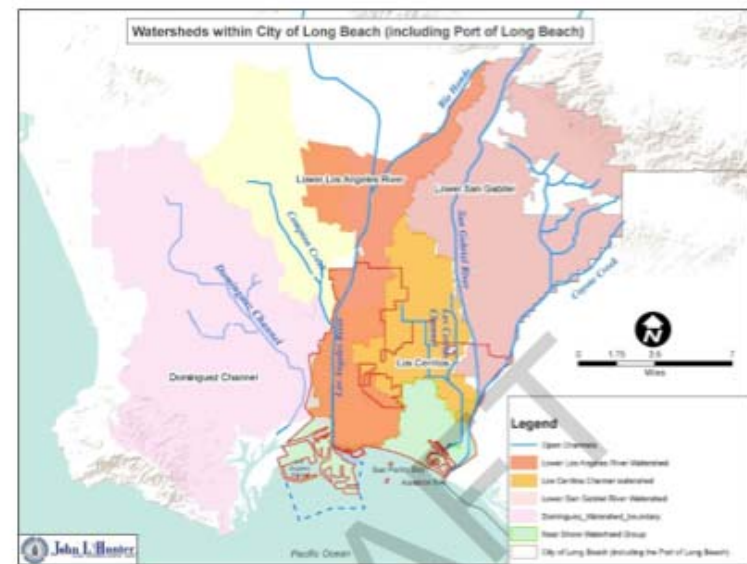


Figure 1-1: Areas Covered by the Lower LA River, Los Cerritos Channel and Lower SG River WMPs

WATER BODIES

The water bodies located within the Nearshore Watershed are the Dominguez Channel Estuary, Long Beach Harbor (including the Outer Harbor, Marinas, Public Beach Areas, and all other Inner Areas), San Pedro Bay, Colorado Lagoon, Alamos Bay, Sims Pond, Los Cerritos Wetlands, Los Cerritos Channel Estuary, San Gabriel River Estuary, Long Beach Marina, and the Marine Stadium.

Los Angeles River Upper Reach 2 Failed to provide any dry weather modeling (#2)

- Dry weather approach is appropriate:
 - Compliance assumed through implementation of permit requirements
 - Load Reduction Strategy for Bacteria
 - Dry weather flow largely absent from Rio Hondo
 - Assumptions confirmed through non-stormwater screening and monitoring program
- Dry-weather/Non-stormwater modeling considerations

Los Angeles River Upper Reach 2 Failed to Calibrate the Model (#2)

Final WMP:

- WMMS/LSPC model is regionally calibrated for hydrology and water quality performance
- Input parameters and model settings were not modified
- LSPC modeled flow compared favorably with observed flow downstream of LAR UR2 area
- Difference within 'Very Good' range of RAA guidelines

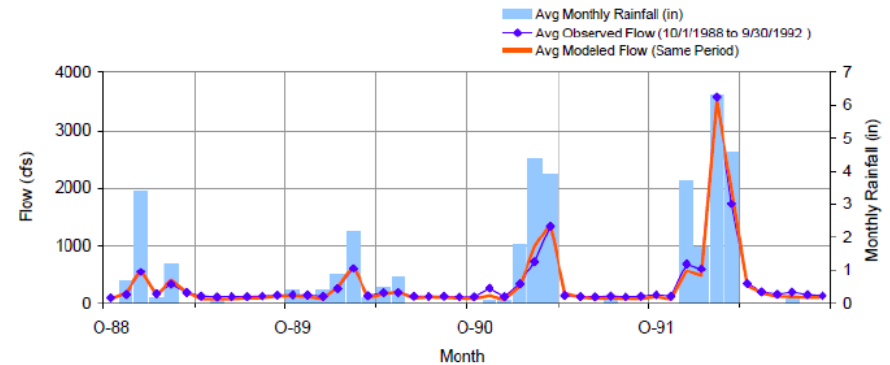


Figure 4-2 LSPC Modeled and Observed Los Angeles River Flows Above Long Beach (Figure from Los Angeles County Department of Public Works, 2010a)

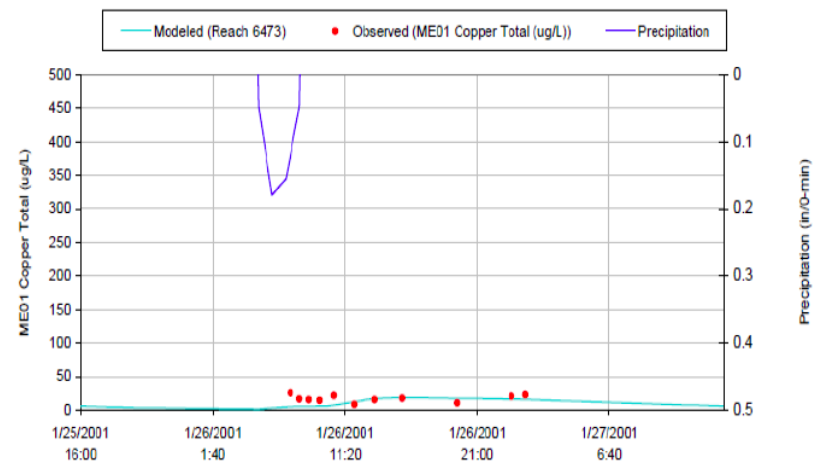


Figure 4-4 LSPC Predicted and Observed Total Copper Concentrations at Site ME01 (Figure from Los Angeles County Department of Public Works, 2010b)

Failed to Calibrate the Model (#6 cont.)

Final WMP:

- Structural BMP Prioritization and Analysis Tool (SBPAT) output compared to LSPC and adjusted as appropriate
- Comparability with County-calibrated LSPC baseline condition

Addresses Condition 6 of Approval:

Table 4-2 LSPC and SBPAT Runoff Volume Calibration Validation (Acre-Feet)

Runoff Period	Los Angeles River Runoff Volume			Rio Hondo Runoff Volume		
	LSPC	SBPAT	Difference	LSPC	SBPAT	Difference
1995	17,462	18,466	6%	3,291	3,507	7%
2011	11,819	11,832	0%	2,443	2,242	-8%
1989-2011	211,720	224,657	6%	42,265	42,532	2%

Specificity – Structural BMPs

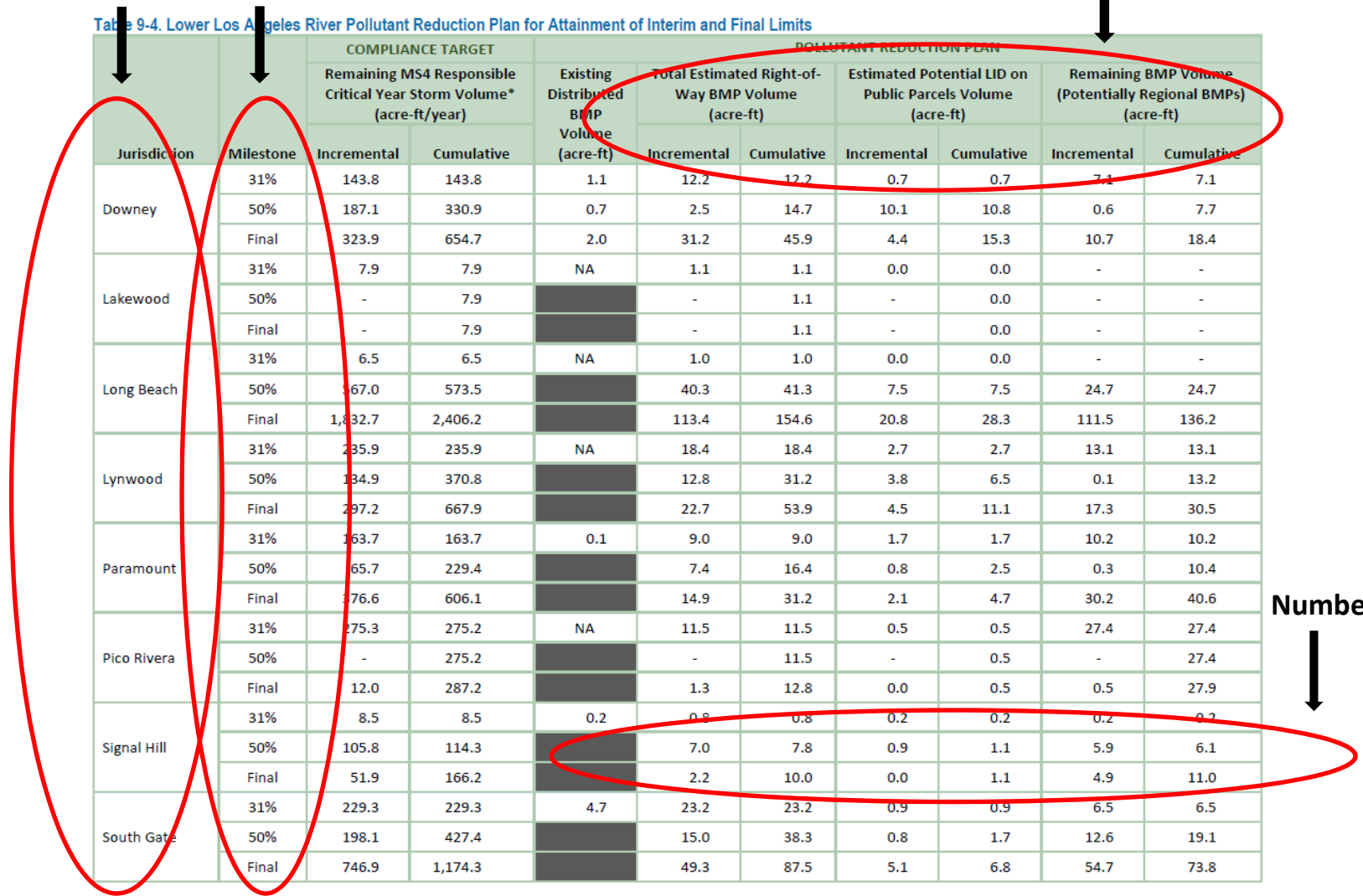
Location Schedule

Type

Table 9-4. Lower Los Angeles River Pollutant Reduction Plan for Attainment of Interim and Final Limits

Jurisdiction	Milestone	COMPLIANCE TARGET		Existing Distributed BMP Volume (acre-ft)	POLLUTANT REDUCTION PLAN					
		Remaining MS4 Responsible Critical Year Storm Volume* (acre-ft/year)			Total Estimated Right-of-Way BMP Volume (acre-ft)		Estimated Potential LID on Public Parcels Volume (acre-ft)		Remaining BMP Volume (Potentially Regional BMPs) (acre-ft)	
		Incremental	Cumulative		Incremental	Cumulative	Incremental	Cumulative	Incremental	Cumulative
Downey	31%	143.8	143.8	1.1	12.2	12.2	0.7	0.7	7.1	7.1
	50%	187.1	330.9	0.7	2.5	14.7	10.1	10.8	0.6	7.7
	Final	323.9	654.7	2.0	31.2	45.9	4.4	15.3	10.7	18.4
Lakewood	31%	7.9	7.9	NA	1.1	1.1	0.0	0.0	-	-
	50%	-	7.9		-	1.1	-	0.0	-	-
	Final	-	7.9		-	1.1	-	0.0	-	-
Long Beach	31%	6.5	6.5	NA	1.0	1.0	0.0	0.0	-	-
	50%	67.0	573.5		40.3	41.3	7.5	7.5	24.7	24.7
	Final	1,832.7	2,406.2		113.4	154.6	20.8	28.3	111.5	136.2
Lynwood	31%	235.9	235.9	NA	18.4	18.4	2.7	2.7	13.1	13.1
	50%	334.9	370.8		12.8	31.2	3.8	6.5	0.1	13.2
	Final	297.2	667.9		22.7	53.9	4.5	11.1	17.3	30.5
Paramount	31%	163.7	163.7	0.1	9.0	9.0	1.7	1.7	10.2	10.2
	50%	65.7	229.4		7.4	16.4	0.8	2.5	0.3	10.4
	Final	76.6	606.1		14.9	31.2	2.1	4.7	30.2	40.6
Pico Rivera	31%	275.3	275.2	NA	11.5	11.5	0.5	0.5	27.4	27.4
	50%	-	275.2		-	11.5	-	0.5	-	27.4
	Final	12.0	287.2		1.3	12.8	0.0	0.5	0.5	27.9
Signal Hill	31%	8.5	8.5	0.2	0.8	0.8	0.2	0.2	0.2	0.2
	50%	105.8	114.3		7.0	7.8	0.9	1.1	5.9	6.1
	Final	51.9	166.2		2.2	10.0	0.0	1.1	4.9	11.0
South Gate	31%	229.3	229.3	4.7	23.2	23.2	0.9	0.9	6.5	6.5
	50%	198.1	427.4		15.0	38.3	0.8	1.7	12.6	19.1
	Final	746.9	1,174.3		49.3	87.5	5.1	6.8	54.7	73.8

Number



Specificity – Structural BMPs

5.4.7 CITY OF SIGNAL HILL

Jurisdiction	Milestone	POLLUTANT REDUCTION PLAN	
		Total Estimated BMP Volume (acre-ft)*	
		Incremental	Cumulative
Signal Hill	31%	1.2	1.2
	50%	13.8	15.0
	Final	7.1	22.1

*Values attained after the city's existing distributed BMP volumes totaling 0.2 acre-ft were incorporated

According to the RAA results, the city of Signal Hill will need to capture and/or treat 1.2 acre-feet of stormwater by September 30, 2017 to meet the 31% interim compliance milestone, 15 acre-feet by January 11, 2024 to meet the 50% interim compliance milestone, and 22.1 acre-feet by January 11, 2028 to meet the final compliance milestone.

Right-of-Way BMPs could be used for the 1.2 acre-feet to meet the 31% compliance milestone. These BMPs could be located within any city-owned street in order to avoid land acquisition.

If Signal Hill Park were transformed into infiltration BMPs, the park would have the potential of retaining 8.2 acre-feet of stormwater. Right-of-Way BMPs could be used for the remaining 6.8 acre-feet to meet the 50% compliance milestone.

31% Interim Compliance Milestone	
Potential BMP Site	Potential Design Capture Volume (ac-ft)
Right-of-Way BMPs	1.2
Total	1.2
50% Interim Compliance Milestone	
Potential BMP Site	Potential Design Capture Volume (ac-ft)
Signal Hill Park	8.2
Right-of-Way BMPs	6.8
Cumulative Total	15.0

Specificity – Structural BMPs

- Regional BMP Milestones:
 - March 2016: Preliminary Site Assessments
 - December 2016: Field Analysis at Selected Sites
- Explicit Permittee commitment to meet load reductions

Specificity – Structural BMPs

Draft WMP



Revised WMP

5.2 PLANNED PROJECT - PROPOSITION 84 GRANT AWARD

The cities of Downey, Norwalk, Santa Fe Springs, and Whittier are participating in a regional multi-watershed project through the Gateway Water Management Authority (GWMA). This project applied for and was awarded funding through the Proposition 84 Grant. Initiation of this project will begin as soon as the grant contracts and funding are finalized which is expected to be in the fall of 2014. The BMPs include: one (1) vegetated bioswale, six (6) tree box filters, and ten (10) bioretention tree wells. The project will install LID BMPs along transportation corridors to treat stormwater runoff and its associated pollutants.

The project is in the preliminary design phase. Installation of the BMPs is anticipated in 2016/2017. With the installation of these LID BMPs, this project is expected to reduce pollutant loads throughout the watershed. The full benefits of this project as it ties into interim and final compliance milestones will be determined during the adaptive management process.

5.2 PLANNED PROJECT - PROPOSITION 84 GRANT AWARD

The cities of Downey, Norwalk, Santa Fe Springs, and Whittier are participating in a regional multi-watershed project through the Gateway Water Management Authority (GWMA). This project applied for and was awarded funding through the Proposition 84 Grant. Initiation of this project will begin as soon as the grant contracts and funding are finalized which is expected to be in the fall of 2014. The BMPs include: one (1) vegetated bioswale, six (6) tree box filters, and ten (10) bioretention tree wells. The project will install LID BMPs along transportation corridors to treat stormwater runoff and its associated pollutants.

With the installation of these LID BMPs, this project is expected to reduce pollutant loads throughout the watershed. The full benefits of this project as it ties into interim and final compliance milestones will be determined during the adaptive management process. The project is currently in the design phase. Project milestones and implementation timeframes are as follows:

Design, Environmental Documentation and Design and Bid Solicitation Process

The Project went through review to determine compliance with the environmental requirements such as those outlined in the California Environmental Quality Act (CEQA) in December 2014.

The Project will begin the process of obtaining necessary permits such as local construction permits and Los Angeles County permits in May 2015. This task is expected to be finalized in July 2015, prior to commencement of construction. All proposed BMPs will be located on public property in the public right of way and therefore, issues obtaining site access are not expected as well as obtaining access agreements and easement deeds will not be required.

During the Project design and bid process, a preliminary engineering analysis will be performed for proposed designs and locations, preparation and review of design drawings and technical specifications. The Participating Agencies will collaborate in reviewing the submitted proposals and construction documents. Once the review process is complete a construction contract will be awarded and finalized by the end of July 2015.

Construction and Implementation

The Project construction and implementation process is expected to begin in August 2015. Construction is anticipated to last for approximately twelve months and completion is expected in August 2016. Associated activities for construction will include mobilization and site preparation, excavation, installation of BMPs and proper coordination with contractors.

Specificity - Structural BMPs



Final WMP

5.2 PLANNED PROJECT - PROPOSITION 84 GRANT AWARD

The cities of Downey, Norwalk, Santa Fe Springs, and Whittier are participating in a regional multi-watershed project through the Gateway Water Management Authority (GWMA). This project applied for and was awarded funding through the Proposition 84 Grant. Initiation of this project will begin as soon as the grant contracts and funding are finalized which is expected to be in the fall of 2014. The BMPs include: one (1) vegetated bioswale, six (6) tree box filters, and ten (10) bioretention tree wells. Table 5-2 lists the responsible Permittees for each LID BMP in the Proposition 84 Grant project and Table 5-3 lists the deadlines and status for certain project milestones.

Table 5-2: Permittees Responsible for LID BMPs in the Proposition 84 Project

City	LID BMPs	Anticipated Treatment Volume ¹	Watersheds
Downey	(4) Tree box filters (1) Bioswale	29,032 cf 11,741 cf	San Gabriel River
Norwalk	(2) Tree box filters	14,516 cf	San Gabriel River
Santa Fe Springs	(2) Tree box filters	14,516 cf	San Gabriel River
Whittier	(10) Bioretention Tree Wells	5,870 cf	San Gabriel River

Table 5-3: Deadlines and Status for Prop 84 Tasks

Milestone	Deadline	Status
CEQA	January 2015	Completed
Monitoring Plan, Project Plan and Assessment, and Quality Assurance Project Plan	March 2015	Pending Approval
Preliminary Plans and Specifications	March 2015	Completed
Final Plans and Specifications	June 2015	Pending Approval
Awarded Construction Contract	July 2015	In Progress
Construction and Implementation	August 2015 – August 2016	Expected
Operation and Maintenance Plan	August 2016	Expected
Monitoring and Reporting	October 2016 – April 2017	Expected
Project Completion	April 2017	Expected

With the installation of structural LID BMPs, this project is expected to reduce pollutant loads throughout the watershed. The full benefits of this project as it ties into interim and final compliance milestones will be

¹ Treatment volume calculations based on a 24-hour, 0.75-inch storm, 6x6 tree box filter units, and a 1200 LF swale. Additional details and calculations used to determine treatment volumes can be found in Attachment 6: Technical Report

determined during the adaptive management process. The project is currently in the design phase. Project milestones and implementation timeframes are as follows:

Design, Environmental Documentation and Design and Bid Solicitation Process

The Project went through review to determine compliance with the environmental requirements such as those outlined in the California Environmental Quality Act (CEQA) in January 2015.

The Monitoring Plan, the Project Assessment and Evaluation Plan, and the Quality Assurance Project Plan were all submitted in March 2015. The Project Assessment and Evaluation Plan was approved, and the Monitoring Plan and the Quality Assurance Project Plan are expected to be approved May 2015. Preliminary plans and specifications were developed and submitted in March 2015. Comments were received and addressed, and final plans and specifications are expected to be approved by June 2015. All proposed BMPs will be located on public property in the public right of way and therefore, issues obtaining site access are not expected as well as obtaining access agreements and easement deeds will not be required.

During the Project design and bid process, a preliminary engineering analysis will be performed for proposed designs and locations, preparation and review of design drawings and technical specifications. The Participating Agencies will collaborate in reviewing the submitted proposals and construction documents. Once the review process is complete a construction contract will be awarded and finalized by the end of July 2015.

Construction and Implementation

The Project construction and implementation process is expected to begin in August 2015. Construction is anticipated to last for approximately twelve months and completion is expected in August 2016. Associated activities for construction will include mobilization and site preparation, excavation, installation of BMPs and proper coordination with contractors. An Operation and Maintenance Plan will be developed by end of the year 2016. Monitoring and reporting will be conducted beginning October 2016. Community event materials, survey results, and school outreach materials will all be developed by end of the year 2016. All construction, monitoring and administration activities are expected to be completed by April 2017.

“Permit language does not describe what an Adaptive Management Process is ... provides no structure, timeline, or process...”

- **Structure:**
 - Required considerations & substantive reporting requirements [Parts VI.8.a.i & VI.8.a.iv; Attachment E, Part XVIII.6; WMP approval letters]
- **Timeline:**
 - Every 2 years upon WMP approval [Part VI.8.a; WMP approval letters]
- **Process:**
 - Reported in annual report or ROWD [Part VI.8.a.ii]
 - Modifications subject to public review & EO approval [Part VI.8.a.iii]
 - Implement modification upon approval or within 60 days if EO expresses no objections [Part VI.8.a.iii]
 - Complete update by June 2021 or as otherwise directed by EO [Part VI.8.b]

EPA Watershed Academy training materials:

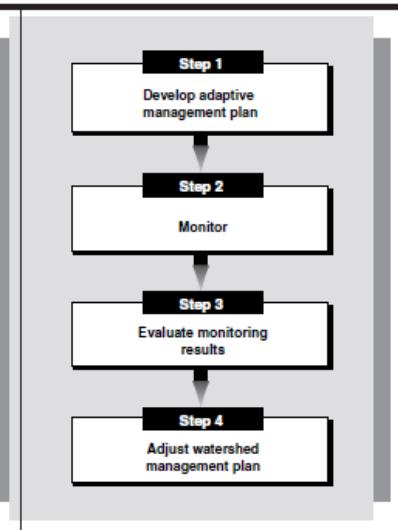
Adaptive Management Process

Step Chart

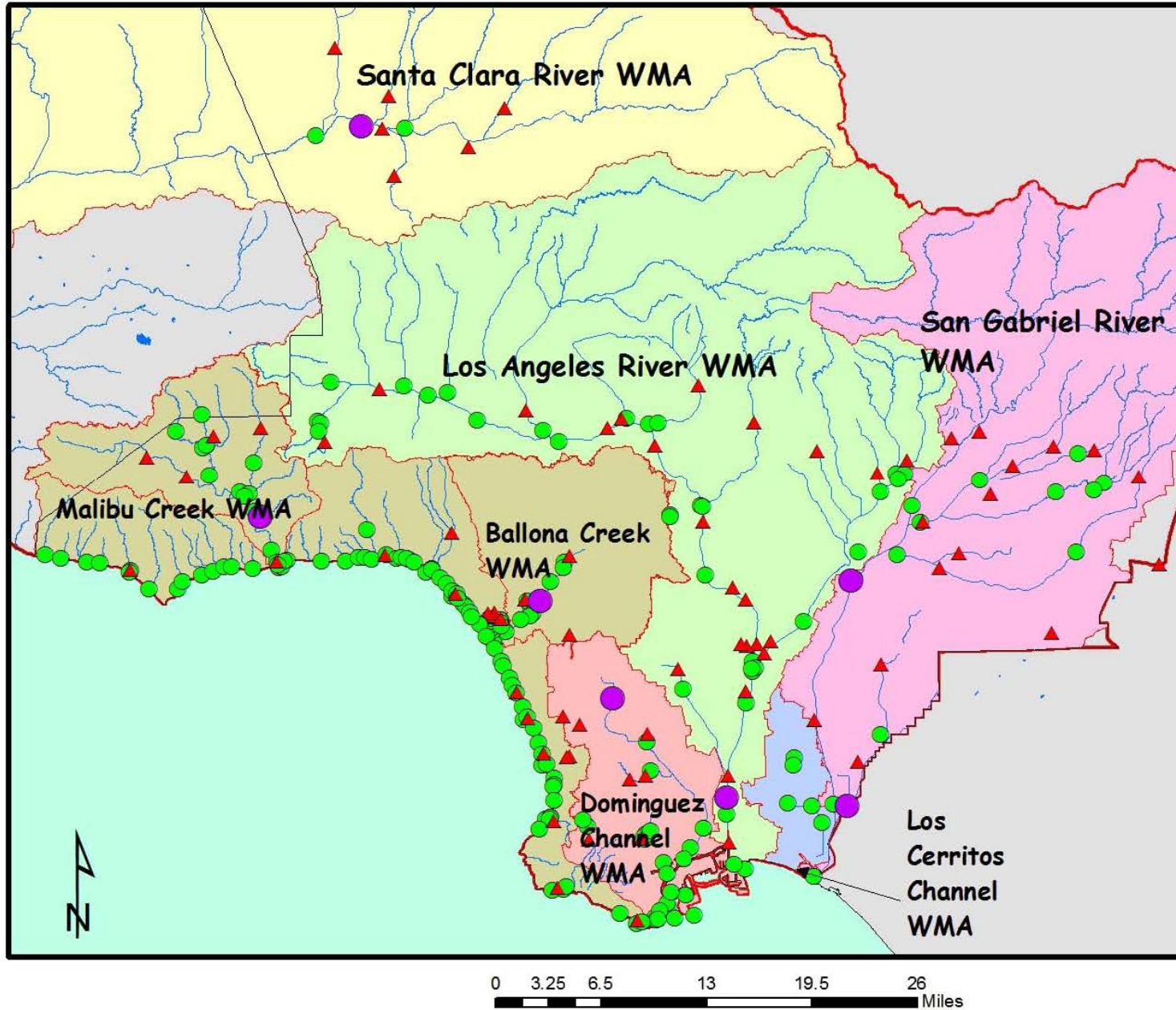
Procedure

The objectives of the Adaptive Management step are as follows:

- To create a system to monitor changes in the watershed.
- To evaluate trends using monitoring data.
- To modify the watershed management plan as necessary.



Original Mass Emissions Monitoring Sites and Proposed CIMP Monitoring Sites



Conclusion

- Permittees:
 - Conducted appropriate RAAs,
 - Developed a sound compliance strategies based on their RAA,
 - Have made commitments to significant milestones; and
 - Have committed to reassessing their strategy
 - Based on data collected through their CIMPs
 - Adaptive management process
- WMPs meet permit requirements
- Consistent with expectations for 20- to 25-year strategic watershed management programs

Sample of Structural BMPs Implemented by December 2017

Structural BMP(s)	Completion Date
Modular Wetland Systems	80% drainage area by 3/6/15 and 100% drainage area by 3/6/16
5 Green Street Projects	June 2016
Telegraph Road Overlay Infiltration Project (Commerce)	April 30, 2015
3820 & 4100 S. 26th St Prop 84 Tree Boxes (Vernon)	September 22, 2015
Low flow diversion to infiltration/evapotranspiration facility	September 30, 2017
Stormwater Capture Facility	September 30, 2017
LID BMPS (4 Tree Box Filters)	September 30, 2016
LID BMPs (13 Tree Box Filters, 10 Bioretention Tree Wells)	April 30, 2017
Enhanced Street Sweeping using high efficiency vacuum street sweepers	September 1, 2017