AGENDA REPORT

Meeting Date: June 16, 2015

Item Number: F-1

To: Honorable Mayor & City Council

From: Trish Rhay, Assistant Director of Public Works Services – Infrastructure & Field Operations

Josette Descalzo, Environmental Compliance and Sustainability Programs Manager JD

Subject: CITY COUNCIL AUTHORIZATION TO SUBMIT THE ENHANCED WATERSHED MANAGEMENT PROGRAM (EWMP) PLAN FOR THE BALLONA CREEK WATERSHED TO THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD.

Attachments: Enhanced Watershed Management Program (EWMP) Plan for the Ballona Creek Watershed

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RECOMMENDATION

It is recommended that the City Council authorize the submittal of the Enhanced Watershed Management Program (EWMP) Plan for the Ballona Creek Watershed to comply with National Pollution Discharge Elimination System (NPDES) Permit No. CAS004001, Order No. R4-2012-0175 (Attachment).

BACKGROUND

The City's urban and stormwater runoff goes through a network of storm drain lines that discharge to Ballona Creek and the Ballona Creek Estuary. The City's discharges must meet water quality standards prescribed in the Municipal Separate Storm Sewer System Permit [2012 MS4 Permit] (MS4 Permit) for Ballona Creek and Estuary.

On November 8, 2012, the new MS4 Permit was adopted by the Los Angeles Regional Water Quality Control Board (Regional Board) to ensure compliance with the regulations under the Federal Clean Water Act. The new permit prescribed additional regulations on incorporated cities in Los Angeles County and the Los Angeles County Flood Control District (Permittees) to ensure acceptable water quality standards with respect to urban

runoff, stormwater discharges and the water bodies of the United States. This latest MS4 Permit incorporates water quality based effluent limits via adopted Total Maximum Daily Load (TMDL) provisions. TMDL is a regulatory term in the Clean Water Act describing the maximum amount of pollutant that a body of water can receive while still meeting water quality standards required to support assigned water body beneficial uses. Beneficial uses are assigned to water bodies by the Regional Board and include uses such as swimming, boating, fishing, marine habitat and others. TMDLs have been issued to numerous water bodies in Los Angeles County addressing trash, metals, toxics and bacteria.

In developing the 2012 MS4 Permit, the Regional Board sought to provide additional compliance pathways for the Permittees because compliance through previous iterations of the MS4 Permit would likely not be met and therefore unsuccessful in improving water quality. For these reasons, the 2012 MS4 Permit has three compliance pathways: 1) requiring Permittees to meet strict numeric standards in the storm drain outfalls and water bodies of the United States; 2) preparation and implementation of a Watershed Management Program; and 3) preparation and implementation of an Enhanced Watershed Management Program (EWMP). The Watershed Management Program and Enhanced Watershed Management Program compliance pathways are adaptive management approaches that allow Permittees to comply with the 2012 MS4 Permit through action-based standards (variety of Best Management Practices and careful planning) as compared to strict numeric standards. The Watershed Management Program alternative required completion of the Watershed Management Program Plan by June 28, 2014. The EWMP alternative allows an extra year to fully analyze the watershed and prepare a EWMP plan. The additional year for compliance is due to the additional requirement that municipalities joining an EWMP implement large regional projects that would capture, infiltrate and/or reuse flows from an 85th percentile storm event or roughly 1.1 inches of rain. This option is preferred by the Regional Board. As an additional incentive, the MS4 Permit deems areas that are draining to the regional projects compliant with the permit as long as the EWMP plan and required monitoring are implemented accordingly. The final EWMP plan is due to the Regional Board by June 29, 2015.

At the May 23, 2013, City Council meeting, staff presented their findings on the three compliance pathways and recommended joining a EWMP group as the best option for the City. The EWMP provides the City the following advantages:

1. Planning documents to integrate the various permit provisions, including water quality standards through the means of Total Daily Maximum Loads (TMDLs).

2. Monitoring and reporting through a Coordinated Integrated Monitoring Program. This plan provides water quality testing in a coordinated interagency manner which will measure the pollutant levels; and the data will be used to correlate Best Management Practices effectiveness in the watershed.

3. Planning and implementation documents where it outlines the watershed's action-based approach to meeting water quality standards of the permit. This includes discussions of regional projects that would provide compliance given that the EWMP plan and monitoring are implemented accordingly. These regional projects are designed to provide multiple benefits to the community by promoting sustainable green infrastructure practices.

4. Allows the City to be in "deemed compliance" with certain interim and final compliance deadlines for Ballona Creek TMDLs and other relieving water limitations in the 2012 LA MS4 Permit.

The City Council agreed with the recommendations and authorized staff to join the Ballona Creek EWMP group. The Ballona Creek EWMP group is comprised of the City of Los Angeles (lead agency), County of Los Angeles and Flood Control District, Culver City, Inglewood, Santa Monica and West Hollywood. The Ballona Creek EWMP group was officially recognized by the Regional Board when it submitted a joint Notice of Intent on June 27, 2013. The Notice of Intent was approved by the Regional Board on February 26, 2014.

Since then, the Ballona Creek EWMP group selected Black & Veatch and the Weston group to help develop the Ballona Creek EWMP Plan and the Coordinated Integrated Monitoring Program Plan for the watershed. The City of Los Angeles is the lead agency for the Ballona Creek watershed and has been performing all administrative and project management tasks related to the consultant contracts. Other agencies in the group have provided technical and informational support to the consultants pertaining to their individual agencies which are critical for the completion of the Ballona Creek EWMP Plan. Numerous meetings and stakeholder workshops have been held to provide comments during the plan development.

To meet the June 29, 2015 submission deadline to the Regional Board, agencies in the Ballona Creek EWMP group are requesting their governing bodies (city councils or board) to authorize the submission of the Ballona Creek EWMP Plan. The following agencies are scheduled to present it on the following dates:

County of Los Angeles - May 26, 2015

City of Los Angeles - June 17, 2015

Culver City – June 8, 2015

City of Inglewood – June 23, 2015

City of West Hollywood – June 15, 2015

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The Ballona Creek EWMP Plan is a planning document that must be reviewed and approved by the Regional Board, and any implementation projects and actions would proceed only after Regional Board approval is granted. Therefore, authorizing the submittal of the Ballona Creek EWMP Plan to Regional Board is not a project for purposes of CEQA because it is not an approval of the plan. (14 Cal Code Regs. 15378(c).) Upon approval by the Regional Board, the City may undertake implementing actions which will be reviewed pursuant to CEQA as appropriate.

DISCUSSION

Contents of the Ballona Creek EWMP Plan

The Ballona Creek EWMP Plan is a planning document that identifies the regulated pollutants in the TMDLs and provides a list of control measures and implementation schedule to comply with the water quality limits in the TMDLs. Control measures are Best Management Practices that varies from institutional (ordinances, street sweeping services) to structural (green infrastructure) Best Management Practices. The Ballona Creek EWMP Plan also provides a planning level cost estimate associated with these control measures and potential funding strategy for implementation.

The Ballona Creek EWMP Plan is divided in the following elements:

1. Water Quality Priorities: The plan identifies priority pollutants based on years of monitoring data and pollutants identified in the TMDL regulations. The Ballona Creek EWMP Plan focuses on bacteria, metals and toxics pollutants that are listed in the Ballona Creek Bacteria and Metals & Toxics TMDLs. Under the provisions of the TMDLs, the pollutant loadings must be reduced to meet the interim and final water quality limits for each TMDLs. For instance:

    a. Constituents in the Ballona Creek Metals and Toxics (i.e. copper, zinc, cadmium, etc.) must be reduced by 50 percent by 2015. Achieve 100% compliance by 2021.

    b. Achieve 100% compliance by 2021 for Ballona Creek Bacteria TMDL (i.e. total coliform, fecal coliform, and E.coli).

2. Watershed Control Measures: The plan identifies control measures that will need to be implemented by individual agencies or collectively at a watershed-scale to address water quality limits. These control measures are categorized as Regional (Signature) projects or Distributed (local) Best Management Practices.

    Regional (Signature) projects are typically watershed-scale projects that collect, infiltrate and/or treat urban and stormwater runoff. These projects are designed to capture the 85th percentile of a 24-hour event storm volume (design storm event) which is equivalent to 1.1 inches of rain, for a drainage area(s). If the site is not feasible to retain the 85th percentile, then the plan provides alternative retention volume for the project. Regional projects sites are usually in public lands such as recreational parks, medians and public golf courses. These locations are prime sites for regional projects because there would be no land acquisition costs. As an example, La Cienega Park has been identified and included as a site for a potential regional project. Costs for regional projects will be shared by agencies draining to a project.

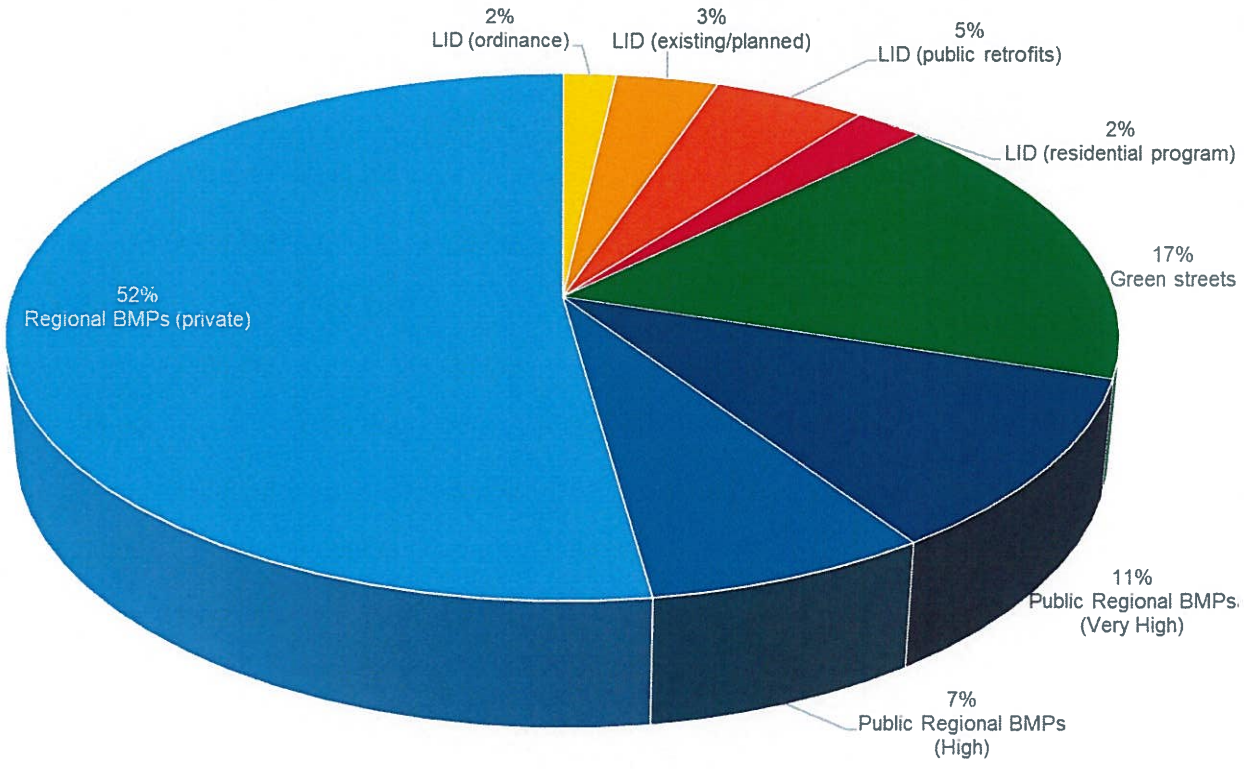
    There is also potential for private regional projects. These are projects constructed on private land and will require private and public agency partnerships. Thus far, these are the least attractive control measures due to the significant land acquisition cost. However, it is important that each municipality plan to look for private partnerships in order to reach the managed volume requirement in the Ballona Creek EWMP Plan.

Distributed (local) Best Management Practices are institutional control measures and structural control measures (green infrastructure) on private and public developments. Adopting a Low Impact Development Ordinance and Green Streets Policy, having an aggressive street sweeping program and having a pollution control elimination program (industrial and commercial facility inspections) are examples of institutional control measures. The City of Beverly Hills has taken steps on improving its institutional control measures by adopting a Low Impact Development Ordinance on May 5, 2015, planning to adopt a Green Streets Policy; and continuing its aggressive street sweeping program and facility inspections.

On the other hand, examples of green infrastructure on private and public development include rain gardens on public medians or designing landscape that would capture onsite runoff (low impact development).

The Ballona Creek EWMP Plan predicts that the implementation of both Regional projects and Distributed (local) Best Management Practices are the "recipe" for compliance. The plan estimates that the implementation of these two watershed control measures can capture up to eight Rose Bowls of urban and stormwater runoff (2,081 acre-ft); hence achieving final compliance with the TMDLs. **Figure 1** describes the relative BMP capacities of each control measures.

Figure 1: Watershed Control Measures Relative Capacities



It is noteworthy to further explain the three structural control measures that are essential for compliance. These are:

a. Low-Impact Development: These are distributed structural practices that capture, infiltrate and/or treat runoff at the parcel (normally less than 10 tributary acres). Common low impact development practices include bioretention, permeable pavement and other infiltration process that prevent runoff from leaving a parcel. Low impact development designs for bioretention and biofiltration can incorporate water efficient landscaping such as rain garden and efficient irrigation systems. Rainfall harvesting practices such as rain barrels and cisterns are also part of low impact development where it is used to capture rainwater that would otherwise runoff a parcel. Water collected during rain harvesting can be used to offset potable water demands for irrigation. Implementation of this Best Management Practice starts with the adoption of Low Impact Development Ordinances in municipalities. The Ballona Creek EWMP Plan identifies low impact development as a major control measure since the runoff is captured and treated on-site before it runs off from the parcel and onto the watershed.

b. Green Streets: This type of green infrastructure is typically implemented as linear bio-retention/biofiltration control measure installed parallel to roadways. Green streets receive runoff from the curb and gutter and it is infiltrated through native or engineered soil media. In addition to stormwater management, green streets provides additional benefits to the community such as pedestrian safety, traffic calming, street tree canopy, reducing heat island effect and implementing water efficient landscaping to reduced irrigation consumption. Similar to Low Impact Development, the Ballona Creek EWMP Plan identifies green streets as a major control measure because the watershed is mostly built out.

c. Regional (Signature) Projects: These are centralized facilities located near the downstream ends of large drainage areas, typically treating 10s to 100s of acre-ft of runoffs. Regional projects receive large amounts of urban and stormwater runoff from large drainage areas. These projects typically have large areas to construct facilities that would capture or treat the 85th percentile of a 24-hour storm event, which is typically 1.1 inches of rain, (design storm event size) from a large drainage area. The design storm event size is a requirement of the 2012 MS4 Permit. Agencies that drain to a regional project will need to approve the project; and cost-sharing is based on the percent drainage area discharging to a regional project.

The EWMP Plan proposes 10 regional projects of which 4 are designed to capture the 85th percentile, 24-hour storm event volume (1.1 inches of rain).

Table 1: Summary of Regional Projects:

Regional Project	BMP Type	Available BMP Volume (acre-ft)	Recommended BMP Volume (acre-ft)	*Retain the 85th Percentile, 24-Hour Storm Event
Rancho Park Golf Course	Surface and Subsurface Retention & Infiltration	403	11.6	YES
La Cienega Park	Subsurface Retention & Infiltration	51.3	24	YES
Culver Boulevard Median	Subsurface Retention and Infiltration	33.7	29.2	NO
Edward Vincent Junior Park	Biofiltration and Wetlands	63	45.7	YES
Lafayette Park	Subsurface Retention & Infiltration	25	18	NO
Poinsettia Park	Subsurface Retention & Infiltration	15.5	10.1	NO
Queen Anne Recreation Center	Subsurface Retention & Infiltration	42	11.6	NO
Plummer Park	Subsurface Retention & Infiltration	7.2	7.2	NO
Ladera Park	Subsurface Retention & Infiltration	7.0	5.3	YES
Westside Water Quality Improvement Project, Phase 2	Subsurface Retention & Harvest for Irrigation and Indoor Flushing	TBD	TBD	TBD

*** These sites have the space to capture and treat the 85th percentile, 24-hour storm event volume from a designated drainage area.**

3. Reasonable Assurance Analysis: The 2012 MS4 Permit requires that a Reasonable Assurance Analysis be performed using the Watershed Management Modeling System which is an approved computer model by the Regional Board. The modeling system uses the lists of control measures in the Ballona Creek EWMP Plan and measures its effectiveness on removing the contaminants listed in the TMDLs. The results of the modeling quantitatively predict whether a particular control measure will be effective in removing enough pollutants to meet water quality limits. The model is also used as a primary tool used to select the site and size of structural control measure.

4. Implementation Strategy and Compliance Schedule: The Implementation Strategy and Compliance Schedule is the "recipe for compliance" for each jurisdiction and in a watershed-scale. The Implementation Strategy provides the types of control measures (i.e. low impact development, green streets and regional projects); locations to construct the suite of control measures in order to achieve optimum pollutant reduction; and implementation schedule to comply with the TMDL milestones. For instance, the Ballona Creek Bacteria TDML and the Metals and Toxics TMDL has a final compliance date is set for 2021. To meet this compliance deadline, this section identifies how much runoff volume will need to be managed by regional projects, green streets and low impact development projects in a watershed and jurisdiction scale. (**See Figure 2 and Figure 3**)

Figure 2: Ballona Creek Watershed Implementation Strategy Schedule

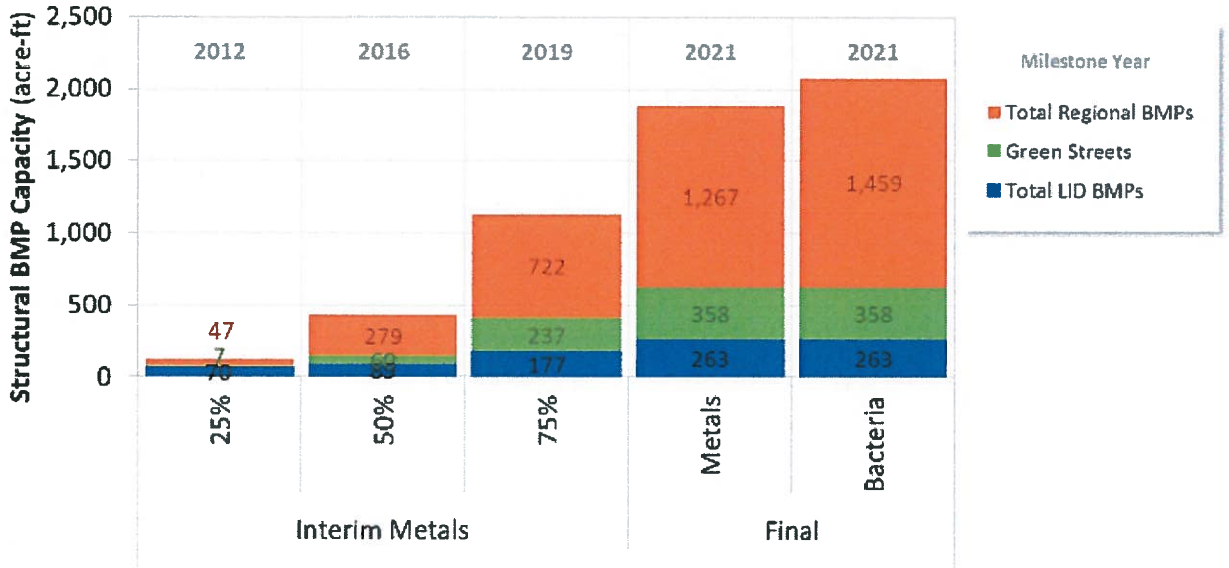
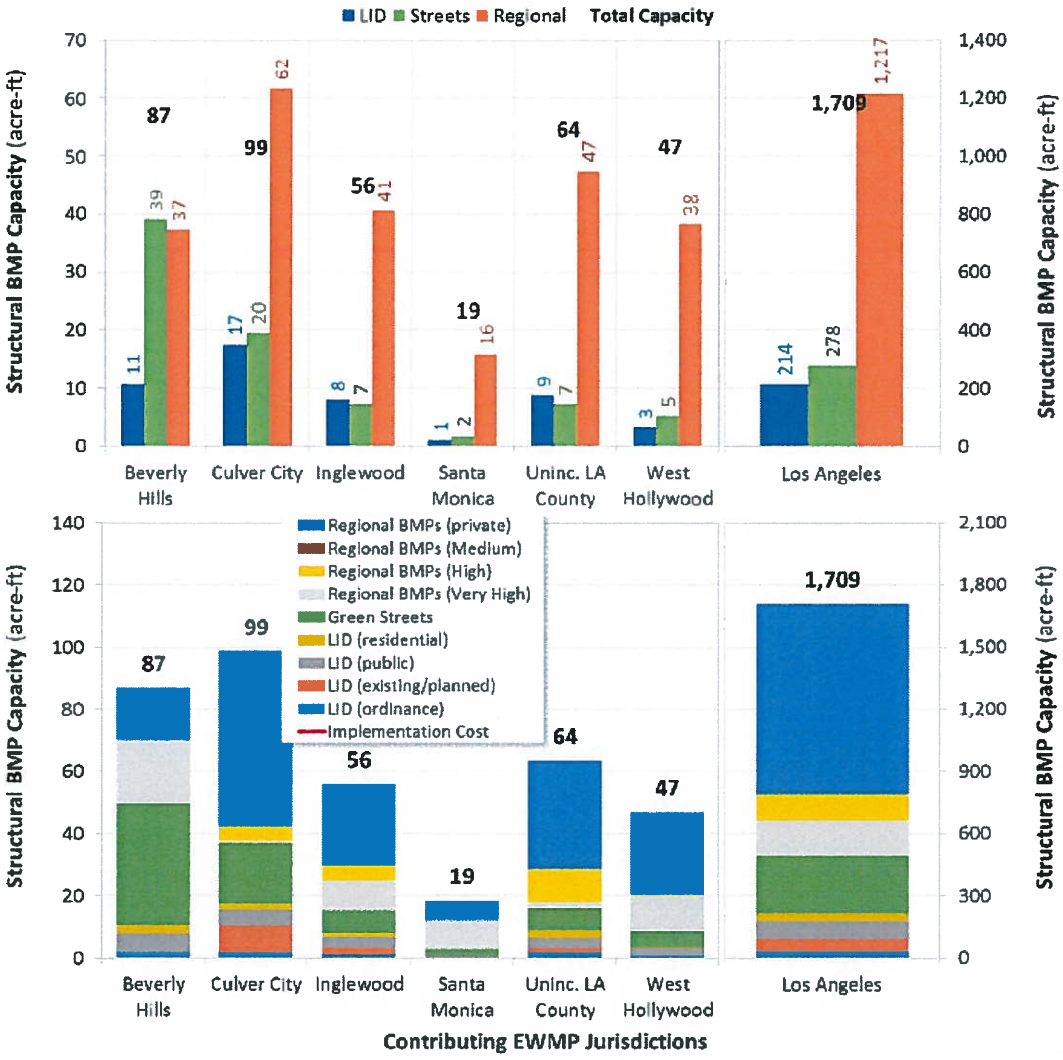


Figure 3: Jurisdictional Implementation Strategy



5. Costs and Financial Strategy: The costs to implement the Ballona Creek EWMP Plan will require orders of magnitude increases in stormwater program funding. The total planning level capital cost estimate is **$2.7 billion** for the Ballona Creek EWMP group. **This equates to $9,422 per parcel within the watershed and operations and maintenance costs exceeding $77M per year. These cost estimates are only on a planning level.** These cost estimates can be refined as the implementation strategies progresses for each agency. The Ballona Creek EWMP Plan identifies potential funding sources such as grants, fees and charges, legislative and policy remedies.

Adaptive Management Process

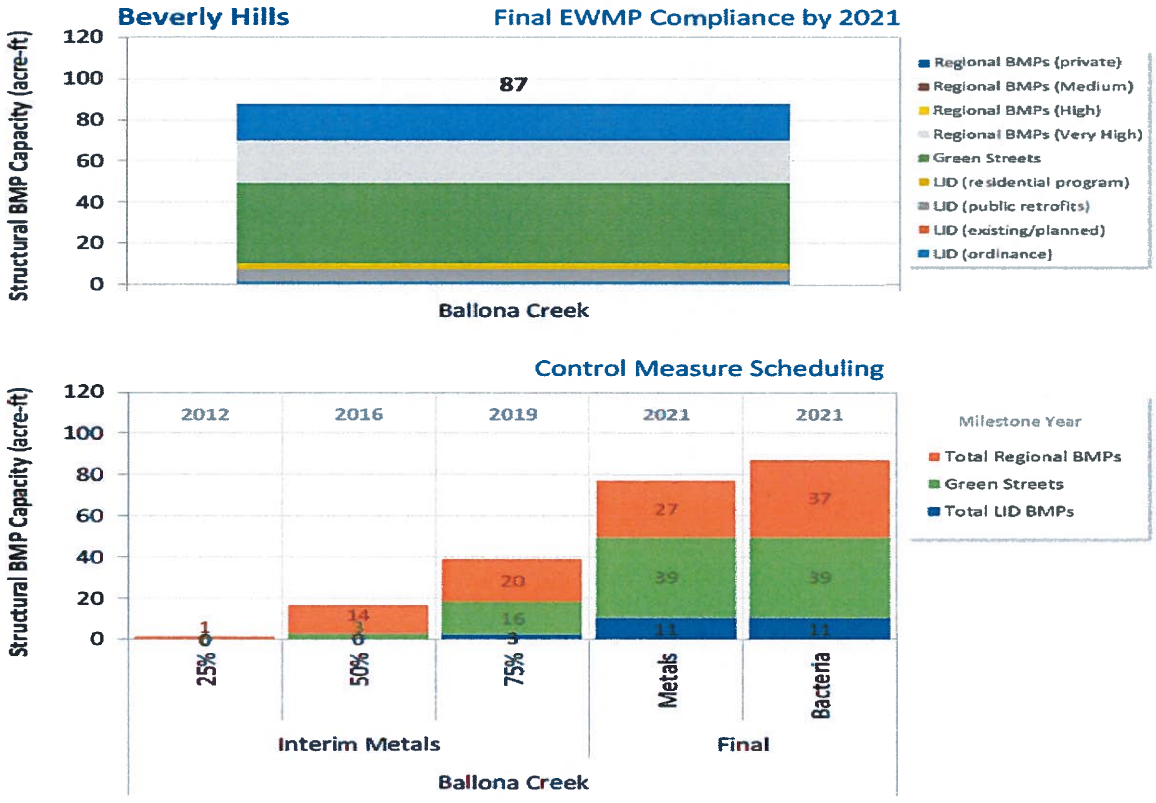
The 2012 MS4 Permit allows EWMPs to be implemented and improved over time through an Adaptive Management Process. The Adaptive Management Process enables agencies to monitor the effectiveness of EWMPs and make adjustments or additions to the plans as needed to improve water quality to comply with TMDLs. **Agencies will be deemed compliant as long as they are implementing an approved EWMP and make adjustments to the plans on a biennial basis as needed to meet water quality standards.** Currently, the Ballona Creek EWMP plan is scheduled to be reviewed every 2 years depending on the results from Coordinated Integrated Monitoring Plan and completed control measure projects.

EWMP Recommended Strategy and Approach for Beverly Hills

The Ballona Creek EWMP Plan is a planning document that provides the "recipe" for the City to comply with the 2012 MS4 Permit. According to the plan, the City will need to capture approximately 87 acre-ft of urban and stormwater runoff using a combination of Regional (Signature) projects and Distributed (local) green infrastructure. The Ballona Creek EWMP Plan suggests that 37 acre-ft of stormwater runoff can be captured by regional (public and private) projects, 39 acre-ft can be captured by green streets and 11 acre-ft can be captured by low impact development projects.

Figure 4: City of Beverly Hills Implementation Strategy to Achieve Compliance

The bar represents the capacities for low impact development, green streets and regional projects to achieve the TMDL milestones. The top panel represents the green infrastructure needed to achieve final compliance in 2021; the bottom panel schedules them through 2021.



The Ballona Creek EWMP Plan identifies the city belonging to two regional (signature) projects: the La Cienega/Frank Fenton Park and the Rancho Park Golf Course. According to the Ballona Creek EWMP Plan, the City's stormwater drainage can be diverted to these two locations where it can be captured and infiltrated.

Below are brief summary of each regional project.

The La Cienega/Frank Fenton Park

The La Cienega/Frank Fenton Park regional project is anticipated to have a subsurface retention and infiltration basin under the playing fields. A combined 7,776 acres of drainage areas from the cities of Beverly Hills, West Hollywood and Los Angeles can be diverted to this regional project. It is estimated that 24 acre-ft of urban and stormwater runoff can be captured and infiltrated. This regional project site will also help meet the permit's requirement to retain the 85th percentile of a 24-hour storm event. The estimated total capital cost for this project is $32.2M that will be needed to be agreed upon and cost-shared among the three cities.

At this time, there are no design details on how this retention basin will be incorporated into the park. Staff will start to develop it when the implementation schedule is created.

Rancho Park Golf Course

Rancho Park Golf Course regional project is designed to have a subsurface retention and infiltration basin under the golf course. It is located in the City of Los Angeles. A combined 7,273 acres of drainage areas from Beverly Hills and Los Angeles can be diverted to this regional project. It is estimated that 11.6 acre-ft of urban and stormwater runoff can be captured and infiltrated. This regional project will also help meet the permit's requirements to retain the 85th percentile of a 24-hour storm event. The estimated total capital cost for this project is $16.2M that will be cost-shared by Beverly Hills and the City of Los Angeles.

Similar to the La Cienega Park, there are no design details on how the subsurface retention and infiltration basin will be incorporated into the golf course. Staff will be working with the City of Los Angeles to receive detailed plans for this project.

Distributed (local) Structural Green Infrastructure

The Ballona Creek EWMP Plan identifies the location and type of green infrastructure suitable for the City. Pollutant loading reduction and runoff volume that needs to be managed are the drivers that determine the size, the number and the type of green infrastructure. For instance, the plan identifies that green streets in the City needs to capture 39 acre-ft of runoff to meet the TMDL provisions by 2021. To achieve this goal, the City was divided into subwatersheds; **(See Figure 5)** and the plan provided how much runoff volume will need to be managed by green streets per subwatershed **(See Table 3)**. This modeling analyses was performed for low impact development in public and private development and regional projects opportunities within the City.

Figure 5: Beverly Hills Subwatershed BMP Map

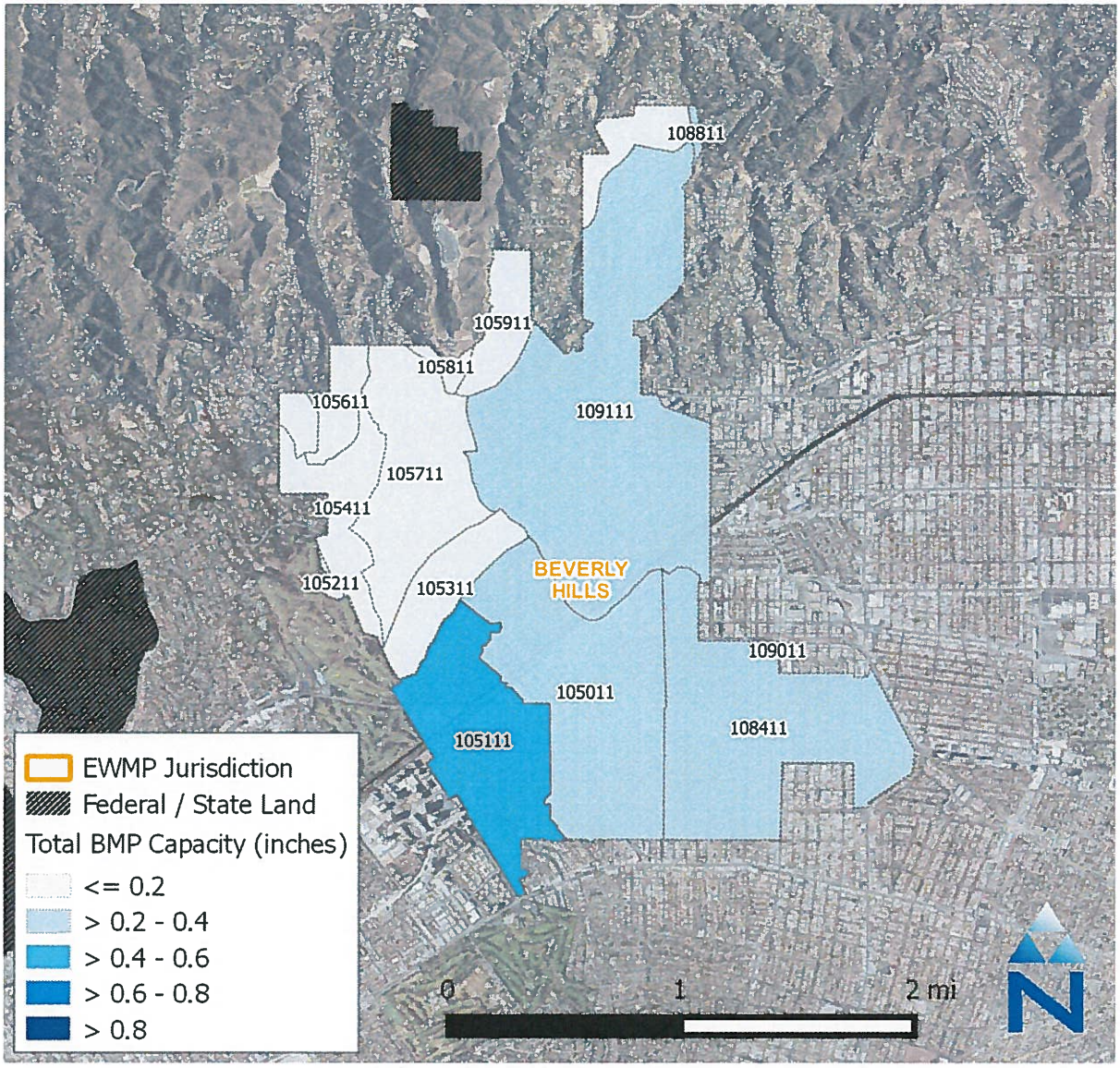


Table 3: Beverly Hills Implementation Strategy

Subwatershed ID	COMPLIANCE TARGETS: MEASURABLE AND ENFORCEABLE BMP GOAL		EWMP IMPLEMENTATION PLAN: APPROACH TO ACHIEVE COMPLIANCE TARGETS, SUBJECT TO ADAPTIVE MANAGEMENT (BMP capacity expressed in units of acre-feet)													
	For Metals by 2021	For Bacteria by 2021	For Metals Attainment by 2021													For Bacteria Attainment by 2021
				Low-Impact Development				Streets	Regional BMPs							
	24-hour Volume Managed (acre-ft)	Additional 24-hour Volume to be Managed (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)
105011	19.86	3.94	58%	0.29	—	2.29	0.44	15.86	0.00	0.00	0.00	0.00	18.9	3.94	22.8
105111	18.62	0.00	90%	0.19	—	1.08	0.33	8.13	0.00	0.00	0.00	6.95	16.7	0.00	16.7
105211	0.00	0.02	5%	0.00	—	—	—	0.00	0.00	0.00	0.00	0.00	0.0	0.02	0.0
105311	1.14	0.25	48%	0.07	—	0.02	0.19	0.86	0.00	0.00	0.00	0.00	1.1	0.25	1.4
105411	0.55	0.31	37%	0.09	—	0.07	0.03	0.42	0.00	0.00	0.00	0.00	0.6	0.31	0.9
105511	0.00	0.07	6%	0.02	—	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.1
105611	0.27	0.13	37%	0.04	—	—	0.03	0.19	0.00	0.00	0.00	0.00	0.3	0.13	0.4
105711	0.24	1.32	6%	0.20	—	0.41	0.10	0.00	0.00	0.00	0.00	0.00	0.7	1.32	2.0
105811	0.05	0.02	21%	0.01	—	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.1	0.02	0.1
105911	0.14	0.57	7%	0.08	0.00	0.17	0.19	0.00	0.00	0.00	0.00	0.00	0.4	0.57	1.0
106011	0.00	0.00	5%	0.00	—	—	—	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.0
108411	181.55	3.26	84%	0.29	—	1.18	0.51	8.96	2.40	0.00	0.00	0.00	13.3	3.26	16.6
108811	0.21	0.00	53%	0.00	—	—	0.01	0.04	0.12	0.00	0.00	0.00	0.2	0.00	0.2
109011	0.00	0.00	63%	0.00	—	—	—	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.0
109111	35.34	1.57	43%	0.53	—	0.69	0.95	4.65	18.30	0.00	0.00	0.00	25.1	1.57	26.7
Total	258.0	11.5	73%	1.8	0.0	6.0	2.8	39.1	20.8	0.0	0.0	6.9	77.5	11.5	89.0

FISCAL IMPACT

If the City implements the EWMP completely, the planning level final cost is estimated close to $72M in capital costs and $4.7M in Operations & Maintenance annually. These cost estimates include low impact development retrofit on public properties, green streets retrofits and the two Regional (Signature) Projects.

Currently, the Department is setting aside $4M each year for the next five years in its CIP fund for local and regional projects. To fund the remaining balance for compliance, staff will be investigating financial strategies suggested in the EWMP Plan such as grants, fees and charges and legislative opportunities.

As mentioned in the Adaptive Management Process section, the EWMP may be reviewed every 2 years. The review may reveal improvements in water quality which may reduce the number of implementation projects and reduce the total cost.

George Chavez
Approved By