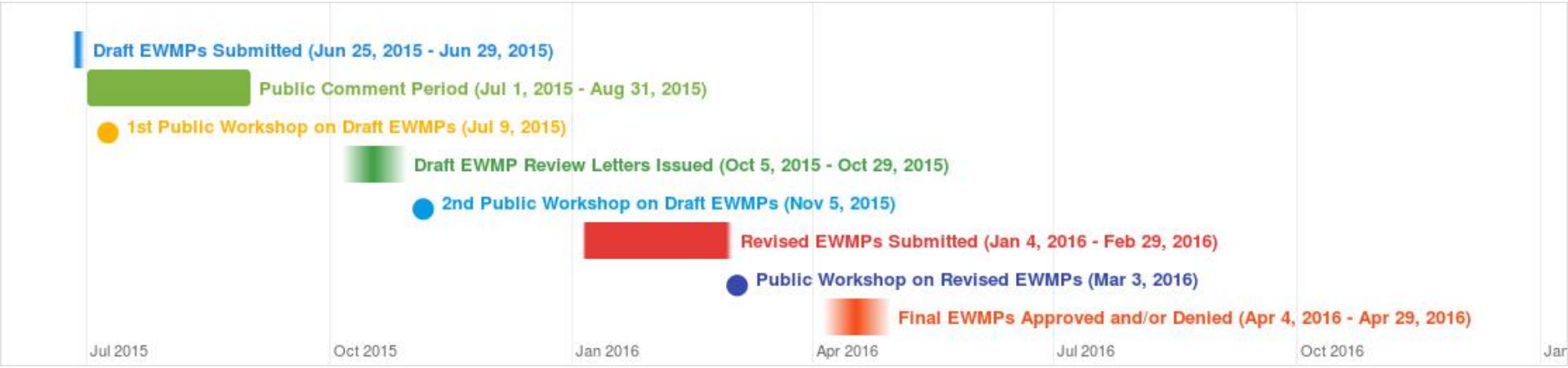
EWMP Workshop

March 3, 2016

CALIFORNIA
Water Boards

EWMP Review Process



Los Angeles River (Credit: I. Ridgeway)

EWMP Comments and Revisions

Key Staff Comments on Draft EWMPs

1. Reasonable Assurance Analysis (RAA)
   - Approaches and Assumptions
2. Water Quality Characterization and Priorities
   - Water-Body Pollutant Combinations
3. Control Measures
4. Financial Strategy
   - Details on Funding Sources
5. Implementation Timelines
   - Control Measure Implementation

Examples – RAA / Control Measures Effectiveness

Table ES-11. Dominguez Channel Watershed – Reasonable Assurance Analysis Results – Interim and Final Compliance

Pollutant	Date	Implementation Benefits (average load reduction as % of baseline for the critical condition[1])							TLR	Compliance (TLR Met)?
		Non-Structural BMPs (Non-Modeled)	Public Retrofit Incentives + Redevelopment	Non-MS4	Regional BMPs	Distributed BMPs	Distributed BMP Implementation Level	Estimated Load Reduction		
Analysis Region DC-RB/MB										
Zinc	2032 (Final)	5%	9%	6%	39%	20%	14% SFR, MFR, COM, IND	79%	76%	Yes
Copper	2032 (Final)	24%[2]	0%	5%	30%	26%		85%	62%	Yes
Fecal coliform	2022 (Interim)	2.1%	1.5%	0.7%	0%	4.1%	3% SFR, MFR, COM, IND	8.4%	8.3%	Yes
	2027 (Interim)	3.5%	2.4%	1.3%	0%	10%	7% SFR, MFR, COM, IND	17%	17%	Yes
	2032 (Final)	5%	3.2%	1.8%	45%	20%	14% SFR, MFR, COM, IND	74%	33%	Yes
Analysis Region DC-Torrance										
Zinc	2032 (Final)	5%	0%	0%	0%	75% per filter	Catch basin inlet filters	See note 3	76%	See note 3
Copper	2032 (Final)	14%[2]	0%	0%	0%	75% per filter	Catch basin inlet filters	See note 3	62%	See note 3
Fecal coliform	2022 (Interim)	2.1%	0%	0%	0%	33% per filter	Catch basin inlet filters	See note 3	8.3%	See note 3
	2027 (Interim)	3.5%	0%	0%	0%	33% per filter	Catch basin inlet filters	See note 3	17%	See note 3
	2032 (Final)	5%	0%	0%	0%	33% per filter	Catch basin inlet filters	See note 3	33%	See note 3

[1] The critical condition is TMDL year 1995 for fecal coliform, 11/30/2007 for copper, 2/5/2010 for lead, and 2/26/2006 for zinc.

[2] Load reduction attributable to copper brake pad phase-out, after accounting for other BMPs, up to 55%.

[3] Load reduction sum cannot be estimated at this time. The individual load reduction for each inlet filter's drainage area is shown under the "Distributed BMPs" column. Initially, 200 of 643 catch basins are planned to be retrofitted in high priority catchments. The total load reduction from inlet filters will be evaluated in the future through CIMP monitoring, as part of the EWMP adaptive management process. At that time, the catch basin BMPs will be modified, with additional filters installed as necessary and additional structural/non-structural BMPs proposed as needed to meet the TLRs required to achieve water quality objectives by the compliance deadlines.

Beach Cities Revised EWMP – Table ES-11 (pg. ES-27)

Examples – Compliance Deadlines

Table 3-5. Compliance Schedule for Category 1 and 2 Water Quality Priorities that are not Included in a Regional Board Adopted TMDL

Constituent	WQP Category and Water Body	Compliance Schedule Source	Weather Condition	Compliance Dates and Compliance Milestones (Bolded numbers indicated milestone deadlines within the current Permit term) [1,2]									
				2013	2014	2015	2016	2019	2020	2024	2028	2032	2037
2,3,7,8-TCDD (Dioxin)	C2: Reach 3 C2: Burbank Western Channel	LAR Bacteria TMDL	Dry	See Table 3-6 for Interim and Final Compliance Milestones									
			Wet										Final

Upper Los Angeles River Draft EWMP – Table 3-5 (pg. 3-10)

Table 3-13. Compliance Schedule for Category 1 and 2 Water Quality Priorities that are not Included in a Regional Board Adopted TMDL

Constituent	WQP Category and Water Body	Compliance Schedule Source	Weather Condition	Compliance Dates and Compliance Milestones (Bolded numbers indicated milestone deadlines within the current Permit term) [1,2]									
				2013	2014	2015	2016	2019	2020	2024	2028	2032	2037
2,3,7,8-TCDD (Dioxin)	C2: Reach 3 C2: Burbank Western Channel	LAR Metals TMDL	Dry						75%	100%			
			Wet							50%	100%		

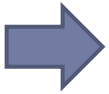
Upper Los Angeles River Revised EWMP – Table 3-13 (pg. 3-21)

Examples – Compliance Deadlines

7.3 SCHEDULING OF CONTROL MEASURES AND EWMP MILESTONES

As described in Section 6.4.3, the scheduling of control measures for the EWMP Implementation Plan is based on the BMP-based milestones created by the USCR EWMP Group. The SCR Bacteria TMDL, which is the primary TMDL for this EWMP, does not have reduction milestones or a schedule of interim requirements. As a result, the Group defined a set of milestones based on aggressive yet realistic implementation of enhanced MCMs, high priority regional projects and green streets over the next two Permit terms. Three interim milestone dates were set to correspond approximately with the requirement to evaluate progress on a watershed scale every two years: (1) 2017 to reflect the end of the current permit term, (2) 2020 to reflect the middle of the second permit term, and (3) 2022 to reflect the end of the second permit term. To reflect final EWMP compliance milestones, the dry and wet weather final TMDL compliance deadlines for the Bacteria TMDL are used (2023 and 2029 respectively) for all constituents except metals. A final deadline of 2035 is included for any additional control measures needed to address metals after the controls to address bacteria and other constituents are implemented. This final date was determined to be as soon as possible given the additional structural control measures that may need to be implemented.

Upper Santa Clara River Draft EWMP – Section 7.3 (pg. 7-14)



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- Additional monitoring data will need to be collected and assessed to determine if metals are still exceeding water quality objectives and if additional BMPs are necessary (approximately 2-3 years).
- Time is needed to secure funding, complete the planning process, and construct additional BMPs (approximately 4-5 years).

The final date was determined to be as soon as possible given the time needed to confirm additional structural control measures are needed and design and construct those additional facilities.

Upper Santa Clara River Final EWMP – Section 7.3 (pg. 7-14)

San Gabriel Forest Gateway Interpretive Center –
From Rio Hondo / San Gabriel River EWMP (pg. 68)

Implementation – Financial Strategy

Implementation – Financial Strategy

- Obtaining financing for projects necessary to achieve pollutant reductions

  - **Evaluation of Funding Sources**
  - **Near-Term and Long-Term Focus**
  - **Milestone Commitments**
  - **Funding and Project Milestone Contingencies**

Implementation – Financial Strategy

Table 9-6 Green Streets Projects Funding Sources Prioritization

Funding Source	Estimate of Potential Annual Available Funding in the Watershed	Scope/ Scale		Potential/ Feasibility	
		Project	Program	Near Term (<5 years)	Long Term (>5 years)
Clean Water State Revolving Fund[1]	$$$$	●	●	High	High
Service Related Fees[1]	$-$$		●	High	High
Federal/ State Grants[1]	$	●		Moderate	Moderate
Property Based Fees[1]	$$-$$$		●	Moderate	High
Special Assessment Districts[1]	$$-$$$	●	●	Moderate	High
Public Private Partnerships	$	●	●	Low	Moderate
Sales Tax Measure[1]	$-$$		●	Low	Moderate
Environmental Impact Fees[1]	$-$$		●	Low	Moderate

1. Subject to local, state, and federal restrictions on use of funds. May not be eligible for property acquisition.

Available Funding Key:
$ = $1-5M
$$ = $5-25M
$$$ = $25-100M
$$$$ = >$100M

Upper Los Angeles River EWMP – Table 9-6 (pg. 9-14)

Low Interest Loans

- Clean Water State Revolving Fund (CWSRF)
  - Interest Rate – ½ most recent General Obligation Bond Rate
  - Financing Term – Up to 30 years or useful life
  - Financing Amount – No maximum funding or disbursement limit
  - Repayment – Begins 1 year after construction completion

- California Infrastructure and Economic Development Bank
  - Low-cost financing option for a wide range of infrastructure projects
  - Funding Amount – $50,000 to $25 million
  - Funding Terms – Up to 30 years

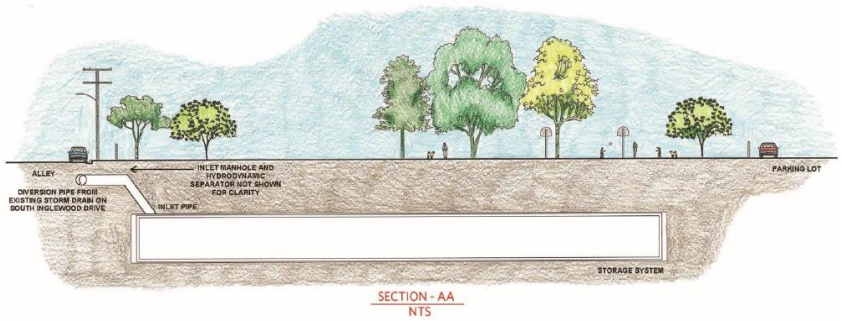
Fee Based Programs

- Service-related Fees
  - Increase or establish fees for new development and redevelopment, inspections, maintenance, etc.
- Property-based Fees
  - Establish parcel tax based on certain factors (e.g. size, impervious area, etc.)
- Special Assessment Districts
  - Form a district to fund improvements over a defined area

Grants

- Example:
  - Proposition I Stormwater Grant Progarm

- Concerns:
  - Limited Amount of Funding Available (e.g. $200 million available under Proposition I Stormwater Grant Program)
  - Competitive
  - Grant Administration Time and Costs
  - Project Readiness
  - Operations and Maintenance not typically covered



Ramona Park – From Dominguez Channel Revised EWMP Figure 4-8 (pg. 4-25)

Implementation – Timelines

Implementation – Timelines

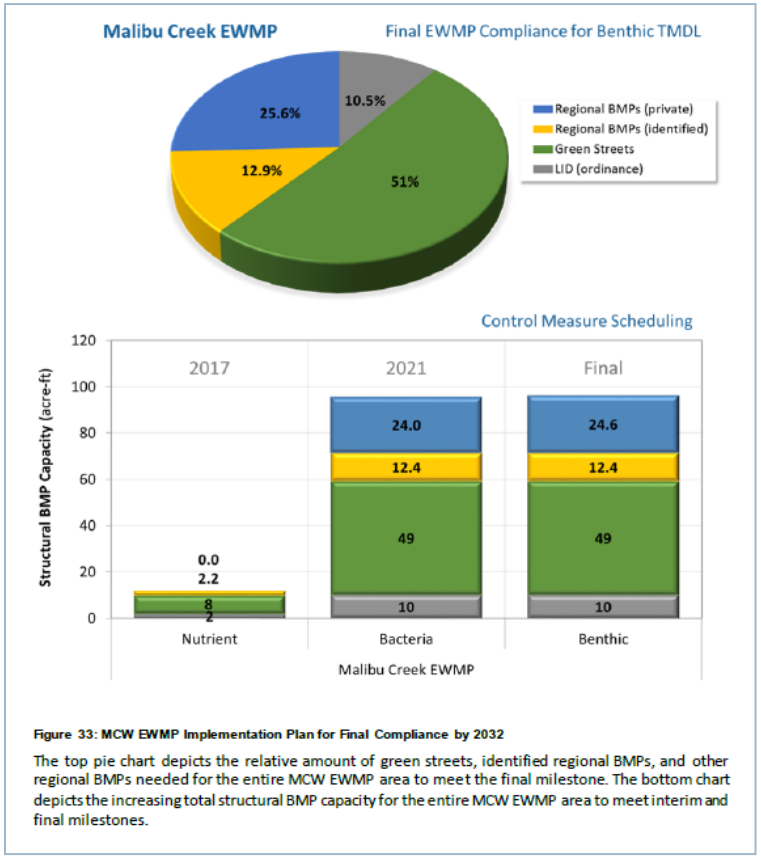


Figure 33: MCW EWMP Implementation Plan for Final Compliance by 2032

The top pie chart depicts the relative amount of green streets, identified regional BMPs, and other regional BMPs needed for the entire MCW EWMP area to meet the final milestone. The bottom chart depicts the increasing total structural BMP capacity for the entire MCW EWMP area to meet interim and final milestones.

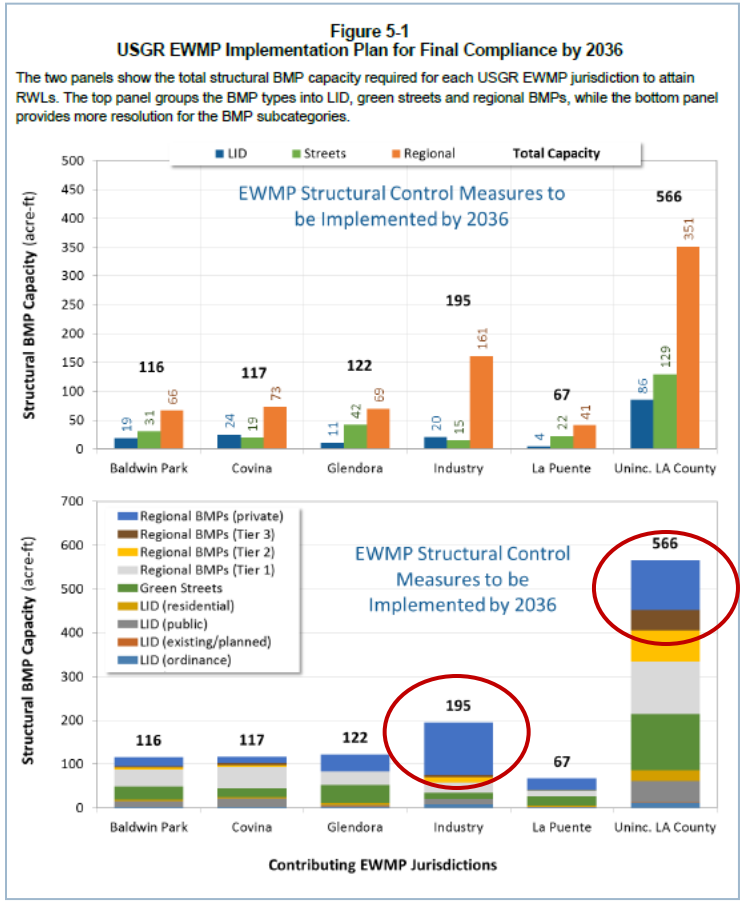
Malibu Creek Revised EWMP – Figure 33 (pg. 93)

Table 47: EWMP Compliance Cost Summary

BMP Scenario	Capital Cost ($)	Annual O&M Cost ($)
Regional	21,058,000	251,000
Green Streets	108,643,000	2,173,000
Private Regional	64,883,000	1,298,000
Total	**194,584,000**	**3,722,000**

Malibu Creek Revised EWMP – Table 47 (pg. 108)

Implementation – Timelines



Upper San Gabriel River Revised EWMP – Figure 5-1 (pg. 101)

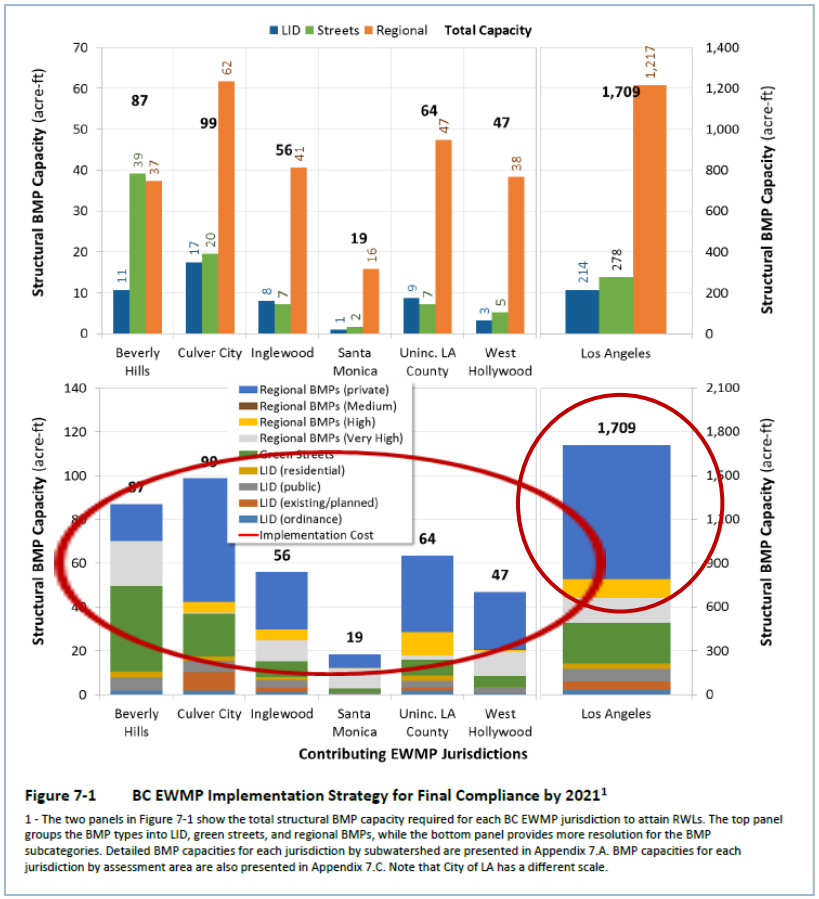


Figure 7-1 BC EWMP Implementation Strategy for Final Compliance by 2021[1]

1 - The two panels in Figure 7-1 show the total structural BMP capacity required for each BC EWMP jurisdiction to attain RWLs. The top panel groups the BMP types into LID, green streets, and regional BMPs, while the bottom panel provides more resolution for the BMP subcategories. Detailed BMP capacities for each jurisdiction by subwatershed are presented in Appendix 7.A. BMP capacities for each jurisdiction by assessment area are also presented in Appendix 7.C. Note that City of LA has a different scale.

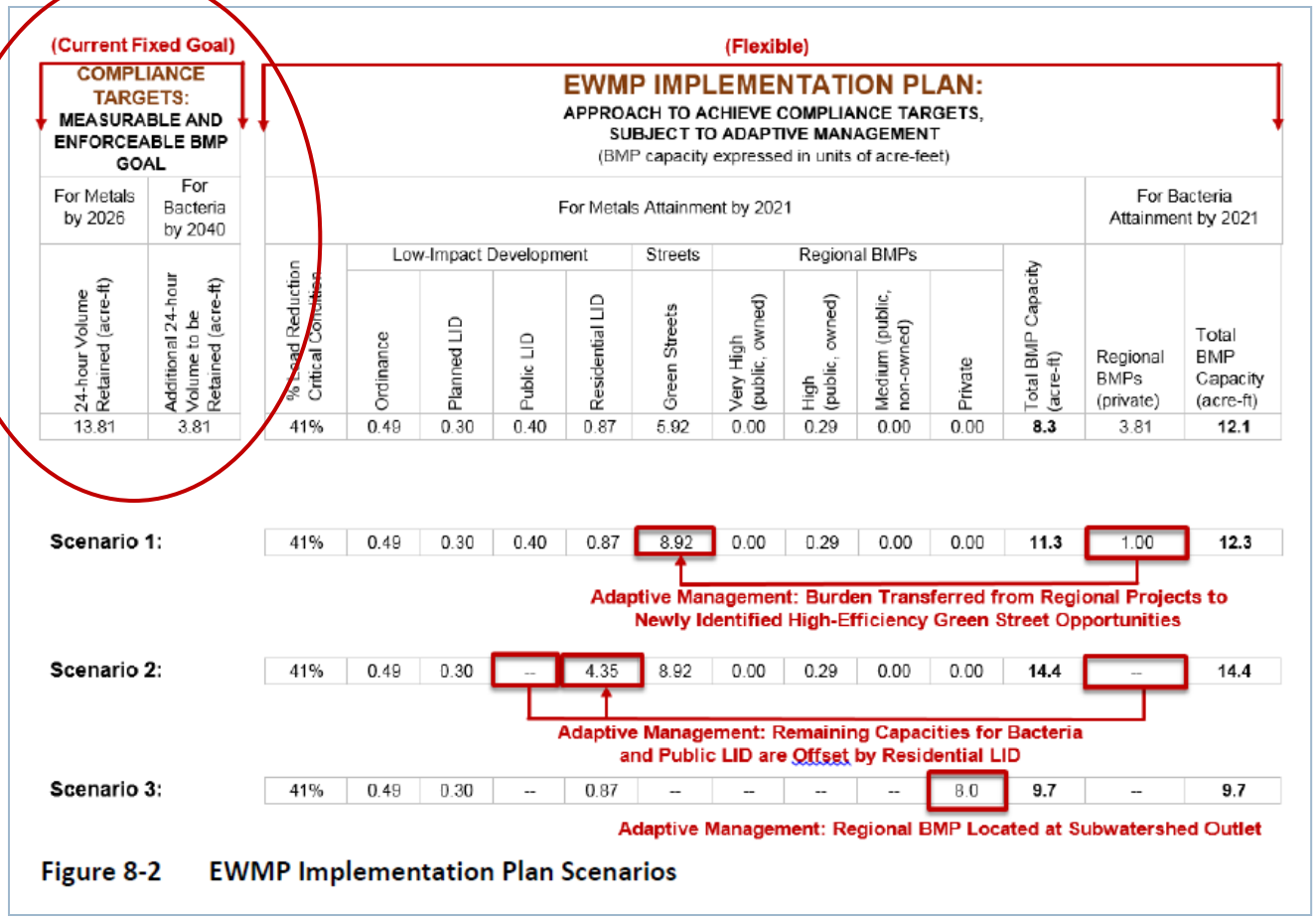
Ballona Creek Revised EWMP – Figure 7-1 (pg. 7-3)

Implementation - Timelines

- Strategies to complete an adequate number of projects in the required timeframes

  - **RAA-Based Milestones (e.g. Volume Based Milestones)**
  - **Milestones for "High-Priority" Projects**
  - **Commitment, Project Substitutions, and Partnerships**
  - **Funding and Project Milestone Contingencies**

Examples – RAA Milestones



(Current Fixed Goal)

COMPLIANCE TARGETS: MEASURABLE AND ENFORCEABLE BMP GOAL

(Flexible)

EWMP IMPLEMENTATION PLAN:
APPROACH TO ACHIEVE COMPLIANCE TARGETS, SUBJECT TO ADAPTIVE MANAGEMENT
(BMP capacity expressed in units of acre-feet)

For Metals by 2026	For Bacteria by 2040	For Metals Attainment by 2021										For Bacteria Attainment by 2021	
			Low-Impact Development				Streets	Regional BMPs					
24-hour Volume Retained (acre-ft)	Additional 24-hour Volume to be Retained (acre-ft)	% Load Reduction Critical Condition	Ordinance	Planned LID	Public LID	Residential LID	Green Streets	Very High (public, owned)	High (public, owned)	Medium (public, non-owned)	Private	Total BMP Capacity (acre-ft)	Regional BMPs (private)	Total BMP Capacity (acre-ft)
13.81	3.81	41%	0.49	0.30	0.40	0.87	5.92	0.00	0.29	0.00	0.00	**8.3**	3.81	**12.1**
Scenario 1:		41%	0.49	0.30	0.40	0.87	8.92	0.00	0.29	0.00	0.00	**11.3**	1.00	**12.3**
Scenario 2:		41%	0.49	0.30	--	4.35	8.92	0.00	0.29	0.00	0.00	**14.4**	--	**14.4**
Scenario 3:		41%	0.49	0.30	--	0.87	--	--	--	--	8.0	**9.7**	--	**9.7**

Adaptive Management: Burden Transferred from Regional Projects to Newly Identified High-Efficiency Green Street Opportunities

Adaptive Management: Remaining Capacities for Bacteria and Public LID are Offset by Residential LID

Adaptive Management: Regional BMP Located at Subwatershed Outlet

Figure 8-2 EWMP Implementation Plan Scenarios

Ballona Creek Revised EWMP – Figure 8-2 (pg. 8-7)

Examples – Project Milestones

Table 3-4
Example Regional EWMP Project Sites

Regional EWMP Project Site	Address
Finkbiner Park	160 N. Wabash Ave, Glendora, CA 91741
Bassett Park	510 Vineland Avenue, La Puente, CA 91746
Kahler Russell Park	735 North Glendora Avenue, Covina, CA 91724
San Angelo Park and Vacant Lot	245 San Angelo Avenue, Bassett, CA 91746
Allen J Martin Park	14830 East Giordano Street, La Puente, CA 91744
Barnes Park	3251 Patritti Avenue, Baldwin Park, CA 91706
La Puente Park	15538-15598 E Temple Ave, La Puente, CA 91744
Adventure Park (aka Gunn Ave. Park)	10130 S. Gunn Avenue, Whittier, CA 90605
Downtown Properties	Foothill Blvd. and Glendora Ave., Glendora, CA 91741
San Jose Properties	Burnaby Dr, Lawford St., Glendora, CA 91741

Upper San Gabriel River Draft EWMP – Table 3-4 (pg. 45)

Table 3-4
Example Regional EWMP Project Sites

Regional EWMP Project Site	Implementation Agency	Address	Milestones (Contingent Upon Funding)
Bassett Park	County	510 Vineland Avenue, La Puente, CA 91746	Design and permitting by December 2021; completion by December 2023
Kahler Russell Park	Covina	735 North Glendora Avenue, Covina, CA 91724	Design and permitting by December 2018; completion by December 2023
San Angelo Park and Vacant Lot	Industry	245 San Angelo Avenue, Bassett, CA 91746	Design and permitting by December 2018; completion by 2020
Allen J Martin Park	County	14830 East Giordano Street, La Puente, CA 91744	Design and permitting by December 2021; completion by December 2023
Barnes Park	Baldwin Park	3251 Patritti Avenue, Baldwin Park, CA 91706	Design and permitting by December 2021; completion by December 2023
La Puente Park	La Puente	15538-15598 E Temple Ave, La Puente, CA 91744	Feasibility determination of an alternative project at Bassett High School by June 2016; Design and permitting by December 2021; Completion by December 2023
Adventure Park (aka Gunn Ave. Park)	County	10130 S. Gunn Avenue, Whittier, CA 90605	Completion by December 2020
Downtown Properties	Glendora	Foothill Blvd. and Glendora Ave., Glendora, CA 91741	Design and Permitting by December 2018; Completion by December 2023

Upper San Gabriel River Revised EWMP – Table 3-4 (pg. 51)

Next Steps

- Review
- Approval/Denial
- Implementation
- EWMP Compliance and Adaptive Management

Rosemead Boulevard Improvement Project – From
Rio Hondo / San Gabriel River Revised EWMP (pg. 68)

End