

still meet water quality standards, and allocates the acceptable pollutant load to point and nonpoint sources. The elements of a TMDL are described in 40 CFR 130.2 and 130.7. A TMDL is defined as “the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background” (40 CFR 130.2). Regulations further require that TMDLs must be set at “levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality” (40 CFR 130.7 (c) (1)). The regulations at 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters. The U.S. EPA has issued guidance for establishing WLAs for storm water discharges in TMDLs and their incorporation as numerical limitations in MS4 Storm Water Permits (U.S. EPA Office of Water Memo, *Establishing Total Maximum Daily Load Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs*, Nov 22, 2002 Memo).

Since provisions in NPDES permits must reflect the assumptions and requirements of available TMDLs (40 CFR 122.44 (d)(1)(vii)(B)), the NPDES permit must incorporate the WLAs as either BMPs (reasonably expected to achieve the WLAs when implemented and properly maintained), under specified circumstances (40 CFR 122.44(k)(2) & (3)), or as a Water Quality Based Limitation (WQBEL) expressed numerically. Where a non-numeric effluent limitation is selected, the permits administrative record must support the expectation that the BMPs are sufficient to achieve the WLAs. (40 CFR 124.8, 124.9, and 124.18.) The guidance, however, does not address non-storm water discharges from an MS4.

State Regulatory Authority and Permit History

The State of California is one of forty-five States with duly delegated authority under the CWA to implement the NPDES permitting program. The Porter-

Cologne Act (California Water Code) authorizes the State Board, through the nine regional boards, to issue NPDES permits, and regulate and control the discharge of pollutants into waters of the State. To comply with the CWA, the Los Angeles Regional Water Board (LA Water Board) issued the first storm water permit ("predecessor permit") on June 18, 1990, to the municipalities (Permittees) in Los Angeles County (Order No. 90-079; NPDES Permit No. CA0061654). The LA County MS4 Permit was reissued in 1996, and the current iteration of the permit was adopted on December 13, 2001 (Order No. 01-182; NPDES Permit No. CAS004001).

Because of the complexity and networking of the storm drain system and drainage facilities within and tributary to the County of Los Angeles, the LA Water Board adopted a countywide approach in permitting storm water and urban runoff discharges. The permit requires Permittees to conduct monitoring and to implement programs in the areas of public involvement and participation, industrial/commercial inspection, development planning, development construction, public agency activities, and to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Los Angeles to the waters of the U.S. In addition, Permittees are required to effectively prohibit the discharge of unauthorized non storm water into the MS4 (except where they are authorized under a NPDES permit), by implementing a program to detect and eliminate illicit discharges/connections to the MS4.

The LA County MS4 Permit requires Permittees to develop, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) to the waters of the U.S. In addition, it states that discharges from the MS4 to waters of the U.S. including Santa Monica Bay are required to meet water quality standards. Upon establishment of TMDLs by the State or the U.S. EPA, the State is required to incorporate the TMDLs into the State Water Quality Management Plan (40 CFR 130.6 (c) (1), 130.7). The Water Quality Control Plan for the Los Angeles Region (Basin Plan), and applicable statewide

plans, serves as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the LA Water Board. LA Water Board-issued NPDES permits must contain provisions consistent with the State Water Quality Management Plan.

The LA Water Board adopted a dry weather bacteria TMDL, including WLAs, to address documented bacteriological water quality impairments at 44 beaches along the Santa Monica Bay from the Los Angeles/Ventura County line, to the northwest, to Outer Cabrillo Beach, just south of the Palos Verdes Peninsula. The WLAs for bacteria during summer dry weather (April 1 to October 31) for the LA County MS4 Permittees that discharge to the Santa Monica Bay are set at zero allowable exceedance days of the single sample bacteria objectives at each beach location for the protection of public health. The WLAs, expressed as exceedance days of the single sample bacteria objectives, for each beach location during winter dry weather (November 1 to March 31) are specified in Attachment 1 (Basin Plan Table 7-4.2a). No exceedances of the geometric mean bacteria objectives are allowed during summer or winter dry weather. Winter dry weather bacteria WLAs do not go into effect until July 15, 2009, and so are not considered for inclusion at this time. Dry weather is defined in the TMDL as those days with less than 0.1 inch of rainfall, and more than three days after a rain day (in consideration of the 72 hours used by the County Department of Health Services to post beaches with rain advisories). The TMDL defines rain days as those days with greater than or equal to 0.1 inch of rainfall. (0.1 inch of rainfall is the minimum amount of rainfall that will produce runoff and is also the smallest unit of measure on standard rain gauges operated by flood management agencies). The summer dry weather day when a flow occurs from an MS4 outfall to SMB beaches is being equated to a non-storm water discharge.

The summer dry weather bacteria TMDLs were adopted to reduce the risk of illness associated with swimming in marine waters contaminated with human sewage and other sources of bacteria. It has been estimated that between 627,800 and 1,479,200 excess gastrointestinal illness cases may occur annually among swimmers in Los Angeles County and Orange County beaches as a

result of enterococci contaminated waters. The corresponding economic loss annually has been estimated to range from \$21 million to \$51 million. (*Regional Public Health Cost Estimates of Contaminated Coastal Waters: A Case Study of Gastroenteritis at Southern California Beaches*, Given S., L.H. Pendelton, and A.B. Boehm. *Env. Sci. Technol.* (2006).)

Related State Administrative Actions

The State Water Board has issued standard receiving water limitations language to be included in municipal storm water permits. (State Board WQO 99-05, which amended WQO 98-01). The State Board affirmed that NPDES storm water permits must prohibit discharges that cause or contribute to violations of water quality standards (See WQ 98- 01, at p. 8). The State Water Board had ruled earlier that municipal storm water permits must include effluent limitations necessary to achieve water quality standards (State Board Orders WQ 91-03 and WQ 91-04)¹, and that these may be non-numerical. Also, Discharge Prohibitions need not be iterative (State Board Order WQ 2001-15, see footnote 18). The State Water Board modified the prohibition in WQO 2001-15, because the plain text in the San Diego County MS4 Permit prohibited the discharge of storm water containing pollutants exceeding water quality standards to the MS4, not non-storm water discharges. The discharge of non storm waters to waters of the U.S. from an MS4 must strictly comply with 33 U.S.C. § 1311(b)(1)(C).

Even if the Water Boards were to allow for an iterative adaptive approach for storm water and non storm water dischargers to comply with receiving water limitations, instead of establishing WQBELs or strict discharge prohibitions, it is the Permittees who are ultimately responsible for evaluating and revising BMPs to achieve compliance with water quality standards in an iterative manner. The Water Boards have no affirmative obligation to notify MS4 Permittees that they

¹ In Order WQ 91-04, the State Board reviewed a complaint brought by the environmental community that the 1990 LA County MS4 Permit lacked numerical effluent limits and violated federal law.

are in violation of permit provisions, for them to initiate corrective action to remedy exceedances of water quality standards.

In September 2005, the State Water Board convened an expert panel to make findings and recommendations on the feasibility of including numerical effluent limitations in storm water discharge permits, including MS4 permits. The panel issued a report titled, *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities* (June 2006). The panel concluded that it was not feasible to set enforceable numeric effluent criteria for municipal storm water discharges or storm water BMPs at this time. Nevertheless, the panel recommends an interim approach using action levels based either on consensus, or ranked percentile distributions, or statistically derived population parametrics. The panel neither deliberated nor made any determination on how non-storm water discharges from MS4s that adversely affect receiving waters are to be addressed in storm water permits. While the State Water Board has convened workshops to discuss the panel's report, the State Board has not yet taken any action on the report. Again, this panel's report does not address non storm water discharges from point sources like the MS4.

Permittee Implementation under the MS4 Permit

LA County MS4 Permittees have been implementing an illicit connections/ discharges elimination (IC/IDE) program over nearly three permit terms (1990 – present) and have been accorded ample opportunity to eliminate unauthorized non-storm water discharges from the MS4 that are causing or contributing to the exceedance of a water quality objective, or to require operators of such discharges to be permitted through the Water Board's NPDES program. In 2001, the LA Water Board revised its single sample and geometric mean water quality objectives for bacteria to reflect U.S. EPA recommended criteria and the findings

of a peer-reviewed local epidemiological study (Regional Board Resolution 2001-018)² and Permittees should have revised their IC/ID programs to eliminate the bacteria exceedances. However, very few Permittees have made changes to their Storm Water Quality Management Programs in response to exceedances of bacteria standards at SMB beaches. A review of the two most recent Annual Program Reports (2003-2004 and 2004-2005) for Permittees discharging to Santa Monica Bay reveals that the primary mechanism for IC/ID elimination is a reactive program based on reported or discovered illicit discharges. Although the municipal response to reported or discovered illicit discharges appears to be effective in all the documented cases, there is a potential deficiency in identifying illicit connections. Less than half of the programs reviewed conducted illicit connection screening during the 2003/2004 and 2004/2005 fiscal years. Further, the majority of the Permittees that conducted illicit connection screening examined only a small portion of their storm drain system. The review of the IC/ID programs shows that while municipal response appears to be effective in eliminating reported or discovered illicit connections/illicit discharges, overall a proactive approach in preventing illicit connections is lacking. Furthermore, dry weather discharges from the MS4 continue to cause violations of bacterial water quality standards at the Santa Monica Bay beaches.

Potential Options for Summer Dry Weather WLA Compliance

Technical options for compliance with the dry weather WLAs for SMB Beaches have been previously analyzed by many Permittees (Santa Monica Bay Beaches Bacteria TMDL Implementation Plan for Jurisdictional Groups 2 and 3, (Feb 2005); Marina del Rey Harbor Mother's Beach and Back Basins Bacteria TMDL Dry- and Wet Weather Implementation Plan (March 2005)). Potential solutions include (i) Institutional (Non Structural source controls) such as public education and restaurant inspections; (ii) Local (Distributed or Decentralized) controls such

² As far back as the 1994 update, the Basin Plan included single sample and geometric mean water quality objectives for a subset of the fecal indicator bacteria included in the 2001

as small scale infiltration and limited treatment; (iii) Regional controls such as capture, storage and treatment systems including bio-infiltration systems and disinfection system, and (iv) flow diversion to waste water treatment plants. The LA County MS4 Permittees within the Santa Monica Bay Watershed have submitted TMDL Implementation Plans for the LA Water Board's review. The Board reviewed and acknowledged support for these plans under Resolutions 2006-005, 2006-006, 2006-007, and 2006-008.

State Grants and Bond Funds for Implementation

The State Water Board and the LA Regional Water Board have funded a total of 27 projects costing \$18.7 million within the Santa Monica Bay Watershed to address bacterial contamination. Six of these projects worth \$3.5 million dollars are for the treatment of bacteria or pathogens as the primary pollutant. In addition, there are twenty-one Clean Beach Initiative Projects worth \$15.1 million, primarily dry-weather diversion projects, within the Santa Monica Bay. These are managed by the State Water Board and are for bacteria reduction. Most of the projects are underway and are at various stages of completion. Similarly, the Santa Monica Bay Restoration Commission has issued grant funds of about \$5.8 million for 16 projects to treat dry weather flows to Santa Monica Bay, eight of which have been completed.

Opportunity for Public Comment

When approving the Santa Monica Bay Beaches Dry Weather Bacteria TMDL, the State Water Board included findings that state: "The [LA Water Board] will develop permit requirements [to implement the TMDL] through a subsequent permit action that will allow all interested persons, including but not limited to municipal storm water dischargers, to provide input as to how the waste load

amendments.

allocations will be translated into permit requirements.” (State Board Resolution 2002-0149.) The notice of the LA Water Board’s proceedings to incorporate the SMB Beaches Bacteria Dry Weather WLAs in the LA County MS4 Permit was first circulated on May 18, 2006, which requested comments by June 20, 2006. It stated that the Board would consider the action at its July 13, 2006, Board meeting. Numerous commenters requested more time to evaluate the proposed action, a more detailed explanation of how the permit conditions were derived, and consideration of a variety of different approaches to incorporation. As a result, the July 13, 2006 discussion was postponed, and LA Water Board staff held a workshop on July 21, 2006, to solicit from Permittees and other interested persons the most appropriate way(s) to incorporate the provisions of the TMDL. Specifically suggestions were requested about how the summer dry weather waste load allocations of no exceedance days at the Santa Monica Bay beaches should be translated into enforceable permit requirements in an NPDES permit. Commenters attended the workshop or submitted written comments, all of which were considered by LA Water Board staff and responses included within our Response to Comments.

Options Considered

The LA Water Board staff considered the following alternatives for making enforceable the summer dry weather SMB beaches WLAs for MS4 non-storm water discharges containing bacteria. A special workshop was held on July 21 to solicit input and comment from Permittees and interested persons on potential approaches to making the Board adopted and U.S. EPA approved SMB Beaches Bacteria summer dry weather WLAs enforceable within the NPDES permitting framework for MS4s.

a. MS4 Storm Water Quality Management Program (SQMP) – An MS4 Storm Water Permittee’s SQMP is its primary documentation for utilizing the iterative adaptive approach using BMPs or other methods to comply with receiving water limitations for storm water discharges. Similarly for non-storm water discharges,

the SQMP should have included an effective Illicit Connection/Illicit Discharge Elimination (IC/IDE) program and other source control measures to eliminate non-storm water discharges to the MS4 or to ensure that they are permitted through the Water Board's NPDES program. MS4 Permittees in the SMB Watershed Management Area have had more than a decade and a half to effectively implement this provision. The fact that MS4 non storm water discharges to Santa Monica Bay still cause or contribute to exceedances of bacteria receiving water limitations, and that the LA Water Board adopted dry weather WLAs for SMB beaches in 2002 demonstrates the need for greater action and strict enforcement of the WLAs. Permittees have never taken the initiative to submit a Receiving Water Limits Compliance Report, despite recurring exceedances of water quality standards. As noted earlier, few Permittees have documented revisions to the SQMP to address chronic exceedances of water quality standards.

b. MS4 Unauthorized Non Storm Water Discharge Prohibition – The LA MS4 Permit includes provisions to effectively prohibit unauthorized non storm water discharges. Permittees may achieve the effective prohibition by implementing other source control measures or an IC/ID Elimination program to remove unauthorized non storm water discharges or to get them permitted through the Water Board's NPDES program. Given the fact that the proposed action is limited in scope in that it seeks to prohibit discharges during summer dry weather (non storm water) from MS4s to SMB Beaches, and that compliance is determined by receiving water limitations imposed in the wave wash rather than end-of-pipe, it is a reasonable action by the LA Water Board to protect water quality and human health, while considerate of the burden it imposes on MS4 Permittees in the Santa Monica Bay Watershed. Thus even if end-of-pipe numbers exceed receiving water limitations, there is no exceedance unless the discharge reaches the wave wash and causes or contributes to the exceedance of the Receiving Water Limits (RWLs) at that point. In essence, the prohibition option does not impose an end-of-pipe water quality based numeric effluent limitation, contrary to arguments raised by many Permittees. Rather, compliance with the bacteria

WLAs is determined in the wave wash. New language has been added to the RWLs section to clarify how compliance with the relevant limitations will be determined. Under federal law, when a non-numeric water quality based effluent limit is imposed, the permit's administrative record, and fact sheet needs to support the approach as sufficient to attain the WLA (See 40 CFR 124.8, 124.9 and 124.18). The LA Water Board's administrative record adequately supports the proposed approach as being sufficient to meet the SMB beaches summer dry weather WLAs.

c. Combined Non Storm water/ Storm water MS4 Permit – An MS4 storm water permit may also cover non storm water discharges. In that case, both storm water discharges and non storm water discharges can be included in the same permit (or in multiple permits). The non storm water discharges will be subject to the existing regulations promulgated for point source non-storm water discharges at 40 CFR 122.44(d). The MS4 was effectively designated a point source by the U.S. Congress in 1987, and thus the MS4 non storm water discharges that have a reasonable potential to adversely impair the beneficial uses of receiving waters are subject to the stricter of the CWA BAT/ BCT technology based controls or WQBELs. MS4 storm water discharges are subject to the discretionary provisions of CWA § 402(p). This continues to remain an option for the Water Board when regulating MS4 storm water and non-storm water discharges within a single NPDES permit.

d. Separate Individual Permit for MS4 Non Storm water discharges – A separate permit for MS4 non storm water discharges may be issued, which would require strict compliance with BAT/ BCT technology based controls or WQBELs, whichever is more stringent. It is possible that the LA Water Board may elect this approach in the future, as it is required to consider numerical effluent limitations to implement non storm water WLAs for dry weather non storm water discharges from the MS4 to enforce the WLAs within the NPDES framework.

e. No Action Option – Given the limited scope of the action, which is to prohibit the discharge to Santa Monica Bay beaches of summer dry weather flows

containing bacteria in excess of Basin Plan objectives, and the economic and health costs associated with non-action or non-enforcement of the SMB Beaches Bacteria summer dry weather WLAs, the proposed action is reasonable and necessary. Furthermore, the SMB Beaches Bacteria TMDL required compliance with the summer dry weather WLAs by July 15, 2006, but exceedances continue to occur at the Santa Monica Bay beaches during summer dry weather. The Regional Board is obligated by federal regulation (40 CFR 122.44(d)) to ensure that NPDES permits are consistent with the assumptions and requirements of any available waste load allocation. Failing to incorporate the summer dry weather bacteria waste load allocations into the permit at this time would be contrary to the federal regulatory purpose of making surface waters 'fishable and swimmable'.

Recommended Action

Given the narrow purpose of the amendments, which is to make the Santa Monica Bay Beaches Bacteria summer dry weather WLAs enforceable for non-storm water discharges from the MS4, after July 15, 2006, staff recommends 'Option b'.

Option b amends the LA County MS4 permit in a limited manner with revisions to Findings; Part 1. Discharge Prohibitions Section; Part 2. Receiving Water Limitations Section; and Part 5. Definitions to incorporate the SMB Beaches Bacteria Summer Dry Weather WLAs. The changes are the addition of new receiving water limitations for bacteria and a prohibition against non-storm water discharges from the MS4 to Santa Monica Bay that result in an exceedance of the bacteria receiving water limitations.

This action amending an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (Cal. Public Resources Code § 21100 *et. seq*) in accordance with Cal. Water Code § 13389. Nevertheless, staff considered the environmental impacts that may result from this action by evaluating the fiscal burden associated with eliminating bacteria exceedances at

SMB beaches through various control measures and engineering practices with the economic and health costs associated with continuing exceedance of the beach bacteria standards, and determined that the environmental and public health benefits far outweigh the fiscal burden.

Part 6 of the permit identifies the limited conditions under which the LA County MS4 permit may be reopened for modification prior to its expiration, and the procedures to be followed. The procedures for this hearing and the recommended action fully comply with the terms of those permit provisions.

Final Action

The LA Water Board unanimously voted to amend the LA County MS4 permit to incorporate the Santa Monica Bay summer dry weather bacteria TMDL WLA at its Board Meeting on September 14, 2006, as recommended by staff.

EXHIBIT G

Preface

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4.2.1 Non-Storm Water (Dry-Weather) Discharge Controls

Potential non-storm water-related sources of bacteria include both direct input into the Marina (from sources such as illegal sewage dumping or leaks from boats, waste from sea mammals, fishes, and birds, etc.) and non-storm water runoff, which may result from over-irrigation, washing cars, driveways, sidewalks, and streets, permitted and illicit discharges, construction dewatering, and natural seepage, etc. Storm drains are the main conveyance systems that carry non-storm water runoff to receiving waterbodies. As stated in Section 2.2.1, implementation efforts will focus on the three priority Subwatersheds 1A, 3, and 4, which are tributary directly to Basins D, E, and F. There are three major storm drains located within the Subwatersheds 3 and 4. Subwatershed 1A does not have a major storm drain. Due to the fact that there is no storm drain system in Subwatershed 1A, the most probably flow path of non-storm water runoff is through sheet flow.

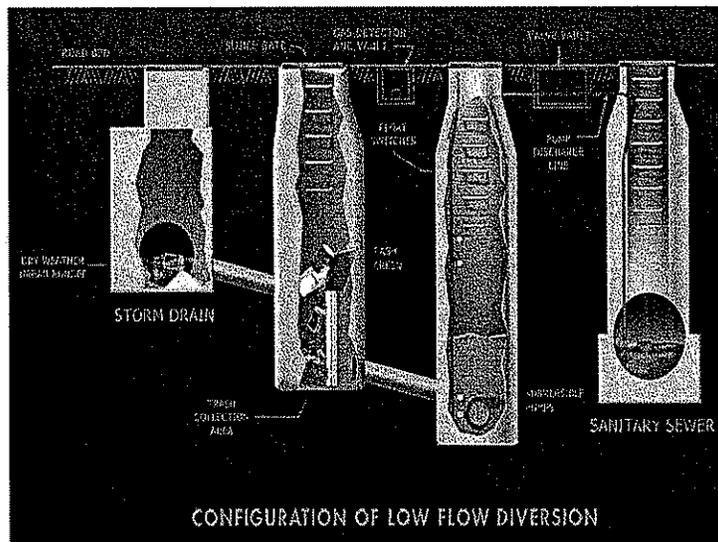
The non-storm water discharge control strategy to reduce quantity and improve quality of runoff consists of a Low-Flow Storm Drain Diversion Program that will divert all the non-storm water runoff from the three major storm drains in the upper watershed, a Marina Beach Water Quality Improvement Project that will increase circulation in Basin D, and a Marina Source Identification and Source Control Program that will identify irregular activities and propose appropriate BMPs. This comprehensive non-storm water discharge control strategy will help the responsible agencies comply with the dry-weather bacteria TMDL, by effectively addressing the bacteria loads in non-storm water runoff as well as those that result from direct input into the Marina from various sources.

Table 4.2.1 Summary of Structural BMP Strategies for the Priority Tributary Areas (Non-Storm Water Discharge Controls)

Priority Tributary Area	Jurisdiction/Areas	Conveyance System	Watershed Characteristics	Structural BMPs Strategy	Implementation Schedule
Subwatershed 4	Cities of Los Angeles and Culver City (Residential and commercial areas)	(Storm Drain) Project No. 5243 and 3872	<ul style="list-style-type: none"> • Tidal influence • High groundwater table 	Low-Flow Diversion Project 5243	Completed in December 2006
				Low-Flow Diversion Project 3872	Will be completed by December 2007
Subwatershed 3	City of Los Angeles (Residential areas)	(Storm Drain) Project No. 3874	<ul style="list-style-type: none"> • Tidal influence • High groundwater table 	Low-flow Diversion Project 3874	Completed in December 2006
Subwatershed 1A	County Unincorporated (Marina)	Small parcel and road drains	<ul style="list-style-type: none"> • No major storm drains • High groundwater table 	Source identification and control	The Non-Point Source Study Report Will be submitted by March 18, 2007
	County Unincorporated (Marina Beach)	None	<ul style="list-style-type: none"> • No major storm drains 	Increase circulation in Basin D	Completed in December 2006

4.2.1.1 Low-Flow Storm Drain Diversion Program

Within the Marina del Rey Watershed, as described in Section 2.2.1, there are three major storm drains, Project No. 3872, Project No. 5243, and Project No. 3874, that are located in the upper watershed and ultimately drain into Basin E. Currently, non-storm water runoff from Project No. 3872 and Project No. 5243 is being discharged directly into Oxford Basin, and Project No. 3874 directly outlets into the Boone-Olive Pump Station and is pumped to Basin E via Project No. 86.



Three low-flow diversion structures are being proposed at these three storm drains. The diversions will divert the non-storm water (dry-weather) runoff from these storm drains to nearby sewer lines and then to the Hyperion Treatment Plant for treatment. This offers an integrated way of managing multiple pollutants. Diverting the non-storm water runoff will not only reduce bacteria loading, but also all other pollutants such as metals, trash, etc.

As described at the beginning of this section, the Marina del Rey Watershed is under tidal influence. As such, the low-flow diversion structures have to be placed above the limit of the tidal influence to prevent salinity from mixing with the non-storm water runoff, since salinity is prohibited from being discharged to the sewer system. Due to this constraint, not all of the non-storm water runoff from the two storm drains (Project No. 5243 and Project No. 3872) that outlet to the Oxford Basin could be fully captured without additional measures being implemented. Therefore, various alternatives were investigated to address the stretch of the two storm drains affected by the tidal influence. Below are design concepts of the three low-flow diversions.

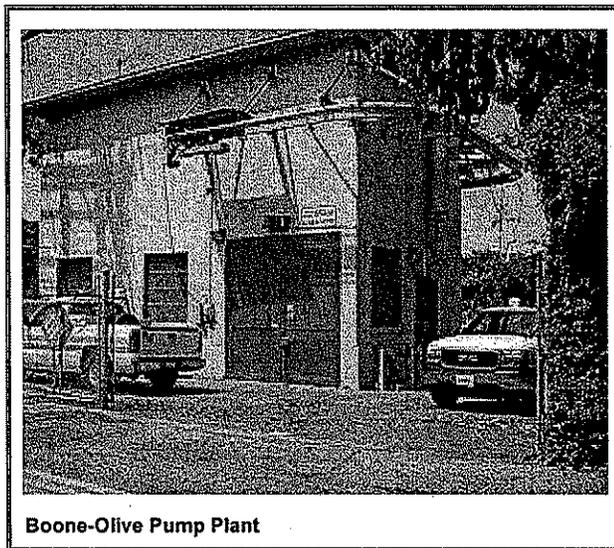
Low-Flow Diversion Project at Storm Drain Project No. 5243

This low-flow project consists of constructing a low-flow diversion system for Project No. 5243, Line A, at the intersection of Washington Boulevard and Thatcher Avenue. The diversion system is located above the tidal influence as required to prevent salinity from mixing with the non-storm water runoff entering the sewer system and captures an estimated 126 catch basins in the upper reach. For the remaining reaches below the

intersection that are under tidal influence, a proprietary bioretention filter BMP was install as a pilot at 5 catch basins to test its effectiveness. If deemed effective through monitoring, the remaining 41 catch basins will be retrofitted in a subsequent phase. Project No. 5243 drains approximately 579 acres of land. This low-flow project was completed in December 2006.

Low-Flow Diversion Project at Boone-Olive Pump Station (Storm Drain Project No. 3874)

The low-flow project consists of installing a submersible pump in the existing Boone-Olive Pump Station control house to divert non-storm water runoff to a sewer line. Project No. 3874 collects non-storm water runoff through 22 catch basins and drains approximately 80 acres of residential land. Non-storm water runoff from the 22 catch basins will be captured in this low-flow diversion. This low-flow project was completed in December 2006.

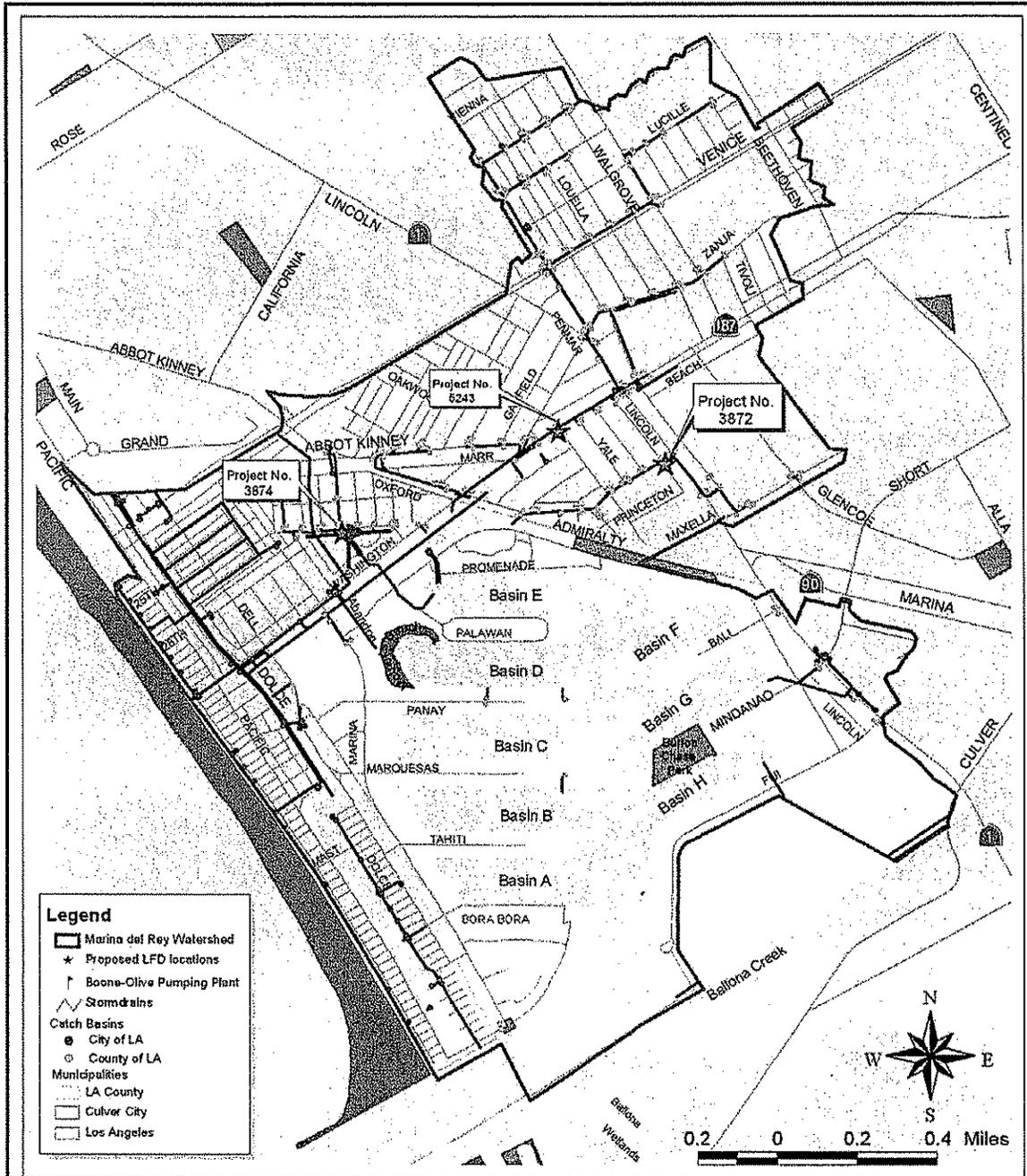


Low-Flow Diversion Project at Storm Drain Project No. 3872 (preliminary concept)

The proposed low-flow project consists of constructing a low-flow diversion system and a leakage drain to the Oxford Pump Station. The construction requires modifications to the exiting storm drain outlet structure to include a headwall. Four Tideflex check valves in the headwall will be installed to pass storm flows into Oxford Basin and prevent salt water from Oxford Basin flowing back into the diversion system. The Tideflex check valve is a pilot study in this low-flow diversion project. The low-flow diversion system will capture non-storm water runoff from all 56 catch basins upstream of the storm drain system, and it drains approximately 92 acres of land.

Design for this project is currently underway and it is anticipated that the project will be completed in 2007. The preliminary design concept of this low-flow diversion project is subject to change if it is deemed impractical after field investigation.

The three low-flow diversions divert non-storm water runoff from the storm drain to the sanitary sewer for treatment at the Hyperion Treatment Plant. To ensure that the low-flow diversion structures are properly maintained, repaired, upgraded, and inspected, the County will develop an Operation and Maintenance Program.



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