

NOTICE OF INTENT

North Santa Monica Bay Coastal Watersheds Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program

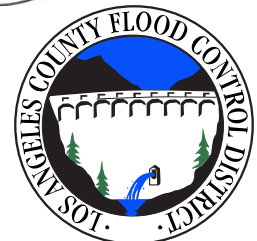
Submitted to:

Los Angeles Regional Water Quality Control Board
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Los Angeles, CA 90013
losangeles@waterboards.ca.gov

Submitted by:

City of Malibu
County of Los Angeles
Los Angeles County Flood Control District

March 11, 2014



SECTION 1. PROGRAM TYPE AND PERMITTEES

MS4 Permit Section VI.C.4.b.i and Attachment E Section IV.C.1.

This Notice of Intent (NOI) is being submitted in accordance with Part VI.C.4.b.i of Order R4-2012-0175. The Permittees (listed in **Table 1**) that are party to this NOI hereby notify the Los Angeles Regional Water Quality Control Board (Regional Water Board) of their intent to develop an Enhanced Watershed Management Program (EWMP) for the portions of the Santa Monica Bay (SMB) Watershed Management Area located within SMB Jurisdictional Group (JG) 1, SMB JG 4, and the portion of the Malibu Creek Watershed (SMB JG 9) located within the City of Malibu's boundaries, hereafter collectively referred to as the North Santa Monica Bay Coastal Watersheds (NSMB) EWMP Area. The geographic scope of the EWMP addressed in this NOI is further discussed in Section 5 of this document. The Permittees meet the Low Impact Development (LID) and green streets conditions, will submit an EWMP Work Plan within 18 months of the effective date of the Order R4-2012-0175 (June 28, 2014), and will submit the Draft EWMP within 30 months of the effective date (June 28, 2015).

Additionally, the Permittees (listed in **Table 1**) that are party to this NOI hereby notify the Regional Water Board of their intent to develop a Coordinated Integrated Monitoring Program (CIMP). The Permittees intend to follow a CIMP approach for each of the required monitoring program elements and will submit the CIMP within 18 months of the effective date of Order R4-2012-0175 (June 28, 2014).

Table 1. Enhanced Watershed Management Program Permittees
City of Malibu
County of Los Angeles
Los Angeles County Flood Control District

SECTION 2. TOTAL MAXIMUM DAILY LOADS ESTABLISHED WATER QUALITY BASED EFFLUENT LIMITATIONS

MS4 Permit Section VI.C.4.b.ii

Table 2 lists the Total Maximum Daily Loads (TMDLs) that have specifically been developed for areas that are included in the NSMB EWMP Area. **Table 3** lists applicable interim and final trash Water Quality Based Effluent Limitations (WQBELs) and all other final WQBELs and receiving water limitations (RWLs) established by TMDLs with compliance deadlines occurring prior to the anticipated approval date of the

EWMP (April 28, 2016). The watershed control measures that will be implemented to meet the requirements of the interim and final trash WQBELs and all other final WQBELs are described in Section 3 of this NOI.

Table 2. Total Maximum Daily Loads Applicable to the North Santa Monica Bay Enhanced Watershed Management Program Area

TMDL	Regional Board Resolution	Effective Date and/or EPA Approval Date
Santa Monica Bay Beaches Dry Weather TMDL	2002-004	07/15/2003
Santa Monica Bay Beaches Wet Weather TMDL	2002-022	07/15/2003
Malibu Creek Watershed Bacteria TMDL	2004-019R	01/24/2006
Malibu Creek Watershed Trash TMDL	2008-007	07/07/2009
Malibu Creek Nutrient TMDL	Not Assigned	03/21/2003
Santa Monica Bay Nearshore and Offshore Debris TMDL	R10-010	03/20/2012
Santa Monica Bay DDTs and PCBs TMDL	Not Assigned	03/26/2012

Table 3. Applicable Interim and Final Trash WQBELs and all other Final WQBELs and Receiving Water Limitations¹ Occurring Before Enhanced Watershed Management Program Approval

TMDL Order	WQBEL/RWL	Interim/Final	Compliance Date ²
Santa Monica Bay Beaches Dry Weather Bacteria 2002-004	<i>Total Coliform</i> ³ Daily Maximum: 10,000 MPN/100 mL (WQBEL) Geometric Mean: 1,000 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	<i>Fecal Coliform</i> Daily Maximum: 400 MPN/100 mL (WQBEL) Geometric Mean: 200 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	<i>Enterococcus</i> Daily Maximum: 104 MPN/100 mL (WQBEL) Geometric Mean: 35 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	Compliance with allowable exceedance days for summer and winter dry weather single sample maximum (RWL)	Final	12/28/2012

(Table continued on the next page)

Table 3. Applicable Interim and Final Trash WQBELs and all other Final WQBELs and Receiving Water Limitations¹ Occurring Before Enhanced Watershed Management Program Approval

TMDL Order	WQBEL/RWL	Interim/ Final	Compliance Date ²
Malibu Creek and Lagoon Dry Weather Bacteria 2004-019R	<i>Total Coliform</i> ³ (Malibu Lagoon) Daily Maximum: 10,000 MPN/100 mL (WQBEL) Geometric Mean: 1,000 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	<i>Fecal Coliform</i> (Malibu Lagoon) Daily Maximum: 400 MPN/100 mL (WQBEL) Geometric Mean: 200 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	<i>Enterococcus</i> (Malibu Lagoon) Daily Maximum: 104 MPN/100 mL (WQBEL) Geometric Mean: 35 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	<i>E. coli</i> (Malibu Creek) Daily Maximum: 235 MPN/100 mL (WQBEL) Geometric Mean: 126 MPN/100 mL (WQBEL and RWL)	Final	12/28/2012
	Compliance with allowable exceedance days for summer and winter dry weather single sample maximum (RWL)	Final	12/28/2012
	Malibu Creek Trash R4-2008-007	80% of baseline (i.e., 20% reduction)	Interim
60% of baseline (i.e., 40% reduction)		Interim	7/7/2014
40% of baseline (i.e., 60% reduction)		Interim	7/7/2015
Santa Monica Bay Nearshore and Offshore Debris R10-010	80% of baseline (i.e., 20% reduction)	Interim	3/20/2016

- 1 Per Order R4-2012-0175, interim and final WQBELs are listed for trash TMDL and final WQBELs are listed for other pollutants.
- 2 Per Order R4-2012-0175, WQBELs and RWLs are required to be met at the effective date of the Order. TMDL implementation plans required responsible parties to meet Santa Monica Bay Bacteria TMDL allowable exceedance days during summer dry weather on 7/15/2006 and winter dry weather on 7/15/2009 and Malibu Creek Bacteria TMDL allowable exceedance days during summer dry weather on 1/24/09 and winter dry weather on 1/24/2012.
- 3 Total coliform density shall not exceed a daily maximum of 1,000 MPN/ 100 mL, if the ratio of fecal-total coliform exceeds 0.1.

SECTION 3. IDENTIFY TMDL CONTROL MEASURES

MS4 Permit Sections VI.C.4.b.ii and VI.C.4.d

The Permittees that are participating in this EWMP are responsible for four TMDLs with interim (trash only) and final WQBELs deadlines that occur prior to the anticipated approval of the EWMP (April 28, 2016). **Table 4** identifies the structural

control measures that have been or will be implemented by the Permittees for each TMDL. The Permittees will continue to implement these measures during the development of the EWMP.

In addition to the structural control measures listed in Table 4, the City of Malibu has implemented a number of non-structural source control measures that go beyond the minimum control measures in the permit to support implementation of the TMDLs. These measures include a proactive illicit connection/illicit discharge program that places elimination of all runoff as a priority including irrigation runoff, the City of Malibu Local Coastal Program (discussed in more detail below), annual or more frequent commercial inspections through the Clean Bay Restaurant Certification program (the permit requires 2 inspections during the 5-year permit term), annual inspections of automotive service/retail gasoline outlets (the permit requires 2 inspections during the 5-year permit term), and marine debris reducing ordinances such as plastic bag and polystyrene packaging bans and banning smoking on beaches.

The Los Angeles County Flood Control District submitted a revised Time Schedule Order request to address compliance with the Malibu Creek and Lagoon Dry Weather Bacteria TMDL.

Table 4. Structural Control Measures Implemented to Address Total Maximum Daily Loads¹

TMDL	Permittees	Implementation Plan and Control Measures	Status of Implementation
Santa Monica Bay Beaches Dry Weather Bacteria 2002-004	City of Malibu	Paradise Cover Stormwater Treatment Facility ²	Completed (June 2010)
	County of Los Angeles	Advanced treatment septic systems for beach restrooms at Malibu/Surfrider, Point Dume, Topanga, and Zuma Beaches	In progress (12 out of 18 completed as of June 2013)
	County of Los Angeles, Los Angeles County Flood Control District, and City of Malibu	Marie Canyon Water Quality Improvement Project ^{1,2}	Completed (October 2007)
Malibu Creek and Lagoon Dry Weather Bacteria 2004-019R ⁴	City of Malibu and Los Angeles Flood Control District	Civic Center Stormwater Treatment Facility ³	Completed (February 2007)
		Malibu Legacy Park Project ³	Completed (October 2010)
Malibu Creek Trash R4-2008-007 ⁴	City of Malibu	Malibu Legacy Park Project achieves full capture of 100% of City's drainage area to the Creek.	Completed (October 2010)
		Civic Center Stormwater Treatment Facility screens and filters all runoff to Legacy Park.	Completed (February 2007)
Santa Monica Bay Nearshore and Offshore Debris R10-010	City of Malibu	Distributed Best Management Practices (BMPs) to reduce baseline by 20%	Will complete by March 2016
	County of Los Angeles	Trash Monitoring & Reporting Plan's (TMRP) Minimum Frequency of Assessment and Collection (MFAC)	County will implement the subject MFAC once the Regional Water Board approves the TMRP.
		Plastic Pellets Monitoring and Reporting Plan	County will submit the subject plan by the September 20, 2013 deadline.
		Full capture trash inserts in catch basins to reduce baseline by 20%	Will complete by March 2016

1 These control measures are complete and/or are being implemented concurrently with EWMP Development.

2 From existing Santa Monica Bay Beaches Wet-Weather Bacteria Total Maximum Daily Load Implementation Plan Jurisdictional Groups 1 and 4.

3 These control measures also reduce the bacteria loading to the Santa Monica Bay beaches near the outlet of Malibu Creek and thereby support compliance with the Santa Monica Bay Beaches Dry Weather Total Maximum Daily Load as well.

4 The measures the County has been implementing or will implement to address the TMDLs that are specific to the Malibu Creek Watershed are not discussed in this NOI because the areas within the Malibu Creek Watershed that the County is responsible for will be addressed in a separate NOI and EWMP, specifically, the Malibu Creek Watershed Group EWMP.

SECTION 4. DEMONSTRATION OF MEETING LID ORDINANCE AND GREEN STREET POLICY REQUIREMENTS

MS4 Permit Sections VI.C.4.b.iii.(6), VI.C.4.c.iv.(1), and VI.C.4.c.iv.(2)

The Permittees that are party to this NOI have draft LID ordinances and Green Streets policies. **Table 5** and **Table 6** summarize the status of the Permittees' LID ordinances and Green Streets policies, respectively, for the EWMP area covered by this NOI. As a member of the Los Angeles Permit Group, the City of Malibu will be utilizing the draft LID ordinance and the green streets policy developed by the subject group to meet the requirements to complete a draft LID ordinance and Green Streets policy prior to NOI submittal. The County of Los Angeles has drafted its own LID ordinance and Green Streets policy. More than 50 percent of the area that will be addressed by the EWMP is covered by the City of Malibu's and County's LID ordinances and Green Streets policies.

In addition to utilizing the aforementioned draft ordinance, the City of Malibu has been implementing LID and proactive environment protection requirements for years. The City of Malibu implements a certified Local Coastal Program (LCP) with adopted Local Implementation Plan (LIP), which is considered to be one of the most stringent in regard to development standards in the State. It contains standards addressing a wide range of coastal development issues, many of which serve to reduce water runoff and improve water quality. The standards include:

- limitations on development size and area such as:
 - limiting the interior square footage of commercial projects to 15 percent of the parcel size,
 - allowing for up to 20 percent of the parcel size to be used for commercial projects in the Civic Center Area if the project contains public benefits and amenities, including public open space and habitat restoration or enhancement,
 - requiring that 65 percent of a commercial parcel be retained as landscaping and open space;
- basing residential structure size for non-beachfront lots on lot area, less slopes of 1:1 and steeper (for steep lots, this means the calculation is based on the area of the lot flatter than 1:1, resulting in smaller structures on steep lots);
- encouraging the use of permeable surfaces, especially for driveways;
- requiring that development be planned to fit the topography, soils, geology, hydrology, and other conditions existing on the site so that grading is kept to an absolute minimum while placing an actual limit on the quantity of grading;

- prohibiting new agricultural uses and confined animal uses in environmentally sensitive habitat areas and associated buffer zones, as well as on slopes greater than 3:1;
- requiring setbacks from parklands, streams, wetlands, and coastal bluffs;
- requiring that disturbed areas be protected from erosion; minimize irrigation requirements through the use of native and drought-tolerant plants (which includes a restriction on the amount of turf) and protect existing native areas by the minimization of clearing and the prohibition of invasive, non-native species;
- requiring parking areas to have landscaping; and
- encouraging the use of graywater for irrigation where feasible.

Table 5. Status of Low Impact Development Ordinance Coverage

Permittee	Jurisdictional Area	LID Ordinance Status	MS4 EWMP Area for which Permittee is Responsible [acres]	MS4 EWMP Area Covered by Permittee's LID Ordinance [acres]	Percentage of EWMP Area
City of Malibu	JG1	Draft Ordinance	11,062	11,062	20.1%
	JG4	Draft Ordinance	998	998	1.8%
	JG9	Draft Ordinance	599	599	1.1%
County of Los Angeles	JG1	Draft Ordinance	42,217	42,217	76.6%
	JG4	Draft Ordinance	245	245	0.4%
LACFCD	N/A	N/A	N/A	N/A	N/A
Total EWMP Area			55,121		
Total EWMP Area Covered by LID Ordinances				55,121	
% of EWMP Area Covered by LID Ordinance					100%

Status Description:

- Draft Ordinance – Permittee has completed, or will complete by June 28, 2013, the development of a draft LID Ordinance that is in compliance with the requirements of Order R4-2012-0175 for its portion of the MS4 watershed.

Table 6. Status of Green Street Policy Coverage

Permittee	Jurisdictional Area	Green Street Policy Status	MS4 EWMP Area for which Permittee is Responsible [acres]	MS4 EWMP Area Covered by Permittee's Green Street Policy [acres]	Percentage of EWMP Area
City of Malibu	JG1	Draft Policy	11,062	11,062	20.1%
	JG4	Draft Policy	998	998	1.8%
	JG9	Draft Policy	599	599	1.1%
County of Los Angeles	JG1	Draft Policy	42,217	42,217	76.6%
	JG4	Draft Policy	245	245	0.4%
LACFCD		N/A	N/A	N/A	N/A
Total EWMP Area			55,121		
Total EWMP Area Covered by Green Street Policies				55,121	
% of EWMP Area Covered by Green Street Policies					100%

Status Descriptions:

- Draft Policy – Permittee has completed, or will complete by June 28, 2013, the development of a draft Green Street Policy that is in compliance with the requirements of Order R4-2012-0175 for its portion of the MS4 watershed.

SECTION 5. GEOGRAPHIC SCOPE OF ENHANCED WATERSHED MANAGEMENT PROGRAM

MS4 Permit Section VI.C.4.b.iii.(1)

The EWMP and CIMP will address MS4 areas within the North Santa Monica Bay Coastal Watersheds (that is, SMB JG 1, SMB JG 4, and the portion of SMB JG 9 located within the City of Malibu's boundaries) that are under the jurisdiction of the City of Malibu and the County of Los Angeles and the Los Angeles County Flood Control District's facilities within those areas, as shown in **Figure 1**. The EWMP and CIMP will not address State of California (State) and Federal lands within SMB JG 1, SMB JG4, and the portion of SMB JG 9 located within the City of Malibu's boundaries. The area covered by the EWMP is 55,121 acres and includes portions of 18 subwatersheds. **Table 7** provides a breakdown of each jurisdictional group within the EWMP area. Geographic descriptions of each of the jurisdictional groups are discussed in the following sections.

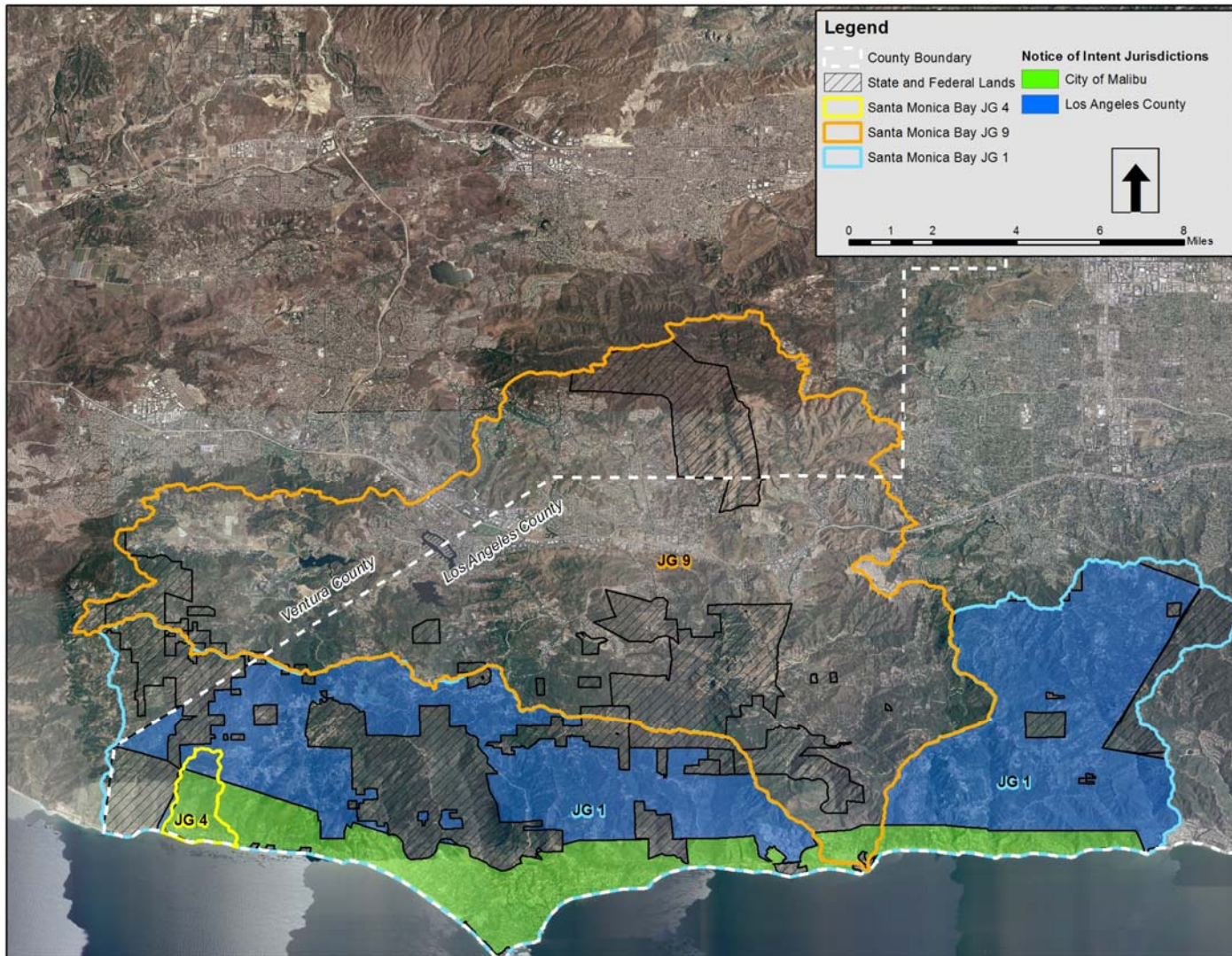


Figure 1. Geographic Scope of the Portions of Santa Monica Bay Jurisdictional Groups 1, 4, and 9 to be covered by the Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program (areas that are not highlighted constitute areas that are not within the geographic scope of the NSMB EWMP)

Table 7. North Santa Monica Bay Coastal Watersheds Land Area Distribution and Enhanced Watershed Management Program and Coordinated Integrated Monitoring Plan Participation

Jurisdictional Group	Responsible Party	EWMP Party	Land Area (Acres)	Percent of JG Area
Jurisdictional Group 1	City of Malibu	Yes	11,062	19.0%
	County of Los Angeles	Yes	42,217	72.5%
	Total JG 1 Area Covered by this EWMP and CIMP		53,279	
	Cities of Calabasas and Los Angeles, Caltrans, and State and Federal parks, Santa Monica Mountains Conservancy, and the Mountains Recreation and Conservation Authority	No	4,935	8.5%
	Total Area of Jurisdictional Group 1		58,214	
Jurisdictional Group 4	City of Malibu	Yes	998	80.2%
	County of Los Angeles	Yes	245	19.7%
	Total JG 4 Area Covered by this EWMP and CIMP		1,243	
	Caltrans	No	1	0.1%
	Total Area of Jurisdictional Group 4		1244	
Jurisdictional Group 9	City of Malibu	Yes	599	0.9%
	Total JG 9 Area Covered by this EWMP and CIMP		599	
	Cities of Calabasas, Westlake Village, Agoura Hills, Hidden Hills, Simi Valley and Thousand Oaks, unincorporated areas of the Counties of Los Angeles and Ventura, Caltrans, State and Federal parks, Santa Monica Mountains Conservancy, and the Mountains Recreation and Conservation Authority	No	69,831	99.1%
	Total Area of Jurisdictional Group 9		70,430	
Total Area Covered by this EWMP and CIMP			55,121	
Total Area of Jurisdictional Groups 1, 4, and 9			129,888	

Jurisdictional Group 1 Geographic Description

The entire SMB JG 1 area encompasses approximately 58,214 acres and is comprised of portions of the Cities of Malibu, Calabasas, and Los Angeles, unincorporated areas of the County of Los Angeles, Caltrans, State and Federal parks, Santa Monica Mountains Conservancy, and the Mountains Recreation and Conservation Authority. The watershed is comprised of 16 subwatersheds:

Arroyo Sequit	Los Aliso	Encinal	Trancas
Zuma	Ramirez	Escondido	Latigo
Solstice	Corral	Carbon	Las Flores
Piedra Gorda	Pena	Tuna	Topanga

The portion of the SMB JG 1 area covered by this NOI encompasses approximately 53,279 acres and only consists of portions of the City of Malibu and unincorporated areas of the County of Los Angeles. Permittees do not have jurisdiction over lands within the Cities of Calabasas and Los Angeles, Caltrans, and lands owned by the State of California and the Federal government, but will seek collaboration with these agencies during the development of the EWMP. Of the total watershed area, the Permittees have jurisdiction over 91.5% of the land area in SMB JG1. **Figure 2** provides a map of SMB JG1 watershed boundaries and highlights the geographic areas covered by this NOI.

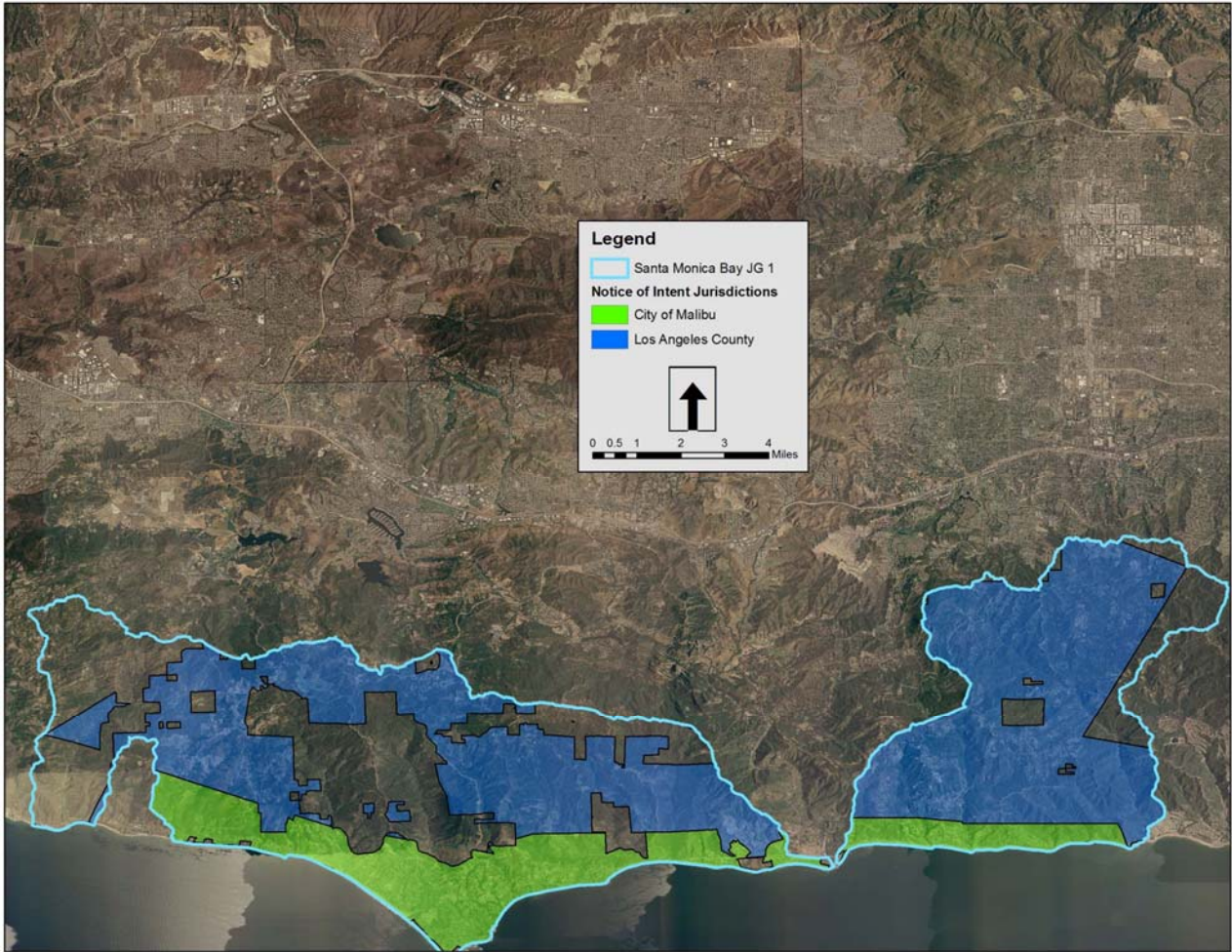


Figure 2. Geographic Scope of the Portion of Santa Monica Bay Jurisdictional Group 1 to be covered by the Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program (areas that are not highlighted constitute areas that are not within the geographic scope of the NSMB EWMP)

Jurisdictional Group 4 (Nicolas Canyon Subwatershed) Geographic Description

The SMB JG 4 area encompasses approximately 1,244 acres and is only comprised of portions of the City of Malibu, unincorporated areas of the County of Los Angeles, and Caltrans. The Permittees have jurisdiction over 99.9% of the total watershed area. Permittees do not have jurisdiction over the lands owned by Caltrans, but will seek collaboration with Caltrans during the development of the EWMP. The entire watershed consists only of the Nicholas Canyon subwatershed. **Figure 3** provides a map of the watershed boundaries and highlights the geographic areas covered by this NOI.

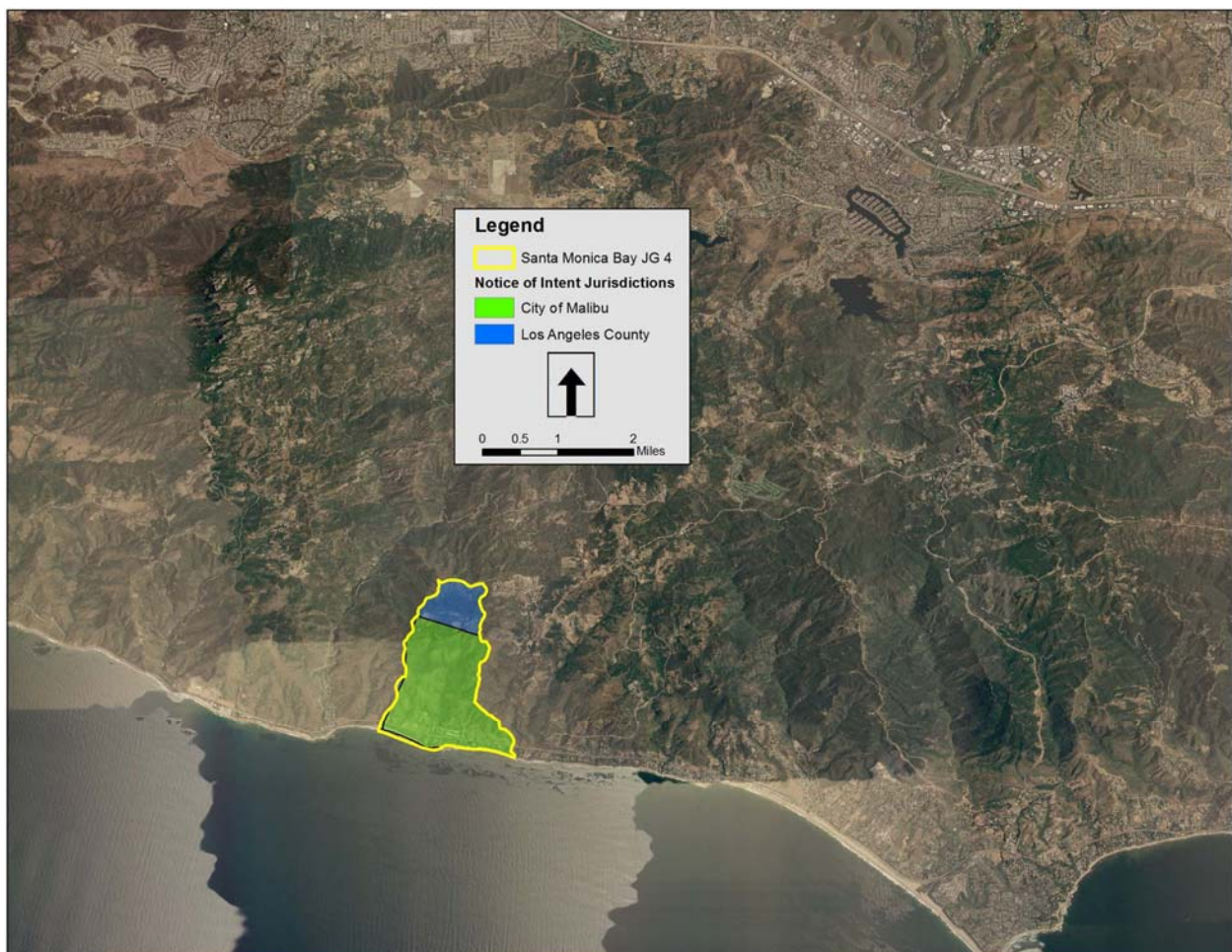


Figure 3. Geographic Scope of the Portion of the Santa Monica Bay Jurisdictional Group 4 area to be covered by the Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program (areas that are not highlighted constitute areas that are not within the geographic scope of the NSMB EWMP)

Jurisdictional Group 9 (Malibu Creek Watershed) Geographic Description

SMB JG9 area encompasses approximately 70,430 acres and is known as the Malibu Creek watershed. It is comprised of portions of the Cities of Agoura Hills, Calabasas, Hidden Hills, Malibu, Simi Valley, and Thousand Oaks, and Westlake Village; (unincorporated areas of) the Counties of Los Angeles and Ventura; Caltrans; State and Federal parks; Santa Monica Mountains Conservancy; and the Mountains Recreation and Conservation Authority.

As previously mentioned, the EWMP and CIMP identified in this NOI will only address the portion of SMB JG 9 within the jurisdictional limits of the City of Malibu, which encompasses approximately 599 acres and only consists of a portion of the City of Malibu. Of the total watershed area, the City of Malibu has jurisdiction over 0.9% of the area in SMB JG 9. The City of Malibu does not have jurisdiction over lands within the rest of the watershed, but will seek collaboration with the other agencies in the watershed during development of the EWMP. **Figure 4** provides a map of the watershed boundaries and highlights the geographic areas covered by this NOI.

The County of Los Angeles and Los Angeles County Flood Control District are partnering with agencies in the Malibu Creek Watershed (other than the City of Malibu) in the development of a Malibu Creek Watershed Group EWMP and a CIMP, which will address the portions of JG9 that are under the responsibility of the agencies that are participating in the development of that EWMP.

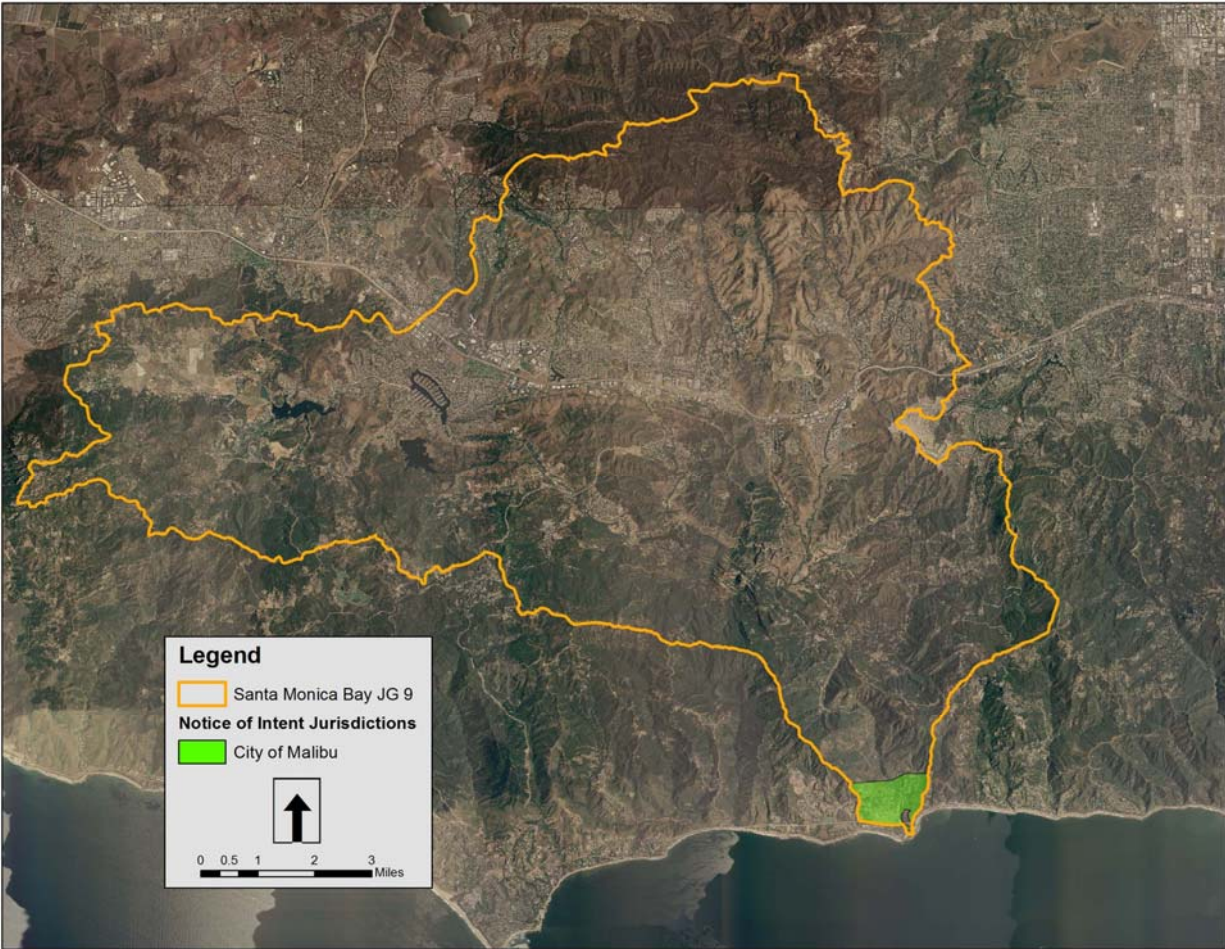


Figure 4. Geographic Scope of the Portion of Santa Monica Bay Jurisdictional Group 9 to be covered by the Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program (areas that are not highlighted constitute areas that are not within the geographic scope of the NSMB EWMP)

SECTION 6. PLAN CONCEPT AND INTERIM MILESTONES AND DEADLINES

MS4 Permit Sections VI.C.4.b.iii.(1) and VI.C.4.b.iii.(4)

The Permittees were directly involved in the development of implementation plans with strategies for compliance with the Malibu Creek and Lagoon Bacteria TMDL and Santa Monica Bay Beaches TMDL and have a track record of successfully and proactively implementing multi-benefit projects in the subwatersheds covered by the NOI to address other TMDL requirements. The Permittees’ EWMP will build on the implementation plans and completed control measures to ensure proposed actions consider multiple pollutants and meet the permit requirements. The Permittees’ EWMP will re-evaluate watershed control measures that have been proposed, but have not yet

been implemented, and will identify improvements that can be made to these control measures to provide the maximum benefit to all stakeholders. Finally, the EWMP will evaluate opportunities for regional projects that could retain all non-stormwater runoff and stormwater from the 85th percentile, 24-hour storm event and identify additional watershed control measures for those areas in the watershed that cannot be addressed by a regional project.

Based on the available information, the Permittees believe that opportunities exist, within the Permittees' collective jurisdictional areas, for collaboration on multi-benefit projects that will meet the intent of the EWMP approach. The Permittees have shown the ability to identify and implement large, regional projects that retain the 85th percentile, 24-hour storm event and provide opportunities for multiple benefits. One example of such a project that has been implemented by the Permittees is the Malibu Legacy Park Project. The Malibu Legacy Park Project encompasses an area of approximately 17 acres. The total cost of the project was in excess of \$50 million. The multiple benefits of the project include:

- Elimination of all non-stormwater discharges and stormwater discharges resulting from the 85th percentile, 24-hour storm event.
- Improving the water quality of Malibu Creek, Malibu Lagoon, and nearby beaches by screening, filtering, and disinfecting stormwater and incidental runoff from the local watershed to remove pathogens and other pollutants.
- Developing the Legacy Park site into a public amenity that provides valuable habitat, education, and passive recreation opportunities in conjunction with water quality improvement opportunities.
- Conserving water by using the retained and treated runoff for irrigation in the Park.

Building on the lessons learned from implementing the Malibu Legacy Park Project, the Permittees will continue to seek opportunities for regional projects that retain all non-stormwater and stormwater runoff from the 85th percentile, 24-hour storm event. Where such regional projects cannot be identified, the Permittees will identify smaller-scale watershed control measures.

To ensure adequate progress is being made to achieve the permit deadlines, interim milestones and deadlines were identified and are summarized in **Table 9**. Interim milestones in **Table 9** are the expected due dates of draft Technical Memoranda that will summarize the information and approaches for development of the specified components of the final Work Plan, CIMP, and EWMP. It is expected that the draft technical memos will not be finalized; instead the information presented in the memos will be revised based on comments and presented in the Work Plan, CIMP, and EWMP Plan.

Table 9. Enhanced Watershed Management Program Interim Milestones and Deadlines

Milestone	Deadline
Develop draft technical memorandum of water quality priorities	March 2014
Complete internal draft of EWMP Work Plan	April 2014
Complete internal draft of CIMP	April 2014
Submit final EWMP Work Plan to the Regional Water Board	June 2014
Submit CIMP to the Regional Water Board	June 2014
Develop draft technical memorandum describing approach to US EPA TMDLs	March 2015
Complete internal draft of EWMP	May 2015
Submit draft EWMP to Regional Water Board	June 2015
Submit Final EWMP to Regional Water Board (revised based on to Regional Water Board comments)	January 2016

SECTION 7. COST ESTIMATE

MS4 Permit Section VI.C.4.b.iii.(2)

The cost estimate for the development of the EWMP and CIMP is \$400,000. Additionally, it is expected that the Permittees will contribute several hundred thousand dollars of in-kind services toward the development of the EWMP and CIMP and attendance at EWMP and Technical Advisory Committee meetings, and will have additional implementation costs.

SECTION 8. PERMITTEE MEMORANDUM OF AGREEMENT

MS4 Permit Section VI.C.4.b.iii.(2)

Attachment A includes a draft of the Memorandum of Understanding between the Permittees that are participating in the development of the EWMP and CIMP addressed in this NOI. Attachment B includes the Permittees’ letters of intent with regard to execution of the MOU.

SECTION 9. COMMITMENT TO IMPLEMENT A STRUCTURAL BMP OR SUITE OF BMPS

MS4 Permit Section VI.C.4.b.iii.(5)

The Permittees listed in **Table 10** will implement the identified structural BMPs to fulfill the obligations under Part VI.C.b.iii.(5). The structural BMPs listed in Table 10 are further described in Attachment C.

Table 10. Structural BMP or Suite of Best Management Practices to be Implemented in the Enhanced Watershed Management Program Area

Jurisdictional Group	Permittee	Structural BMP or Suite of BMPs to be Implemented	Planned Implementation Date
SMB JG 1	City of Malibu	Broad Beach Biofiltration Project – installation of biofilters at 9 catch basins on Broad Beach Road.	September 2013 (Commencement of Construction) April 2014 (Completion)
		Wildlife Road Storm Drain Improvements – installation of biofilters along Wildlife Road and Whitesands Place, and catch basin filters at 2 existing catch basins.	September 2013 (Commencement of Construction) April 2014 (Completion)
SMB JG 9	City of Malibu	Malibu Legacy Park Pump Station Improvements – upgrade the existing storm drain pumps so that the system can treat an increased volume of runoff.	June 2015 (Completion)

ATTACHMENT A
MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE CITY OF MALIBU AND PARTICIPATING AGENCIES
(LOS ANGELES COUNTY FLOOD CONTROL DISTRICT AND COUNTY OF LOS ANGELES)

REGARDING THE ADMINISTRATION AND COST SHARING FOR THE DEVELOPMENT OF THE
NORTH SANTA MONICA BAY COASTAL WATERSHEDS
ENHANCED WATERSHED MANAGEMENT PROGRAM
AND COORDINATED INTEGRATED MONITORING PROGRAM

This Memorandum of Understanding (MOU) is made and entered into as of the date of the last signature set forth below by and between the City of Malibu (CITY), a municipal corporation, and PARTICIPATING AGENCIES (Los Angeles County Flood Control District (LACFCD) and County of Los Angeles). Collectively, these entities shall be known herein as "PARTIES" or individually as "PARTY."

WITNESSETH

WHEREAS, the Los Angeles Regional Water Quality Control Board (Regional Board) adopted the National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit Order No. R4-2012-0175 (MS4 Permit); and

WHEREAS, the MS4 Permit became effective on December 28, 2012, and requires that the LACFCD, County of Los Angeles, and 84 of the 88 cities (excluding Avalon, Long Beach, Palmdale, and Lancaster) within the County of Los Angeles comply with the prescribed elements of the MS4 Permit; and

WHEREAS, the PARTIES have agreed to collaborate in the development of an Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Program (CIMP) for the areas and facilities in the North Santa Monica Bay Coastal Watersheds controlled by the LACFCD, County of Los Angeles, and CITY to comply with of certain elements of the MS4 Permit; and

WHEREAS, the PARTIES agree that each shall assume full and independent responsibility for ensuring its own compliance with the MS4 Permit despite the collaborative approach of this MOU; and

WHEREAS, the PARTIES collaboratively prepared a final Scope of Work and Request for Proposal to obtain a Consultant to assist the PARTIES with compliance with certain elements of the MS4 Permit, as specified in the Scope of Work, which is incorporated into this MOU by reference; and

WHEREAS, the PARTIES have determined that hiring a Consultant, as set forth in paragraph (5)b, to prepare and deliver a Final Work Plan, an EWMP, and a CIMP (collectively,

PLANS) in compliance with certain elements of the MS4 Permit will be beneficial to the PARTIES; and

WHEREAS, the PARTIES have agreed that the total cost for developing the PLANS shall not exceed \$521,218, which includes the cost of the Consultant contract, contract administration fee, and a ten percent (10%) contingency, as detailed on Exhibit A; and

WHEREAS, the PARTIES have agreed to contribute funds to the CITY, which will contract with the Consultant for the preparation of the PLANS, in accordance with the cost allocation and timeline shown in Exhibit A.

NOW, THEREFORE, in consideration of the mutual benefits to be derived by the PARTIES, and of the promises contained in this MOU, the PARTIES agree as follows:

- (1) Recitals: The recitals set forth above are fully incorporated as part of this MOU.
- (2) Purpose: The purpose of this MOU is to cooperatively fund the preparation and submittal of the PLANS to the Regional Board.
- (3) Voluntary: This MOU is voluntarily entered into for the purpose of preparing and submitting the PLANS to the Regional Board.
- (4) Terms: This MOU shall become effective on the latest date of execution by a PARTY and shall remain in effect until (i) the Regional Board's final approval date of the last outstanding portion of the PLANS, (ii) the CITY has provided the PARTIES with an accounting as set forth in paragraph (5)g, and (iii) the PARTIES have paid all outstanding invoices.
- (5) The CITY shall provide the services and performance as follows:
 - a. CITY shall solicit proposals for, award, and administer a Consultant contract for the preparation and delivery of the PLANS.
 - b. CITY shall invoice the PARTIES for their share of the cost for the preparation and delivery of the PLANS as described in Exhibit A.
 - c. CITY will administer the Consultant contract. For this service, LACFCD and County of Los Angeles will pay CITY a contract administration fee equivalent to ten percent (10%) of the respective PARTY's contribution toward the Consultant contract.
 - d. Contingency: CITY will notify the PARTIES if actual expenditures are anticipated to require use of the contingency funds specified in Exhibit A and will obtain written approval of such expenditures from all PARTIES prior to expenditures. Expenditures

that exceed the ten percent (10%) contingency will require an amendment of this MOU.

- e. CITY shall utilize the funds deposited by the PARTIES only for the preparation and completion of the PLANS and the administration of the Consultant contract.
- f. CITY shall provide the PARTIES with an electronic copy of the technical memos, draft PLANS, and completed PLANS within seven (7) business days after receipt from the Consultant.
- g. CITY shall provide an accounting upon the early termination of this MOU pursuant to paragraph (6)p 60 days after the date the Regional Board gives final approval for the last outstanding portion of the PLANS, or three (3) years after the execution of this MOU, whichever comes first. At the completion of the accounting, CITY shall return the unused portion of all funds deposited with the CITY in accordance with the cost allocation formula set forth in Exhibit A.
- h. CITY shall instruct the Consultant to not submit any PLANS to the Regional Board unless and until the PLANS have been approved, in writing, for submittal by all PARTIES to this MOU, which approval will not be unreasonably withheld. If the PARTIES cannot agree on the final language of the PLANS to be submitted to the Regional Board, then this MOU shall terminate and each PARTY shall be entitled to copies of the Consultant's materials prepared to date for use by each individual PARTY.

(6) THE PARTIES FURTHER AGREE:

- a. To make a full faith effort to cooperate with one another to achieve the purposes of this MOU by providing information about project opportunities, reviewing deliverables, and informing their respective administrators, agency heads, and/or governing bodies of matters associated with this MOU in a timely manner.
- b. To fund the cost of the preparation and delivery of the PLANS and to pay the CITY for the preparation and delivery of the PLANS within 60 days of receiving an invoice. Funding shall be as specified in Exhibit A.
- c. To grant reasonable access rights and entry to the CITY and the Consultant during the terms of this MOU to the PARTY's facilities (i.e. storm drains, channels, catch basins, properties, etc.) (collectively, THE FACILITIES) to achieve the purposes of this MOU, provided, however, that prior to entering any PARTY's FACILITIES, the CITY or its Consultant shall secure written authorization to enter from the applicable PARTY.
- d. The CITY shall require the Consultant retained pursuant to this MOU to agree to indemnify, defend, and hold harmless each PARTY, its special districts, elected and

appointed officers, employees, and agents, from and against any and all liability, including but not limited to demands, claims, actions, fees, costs, and expenses (including attorney and expert fees), arising from or connected with the Consultant's performance of its agreement with CITY. In addition, the CITY shall require the Consultant to carry, maintain, and keep in full force and effect an insurance policy or policies, and each PARTY, its officers, employees, attorneys, and designated volunteers shall be named as additional insured on the policy(ies) with respect to liabilities arising out of the Consultant's work.

- e. Each PARTY shall indemnify, defend, and hold harmless each other PARTY, including its special districts, elected and appointed officers, employees, and agents, from and against any and all liability, including but not limited to demands, claims, actions, fees, costs, and expenses (including attorney and expert witness fees), arising from or connected with the respective acts of each PARTY arising from or related to this MOU; provided, however, that no PARTY shall indemnify another PARTY for that PARTY's own negligence or willful misconduct.
- f. In light of the provisions of Section 895.2 of the Government Code of the State of California imposing certain tort liability jointly upon public entities solely by reason of such entities being parties to an agreement (as defined in Section 895 of said Code), each of the PARTIES hereto, pursuant to the authorization contained in Section 895.4 and 895.6 of said Code, shall assume the full liability imposed upon it or any of its officers, agents, or employees, by law for injury caused by any act or omission occurring in the performance of this MOU to the same extent that such liability would be imposed in the absence of Section 895.2 of said Code. To achieve the above stated purpose, each PARTY indemnifies, defends, and holds harmless each other PARTY for any liability, cost, or expense that may be imposed upon such other PARTY solely by virtue of said Section 895.2. The provisions of Section 2778 of the California Civil Code are made a part hereof as if incorporated herein.
- g. The PARTIES are, and shall at all times remain as to each other, wholly independent entities. No PARTY to this MOU shall have power to incur any debt, obligation, or liability on behalf of any other PARTY unless expressly provided to the contrary by this MOU. No employee, agent, or officer of a PARTY shall be deemed for any purpose whatsoever to be an agent, employee, or officer of another PARTY.
- h. Any notices, bills, invoices, or reports relating to this MOU, and any request, demand, statement, or other communication required or permitted hereunder shall be in writing and shall be delivered to the representatives of the PARTIES at the addresses set forth in Exhibit B.
- i. This MOU shall be binding upon, and shall be to the benefit of the respective successors, heirs, and assigns of each PARTY; provided, however, neither PARTY may

assign its respective rights or obligations under this MOU without the prior written consent of the other PARTIES.


- j. This MOU is governed by, interpreted under, and construed and enforced in accordance with the laws of the State of California.
- k. If any provision of this MOU shall be determined by any court to be invalid, illegal, or unenforceable to any extent, the remainder of this MOU shall not be affected, and this MOU shall be construed as if the invalid, illegal, or unenforceable provision had never been contained in this MOU.
- l. All PARTIES have been represented by counsel in the preparation and negotiation of this MOU. Accordingly, this MOU shall be construed according to its fair language. Any ambiguities shall be resolved in a collaborative manner by the PARTIES and shall be rectified by amending this MOU as described in paragraph (6)o.
- m. Each of the persons signing below on behalf of a PARTY represents and warrants that he or she is authorized to sign this MOU on behalf of such PARTY.
- n. Each PARTY shall have no financial obligation to the other PARTIES of this MOU, except as herein expressly provided.
- o. The terms and provisions of this MOU may not be amended, modified, or waived, except by an instrument in writing signed by all PARTIES.
- p. Early Termination or Withdrawal
 - 1. This MOU may be terminated upon the express written agreement of all PARTIES. If this MOU is terminated, all PARTIES must agree on the equitable redistribution of remaining funds deposited, if there are any, or payment of invoices due at the time of termination. Completed work shall be owned by all PARTIES. Rights to uncompleted work by the Consultant still under contract will be held by the PARTY or PARTIES who fund the completion of such work.
 - 2. A PARTY may withdraw from this MOU upon 60 days written notice to the other PARTIES, subject to payment of any invoice received from CITY prior to or during the 60-day notice period for its share of the cost of the work completed as of the date of its notice of withdrawal, calculated in accordance with the cost-sharing percentages set forth in Exhibit A. The effective withdrawal date shall be the sixtieth (60th) day after CITY receives the withdrawing PARTY's notice to withdraw from this MOU. CITY shall refund to the withdrawing PARTY any unused funds paid by the withdrawing PARTY's effective withdrawal date. All PARTIES understand, acknowledge, and agree that withdrawal from this MOU will terminate any responsibility, liability, or obligation of the withdrawing PARTY

under this MOU commencing on the effective withdrawal date and that the withdrawing PARTY shall remain liable for its share of any loss, debt, or liability incurred prior to the withdrawal date, and for any work which could not be suspended. Work completed prior to the effective withdrawal date shall be owned by all PARTIES. Rights to the remaining work will be held by the PARTY or PARTIES who fund the completion of such work. Withdrawal from this MOU does not release any PARTY from the obligations set forth in the MS4 Permit.

3. If a PARTY fails to comply with any of the terms or conditions of this MOU, that PARTY shall forfeit its rights to work completed through this MOU, but no such forfeiture shall occur unless and until the defaulting PARTY has first been given notice of its default and a reasonable opportunity to cure the alleged default.

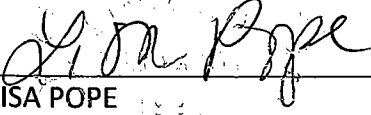
IN WITNESS WHEREOF, the PARTIES hereto have caused this MOU to be executed by their duly authorized representatives and affixed as of the date of signature of the PARTIES:

CITY OF MALIBU

By 
JIM THORSEN
CITY MANAGER

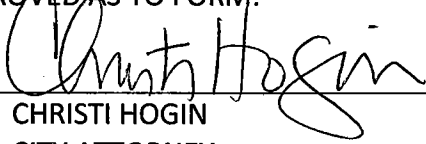
10/15/13
Date

ATTEST:


By 
LISA POPE
CITY CLERK

10.15.13
Date

APPROVED AS TO FORM:

By 
CHRISTI HOGIN
CITY ATTORNEY

COUNTY OF LOS ANGELES

By 
for GAIL FARBER
Director of Public Works

9-19-13
Date

APPROVED AS TO FORM:

John F. Krattli
County Counsel

By 
Associate

9/17/2013
Date

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

By 
for GAIL FARBER
Chief Engineer

9-19-13
Date

APPROVED AS TO FORM:

John F. Krattli
County Counsel

By 
Associate

9/17/2013
Date

EXHIBIT A

**North Santa Monica Bay Coastal Watersheds EWMP and CIMP
Funding Contributions**

Consultant Contract Cost = \$446,200

Funding Contributions

The LACFCD will contribute 10 percent of the total project cost. Ten (10) percent of the remaining 90 percent of the total project cost will be distributed equally between the other PARTIES (i.e., the City of Malibu and the County of Los Angeles); this shall be known as the Base Fee. The remaining balance will be distributed based on the percent of the combined land area for which each PARTY is responsible.

Table 1: Agency Contributions

Party	Base Fee	Land Area (Acres)	Percent of Land Area	Contribution Based on Land Area	Total Contribution toward Consultant Contract	Contract Administration Fee	Total
LACFCD	N/A	N/A	N/A	N/A	\$44,620	\$4,462	\$49,082
City of Malibu	\$20,079	12,659	22.9658%	\$83,004	\$103,083	N/A	\$103,083
County of Los Angeles	\$20,079	42,462	77.0342%	\$278,418	\$298,497	\$29,850	\$328,347
Total	\$40,158	55,121	100%	\$361,422	\$446,200	\$34,312	\$480,512

Table 2: Invoicing Timeline

Party	1st Invoice (50%) [See note 1]	2nd Invoice (50%) July 1, 2014	Total Invoice Amount	Contingency (10%) [See note 2]	Total Including Contingency
LACFCD	\$24,541	\$24,541	\$49,082	\$4,908	\$53,990
City of Malibu	\$51,541	\$51,541	\$103,083	\$10,308	\$113,391
County of Los Angeles	\$164,174	\$164,174	\$328,347	\$32,835	\$361,182
Total	\$240,256	\$240,256	\$480,512	\$48,051	\$528,563

Notes:

1. The first invoice shall be sent once the MOU becomes effective, as set for in Section 4, or on October 1, 2013, whichever comes first
2. The ten percent (10%) contingency includes a 10 percent contingency on the cost of the consultant contract plus the corresponding contract administration fee.

EXHIBIT B

**North Santa Monica Bay Coastal Watersheds EWMP
Responsible Agencies Representatives**

1. City of Malibu
Public Works Department
23825 Stuart Ranch Road
Malibu, CA 92065
Rob DuBoux
E-mail: rduboux@malibucity.org
Phone: (310) 456-2489 x339
Fax: (310) 317-0950

2. County of Los Angeles
Department of Public Works
Watershed Management Division, 11th Floor
900 South Fremont Avenue
Alhambra, CA 91803-1331
Angela George
E-mail: ageorge@dpw.lacounty.gov
Phone: (626) 458-4300
Fax: (626) 457-1526

3. Los Angeles County Flood Control District
Department of Public Works
Watershed Management Division, 11th Floor
900 South Fremont Avenue
Alhambra, CA 91803-1331
Gary Hildebrand
E-mail: ghildeb@dpw.lacounty.gov
Phone: (626) 458-4300
Fax: (626) 457-1526

ATTACHMENT B
LETTERS OF INTENT



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE

REFER TO FILE: **WM-7**

June 24, 2013

Mr. Samuel Unger, P.E., Executive Officer
California Regional Water Quality
Control Board – Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention Ms. Renee Purdy

Dear Mr. Unger:

**LETTER OF INTENT – COUNTY OF LOS ANGELES
NORTH SANTA MONICA BAY COASTAL WATERSHEDS
ENHANCED WATERSHED MANAGEMENT PROGRAM
AND COORDINATED INTEGRATED MONITORING PROGRAM**

The County of Los Angeles (County) submits this Letter of Intent to participate in and share the cost of the development of an Enhanced Watershed Management Program (EWMP) and a Coordinated Integrated Monitoring Program (CIMP) with the North Santa Monica Bay Coastal Watersheds Group. This Letter of Intent serves to satisfy the EWMP notification requirements of Section VI.C.4.b.iii(3) of Order No. R4-2012-0175 (Municipal Separate Storm Sewer System Permit) and the CIMP requirements of Section IV.C.1 of Attachment E of the Municipal Separate Storm Sewer System Permit.

The North Santa Monica Bay Coastal Watersheds Group consists of the following agencies: City of Malibu as coordinating agency for EWMP and CIMP development, County, and Los Angeles County Flood Control District. The North Santa Monica Bay Coastal Watersheds Group has included a final draft Memorandum of Understanding as Attachment A of the Notice of Intent. The County intends to submit a final Memorandum of Understanding to its Board of Supervisors for approval prior to December 28, 2013.

If you have any questions, please contact Ms. Angela George at (626) 458-4325 or ageorge@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works

MB:jht

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cc: City of Malibu (Jennifer Brown, Rob DuBoux)



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: **WM-7**

June 24, 2013

Mr. Samuel Unger, P.E.
Executive Officer
California Regional Water Quality
Control Board – Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention Ms. Renee Purdy

Dear Mr. Unger:

LETTER OF INTENT – LOS ANGELES COUNTY FLOOD CONTROL DISTRICT NORTH SANTA MONICA BAY COASTAL WATERSHEDS ENHANCED WATERSHED MANAGEMENT PROGRAM AND COORDINATED INTEGRATED MONITORING PROGRAM

The Los Angeles County Flood Control District (LACFCD) submits this Letter of Intent to participate in and share the cost of the development of an Enhanced Watershed Management Program (EWMP) and a Coordinated Integrated Monitoring Program (CIMP) with the North Santa Monica Bay Coastal Watersheds Group. This Letter of Intent serves to satisfy the EWMP notification requirements of Section VI.C.4.b.iii(3) of Order No. R4-2012-0175 (Municipal Separate Storm Sewer System Permit) and the CIMP requirements of Section IV.C.1 of Attachment E of the Municipal Separate Storm Sewer System Permit.

The North Santa Monica Bay Coastal Watersheds Group consists of the following agencies: City of Malibu as coordinating agency for EWMP and CIMP development, County of Los Angeles, and LACFCD. The North Santa Monica Bay Coastal Watersheds Group has included a final draft Memorandum of Understanding as Attachment A of the Notice of Intent. The LACFCD intends to submit a final Memorandum of Understanding to the County of Los Angeles Board of Supervisors (which is the LACFCD's governing body) for approval prior to December 28, 2013.

Mr. Samuel Unger
June 24, 2013
Page 2

If you have any questions, please contact Ms. Terri Grant at (626) 458-4309 or
tgrant@dpw.lacounty.gov.

Very truly yours,


A handwritten signature in black ink, appearing to read "Gail Farber".

GAIL FARBER

Chief Engineer of the Los Angeles County Flood Control District

MB:jht

P:\wmpubl\Secretarial\2013 Documents\Letter\LOI NSMBCW LACFCD.doc\C13182

cc: City of Malibu (Jennifer Brown, Rob DuBoux)



City of Malibu

23825 Stuart Ranch Road · Malibu, California · 90265-4861
Phone (310) 456-2489 · Fax (310) 456-3356 · www.malibucity.org

June 26, 2013

Samuel Unger, Executive Officer
Los Angeles Regional Water Quality Control Board
320 W. Fourth Street, Suite 200
Los Angeles, CA 90013

RE: Participation in the North Santa Monica Bay Coastal Watersheds Enhanced Watershed Management Program and Coordinated Integrated Monitoring Program

Dear Mr. Unger:

The City of Malibu is confirming its intent to participate in the development of and share the cost of the North Santa Monica Bay Coastal Watersheds Enhanced Watershed Management Program (EWMP) and Coordinated Integrated Monitoring Program (CIMP). This Letter of Intent serves to satisfy the notification requirements of Section VI.C.4.b.iii (3) and Section IV.C.1 of Attachment E of Order No. R4-2012-0175 (Permit). The final Memorandum of Understanding between the City and other participating agencies is scheduled for approval by Malibu City Council prior to December 28, 2013.

The North Santa Monica Bay Coastal Watersheds agencies subject to the Permit and participating in this EWMP and CIMP include the City of Malibu, County of Los Angeles, and the Los Angeles County Flood Control District. The City is taking an active role as the coordinating agency in this effort. There are additional agencies which have land draining to the North Santa Monica Bay Coastal Watersheds that are not currently participating in this EWMP and CIMP. Some are agencies which are already participating in other local EWMPs. Others are Caltrans, National Parks Service, California Department of Parks and Recreation, the Santa Monica Mountains Conservancy, and Mountains Recreation Conservation Authority. Therefore, lands owned by those agencies are not included in the subject EWMP coverage area. However, the participants are making efforts to collaborate and/or include other agencies in the process where feasible.

Should you have any questions, please contact Jennifer Brown, Senior Environmental Programs Coordinator at (310) 456-2489 extension 275 or jbrown@malibucity.org, or Rob DuBoux, Senior Civil Engineer, on extension 339 or rduboux@malibucity.org.

Sincerely,

Jim Thorsen
City Manager

cc: County of Los Angeles

ATTACHMENT C

BROAD BEACH PROJECT

Jurisdictional Group	Permittee	Structural BMP or Suite of BMPs to be Implemented	Planned Implementation Date
SMB JG 1	City of Malibu	Broad Beach Biofiltration Project – installation of biofilters at 8 catch basins on Broad Beach Road.	January 2014 (Commencement of Construction) June 2014 (Completion)

BACKGROUND/DESCRIPTION

The Broad Beach Biofiltration Project is located in JG1 in Northern Malibu on Broad Beach, near the intersection of Pacific Coast Highway (PCH) and Trancas Canyon Road, adjacent to ASBS areas. Broad Beach Road parallels and is located at the toe of the PCH embankment slope. Single family residential homes separate Broad Beach Road from the Pacific Ocean. The Project consists of the installation of different types of biofilters at nine catch basins within the City Right of Way, treating stormwater and urban runoff prior to the entering of flows into City-owned catch basins, which discharge to privately owned storm drain systems. The project location is shown below in Figure 1.



Figure 1. Broad Beach Project Locations

Design constraints include proximity to septic systems, slope stability of adjacent Caltrans embankments and slopes, parking restrictions, local geotechnical concerns, and other constraints. An example of a typical Broad Beach Road biofilter (small footprint) is shown below in Figure 2.

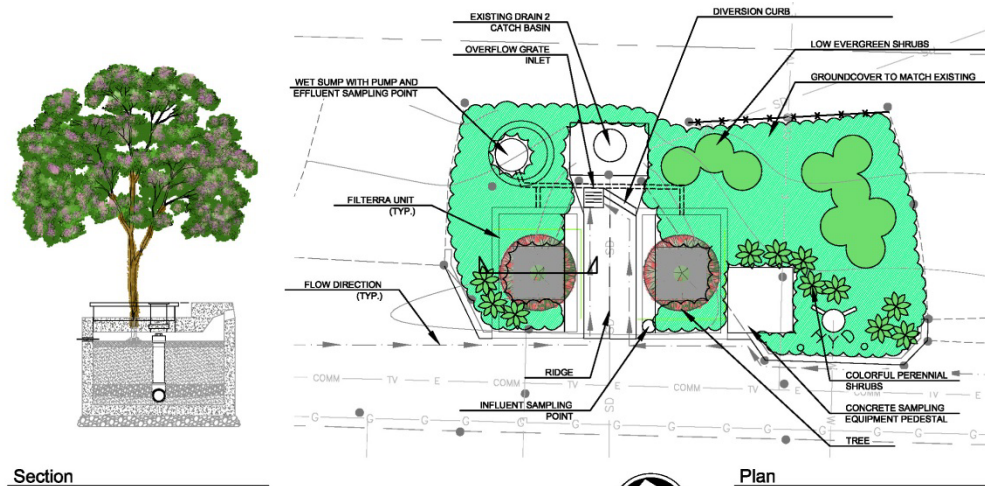


Figure 2. Typical Small Footprint Biofilter

Project includes a combination of biofilters, and flow control, with potential to incorporate harvest and use systems for Malibu drains. In general terms, three types of biofilters are contemplated.

- Small footprint biofilters such as the Filterra™ or Bacterra™ systems, which incorporate flow-based design, smaller right of way requirements, and higher treatment capacity. A schematic of the Filterra system is provided as Figure 3.
- Biofilters with volume control that provide not only biofiltration, but control discharges into the storm drain system through integrated storage and pumping. This is a volume-based design approach. The extended hydraulic residence time in vegetated soil media matrix are design to partially mimic subsurface flow wetland performance and eliminate dry weather flows into the MS4 (catch basin).
- Harvest and use systems incorporated with biofilters are not currently planned but could be contemplated as a future retrofit. This approach seeks to incorporate integrated water resource and potable water offset concepts with water quality. Given local site limitations including steep slopes and onsite wastewater treatment systems, the objective is to store captured water for application to safely apply to landscaping. This design element if incorporated, could examine usage of Opti-RTC (real time controller) technologies for stormwater management, though it is not currently planned.

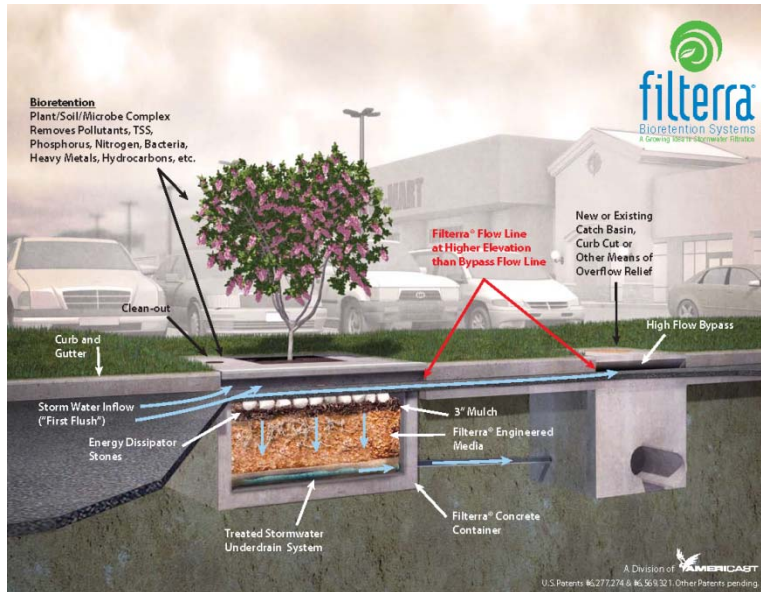


Figure 3. Filterra (TM) Concept

DRAINAGE AREA AND EQUIVALENT WATER QUALITY VOLUMES

Catch basin locations are shown above in Figure 1. The following table (Table 1) lists drainage areas and approximate equivalent design volumes and flow rates for the catch basin locations. Drainage areas are primarily single family residential, roadway, and slope runoff. The basis for design is the Standard Urban Stormwater Mitigation Plan (0.75 in storm).

Table 1.
Approximate Drainage Areas and Equivalent Design Volumes for Project Catchments.

Catchment No.	Drainage Area (Acres)	Runoff Coef. (Cd)	WQ Volume (ft ³) ¹	WQ Flow Rate (cfs)
1	2.3	0.29	1794	0.13
2W	0.6	0.17	283	0.02
2E	1.6	0.17	754	0.06
3	0.8	0.20	427	0.03
4	1.5	0.16	651	0.05
5AW	0.9	0.17	422	0.03
5AE	1.7	0.17	797	0.06
6	1.1	0.18	546	0.04
7W	0.8	0.19	413	0.03
7E	0.3	0.19	155	0.01
8	0.8	0.23	494	0.04
Total	12.4		6,736	

POLLUTANT LOAD REDUCTIONS

- For biofilters (flow-through systems) estimates for pollutant loading are provided by the manufacturer for reference. Lab analyses report removal efficiencies ranging from 77% - 99%. Field investigations report removal efficiencies of 95% - 99% for fecal coliform, E.coli,

¹ Note that where flow based BMPs are implemented, the basis for design would be flow based.

and enterococcus; TSS removal efficiencies of 85%. Influent and effluent concentrations are not reported, but given anticipated influent loading, pollutant reduction, particularly for the Bacterra media, is expected to be significant (see Figure 4).

(<http://www.filterra.com/index.php/product/bacterra/>)

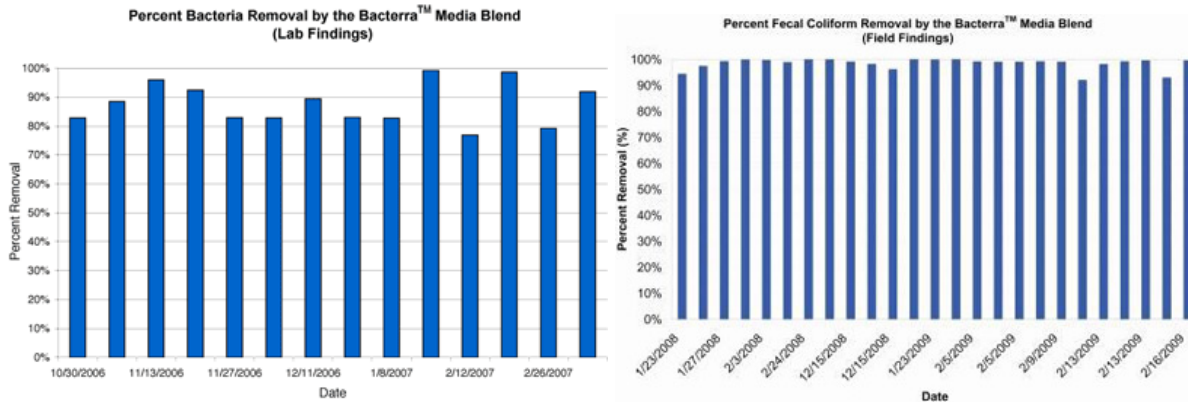


Figure 4. Filterra (TM)/Bacterra reported pollutant removal efficiencies.

- For biofilters with flow control. Water quality is expected to be similar to the quality of subsurface flow wetlands, which have proven to be highly effective for pollutant removal (in many cases 2-log to 3-log removal). Full bacteria treatment is expected for any discharges from biofilters. Furthermore, flow control systems will minimize discharge occurrences, enhancing compliance with the TMDL and ASBS exception provisions.
- For harvest and use systems, though not currently planned, there would be no discharge and therefore captured water would receive 100% pollutant reduction of all stormwater and urban runoff pollutants.

WILDLIFE ROAD

Jurisdictional Group	Permittee	Structural BMP or Suite of BMPs to be Implemented	Planned Implementation Date
SMB JG 1	City of Malibu	Wildlife Road Storm Drain Improvements – installation of biofilters along Wildlife Road and Whitesands Place, and catch basin filters at 2 existing catch basins.	September 2013 (Commencement of Construction) April 2014 (Completion)

BACKGROUND/DESCRIPTION

The Wildlife Road Storm Drain Improvements Project is located in JG1 in Northern Malibu on Wildlife Road and Whitesands Place, adjacent to ASBS areas. This project is located within a developed residential neighborhood. Two existing storm drain inlets, SD-1 and SD-2 are located on Whitesands Place and Wildlife Road. The project site map is shown on Figure 5. The Project consists of the installation of bioretention swales and biofilters within the City Right of Way, treating stormwater and urban runoff prior to the entering of flows into City-owned catch basins.



Figure 5. Wildlife Road Storm Drain Improvements Locations

Due to the limited amount of space within the City's Right of Way, the project will include a combination of bioretention swales and biofilters.

- Small foot print biofilters such as the Filterra™ or Bacterra™ systems, which incorporate flow-based design, smaller right of way requirements, and higher treatment capacity. A schematic of the Filterra system is provided as Figure 3.
- Bioretention swales will be constructed adjacent to the existing roadway without significant impact to the existing infrastructure (driveways, hardscape and landscaping). The bioretention swales are vegetated shallow depressions that provide above ground storage, evapotranspiration, infiltration, and hydro-modification of stormwater runoff. Runoff from the roadway will enter into the bioretention swales where the proposed vegetation will assist in removing the pollutants through plant uptake. The remaining stormwater runoff is infiltrated through the bottom of swale into the native soils

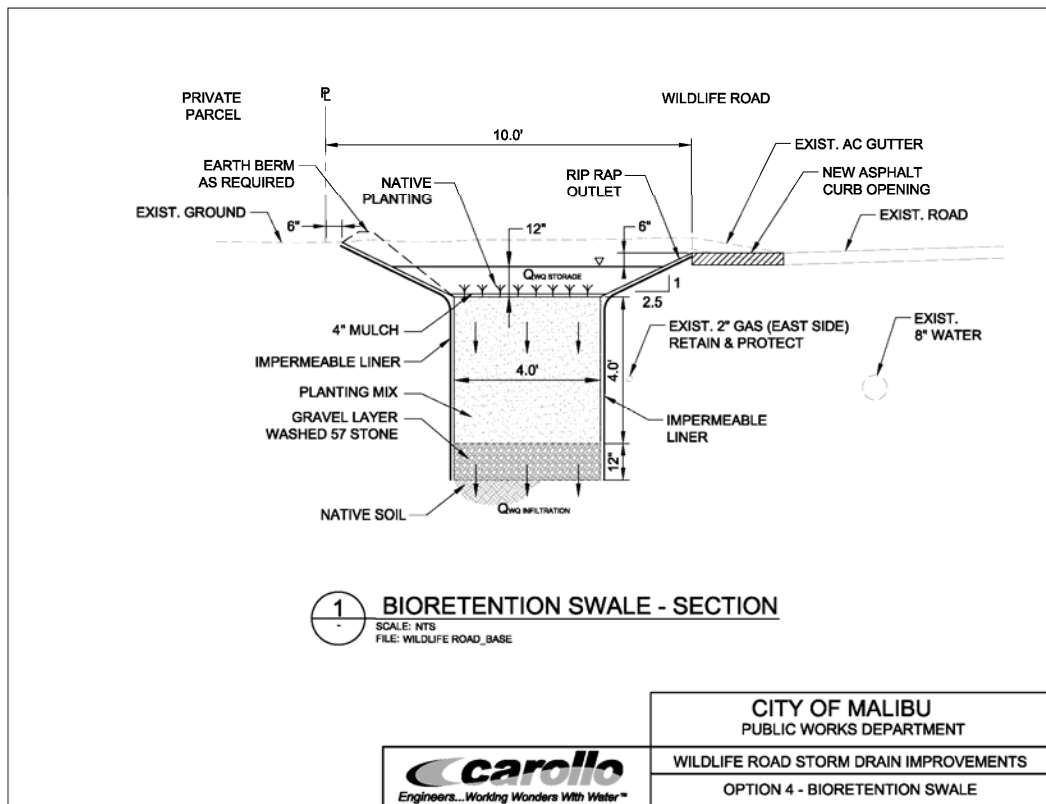


Figure 6. Typical Bioretention Swale

DRAINAGE AREA

Catch basin locations are shown above in 5. The following table (2) lists drainage areas and approximate equivalent design volumes and flow rates for the catch basin locations. Drainage areas are primarily single family residential, and roadway runoff. The basis for design is the Standard Urban Stormwater Mitigation Plan (0.75 in storm).

Table 2.
Approximate Drainage Areas and Equivalent Design Volumes for Project Catchments.

Catchment No.	Drainage Area (acres)	Runoff Coef. (Cd)	WQ Volume (ft ³) ²	WQ Flow Rate (cfs)
SD1	4.91	0.32	4,792	0.35
SD2	3.90	0.47	5,663	0.40
Total	8.81		10,455	

POLLUTANT LOAD REDUCTIONS

- For the Filtera biofilters (flow-through systems) estimates for pollutant loading are provided by the manufacturer for reference. Lab analyses report removal efficiencies ranging from 77% - 99%. Field investigations report removal efficiencies of 95% - 99% for fecal coliform, E.coli, and enterococcus; TSS removal efficiencies of 85%. Influent and effluent concentrations are not reported, but given anticipated influent loading, pollutant reduction, particularly for the Bacterra media, is expected to be significant (see Figure 4).
- For the bioretention swales the water quality is expected to be similar to the quality of subsurface flow wetlands, which have proven to be highly effective for pollutant removal (in many cases 2-log to 3-log removal). Full bacteria treatment is expected since all storm flows captured will be infiltrated. It is expected that these bioretention swales will provide full compliance with the TMDL and ASBS exception provisions.

LEGACY PARK

Jurisdictional Group	Permittee	Structural BMP or Suite of BMPs to be Implemented	Planned Implementation Date
SMB JG 9	City of Malibu	Malibu Legacy Park Pump Station Improvements – upgrade the existing storm drain pump stations so that the system can treat an increased volume of runoff.	June 2015 (Completion)

BACKGROUND/DESCRIPTION

Malibu Legacy Park is a Regional Project that provides water quality and water resources benefits. The project exceeds requirements to put over 300 acres of Malibu (including City Hall) into full compliance with Malibu Creek Bacteria TMDL requirements, providing a capture volume consistent with Los Angeles Standard Urban Stormwater Mitigation Plan requirements (assuming no upstream LID or source control measures). Captured water is managed, disinfected, and utilized to offset potable water uses for park irrigation. A schematic of the design flow processes is provided in the schematic below (Figure 7).

² Note that where flow based BMPs are implemented, the basis for design would be flow based.

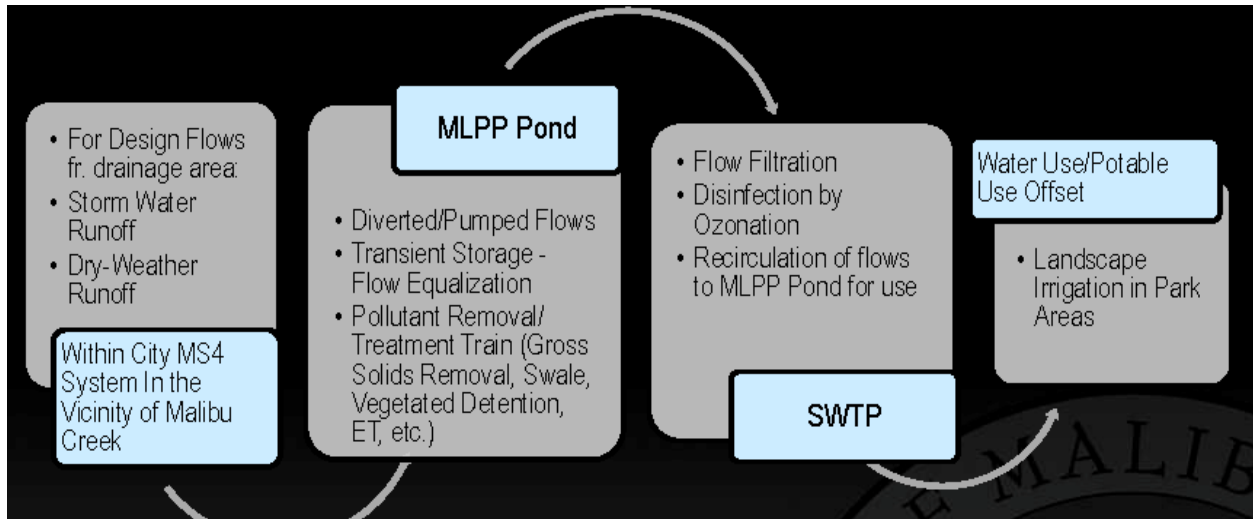


Figure 7. Legacy Park Flow Process

DRAINAGE AREA

There are three primary tributary areas associated with the (pre-project) hydrology as shown below in Figure 8. The majority of water originates from the Civic Center Drainage Area and drains directly to Legacy Park. Two smaller drainage areas originate from the Cross Creek (AKA Texaco Drain) drainage area and Malibu Road drainage area. Currently, water from Cross Creek and Malibu Road are pumped through a force main to Legacy Park. The proposed project contemplates an upgrade to the pumping system (Figure 9).

A summary of drainage areas are tabulated below.

- Malibu Road Outfall ~ 55 acres
- Cross Creek (Texaco Drain) ~15 acres
- Civic Center~270 acres
- Total Drainage Area ~ 340 acres

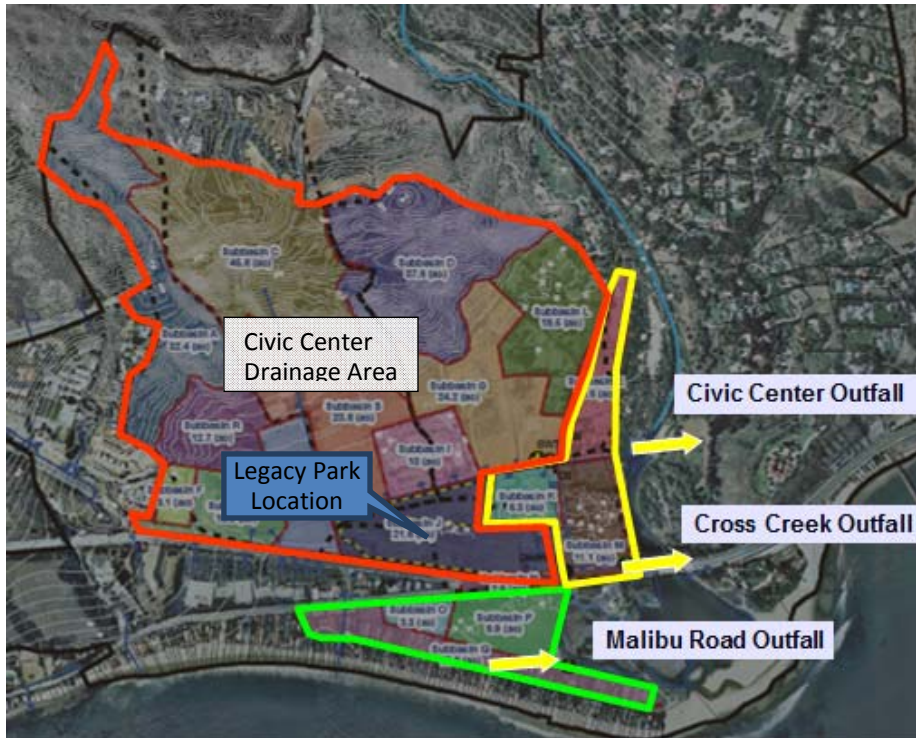


Figure 8. Legacy Park Drainage Areas

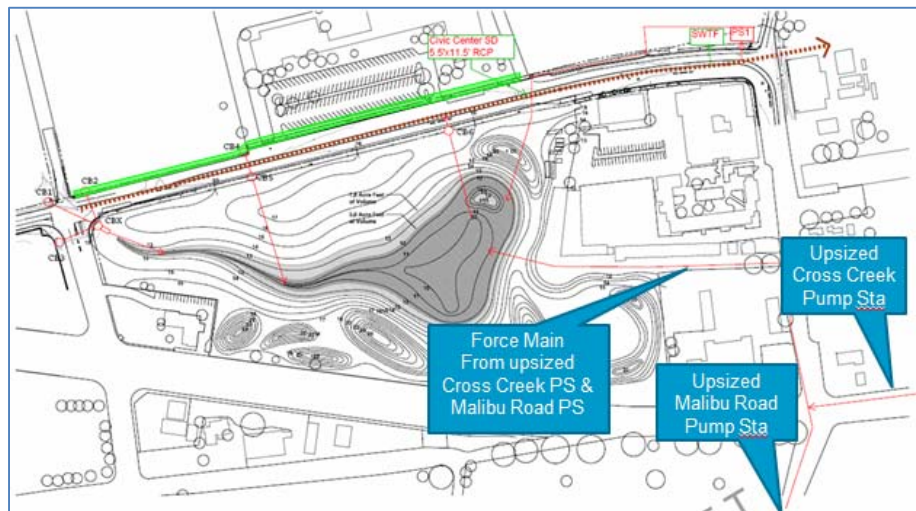


Figure 9. Legacy Park Project Upgrades

VOLUME OF WATER TREATED

The hydraulics of the Civic Center Drain system were analyzed through a continuous 50-year simulation to model compliance with the Bacteria TMDL. The results of this simulation are provided below in Figure 10. Prior to the project, it was estimated that the Cross Creek and Malibu Road may have exceeded Bacteria TMDL criteria 15-35% of the time. Studies have shown that increasing pumping capacity could increase compliance to 90-98% of the time (Susilo et. al 2007).

The objective of the pump station upgrades is to increase the pumping capacity to capture and convey the 85th Percentile 24-hour storm event to Malibu Legacy Park. The Cross Creek Pump

Station and Malibu Road Pump Station currently have a maximum pumping capacity of 200 gallons per minute. These pump stations will be upgraded with new pumps and other improvements to increase the capacity at these locations.

Currently the park has a storage capacity (utilized for both extended detention and transient water storage) of 8 acre feet, or 348,480 cubic feet. Since the 85th Percentile 24-hour storm event volume for the pond is 240,000 cubic feet, the existing Malibu Legacy Park configuration has sufficient capacity once the pump stations are upgraded.

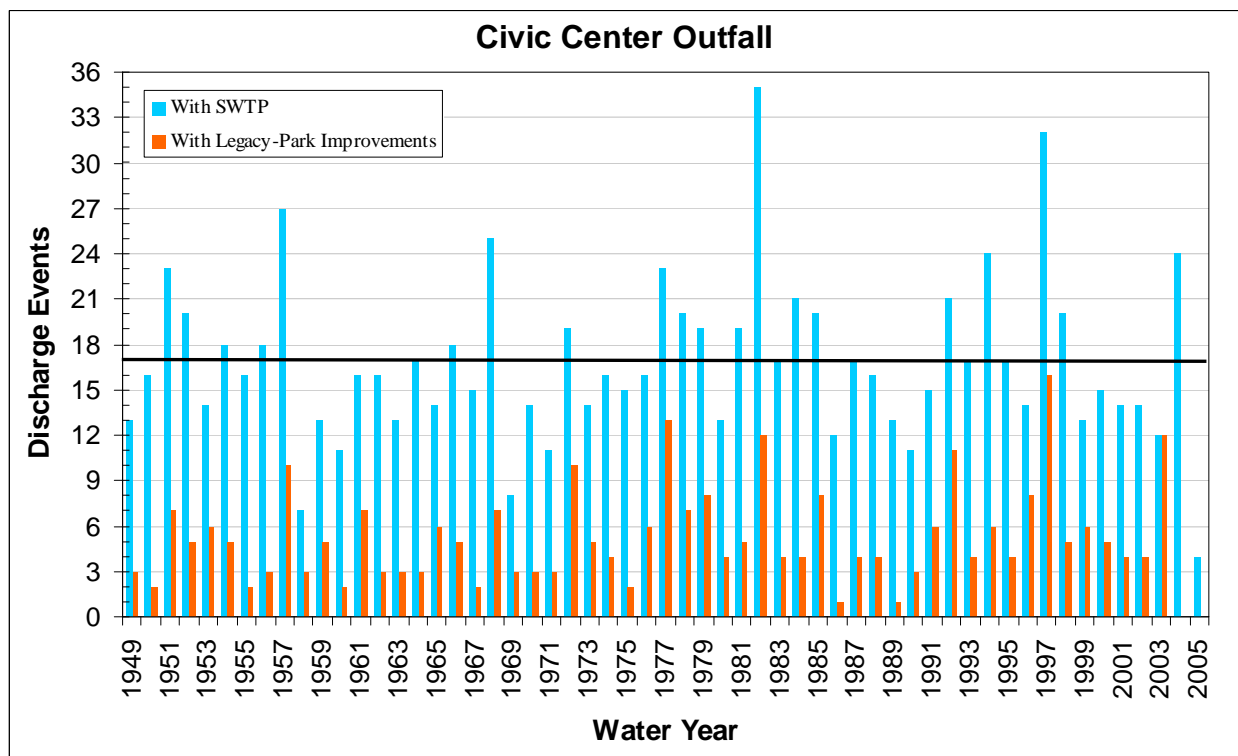


Figure 10. Civic Center Drain TMDL Compliance

POLLUTANT LOAD REDUCTIONS

As previously stated the capacity of Legacy Park is 8 acre-feet, significantly more than the 85th Percentile 24-hour storm volume. Because this is an actively managed, disinfection, and harvest and use system, it is expected that all pollutant loading associated with this design storm will be fully mitigated.

REFERENCES

Susilo, Brager, Cameron, West. 2007. Multi-Benefit Stormwater Concept Implementation: Malibu’s Legacy Park Project. CASQA Conference. Costa Mesa, CA