

Port of Los Angeles and Port of Long Beach
Annual Progress Report, October 2010

Water Resources Action Plan



Port of
LONG BEACH
The Green Port



TABLE OF CONTENTS

SECTION 1: INTRODUCTION..... 1

 1.1 WRAP Development, Review, and Adoption1

SECTION 2: ANNUAL PROGRESS REPORTS 3

 2.1 Permitting and Regulatory Update.....3

 2.1.1 Total Maximum Daily Loads..... 3

 2.1.2 NPDES Permits..... 3

SECTION 3: CONTROL MEASURE SUMMARY AND UPDATE..... 4

 3.1 Control Measure Updates7

 Control Measure LU-1: Housekeeping BMPs..... 7

 Control Measure LU-2: Design Guidance Manual 9

 Control Measure LU-3: Structural BMPs 10

 Control Measure LU-4: Stormwater/Dust Control for Orphan Sites..... 11

 Control Measure LU-5: Litter Control Program 12

 Control Measure LU-6: Public Area Sweeping Programs..... 13

 Control Measure LU-7: Port-Wide Stormwater Construction Permits..... 14

 Control Measure LU-8: Remote Sites Stormwater Compliance 14

 Control Measure OW-1: Vessel Guidance Manual 16

 Control Measure OW-2: Piling Replacement Policy & Standards..... 16

 Control Measure OW-3: BMPs & Standards for Cathodic Protection 17

 An inventory of the methods of cathodic protection currently in use was completed in the summer of 2010. It determined that zinc-based cathodic protection is not being used on POLA structures and is only currently in use on some, smaller POLA vessels. POLA staff are currently investigating alternatives, particularly aluminum anodes. A final policy on cathodic protection will be in place by the end of 2010. 18

 Control Measure S-1: Operations Sediment Management Plans..... 18

 Control Measure S-2: Legacy/Hotspot Management Plans..... 18

 Control Measure WS-1: Support Pollutant Loading Reduction Efforts 19

 3.2 Technology Advancement Program19

SECTION 4: NEXT STEPS 22

SECTION 1: Introduction

Following the successful joint development and adoption of the Clean Air Action Plan in 2006, the Port of Los Angeles and the Port of Long Beach (ports) continued to work together to develop a planning document focused on water and sediment resources in the harbor complex. As with air, the Los Angeles/Long Beach harbor water resources are not static: the hydrodynamics of the harbor mean that water resources are not confined to either port district. Accordingly, the ports understood that any plan focused on improving the quality of water and sediment in the harbor needed to focus on the entire harbor complex.

The Port of Los Angeles (POLA) and the Port of Long Beach (POLB) adopted the Water Resources Action Plan (WRAP) at a joint meeting of Harbor Commissioners in August of 2009. The WRAP is a joint planning document developed by both ports to address water and sediment pollution in the harbor complex. The ports' stated goals for the WRAP are 1) to support the attainment of full beneficial uses of harbor waters and sediments by addressing the impacts of past, present, and future port operations, and 2) to prevent port operations from degrading existing water and sediment quality.

The WRAP has two main driving forces: 1) the ports' need to achieve their broad mission to protect and improve water and sediment quality, and 2) the imminent promulgation by the Los Angeles Regional Water Quality Control Board (LA-RWQCB) and the U.S. Environmental Protection Agency (EPA) of Total Maximum Daily Loads (TMDLs) for harbor waters, and the associated Clean Water Act (CWA) permits. The WRAP's purpose is to put in place the programs and mechanisms for the ports to achieve the goals and targets that will be established in the relevant TMDLs and to comply with the Industrial Activities, Construction Activities, and Municipal Separate Storm Sewer System (MS4) permits issued to the ports and their respective cities and tenants through the National Pollutant Discharge Elimination System (NPDES) program. Throughout the process of implementing the WRAP, the ports will be guided by the basic principle of promoting science-based studies and methods in the integration of regulatory requirements with water and sediment management programs.

1.1 WRAP Development, Review, and Adoption

The ports developed the WRAP with the guidance and participation of the EPA, the LA-RWQCB, and the WRAP Plan Advisory Committee (PAC), which is a public stakeholder group composed of regulatory agencies, non-governmental organizations, and community representatives. Development of the WRAP included a comprehensive analysis of potential pollutant sources and contaminants of concern, identification of key issues associated with water and sediment quality, examination of existing programs, analysis of key issues in water and sediment quality, and evaluation of what additional control measures were needed to achieve the mission of the ports with respect to water and sediment resources. Throughout the process, the input of the EPA, the LA-RWQCB, and



the PAC was solicited, evaluated, and incorporated into the WRAP; information on the WRAP and its development, including the PAC meeting minutes, is available on the two ports' websites (www.portoflosangeles.org; www.polb.com). The WRAP outline and the schedule for developing the document were presented to the PAC in September 2008, a list of the proposed control measures was presented to the PAC at the November 2008 meeting, and a draft of Section 4, which contains the control measure write-ups, was provided to the PAC in March 2009. The comments of PAC members, EPA, and the LA-RWQCB on the draft measures and WRAP text prompted a number of refinements to the document, including the addition of two control measures (LU-8 and S-2) that were not originally envisioned.

SECTION 2: Annual Progress Reports

The WRAP is a living document in the sense that the ports expect to modify it as circumstances warrant. Periodic review of the WRAP by the ports will determine the need for updates. Updates could be warranted by regulatory changes such as issuance of TMDLs and/or substantially modified NPDES permits, by technological advances in pollution control, or by the addition of new control measures. Rather than produce annual updates to the WRAP, the ports identified that annual progress reports, identifying the progress of the various control measures, would be developed and presented to their Boards, with document updates occurring on an as-needed basis only.

2.1 Permitting and Regulatory Update

2.1.1 Total Maximum Daily Loads

As discussed in section 2.4.5 of the WRAP, specific water bodies within each port's (POLB and POLA) jurisdiction are identified as impaired for several pollutants on the LA-RWQCB 303(d) list of impaired water bodies. For the impaired water bodies, TMDLs are being developed to identify pollutant load reductions for each listed pollutant. Since adoption of the WRAP, staff from both ports have been working with EPA and LA-RWQCB staff on development of the TMDLs. In addition, the ports' WRAP hydrodynamic model has been used to assist in the understanding of sediment hotspot contamination. Furthermore, the control measures contained in the WRAP will be included in the TMDL implementation plan. The agencies expect to release a draft TMDL addressing pollutants listed for the harbor area water bodies in late 2010 for public review and comment.

2.1.2 NPDES Permits

Along with TMDLs, the ports must comply with NPDES permits that cover stormwater discharges from both industrial and construction-related activities in the ports. The two ports operate under somewhat different permits and have different approaches to complying with those permits, as described in the WRAP. Common to both ports, however, is the fact that a number of the permits have either expired or are under major revision, meaning that new permits are pending. Due to the significant effort port and agency staff have needed to devote to the development of TMDLs, discussions related to pending new permit development have been limited. However, each port has held individual discussions with key agency staff to begin discussions on the preferred framework for compliance with current and future NPDES permits. Refer to the control measure discussion in Section 3 for more information.

SECTION 3: Control Measure Summary and Update

The ports, with assistance from regulatory staff and stakeholders, identified fourteen (14) control measures aimed at fulfilling each port’s water resources mission. Four basic types of sources are addressed by the WRAP through existing and proposed control measures: land use discharges (LU in the table below), on-water discharges (OW), sediments (S), and watershed discharges (WS). While both ports are committed to developing and implementing programs and policies for each of the fourteen control measures, some control measures contain different goals and implementation timelines for each port based on their respective existing programs and overall priorities. The following section describes each of the fourteen control measures, followed by a brief summary of each port’s current status and future goals. To obtain copies of any of the documents referenced, please contact the POLB Environmental Planning Division or the POLA Environmental Management Division.

Control Measure	Summary	WRAP Schedule	Current Status
LU-1: Housekeeping BMPs	Enhance and expand housekeeping BMPs in maintenance and fueling areas, automobile dismantling and boat repair facilities, oil production facilities, and building maintenance and landscaping areas.	POLB: Identify first set of new measures by end of 2009. POLA: Develop and initiate inspection strategy by end of 2009, identify first set of new measures by end of 2010.	POLB: First set of new measures identified and implemented. Program ongoing. POLA: Tenant Outreach Program developed and initiated. First set of measures identified and recommended. Program ongoing.
LU-2: Design Guidance Manual	Develop a port-wide guidance manual for design of new and redeveloped facilities, including design criteria and structural BMPs.	Complete draft manual mid 2010.	Draft manuals complete. To be finalized in 2011.
LU-3: Structural BMPs	Evaluate the need for structural BMPs for key discharges and targeted pollutants at existing facilities and install where necessary to ensure compliance.	POLB: Ongoing POLA: Develop and initiate inspection strategy by end of 2009, identify new measures by end of 2010.	POLB: First set of new BMPs identified and implemented. Program ongoing. POLA: Tenant Outreach Program developed and initiated. First set of BMPs identified and recommended. Program ongoing.



**Annual Progress Report 2010
WATER RESOURCES ACTION PLAN**

Control Measure	Summary	WRAP Schedule	Current Status
LU-4: Stormwater/Dust Control for Orphan Sites	Continue and expand upon existing stormwater/dust control programs for vacant/undeveloped property.	POLB: Ongoing POLA: Finalize program document by end of 2010; begin implementation of new program in spring of 2011.	POLB: High priority sites addressed. Program ongoing. POLA: Identified and prioritized sites. New program to begin implementation by end of 2010.
LU-5: Litter Control Program	Enhance and expand litter control programs and implement relevant elements of those programs in specific sources.	POLB: Mid 2010 POLA: End of 2010	POLB: Program developed and being implemented. POLA: Program under development; to begin implementation by end of 2010.
LU-6: Public Area Sweeping Program	Enhance and expand street and public parking area sweeping/cleaning programs.	POLB: Program recommendations by end of 2009 POLA: Program recommendations by mid 2010	Both ports: Studies complete and recommendations under consideration.
LU-7: Port-Wide Stormwater Construction Permits	Evaluate construction permit compliance procedures and enhance as necessary.	Ongoing	Both ports: Evaluations completed and enhancements in place as part of ongoing programs.
LU-8: Remote Sites Stormwater Compliance	Evaluate port-owned properties within the watershed but outside the harbor districts, and ensure permit compliance as necessary.	Program implementation by end of 2010.	Sites have been inventoried and permit compliance ensured.
OW-1: Vessel Guidance Manual	Develop guidance manual for on-water activities (e.g., allowable and prohibited vessel maintenance activities and discharges).	Complete guidance manuals by end of 2009.	Completed: Guidance manual completed and distributed to stakeholders. An update of the Clean Marina Guidebook was completed and distributed.
OW-2: Piling Replacement Policy and Standards	Develop port policy and standards for maintenance, in-kind replacement, and eventual phasing out of exposed treated pilings from in-water applications.	End of 2010	POLB: BMPs developed and pilot project underway. POLA: BMPs developed and evaluation program underway.



**Annual Progress Report 2010
WATER RESOURCES ACTION PLAN**

Control Measure	Summary	WRAP Schedule	Current Status
OW-3: BMPs & Standards for Cathodic Protection	Develop BMPs and port standards for zinc-based cathodic protection of port structures and vessels.	Standards developed by end of 2010.	BMPs and port standards in review. To be completed by the end of 2010.
S-1: Operations Sediment Management Plans	Develop sediment management policy/guidance establishing priorities for removal, disposal, and management of sediment with a clear decision-making framework.	Mid 2010: Complete draft plans. End of 2010: Adopt final management plans.	Internal drafts complete. Final plans anticipated by the end of 2010.
S-2: Legacy/Hotspot Management Plan	Develop a sediment management policy establishing priorities for the management of areas of legacy contaminated sediments and hotspots.	Subject to completion of the TMDL process.	Draft implementation plan developed; will be finalized through the TMDL process. POLB: Dredging at IR Site 7 began in the summer of 2010. To be completed by the end of 2010.
WS-1: Support Pollutant Loading Reduction Efforts	Employ all available means to support efforts to reduce upstream pollutant loadings that adversely affect harbor water and sediment quality.	Ongoing.	Participation in watershed activities is ongoing.

3.1 Control Measure Updates

Control Measure LU-1: Housekeeping BMPs

Enhance and expand housekeeping BMPs in maintenance and fueling areas, general cargo handling areas, certain dry-bulk cargo handling areas, automobile dismantling and boat repair facilities, oil production facilities, and building maintenance and landscaping areas.

The enhancement or addition of housekeeping BMPs in areas with demonstrated deficiencies in existing BMPs or a high probability of contributing to stormwater pollution will reduce overall pollutant loading from port activities into harbor waters.

POLB: Identified and implemented the first set of new measures through the existing inspection program. Control measure will be ongoing.

Individual facility SWPPPs and recent inspection/audit and annual reports have been reviewed through the normal course of the annual POLB Industrial Storm Water Program compliance inspections to determine where improvements in existing housekeeping BMPs are needed, and which facilities would benefit from additional BMPs.

Common facility-specific additional/enhanced BMPs recommended through regular annual inspections at POLB facilities included:

- More frequent/extensive sweeping,
- More rigorous spill prevention procedures for mobile fueling operations, equipment maintenance and storage procedures, cargo, and hazardous materials storage,
- Improved hazardous materials management procedures,
- Enhanced dust and runoff control,
- More frequent trash collection.

In addition to facility-specific BMP recommendations made during the annual inspection process, new and/or enhanced BMPs have been developed which will be added to the POLB SWPPP template as standard BMPs to be implemented at all facilities. All facility SWPPPs will include information regarding the party responsible for catch basin stenciling and signage. A standard Pre-Rain Event Preparation (PREP) Plan has been developed for POLB facilities. The PREP Plan contains several housekeeping control measures and BMPs designed to minimize storm water pollution during rain events. In those areas with demonstrated deficiencies in preventing leaking equipment through the use of drip pans or preventive maintenance, the POLB will require zero-discharge pavement cleaning on an annual basis prior to the rainy season to prevent hydrocarbon contamination of storm water runoff.

Enhanced housekeeping BMPs designed to better control metals loadings will be added to the POLB SWPPP as well. These BMPs include removing and recycling all non-essential scrap metals on terminals and covering all essential spare metals parts stored outdoors with tarps. In addition, where feasible, metalworking activities such as grinding, welding, and torch cutting have been relocated to indoor areas. If relocating to an indoor area is not feasible, housekeeping will be increased in these areas requiring a thorough work station clean after every shift.

POLA: The Tenant Outreach Program has been developed and the first set of measures has been identified and recommended. The program is ongoing.

As part of POLA's outreach effort, 96 tenants were identified as appropriate for a facility evaluation. This evaluation involved a phone interview, review of their stormwater documents, and a site visit, conducted in March and April of 2010. As a follow up to the recent site evaluations, observations and recommendation letters on improving tenant operational housekeeping practices and stormwater management activities were generated and sent to tenants. Typical recommendations include:

- Requiring improved management of maintenance and repair sites and hazardous materials/liquids to limit their overflow outside appropriate covered facility and storage/containment areas
- Routinely using tarps, drip pans, rags, spill kits for proper maintenance of outdoor equipment and material storage, maintenance sites and fueling areas. Keeping dumpsters and scrap materials covered, and increasing trash pick-up and sweeping efforts to reduce litter at their facilities.
- Reviewing and revising stormwater prevention plans (SWPPP) for completeness, accuracy, and proper documentation of all stormwater permit-required elements.

In conjunction with personalized, face-to-face tenant outreach efforts, the Tenant Outreach Program has developed outreach materials such as facility-specific Best Management Practices factsheets, general stormwater summary information, and presentations to distribute to POLA tenants. Over 200 BMP factsheets were distributed to POLA tenants during the 2010 outreach effort.

During the process of reaching out to the tenants, a tenant outreach program database was created and updated. Appropriate facility contact information was collected, and the site visits provided accurate information not only on the tenant's primary operation but also any auxiliary outdoor activities on site that could potentially impact stormwater. This data, along with the tenant's stormwater permit status, compliance activities, and site evaluation observations and recommendations, are also in the database and are essential in tracking the outreach efforts and any tenant improvements and changes in their stormwater management activities. New information in subsequent outreach efforts will be used to keep the database updated.

Control Measure LU-2: Design Guidance Manual

Develop a port-wide guidance manual for design of new and redeveloped facilities, including design criteria and structural BMPs.

The identification of port-specific and appropriate development/redevelopment criteria, including low-impact development, and structural BMPs will reduce overall pollutant loading from port activities into the harbor.

POLB: A draft was completed by mid 2010. A final guidance manual will be completed in 2011.

A draft 2010 Stormwater Quality Post-Construction Guidance Manual for the POLB has been developed as an update to the development planning portion of the POLB's Master Storm Water Program, Volume 3: Development Planning and Construction Activities (2000).

The Draft 2010 Guidance Manual was prepared to accomplish the following goals:

- Protect the waters of the POLB from the adverse impacts of urban stormwater runoff;
- Provide clear development standards for new development and redevelopment projects in the use in the selection and implementation of appropriate stormwater control measures;
- Integrate LID strategies; and
- Establish standards that reflect the unique conditions and setting of the POLB.

The draft is currently going through an internal review. Once the draft has been vetted and approved by applicable POLB Divisions, it will be presented to the Agencies for review and comment.

POLA: A draft was completed by mid 2010. A final guidance manual will be completed by mid 2011.

A draft 2010 Stormwater Quality Post-Construction Guidance Manual for the POLA has been produced. The manual identifies stormwater control measures and strategies the POLA can implement to comply with Standard Urban Stormwater Mitigation Program (SUSMP) requirements in the Los Angeles County-wide Municipal NPDES Permit, and also the City of Los Angeles Low Impact Development (LID) Ordinance. The manual describes the unique hydrological environment at the POLA and the need for solutions tailored to these conditions.

Development of this document is currently undergoing internal review and will also be reviewed by the City of Los Angeles Bureau of Sanitation Watershed Protection Division and the City Department of Building and Safety. These City entities are involved in review and approval of SUSMP/LID compliance in conjunction with issuance of permits for POLA development projects. Following POLA/City approval of the draft manual, it will be transmitted to the agencies for review and comment prior to being finalized.

Control Measure LU-3: Structural BMPs

Evaluate the need for structural BMPs for key discharges and targeted pollutants at existing facilities and install where necessary to ensure compliance.

The modification, enhancement, and/or installation of structural BMPs in areas with a high probability of contributing to stormwater pollution, and a demonstrated deficiency in current housekeeping, operational and/or structural BMPs, will reduce overall pollutant loading from port activities into the harbor.

POLB: The first set of new BMPs has been identified and implemented. The program is ongoing.

Where housekeeping improvements implemented through Control Measure LU-1 could not adequately address a particular storm water issue, the need for new or additional structural BMPs was evaluated. This evaluation was made in the normal course of the storm water program management on a case by case basis. In each case, the facility's SWPPP, recent inspection reports, current site conditions, storm water monitoring results, and recent annual reports were evaluated to determine whether the facility would benefit from the addition of structural BMPs where none existed, improvements in existing structural BMPs, or the installation of additional structural BMPs beyond those already present.

Types of additional structural BMPs installed at tenant facilities included silt fencing to control erosion, containment berms, covers or sheds for outdoor storage of hazardous materials, catch basin inserts, trench drains to better contain process water, valve controlled catch basins to contain spills, rumble strips for unpaved roads, and erosion control curbs.

POLA: The Tenant Outreach Program has been developed. The first set of BMPs has been identified and recommended. The program is ongoing.

In tandem with the POLA Tenant Outreach Program's comprehensive site inspection/evaluation process, each site was evaluated in Spring of 2010 in part to assess the need and utility of structural BMPs. Information collected during the site visits have aided in the implementation of this measure. Where applicable, the teams noted potential structural improvements that may be necessary or beneficial. However, the necessity for additional structural BMPs will be an iterative process and generally will only be implemented after all operational BMPs have been implemented and it has been

determined that these operational BMPs alone will not achieve the goal of limiting each facility's activities from polluting stormwater. POLA will continue to monitor tenants regarding their operational activities and improvements to stormwater quality, and continue to evaluate the need for structural BMPs.

Control Measure LU-4: Stormwater/Dust Control for Orphan Sites

Continue and expand upon existing stormwater/dust control programs for vacant/undeveloped property.

Through the continuation and expansion of existing stormwater and dust control measures for vacant and/or undeveloped property within the ports, runoff containing high levels of suspended solids and other pollutants would be reduced. Potential measures may include the introduction of sustainable landscaping or the use of swales, berms, or re-grading.

POLB: High priority sites have been addressed and the program is ongoing.

Long-term remediation activities undertaken at the 19 high priority sites identified by the program have been complete for approximately one year. During this time BMP assessment activities have been performed by POLB staff to determine the effectiveness and long term feasibility of the BMPs utilized. In addition, an in depth evaluation of the performance of the hydroseeded areas was performed to identify areas performing poorly and identify potential remedies.

Results of these assessments will be used to address any issues identified and potentially substitute ineffective BMPs with more effective solutions. Remedies for poorly performing hydroseed areas identified in the assessment will be implemented and these areas will be re-assessed for effectiveness.

All high priority sites have been identified, addressed, and evaluated for performance. Poorly performing BMPs and other problems identified in the assessments will be addressed through the Program. POLB staff has also identified additional lower priority sites which will be addressed on a case-by-case basis according to the severity of issues found at the sites.

POLA: POLA has identified and prioritized its sites in the draft plan. Final program document is expected to be completed by the end of 2010, as scheduled. Implementation of the plan will begin in spring 2011.

In spring of 2010, POLA staff conducted an initial surveillance of all unleased port property to identify properties that required further assessment under the Orphan Site program. Ninety two sites were initially reviewed. Of these 92 sites, 26 warranted further, detailed evaluations, which were performed in June of 2010. A draft plan was completed in July, 2010.

The draft plan documents site conditions to identify 1) sites that are contributing to dust and sediment within the Port and 2) the feasibility of recommendations in the context of cost, maintenance and effectiveness. Recommendations to address erosion and/or fugitive dust were made for each site. The most frequent recommendations included: reestablish vegetation, vegetate the site, gravel or pave site, install slope drain, and retrofit area to capture stormwater runoff. The final plan will incorporate additional information, such as potential future uses of the sites, in order identify the best solutions for top ranked sites, as well as sites that have easily implemented, affordable solutions. Implementation is expected to begin in spring of 2011.

Control Measure LU-5: Litter Control Program

Enhance and expand litter control programs and implement relevant elements of those programs at specific sources.

The enhancement, modification, or addition of both structural and housekeeping BMPs targeting trash and litter, coupled with a comprehensive education and outreach program targeting relevant industry groups including the International Longshore and Warehouse Union (ILWU), port tenants, and trucking firms, will reduce loading of trash and litter from port activities into harbor waters.

POLB: The Litter Control Program has been developed. The POLB is in the process of the implementing the program.

Currently the POLB is in the process of implementing its Litter Control Program, which has a three-tiered approach. Tier I addresses the local source of trash and debris in harbor waters with a comprehensive anti-litter education and outreach campaign. The campaign's objective is to prevent litter from accumulating in the harbor by changing behavior patterns. Increased enforcement of City of Long Beach litter laws will also be included as a portion of Tier I. Tier II's objective is to prevent trash and debris from entering the harbor and re-accumulating by supplying a greater number of innovative trash receptacles on Port terminals, and retrofitting storm water catch basins to prevent trash from entering POLB's storm water infrastructure. Tier III will involve a pilot project installing a marine trash skimmer to collect litter and debris from the harbor in areas where litter is known to accumulate due to prevailing wind patterns. The objective of Tier III is to collect and concentrate trash and marine debris from the harbor for proper disposal.

POLA: POLA's Litter Control Program is under development; implementation is expected to begin by the end of 2010, as scheduled.

POLA staff is currently developing its Litter Control Program. Elements completed to date include the purchase and operation of a new, efficient trash boat for collection of trash in harbor waters, surveys by Environmental and Construction & Maintenance staff to identify areas in POLA highly impacted by trash, and initial outreach with tenants on trash management during the POLA's Tenant Outreach Program.

The Litter Control Program will encompass both umbrella and targeted efforts. Wide-ranging outreach efforts will focus on the wider public through posting signs and banners, and through public access programming. Targeted efforts will focus on educating terminal operators, terminal workers, and truckers. POLA will assist in outreach efforts and reduction of trash by providing signs, educational workshops, and innovative trash receptacles.

Control Measure LU-6: Public Area Sweeping Programs

Enhance and expand street and public parking area sweeping/cleaning programs.

Debris and other pollutants from vehicle traffic, surrounding uses, and air deposition can accumulate on streets and parking lots, and be carried into the harbor with stormwater flows. The enhancement and/or expansion of street and parking area sweeping and cleaning programs will reduce overall pollutant loading into harbor waters from these activities.

POLB: A research and recommendations document was completed. The recommendations are under consideration.

Prior to developing recommendations, POLB staff reviewed existing street sweeping schedules, route maps, and existing street sweeping machines to obtain baseline information. This information, along with completed street sweeping studies by agencies within and outside of Southern California, was used to develop recommendations for improving the effectiveness of the POLBs street sweeping program as a stormwater control. The research and recommendations document was completed in April 2010.

POLB staff are continuing to monitor the effectiveness of street sweeping as a stormwater control.

POLA: Studies have been completed and the recommendations are under consideration.

POLA environmental staff conducted a field reconnaissance of existing street sweeping routes and schedules, and reviewed the operation of existing sweeping equipment to evaluate the current POLA sweeping program. This information, together with an examination of outside sweeper efficiency studies and tenant practices/tools, was used to develop recommendations to improve efficiency of the current sweeping practices. Key suggestions identified include (1) the need for additional source control measures, (2) the need for a coordination effort with City Street Services to add signage and posting on streets to limit parking, which will allow for consistent street-curb access for street sweeping, and (3) the necessity of purchasing a vacuum sweeper to improve pick-up of sediment and pollutants (metals etc.) found in finer debris and in areas otherwise inaccessible to the current mechanical broom sweeper.

Control Measure LU-7: Port-Wide Stormwater Construction Permits

Evaluate construction permit compliance procedures and enhance as necessary (e.g., inspection frequency, construction specifications, and revised permit structure).

Evaluating the construction permitting process and procedures will allow port staff to determine areas for improvement in permitting compliance that will reduce pollutant runoff from such sites. These enhancements could be in the form of modification of inspection procedures, improved construction specifications, and revised permit structuring.

POLB: This control measure is ongoing. The POLB has updated its construction stormwater program in compliance with the new NPDES permit, and has begun negotiations with the LA-RWQCB on future permit framework.

POLB completed site and SWPPP document evaluations of all active construction projects with open NOIs by the end of 2009. These inspections resulted in minor SWPPP revisions as well as the closure of one inactive construction site. In anticipation of the new NPDES general construction stormwater permit, POLB developed a new SWPPP template and recertified all existing construction projects prior to the effective date of the new NPDES construction stormwater permit, ensuring POLB compliance. POLB met with LA-RWQCB staff and agreed on an interim approach for complying with the general construction storm water permit, in lieu of receiving a Port specific permit.

Environmental Planning is continuing with annual construction site and SWPPP evaluations, as well as ensuring the appropriate stormwater language is included in construction contracts.

POLA: Evaluation of the new Construction NPDES permit requirements has been completed and enhancements to the Port's compliance program are in place.

POLA has filed NOIs under the new General Construction Permit for current projects in compliance with the schedule and requirements stated in the permit. Key POLA staff involved in project design, engineering and construction have been trained on the requirements in the new permit. POLA will continue to monitor POLB's discussions with the LA-RWQCB regarding the potential for issuance of an individual port construction permit; however, at this time, POLA has determined that they will not seek an individual permit for construction activities. At such time that POLA feels there are efficiencies to be gained by obtaining an individual permit, this position will be re-evaluated.

Control Measure LU-8: Remote Sites Stormwater Compliance

Evaluate port-owned properties within the watershed but outside the harbor districts, and ensure permit compliance as necessary.

Inventoried and evaluating all port-owned properties outside the immediate harbor area will allow port staff to ensure that stormwater management is in compliance with all regulations and permits.

POLB and POLA: Remote sites have been inventoried and evaluated.

POLB-Owned Properties: POLB conducted an inventory of all Port-owned properties that lie outside of the harbor district. A GIS database has been developed for long term management and tracking of these properties. The database includes location, address, ownership, assessor's parcel number, land use, participation status in POLB stormwater programs.

A compliance assessment was performed of all POLB owned properties located outside of the Harbor District, and it has been confirmed that all such properties are compliant with current stormwater regulations. An annual inventory and compliance assessment will be performed to remain current, as properties in the Port are constantly changing status.

POLA-Owned Properties: By definition, all POLA-owned properties are within its Harbor District and are incorporated into its Tenant Outreach Program. As part of the Tenant Outreach Program, the database of POLA tenants and POLA-owned properties is reviewed and updated annually. Properties owned jointly by both ports are discussed in the following section.

Jointly Owned Properties: Many remote sites associated with railroad right of ways such as the Alameda Corridor and the former San Pedro Right-of-Way are jointly owned by the two ports. Prior to the construction of the railroad right of ways the ports, acting under a joint powers agreement, acquired the property necessary to construct the rail lines. Some parcels or portions of parcels were not utilized in the construction of the right of way, and these surplus or "remnant" parcels have been leased to various entities for a wide variety of land uses.

The ports have assessed the remnant parcels by reviewing surface lease agreements supplied by the ports' property management company tasked with the oversight of these parcels. Lease agreements were ranked according to priority. High priority sites included remnant parcels leased to facilities which are subject to storm water regulations, such as industrial facilities which are required to obtain a NPDES permit for storm water discharges. The ports have access to the Rail Asset Management System (RAMS) which is a GIS based system developed by the Alameda Corridor Transit Authority (ACTA) for the ports to manage and track all properties associated with the railroad right of ways. High priority sites would be located in the RAMS system and inventoried in the port's database for long term management and compliance assessment.

Initial compliance assessments consisted of ensuring all facilities required to file for coverage under an NPDES permit have filed with the LA-RWQCB. In the event a non-filer occupying port property is identified the facility would be referred to the LA-RWQCB.

Control Measure OW-1: Vessel Guidance Manual

Develop guidance manuals for on-water activities (e.g., allowable and prohibited vessel maintenance activities and discharges).

The identification and communication of allowable and prohibited on-water maintenance activities and vessel discharges as set forth in the VGP and state permit (see Sections 2.1.1 and 2.1.2) will reduce overall pollutant loading from port activities into the harbor.

A guidance manual was completed and distributed.

In August of 2010, the ports completed the Vessel Discharge Rules and Regulations document, a guidance manual summarizing the various regulations pertaining to vessel discharges and maintenance activities. The document's purpose is to provide a quick reference guide informing interested parties (vessel operators, terminal operators, patrol officers, port staff) on allowable and prohibited maintenance activities and discharges within the ports. The guidance manual will act as a summary of all existing regulations. After a draft was completed at the end of 2009, the document was provided to staff from the EPA, LA-RWQCB, and the State Water Resources Control Board for review and comment. In addition to the document, a quick reference was developed for distribution to vessel operators. This chart contains a brief summary of the most common discharges along with whether the discharge or activity is allowed or not within the harbor.

Electronic versions of the document are available on the ports' websites. Hard copies of the document were distributed to port terminal operators.

An update of the Clean Marina Guidebook was completed and distributed.

In January of 2010, staff updated the Clean Marina Guidebook and distributed the guidebook to all port marinas. The guidebook provides port-specific information for marinas on environmental resources, pertinent regulatory information, and how to become certified as a Clean Marina through the Clean Marinas California Program. In spring and summer of 2010, three more POLA marinas became certified clean marinas, bringing the total number to nine.

In addition, POLA staff completed a draft Boat Maintenance Policy and circulated it among marina managers for review and comment. A final policy will be completed and distributed to marinas by the end of 2010.

Control Measure OW-2: Piling Replacement Policy & Standards

Develop port policy and standards for maintenance, in-kind replacement, and eventual phasing out of exposed treated pilings from in-water applications.

Minimizing and eventually phasing out the use of treated piles by identifying and implementing effective alternatives for in-kind replacement and maintenance will reduce pollutant loading due to leaching from treated wooden piles.

POLB: BMPs for the storage, use, and disposal of treated piles were developed and implemented. A pilot project is underway.

Since August of 2008, the POLB has been testing plastic piles as possible alternatives to replace damaged to degraded creosote piles. Currently, fiberglass reinforced plastic piles and steel-reinforced plastic piles are installed in two separate locations to gauge the piles ability to withstand the port environment (UV exposure, vessel traffic and bumping, etc). A third pilot project currently in development will place fiberglass reinforced plastic piles in a second location within the POLB harbor to further test the piles structural and environmental integrity.

Until an alternative to treated piles is identified, specific BMPs for the storage, wrapping, installation, and disposal of treated piles have been implemented. Specific BMPs include covering and raising all treated piles while stored on land, wrapping piles prior to installation, and ensuring all piles are disposed of properly.

POLA: BMPs for the storage, use, and disposal of treated piles were developed and a new evaluation program for piles and pile wrap systems is underway.

Existing BMPs for the storage, use, and disposal of treated piles were reviewed to determine if any updates or additional practices could be implemented. A new, more robust material was identified to place under and over piles stored outside to prevent stormwater contact with the piles.

For more than 5 years, POLA has been investigating alternatives to treated piles, as well as methods to wrap piles to both prevent damage to untreated piles and prevent leaching of treatment chemicals of treated piles into harbor water. POLA has installed untreated piles, plastic piles, as well as piles treated with alternatives to creosote. In August of 2010, a detailed evaluation methodology was finalized that will be used to assess various piles and pile wrap systems. The methodology considers factors such as use of the pile (load-bearing, protective, etc.), harbor location, expected life expectancy of the pile (high- versus low-impact areas), cost, sustainability, and disposal methods. Through this evaluation method, POLA staff will be able to select the best options for replacement of its more than 17,000 wooden piles during required maintenance. The method can also be used retroactively to evaluate the success of alternative piles and pile wrap systems that are already in use in LA Harbor.

Control Measure OW-3: BMPs & Standards for Cathodic Protection

Develop BMPs and port standards for zinc-based cathodic protection of port structures and vessels.

Identifying and implementing effective BMPs and providing guidance for the use of zinc as cathodic protection will reduce zinc loading from contaminant leaching by zinc anodes.

POLB: BMPs and standards for cathodic protection will be completed by the end of 2010, as scheduled.

An initial evaluation of the current practices for the installation and use of cathodic protection has been conducted. Additional research into the cost, effectiveness, and environmental impacts of various metal anodes, including zinc, aluminum, and magnesium, is being conducted. Once completed, cathodic protection standards will be developed.

POLA: Development of BMPs and standards for cathodic protection will be completed by the end of 2010, as scheduled.

An inventory of the methods of cathodic protection currently in use was completed in the summer of 2010. It determined that zinc-based cathodic protection is not being used on POLA structures and is only currently in use on some, smaller POLA vessels. POLA staff are currently investigating alternatives, particularly aluminum anodes. A final policy on cathodic protection will be in place by the end of 2010.

Control Measure S-1: Operations Sediment Management Plans

Develop sediment management policy/guidance establishing priorities for removal, disposal, and management of sediments with a clear decision-making framework.

Establishing a sediment quality baseline and formulating a management strategy to address testing, dredging, and disposal of sediments, whether contaminated or not, will help to address TMDL sediment listings and also minimize potential water quality impacts from water column exposure to dredged sediments.

POLB and POLA: Internal drafts are complete. Final plans are anticipated by the end of 2010.

A Draft Operations and Sediment Management Plan has been developed by each port and both are currently going through internal review. It is anticipated that the plans will be circulated for stakeholder review and finalized by the end of the year.

Control Measure S-2: Legacy/Hotspot Management Plans

Develop a sediment management policy establishing priorities for the management of areas of legacy contaminated sediments and hotspots.

Establishing clear port policies and priorities related to legacy contaminated sediment will facilitate cleanup and management of these areas.

POLB and POLA: Draft framework has been developed and will be finalized through the TMDL process.

Both ports, working with the US EPA and Regional Water Quality Control Board through the TMDL development process, have developed a framework for the Legacy/Hotpot Management Plan. The framework utilizes the SQO process to evaluate sediment conditions in the harbors and identify priority hotspots. As the TMDLs move forward the framework will be more fully developed for inclusion in the final TMDL Implementation Plan. Remediation dredging of legacy sediment contamination at IR Site 7 (POLB) began in the summer of 2010. Remediation of IR Site 7 will be completed by the end of 2010.

Control Measure WS-1: Support Pollutant Loading Reduction Efforts

Employ all available means to support efforts to reduce upstream pollutant loadings that adversely affect harbor water and sediment quality.

Participating in local and regional efforts to characterize pollutant inputs to the harbors from outside sources and participating in watershed planning efforts will support regional efforts at pollution reduction.

POLB and POLA: Participation in watershed activities is ongoing.

Staff attends Dominguez Watershed Advisory Committee meetings and periodically updates the attendees on WRAP activities.

Both ports continue to remain active in the stakeholder process for the Harbor TMDLs, and have generated/provided extensive sediment and water quality data in support of the TMDL development. In coordination with EPA and LA-RWQCB, the ports are also utilizing the WRAP hydrodynamic model to support TMDL development.

3.2 Technology Advancement Program

The WRAP's Technology Advancement Program (TAP) is intended to evaluate, demonstrate, and incorporate new technologies into the suite of control measures by which the ports will advance towards their goal of protecting and improving water and sediment quality in the harbor complex.

For emerging technologies that appear to warrant testing in the port environment, the ports and other stakeholders will work together to identify funding opportunities, secure field testing locations, establish testing protocols, and pursue the actual demonstration projects.

POLB: The POLB established a number of pilot projects through the WRAP TAP. The following table describes the various pilot projects, along with the intended goals of the project and which control measure the TAP project supports.

Pilot Project	Summary	Control Measure
ARS Catch Basin Inserts	This project will install automatic retractable screen (ARS) devices on four curb inlet and two catch basin inserts on grate-styled catch basins to determine how well they work and if this BMP is appropriate to install throughout the POLB. The ARSs are designed to prevent trash, sediment, and debris from entering the catch basin. This project builds on an earlier pilot project that evaluated three different ARS designs.	LU-3: Structural BMPs LU-5: Litter Control Program
Trucker Trash Cans	This project is focused on providing an easy-to-use trash can for port truckers. The 22-gallon, pole-mounted trash receptacle can be modified to create a trash can designed for truckers to use without having to exit their vehicles. It is thought that this convenience of use coupled with placement in strategic positions in the port will reduce litter generated by truckers. Three pole-mounted trash receptacles will be developed and modified by the Port to create prototypes for testing. This project is currently under management review.	LU-5: Litter Control Program
Plastic Pile	Building on the success of fiberglass reinforced plastic piles installed two years ago, a second location for the installation of plastic piles has been identified. Fiberglass-reinforced plastic piles are a potential alternative to creosote-treated timber piles, which, despite stringent BMPs, pose a risk to water quality and wildlife due to creosote leaching. This project is currently undergoing staff review.	OW-2: Piling Replacement Policy and Standards

POLA: The POLA is developing a formalized TAP program and will request funding for fiscal year 2011/2012. However, in conjunction with several WRAP control measures, a number of pilot projects have been enacted or are actively being considered, as described in the table below.

Pilot Project	Summary	Control Measure
Catch Basin Inserts	POLA has installed experimental inserts in seven catch basins in equipment storage and parking areas at its Construction and Maintenance yard. The inserts have a special polypropylene liner that filters out petroleum hydrocarbons and suspended solids. The feasibility and effectiveness of these inserts is currently being evaluated for use in other areas of the Port.	LU-3: Structural BMPs
Trucker Trash Cans	As part of the developing Litter Control Program, POLA has funded development/purchase of Trucker Trash cans. The 22-gallon, pole-mounted trash receptacle can be modified to create a trash can designed for truckers to use without having to exit their vehicles. It is thought that this convenience of use coupled with placement in strategic positions in the port will reduce litter generated by truckers.	LU-5: Litter Control Program



**Annual Progress Report 2010
WATER RESOURCES ACTION PLAN**

Pile Wrap Systems	As part of its Piling Replacement Policy and Standards control measure, POLA developed a Pile Wrap Evaluation Procedure. A number of new wrap systems, designed to extend the life of the pile and prevent leaching of pile preservatives such as creosote, which pose a water quality risk, are currently being tested in harbor waters and several more are under evaluation. Examples include HDPE encapsulated piles that prevent leaching and are rugged enough to be driven after treatment without being compromised.	OW-2: Piling Replacement Policy and Standards
-------------------	--	---



SECTION 4: NEXT STEPS

Port staff have determined that a formal update of the WRAP document is not necessary at this time. As control measures continue to be developed and implemented, staff of the two ports will report to their Boards on progress, recommended actions, and on any other relevant information. Annual progress reports will continue to be provided to stakeholders and the Boards.