

STORM WATER



MANAGEMENT
CITY *of* LONG BEACH

Annual Storm Water Permit & Assessment Report
Order No. 99-060/CAS004003 (CI8052)

December 1, 2004



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CITY OF LONG BEACH DEPARTMENT OF PUBLIC WORKS

333 West Ocean Boulevard • Long Beach, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

December 1, 2004

Jonathan Bishop, P.E.,
Executive Officer
California Environmental Protection Agency
Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Annual Storm Water Report 2003-2004

Dear Mr. Bishop,

The City of Long Beach is pleased to submit its "Annual Storm Water Report 2003-2004" in compliance with Order No. 99-060, for the Municipal National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0040003 (C18052).

Should you have any questions in regard to this report, please contact Tom Leary, Stormwater Water Program Officer, at (562) 570-6023.

Sincerely,

Mark Christoffels
City Engineer

MC:ll

Enclosure

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CITY OF LONG BEACH DEPARTMENT OF PUBLIC WORKS

333 West Ocean Boulevard • Long Beach, CA 90802 • (562) 570-6383 • FAX (562) 570-6012

CITY OF LONG BEACH MUNICIPAL STORM WATER PERMIT ORDER NO. 99-060

Permittee Annual Program Report Form Permit Year 2003 - 2004

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for knowing violations.

Executed on the **1st** day of **December, 2004.**"

Mark Christoffels
City Engineer

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INTRODUCTION

The goal of the federal Clean Water Act (1972) is to protect receiving waters such as rivers, lakes and oceans from contamination by controlling pollutants from entering the storm drain system. The federal Clean Water Act amendments of 1987 established requirements for storm water discharges from municipal storm drain systems (MS4s) to obtain coverage under a nationwide permit called the National Pollutant Discharge Elimination System (NPDES). The Long Beach Stormwater Management Program (LBSWMP) is being fully implemented by the City in compliance with its NPDES permit and, most importantly, to preserve and maintain the quality of our beaches and waterways while improving marine habitat and the quality of life for residents.

In January 1999, the Department of Public Works created a new division entitled the Clean Water Division. The Division was created to assist the City in implementing the goals and objectives of the LBSWMP and ensure compliance with the requirements of its Municipal NPDES Permit. This Division was renamed the Stormwater Management Program in 2003 and includes the Stormwater Management Program Officer and an Administrative Analyst III. The Program was renamed to more accurately communicate our mission and better serve the community.

On June 30, 1999, the Regional Water Quality Control Board issued a municipal stormwater NPDES permit to the City of Long Beach. The City of Long Beach became the first city in Los Angeles County to receive its own NPDES Permit and holds that distinction to date. The City of Long Beach is currently operating under the requirements of this permit, which was scheduled to expire on June 29, 2004.

The City of Long Beach was also the first City in Los Angeles County to be audited by the Los Angeles Regional Water Quality Control Board and EPA Region IX. The City has made adjustments to the Long Beach Stormwater Management Plan to accommodate the audit's findings and taken additional steps to tailor the program to meet specific needs.

On December 26, 2003, the City submitted its Report of Waste Discharge (ROWD) due to the fact that the current permit was to expire June 29, 2004. The ROWD consisted of: Statement of Accomplishments, Long Beach Stormwater Management Plan, Water Quality Monitoring Plan, Draft Permit and challenges and future goals. The City received notification of receipt and is confident that its ROWD will be approved in 2005.

The Annual Storm Water Permit Report and Assessment details the City's storm water management accomplishments for the period of October 1, 2003, through September 30, 2004.



PROGRAM MANAGEMENT

The Long Beach Stormwater Management Program (LBSWMP) continues to be facilitated by the Citywide National Pollutant Discharge Elimination System (NPDES) Task Force. Task Force members, representing numerous departments, oversee timely implementation of the LBSWMP and are essential in providing two-way communication with City staff (See Appendix B for Citywide Task Force Matrix).

Stormwater Management Program staff participates in regional task forces, councils, organizations, and committees related to storm water activities. This ongoing involvement has proved to be an excellent avenue for exchanging information and collaborating on joint projects. One such project is the Water Augmentation Study, which the City of Long Beach is working on with the Los Angeles and San Gabriel Rivers Watershed Council (See Appendix C for WAS Executive Summary).

Capital Improvement Projects and the grant money that funds them are always a major focus to reduce pollution throughout the City. Projects totaling approximately \$4.6 million that have been completed in FY 04 include the 20th Ave. and Walnut St. CDS unit installation, CDS Unit Installation at SD12 (Artesia Boulevard) and the Pump Station Trash Rack Renovation. In addition to the CIP projects, a total of \$481,588 has been secured for the Colorado Lagoon Feasibility Study (\$200,000) and the CIWMB Used Oil Study (\$281,588). These projects and others soon to be completed are more fully detailed in Section 1.3 (Current Projects).

PUBLIC AGENCY ACTIVITIES

Code enforcement, public construction procedures, and the maintenance of streets, storm drains, and landscapes continue to be vital components of the LBSWMP. The City's public agency activities are both numerous and extensive. Several improvements have been made over the past year to make particular operations more efficient. For example, larger litter receptacles have been added to parks, beaches, and marinas, and over 85% of the household recycling program has been converted to automated collection bins. Both of these measures resulted in the collection of 25,826 tons of waste and recyclables, which is a 32% increase compared to FY 03. Other notable Public Agency Activities include:

- 2,367 tons of trash and debris collected in beach and marina receptacles (12.3% increase from FY 03).



- 1,980 tons of trash and debris from Neighborhood Cleanup programs (8.6% increase from FY 03).
- 1,196 tons of oversized items picked up through the Dumped Items Program (22.3% increase from FY 03).
- 13,113 tons of trash and debris collected from street sweeping (3.8% increase from FY 03).
- 159 citations issued by the Long Beach Police Department for litter and dumping related offenses (6.3% increase from FY 03).
- 712 cubic yards from storm drain operations and maintenance (111% increase from FY 03).

DEVELOPMENT PLANNING AND CONSTRUCTION

The City has NPDES and SUSMP regulations detailed in Chapter 18.95 of the Long Beach Municipal Code, created and implemented a highly regarded developer information program, and makes accessible CASQA BMP Handbooks to assist and inform developers. In FY 04, there were 41 development projects for which SUSMPs were completed. The City's plan review process for the impacts of development on storm water quality as early as possible during the planning phase of a project will safeguard against the discharge of pollutants into the storm drain system and/or receiving waters. Stormwater quality impacts must be fully addressed by the developer prior to issuance of any permits.

ILLICIT DISCHARGES AND ILLICIT CONNECTIONS

Inspectors and field staff from the Fire, Harbor, Health and Human Services, Planning and Building, Public Works, and Water departments receive annual training on how to identify, report, and eliminate illicit discharges and play a vital role in prohibiting illicit discharges and eliminating illicit connections. For example, the Water Department uses special equipment to inspect storm drain pipes 36-inches or greater in diameter. If an illicit connection is detected an advanced system of communication and follow-up is in place to ensure the removal of the connection. Within the City limits, there are about 383 miles of active storm water carriers, which include pipes, open channels, ditches, culverts, connector pipes and drains. 180 miles of those carriers are City-owned, 142 miles are LA County-owned and 40 miles are Caltrans-owned with various other owners making up the difference. The City maintains 5.5 miles of channels and ditches, LA County has 32 miles of open flood control channels (i.e. LA River, San Gabriel River, Los Cerritos Channel, etc.) and Caltrans has 11 miles of channels and ditches. Interagency cooperation between the City, LADPW, and CALTRANS has led to faster discovery and elimination of illicit discharges and connections countywide.



PUBLIC INFORMATION AND EMPLOYEE TRAINING

Educational outreach is used at length to inform the public, school children, commercial and industrial establishments, and City employees about storm water and urban runoff issues. In FY 04, with a permit requirement of 1.5 million impressions, the City made well over 84 million impressions related to storm water pollution prevention issues and their solutions through the use of various media. New outreach materials and methods are constantly being explored while proven techniques are carried on. In FY 04, the Stormwater Management Program made use of Long Beach Community Television programs, The Wave utility bill insert, the Long Beach Area Chamber of Commerce, and a host of El Dorado Nature Center programs, just to name a few. Additionally, the Adopt-A-Waterway™ program continues to be a success by raising non-taxpayer funds to enhance programs aimed at educating the public about pollution prevention. Since its inception, the Adopt-A-Waterway™ program has generated \$148,540 for the City. In FY 04, Adopt-A-Waterway generated over \$73,057 for the City and relayed Best Management Practices through the 24 installed signs throughout Long Beach. Finally, 1,009 educational site visits were conducted by the city's Health Department.

Public Information and Employee Training are fundamental to changing people's behaviors and stop pollution at its source. The more people are aware that their actions have a specific effect on storm water quality and the environment in general, the more they will be the solution to pollution, rather than its cause. For example, the Water Department and Stormwater Management Program's Fats, Oils & Grease campaign has led to a 40% reduction in sanitary sewer overflows.

CHALLENGES

The City of Long Beach is facing an extremely difficult financial situation. Despite severe cutbacks in many City programs and services, the Stormwater Management Program was able to sustain its FY03-level of funding in FY04. However, the City's projected structural deficit for FY05 is \$58,000,000, and for FY06 \$28,000,000 (subject to adjustment upward as we move further out on the time line.) All programs will be trying to "do more with less."

In this uncertain environment, the Program is facing a number of new challenges:

- The City's Report of Waste Discharge (ROWD) submitted on December 26, 2003 has yet to be approved, creating further uncertainty and difficulties in planning and implementation.



EXECUTIVE SUMMARY

- Increased costs for water quality monitoring, permit fees, and regional/special studies.
- Staffing shortages at local, State, and Federal levels.
- Implementation of Total Maximum Daily Load requirements (TMDL's), given their extraordinary costs and recent court rulings.
- Lack of funding for capital improvement projects (CIP) and special studies aimed at improving water quality.



1.0 PROGRAM MANAGEMENT

Section One explains the City's strategy, regional efforts, and projects related to implementing the Long Beach Storm Water Management Program (LBSWMP). The Department of Public Works Stormwater Management Division administers this citywide program. The objective of the LBSWMP is to improve the quality of storm water runoff by effectively prohibiting non-storm water discharges and by reducing the discharge of pollutants to the maximum extent practicable (MEP). All City departments are involved in the cooperative effort to implement the LBSWMP, while it is the Stormwater Management Division's responsibility to coordinate the development, implementation, and revision of the LBSWMP.

1.1 IMPLEMENTATION STRATEGY

The Citywide National Pollutant Discharge Elimination System (NPDES) Task Force (Task Force) facilitates the implementation of the LBSWMP. The Task Force is made up of representatives from City Departments. Task Force meetings are scheduled on a quarterly and "as needed" basis and serve to disseminate information, receive feedback, provide guidance, and discuss pertinent issues related to NPDES. These meetings serve as a venue to concentrate on integrating the LBSWMP elements into the City's guidelines and standards. The Task Force addresses training, public education, public agency activities, development planning and construction, legal authority, industrial and commercial site visits and procedures to detect and remove illicit connections and improper disposal into the storm drain system. Also, included in this program is a process to identify the appropriate city department(s) to respond to storm water pollution issues (See Appendix A for NPDES First Responders Call List).

The department representatives serving as Task Force members oversee proper and timely implementation of the LBSWMP. These contacts are responsible for coordinating the annual report preparation, training, and policy and procedure revisions within their departments. The Task Force members are essential in providing two-way communication that keeps the appropriate staff up to date with NPDES matters (See Appendix B for Citywide Task Force Matrix).

1.2 REGIONAL PARTICIPATION

The Stormwater Management Program staff and other staffs within the City actively participate on a great number of task forces, councils, organizations, and committees that focus on storm water, pollution prevention and education, and watershed activities.



SECTION 1

The Los Angeles Contaminated Sediments Task Force (CSTF) works to identify contaminated sediment in Los Angeles County and develop viable disposal options. The City of Long Beach Harbor Department (Port of Long Beach) helps fund this task force and special studies related to disposal and reuse. Staff from the Harbor Department and the Department of Parks, Recreation and Marine attends these meetings to assist the CSTF with its goals and objectives.

The Los Angeles River Master Plan (LARMP) Advisory Committee works to continue the implementation of improvement projects within the Los Angeles River Master Plan, which was approved in 1996. These meetings focus on efforts and issues related to the LA River, such as maintenance, signage, and landscaping guidelines. Long Beach Stormwater Management Program staff and the Department of Parks, Recreation and Marine attend these meetings to assist the LARMP Advisory Committee in meeting the goals and objectives of the LARMP.

The San Gabriel River Master Plan (SGRMP) is underway and nearing the end of the planning phase. The consultant, MIG, has completed a draft version of the Master Plan with input from stakeholders at regularly held Steering Committee meetings. Staff from the Department of Parks, Recreation, and Marine and the Stormwater Management Program attends these meetings to assist the SGRMP stakeholders in meeting the goals and objectives of the SGRMP.

The Los Angeles and San Gabriel Rivers Watershed Council (LASGRWC) is a nonprofit organization that engages stakeholders in dialogue promoting watershed health and resolving environmental and regulatory issues. The Water Augmentation Study is one of the LASGRWC's current projects, which will explore the potential for increasing local water supplies and reducing urban runoff pollution by increasing infiltration of storm water runoff. The Stormwater Management Program and the Department of Parks, Recreation, and Marine continue to work with Dr. Suzanne Dallman of the LASGRWC on one of the demonstration project's monitoring locations for this study, which is located at Veterans Park in Long Beach. (See Appendix C for Watershed Augmentation Study Executive Summary.) The LASGRWC holds regular stakeholder meetings that not only cover organization business but also include informative workshops. Staff from the Department of Parks, Recreation, and Marine and Stormwater Management Program attends these meetings to participating in the LASGRWC.

The Dominguez Watershed Advisory Council (DWAC) creates and supports implementation of a comprehensive Watershed Management Master Plan (WMMP) for the Dominguez Watershed. DWAC works very closely with the consultant, MEC, who is



SECTION 1

currently drafting the WMMP. Staff from the Harbor Department and the Stormwater Management Program attends these meetings to assist the DWAC in meeting its goals and objects and the development of its WMMP.

The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) is one of seven Conservancies within the California Resources Agency. It works to preserve urban open space and habitat and undertakes projects that provide low-impact recreation, education, wildlife and habitat restoration, and watershed improvements. Third District Council member Frank Colonna worked with state legislators and local cities on legislation to create the RMC, of which he was Chair during this reporting period. Recently, Dan Baker, Second District Council member, was appointed to the Board. Staff from the Department of Parks, Recreation, and Marine and Stormwater Management Program attends the RMC's public meetings.

The California Stormwater Quality Association (CASQA) assists those entities charged with storm water quality management responsibilities with the development and implementation of storm water quality goals and programs. CASQA also maintains and distributes a Stormwater Best Management Practice Handbook set, which has separate handbooks for Construction, New Development and Redevelopment, Industrial and Commercial, and Municipal operations. Long Beach Stormwater Management Program staff attends the meetings held by CASQA, including the BMP Handbook training. In addition, Tom Leary, Long Beach Stormwater Management Program Officer, served as a member of CASQA's Board of Directors during this reporting period.

The Southern California Association of Governments (SCAG) promotes economic growth, personal well-being, and livable communities through leadership, vision, and progress. The City of Long Beach continues as a member of SCAG.

The Stormwater Monitoring Coalition (SMC) of Southern California, a collaborative working relationship of storm water regulators and municipal storm water management agencies, works to develop the technical information and tools needed to improve storm water decision-making. The City of Long Beach, a founding member and the only municipality representative, continues to be an active member. For example, beginning July 2005, the City will participate in the Standardized Data Transfer Formats for Storm Water Monitoring Data with a start up cost of \$10,000 and an annual maintenance fee of \$3,000.

The Long Beach Stormwater Management Program actively participates on several committees and task forces coordinated by the Los Angeles County Department of Public Works.



- The NPDES Municipal Stormwater Permit Executive Advisory Committee (EAC) actively addresses storm water issues among its stakeholders and with representatives from the Los Angeles Regional Water Quality Control Board. Long Beach Stormwater Management Program staff attends these meetings and the TMDL subcommittee meetings to assist the EAC with meeting its goals and objectives. In addition, the City has agreed to join other municipalities within Los Angeles County to pay for consulting services to address TMDL issues at a cost of \$7,500 (See Appendix D for EAC TMDL Invoice). A consultant is expected to be secured in 2005. The City also plans to actively participate on the City of Los Angeles' TMDL planning committees.
- The Los Angeles County Best Management Practice (BMP) Task Force is an ongoing forum to facilitate the selection, implementation, and financing of effective BMPs. Long Beach Stormwater Management Program staff attends these meetings to assist the BMP Task Force with meeting its goals and objectives. Long Beach Stormwater Management Program staff also participates in the Los Angeles and San Gabriel Rivers Joint Watershed NPDES Permittee meetings and Public Education and Outreach meetings.

1.3 CURRENT PROJECTS (\$5,037,645)

The Long Beach Stormwater Management Program is currently project managing several capital improvement projects aimed at reducing pollution throughout the city. Funding for these projects total \$5,037,645. The following are made possible through various grant awards (See Appendix E for Grant Monies Summary pie chart.)

1.3.1 HAMILTON BOWL TRASH REDUCTION (\$783,000)

In 2002, the City of Signal Hill, Los Angeles County Department of Public Works, and the City partnered on a grant application to reduce trash deposited into Hamilton Bowl via the storm drain system. This facility is a combination detention basin / pump station system that is owned by Los Angeles County and leased to the City of Long Beach for recreational purposes. The total project budget is \$1,168,000, and the project was to receive \$783,000 in Prop 13 funds beginning in August 2004. John L. Hunter and Associates, Inc., serves as project manager for the cities and county. In preliminary planning for this project, the Long Beach Stormwater Management Program had a consultant draft a BMP Selection Report in February 2003. The State Budget Act Appropriation of FY 2000-2001 provided funding for the BMP Selection Report.



On August 2, 2004, the State Water Resources Control Board notified the City of Signal Hill (grantee) that the grant would not be awarded to them due to the matter of Cities of Arcadia et al v. State Water Resources Control Board et al, San Diego Superior Court # GIC803631 entered a Writ that directed them to: cease and desist any and all actions to implement, enforce, or otherwise apply the Los Angeles River Trash TMDL; and suspend all activity relating to the Los Angeles River Trash TMDL's that could result in any change or alteration to the physical environment.

At the time this report is being written, it is understood that the State has offered to consider a modification to the grant project so that the funding is not lost. The modified project removes the City of Signal Hill from the project and names the County of Los Angeles as the grantee. Should the modification be approved by the State we expect construction of the structural BMP's to begin during the summer of 2005. The City of Long Beach commitment and role remains the same.

1.3.2 20th & WALNUT CDS UNIT (\$708,000)

The Long Beach Stormwater Management Program, with the technical guidance of the Public Works Capital Project Coordinator (CPC) and staff engineers, PPC Construction, Inc. and CDS Technologies, completed the installation of a CDS unit on 20th Street, west of the intersection of 20th Street and Walnut Avenue and adjacent to the northwest corner of Hamilton Bowl. The unit is placed on a 42-inch pipe that drains into Hamilton Bowl in an effort to eliminate or significantly reduce trash being deposited by storm water into the Bowl. This BMP will assist with LA River Trash TMDL compliance. The total project budget is \$708,000 and is funded by the State Budget Act Appropriation of FY 2000-2001. Construction was completed in September 2004. This installation is likely to be part of the BMP effectiveness study mentioned in 1.3.7 (See Appendix F for CDS pictures). The pictures taken after our first storms in October 2004 speak volumes as to how successful these units are at collecting first flush trash and debris. A more detailed report of its effectiveness will be included in next year's annual report.

1.3.3 COLORADO LAGOON (\$100,000)

In 2001, the State Water Resources Control Board granted the City of Long Beach \$500,000 through the Clean Beaches Initiative for the purpose of eliminating or significantly reducing bacteria in Colorado Lagoon. The State released \$100,000 of the grant to conduct a feasibility study. The study, conducted by Boyle Engineering concluded that sanitary sewer diversions, the original intent of the granting agency, would not lead to water quality improvements. Additionally, the project costs would far exceed the \$400,000 grant balance.



The City reported its findings to the State and recommended the balance of the funds be used for the Abtech/AES Ultra Urban catch basin inserts with Smart Sponge Plus antimicrobial technology. Earlier this year, the State rejected this alternative and recommended that we continue to pursue the sanitary sewer diversions should we find a funding source able to support the multimillion-dollar project.

Determined to test the insert, the Stormwater Management Program did find funding for the Abtech/AES Ultra Urban catch basin inserts with Smart Sponge Plus antimicrobial technology (see 1.3.8) and is exploring alternative BMP's for the Colorado Lagoon that will meet the same goal of bacteria elimination or reduction and improved water quality (see 1.3.6).

As a footnote to this section, when evaluating feasible alternatives for the Colorado Lagoon Restoration Feasibility Study (CLRFS), our consultant, Moffatt and Nichol Engineers further investigated the sanitary sewer diversion BMP and has included it as a feasible alternative (see 1.3.6).

1.3.4 LOS ANGELES RIVER CDS UNIT (\$100,000)

In 2001, the State Water Resources Control Board granted the City of Long Beach \$500,000 through the Clean Beaches Initiative for installation of a CDS Unit in the watershed area tributary to the Los Angeles River. \$100,000 was released for Plans and Specs and just prior to construction this year we were notified by the State that they would not fund the project. Not willing to give up on such a valuable BMP project the City proactively sought and found another funding source (See 1.3.9). This project was completed on September 30, 2004 (See Appendix G for CDS pictures).

1.3.5 PUMP STATION TRASH RACK RENOVATION (\$2,127,360)

These trap nets are designed to capture and remove trash and debris prior to it entering the pumps, thereby significantly reducing contaminants discharged directly into the Los Angeles River. City-owned pump stations (SD 1, 3, 4, 5, 6) that discharge directly to the Los Angeles River were selected for this project. The project involved removing existing trash racks; constructing storm drain pollution trap nets; installing a hoist-crane structure, steel grated pump house doors, and low channel steel screens; and constructing reinforced concrete pads, chain link fences and gates, a hoist cover, and a vandal-proof control box cover. The project includes a two-year trash-monitoring program as well. Status: Construction completed, monitoring ongoing. (See Appendix H for Trap Net Photos).



As a footnote to this section, this project went on-line just prior to the first winter storms of this year. To date, more than 22 tons of trash, debris and green waste have been collected. A more detailed report on the effectiveness of this BMP will be included in next year's annual report.

1.3.6 COLORADO LAGOON RESTORATION FEASIBILITY STUDY (\$200,000)

In April 2003, the City of Long Beach entered into an agreement with the California State Coastal Conservancy to receive \$200,000 in grant funds for a Colorado Lagoon Feasibility Study. The feasibility study will assist the City in prioritizing and integrating issues of concern to stakeholders, including the restoration of the estuarine ecosystem of Colorado Lagoon, improvement of the quality of both the water and sediment, the management of storm water, and supporting environmental education, public recreation, and public access. The study will look at water and sediment quality, flood control, pollution abatement, habitat, and other aspects while involving the community, a citizen advisory group, and the expertise of a Technical Advisory Committee. The goal is for this to be part of a larger master plan for the Colorado Lagoon. All work for this project is scheduled to be completed by April 2005. Task deliverables, to date, are posted at: <http://www.longbeach.gov/pw>.

1.3.7 BMP EFFECTIVENESS STUDY (\$354,866)

The Stormwater Management Program is working with the Southern California Coastal Water Research Project (SCCWRP) and Los Angeles County Department of Public Works, Santa Monica Bay Restoration Commission, the Los Angeles and San Gabriel Rivers Watershed Council, Orange County Water District, County of Orange Public Facilities and Resources Department, and the Los Angeles Regional Water Quality Control Board on a project to study BMP effectiveness. In 2001, \$354,866 of Prop 13 funds was granted for this project, which has a total budget of \$388,316. SCCWRP serves as the project director and will coordinate with the Stormwater Management Program to study the effectiveness of BMPs located at sites within the City of Long Beach. Both wet and dry weather flows will be analyzed in CDS-type units, dry detention basins, UV treatment systems, and wetland systems.

1.3.8 ABTECH/AES SMART SPONGE CATCH BASIN INSERTS (\$1,000,000)

This construction project includes citywide installation and monitoring of AbTech's Ultra-Urban Filter series with Smart Sponge® Plus antimicrobial technology catch basin



inserts. This is a demo project for the City where installation priority was given to drains that are tributary to waters used for recreation.

The Ultra-Urban Filter series with Smart Sponge® Plus is designed to encapsulate and successfully remove harmful substances, including hydrocarbons, oil, grease, and other toxins, before they enter local waterways. The antimicrobial technology adds the capability to destroy dangerous disease causing microorganisms, such as Staphylococcus aureus, E. coli, and Fecal coliforms. Because of the size of Long Beach's storm drain system and the fact that this is a demonstration project, not all catch basins will be covered. We've selected a wide variety of installation locations based on land use, projected pollutant loads and beneficial use designation.

The fully recyclable filters can be installed very quickly. If we find they are needed more critically in a different area, we can easily relocate them. After the filters reach saturation, they can simply be replaced. This BMP program is designed to protect local waterways that are threatened by the highest level of pollutants. Status: 215 drains with 786 inserts were installed prior to the first rains of 2004 wet weather season. The balance of installations is scheduled to be completed on or before December 31, 2004, with monitoring ongoing (See Appendix I for Abtech Press Release). A more detailed report on the effectiveness of this BMP will be included in next year's annual report.

1.3.9 CDS UNIT @ SD12 (\$270,168)

When the City was notified this year that the State would not be funding the construction of the CDS unit at SD12 (Artesia Boulevard) the Stormwater Management Division worked quickly to find another funding source. Recognizing that this unit would primarily treat the drainage from the 91 and 710 freeways, the City proposed a partnership on this project to Caltrans. Caltrans would fund the construction (~\$225,000) and the City would handle all the details including maintenance and monitoring. Caltrans accepted and the project construction was awarded to PPC Construction in May 2004.

The project consisted of construction of the storm drain VSS pollution trap device, evacuation, shoring, bracing, ground water sampling, repair of chain linked fences/gates, a one year VSS monitoring program and all necessary accompanying work. The project was completed and online prior to the first winter storms of this year (See Appendix J for Catch Basin Insert Photos). A more detailed report on the effectiveness of this BMP will be included in next year's annual report.



1.3.10 CALIFORNIA INTERGRATED WASTE MANAGEMENT BOARD –USED OIL OPPORTUNITY GRANT (\$281,588)

The purpose of this program is to 1) identify the root causes of illegal dumping / barriers to recycling oil, and 2) determine the most effective outreach strategies for preventing pollution. The program is being implemented in partnership with the cities of Carson, Compton, Huntington Park, Lynwood, and South Gate and will tackle the growing problem of illegal dumping in the southern Los Angeles River Watershed. The ultimate goal of the program is to establish effective outreach and education techniques aimed at “do-it-yourselfers,” newcomers, and people practicing improper waste oil disposal. This will be done through identifying barriers, conducting surveys, and evaluating outreach efforts.

The City’s consultant, S. Groner and Associates, Inc., began the study in June 2004, which will continue through April 2007. An update on this grant-funded program will be included in next year’s annual report.



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2.0 MANAGEMENT PROGRAM FOR PUBLIC AGENCY ACTIVITIES

The City of Long Beach puts into practice public agency activities to control the discharge of pollutants into the storm sewers and reduce the discharge of pollutants to Long Beach receiving waters to the maximum extent practicable. In order to effectively improve the quality of storm water, the City has the following in place:

- Trash and Greenwaste Control,
- Code Enforcement,
- Street Maintenance,
- Storm Drain System Operations and Maintenance,
- Public Construction Activities,
- Landscape Maintenance, and
- Training.

2.1 TRASH AND GREENWASTE CONTROL

Trash and greenwaste are controlled through various operations across several departments. These include

- Litter Receptacles,
- Neighborhood Cleanup Assistance,
- Household Recycling,
- Greenwaste Disposal,
- Special Collection,
- Used Oil Recycling,
- Household Hazardous Waste Collection, and
- Trash Collection on the Beach and Along Water Bodies.

The Public Works Department's Environmental Services Bureau (ESB) continues to utilize grant funds provided by the California State Department of Conservation (DOC) to reduce litter by encouraging beverage container recycling. Beverage recycling is promoted at special events where flyers are distributed and recycling receptacles are provided, on the ESB website, at public meetings and resident organizations and through a promotional gym bag giveaway at the 2004 Toyota Grand Prix. The City also uses the funding to promote litter reduction opportunities for both the business and residential communities of Long Beach through the No Litter Zone campaign and by



MANAGEMENT PROGRAM FOR PUBLIC AGENCY ACTIVITIES

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supporting Long Beach Beautiful. The No Litter Zone campaign encourages businesses to adopt the sidewalk and gutter in front of their place of business, keeping the area free of litter. Long Beach Beautiful is a community-based effort that allows volunteers to develop a strategic approach to keep the City litter-free and beautiful. In FY 04, there were seven campaign events, in which approximately 160 volunteers assisted with corridor cleanups, beautification projects and recycling.

Adopt-A-Street is a program that allows local businesses the opportunity to adopt portions of streets that will be serviced by special litter cleanup crews on a monthly basis. The City of Long Beach adopted six miles of streets.

The Adopt-A-Gutter curriculum engages students and teaches them about basic storm drain education, including the effects of trash along the street and curb. The program now includes student monitoring and characterizing trash in gutters around each student's home. Students received magnets, rulers, pencils and literature to remind them that they are the solution to ocean pollution.

2.1.1 LITTER RECEPTACLES

The placement and servicing of litter receptacles provides people an alternative to littering, and, thus, aids in keeping refuse from collecting in the storm drain system. There are 269 litter receptacles along residential streets and 984 litter receptacles along commercial streets. Approximately 942 tons of waste was collected from these litter receptacles in FY 04. In addition, the Long Beach Parks, Recreation, and Marine Department maintain 575 litter receptacles at park locations that are emptied daily. There are another 145 beach receptacles that are emptied four times per week during the summer and two times per week during the winter. 75 marina trash receptacles are emptied six times per week. The Queensway Bay area has 30 litter receptacles, which are emptied daily. In FY 04, over 2,367 tons of trash and debris was collected along the beaches and marinas through the use of litter receptacles. This is an increase of approximately 12.3% from the 2,067 tons collected in FY 03. During special events, additional litter receptacles are provided as needed and collected on the day of the event.

The Environmental Services Bureau of the Public Works Department continues to provide incentives to the general public, businesses, and private waste haulers in an effort to minimize litter and reduce storm water pollution. An ordinance (LBMC 8.60.270) requiring businesses to provide and maintain litter and cigarette receptacles for customers and employees continues to be enforced. Also, all private waste haulers have contractual requirements to collect overflow debris when servicing their accounts.



MANAGEMENT PROGRAM FOR PUBLIC AGENCY ACTIVITIES

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Refuse Field Investigators regularly monitor accounts serviced by private waste haulers and notify haulers when necessary. Both programs have proven successful at litter reduction.

2.1.2 NEIGHBORHOOD CLEANUP ASSISTANCE

The Neighborhood Services Bureau of the Community Development Department assists neighborhood volunteers in conducting cleanups. In FY 04, there were 173 cleanup events, which resulted in 1,980 tons of waste being collected. This is an increase of approximately 8.6% from the 1,704 tons collected in FY 03 at 166 cleanups. The Bureau provides free trash dumpsters, trash bags, and gloves and lends tools for use during the cleanup events. Neighborhood groups are also given free use of community computers and photocopiers to produce flyers for the event. In addition, the Bureau's Neighborhood Leadership Program Class of 2004 engaged in a neighborhood cleanup project on Anaheim Street in the City of Long Beach.

2.1.3 HOUSEHOLD RECYCLING

ESB continues to improve the City's household recycling program. 85% of manual collection of materials in open bins has been converted to automate collection of materials in covered carts. Residents are provided with 32-gallon, 64-gallon, or 96-gallon carts for commingled collection of recyclables in the categories of newspaper, cardboard, mixed paper, plastic, cans (aluminum, steel, and tin), glass, and empty paint and aerosol cans. The revised household recycling program will further reduce litter and increase compliance with AB939. Approximately 25,826 tons was collected through the curbside recycling program during FY 04. Table 2.1 shows recyclables collected in FY 04. This is approximately a 32% increase from the 17,700 tons collected in FY 03. This increase is related to the use of larger containers in the new program (See Appendix K for Recycling Flyer).

Table 2.1: **CURBSIDE RECYCLING**

Item	Tons Collected
Newspaper	15,494
Corrugated Cardboard	3,333
Commingled Containers	6,611
Mixed Paper	388
TOTAL	25,826



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2.1.4 GREENWASTE DISPOSAL

The City requires residents to tie tree limbs, shrubs, and trimmings into bundles and securely wrap materials for proper disposal. The Special Collection Program provides pickup for these materials. If a special pickup is not needed, residents may put greenwaste in their regular manual or automated refuse cans for collection. Public Works investigated the possibility of green waste recycling for residents; however, the estimated additional cost to each household would be approximately \$3.00 to \$5.00 per month, which makes the program cost prohibitive at this time.

City departments minimize the amount of greenwaste collected from City facilities by reuse. Grass clippings are evenly distributed over the areas that are being mowed (grasscycling). Excess grass clipping and other greenwaste, such as tree limbs, are recycled. BMP's, such as surrounding the base of bulk materials with sand bags and covering with plastic tarps, are utilized to assure that exposed materials will not migrate from their temporary storage locations. The departments of Parks, Recreation and Marine and Public Works recycled approximately 69,882 tons of grass from City grounds in FY 04. The Street Landscaping Division recycled approximately 3,827 tons of grass and tree limbs last year. This is virtually the same amount (3,831 tons) collected in FY 03 (See Appendix L for Greenwaste Flyer).

The City participates in seminars on composting and distributes literature that explains methods of greenwaste composting. Monthly composting education classes are offered through the Parks, Recreation and Marine and Public Works Departments.

2.1.5 SPECIAL COLLECTION

Two well-publicized special item collection programs, the Oversized Items Pickup and Dumped Items Pickup, are designed to reduce bulky items from alleys and vacant lots throughout the City. The City offers each household two free Oversized Items Pickups per year. Additional collections may be requested starting at \$4.50 per item per visit. The Environmental Services Bureau (ESB) distributes a trilingual (English, Spanish, and Khmer) promotional flyer to inform residents about the Oversized Items Pickup program. Table 2.2 shows the amounts collected from special item pickup requests. While the total tonnage for FY04 is down from the 3,412 tons collected in FY 03, the tonnages for e-waste dropped off at the LA County Hazardous Waste Round-ups are significantly higher. E-waste has been a significant percentage of the tonnage numbers for the City's Special Collections.



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Table 2.2: **SPECIAL ITEM PICKUPS**

Category	# of collection requests	Tons Collected
Furniture	9,696	1,248
Tires	117	37
Yard Waste/Tree Trimmings	863	78
City-provided recycling bins (old)	793	130
Out Lates (missed collections)	316	52
E-Waste	896	Not Available
Appliances	1,034	Not Available
Other:	8,858	1,092
TOTAL	22,573	2,637

The Dumped Item Pickup program allows residents to report illegally dumped items for collection. ESB works closely with the Police Department to help enforce laws against illegal dumping. Surveillance cameras have been installed in some alleys to detect this behavior. Additional cameras have been added in FY04 and ESB will continue to add more each year. Refuse staff collected 1,196 tons of illegally dumped items, which is a 23.3% increase from the 917 tons collected in FY 03. A contributing factor to the increased tonnage of illegally dumped items collected is a new policy implemented by ESB whereby Refuse Operators are required to collect dumped items along their regularly scheduled routes. Additionally, the Police Department issued 159 citations and made 9 arrests for littering and dumping-related issues in FY 04. Citations increased approximately 6.3%, and arrests decreased approximately 40% compared to FY 03 (See Appendix M for Long Beach Police Department NPDES Report.)

2.1.6 USED OIL RECYCLING

The City operates a curbside residential recycling program that includes collection of used motor oil and oil filters. Residents are provided with free used motor oil recycling containers at their request. Waste Management, Inc., the City's recycling contractor, collects the containers and leaves empty replacement containers. ESB staff attended numerous community events throughout the year to promote the Used Motor Oil Recycling program and distribute motor oil containers and funnels. ESB continues to display tri-lingual street pole banners with the "Cleaner Long Beach" slogan promoting motor oil recycling as a method of supporting clean beaches and waterways. Last year



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24,456 gallons of used motor oil was collected through the curbside recycling program (See Appendix N for Used Motor Oil Program).

In addition, drop-off locations throughout the City, such as gas stations and auto parts stores, that accept used motor oil are posted on the Long Beach Energy and Environmental Services Bureau websites and listed in ancillary educational materials. These certified drop-off centers are managed and maintained by the business owners and supplement the City's programs.

2.1.7 HOUSEHOLD HAZARDOUS WASTE COLLECTION

ESB staff, in partnership with the Los Angeles County Department of Public Works and the Sanitation Districts of the County of Los Angeles, held a very successful Household Hazardous Waste (HHW) Roundup at Veterans Stadium in Long Beach. Table 2.3 shows the amounts of hazardous waste collected at the March 27, 2004 event. Approximately 2,050 cars were served by this collection event.

Table 2.3: **HOUSEHOLD HAZARDOUS WASTE COLLECTION**

Motor Oil	1,525 gallons
Oil Filters	440 units
Car Batteries	321 units
Antifreeze	500 gallons
Paint	14,225 gallons
Batteries	2,400 lbs
E-Waste	30,655 lbs
CRT's	555 units
Misc Waste (pesticides, pool chemicals, etc)	3,000 gallons

2.1.8 TRASH COLLECTION ON THE BEACH AND ALONG WATER BODIES

In FY 04, the Long Beach Parks, Recreation, and Marine Department collected 2,367 tons of storm debris from City beaches. Several miles of ocean front beaches are raked five to six days per week, depending on conditions. Also, Los Angeles County Department of Public Works has a boom installed at the base of the Los Angeles River within Long Beach city limits. During the last storm season, the boom collected 100 tons of material. Other tools for collecting floating debris from the water are a skimmer boat, known as the "Predator," and a stationary skimmer box.



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In addition, the Parks, Recreation, and Marine Department is responsible for the maintenance of recreation water bodies at Heartwell, Scherer, and El Dorado Parks, the Colorado Lagoon and Rainbow Lagoon. At all locations, the contractor is required to remove trash, including floating and submerged debris, from the lakes on a daily basis. Trash removal from the restored wetland area of Queensway Bay is done by hand (usually from a boat) with great care. Furthermore, the Port of Long Beach Maintenance Department operates a boat, called the "Big Dipper," which patrols the waters throughout the Port picking up debris that has fallen into the water. The Big Dipper is operated by a two-person crew approximately three days a week and picks up wood piles, industrial debris, construction debris, plastics, etc.

In addition, the Parks, Recreation, and Marine Department coordinates several cleanup efforts that occur during the year.

- At the 20th Annual International Coastal Cleanup in September 1,235 people cleaned nine sites along the City's beaches, LA River and Colorado Lagoon. At the "Birds, Bikes and Trash Cleanup event in May, 54 volunteers collected 30 bags of trash along the San Gabriel River. Between the two events, 6.4 tons of trash and debris was collected.
- During the year 476 volunteers donated over 3,200 hours to collect non-point source pollution during several special volunteer cleanups that took place at the Long Beach Marine Stadium, Golden Shore Reserve, Dunster Marine Reserve, and Hamilton Bowl.

2.2 CODE ENFORCEMENT

The City conducts several code enforcement activities that assist with controlling the discharge of pollutants into the storm sewers and reduce the discharge of pollutants to Long Beach receiving waters to the maximum extent practicable. These include

- Property Maintenance,
- Weed Abatement,
- Abandoned / Inoperative Vehicle Abatement, and
- Oil Code Enforcement.

2.2.1 PROPERTY MAINTENANCE

Property maintenance activities deal with enforcing Municipal Codes aimed at eliminating unsightly conditions and governing the maintenance of buildings and



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surrounding property. Complaints of trash and debris in yards, overgrown vegetation, inoperative or abandoned vehicles, etc. are investigated and violation notices or citations issued where warranted. Failure to comply may result in a referral to the City Prosecutor or in a cleanup by City staff at the owner's expense. In FY 04, the Department of Planning and Building conducted 5,636 investigations, which resulted in the correction of 657 violations. When compared to FY 03, investigations decreased approximately 30%, and the number of violations corrected decreased approximately 1.5%. This decrease can be attributed to reduced staffing in several Departments.

2.2.2 WEED ABATEMENT

Weed abatement enforcement activity is closely related to Property Maintenance but strictly focuses on prohibiting overgrown vegetation on vacant lots or in yards. Notices to Clean are issued where warranted. Failure to comply may result in a referral to the City Prosecutor or in a cleanup by City staff at the owner's expense. In FY 04, there were 9,239 investigations conducted, which resulted in the issuance of 1,821 Notices to Clean. Investigations decreased approximately 24%, and Notices to Clean decreased approximately 12% from FY 03 to FY 04. This decrease can be attributed to reduced staffing in several Departments.

2.2.3 ABANDONED / INOPERATIVE VEHICLE

This activity is directed toward the removal of abandoned and inoperative vehicles (including unlicensed) vehicles located on vacant lots or visible yard areas. There were 6,506 investigations last year, which resulted in the removal of 774 vehicles. This represents an increase in investigations of approximately 11% and an increase in vehicles removed of approximately 32%.

2.2.4 OIL CODE ENFORCEMENT

In the 1970s, four islands were constructed in the Long Beach Harbor for the purpose of accessing oil under the harbor. Strict procedures are in place for preventing and dealing with oil spills. Monthly field inspections cover housekeeping practices, potential safety hazards, security, and a number of other issues. Employees are trained annually, and the department stays abreast of new technologies and industry progress by attending various committees and focus groups, including some specifically related to storm water.

The Code Enforcement Division of the Department of Planning and Building is responsible for enforcing City regulations governing the drilling of new wells and the



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maintenance of existing production sites. Annual permits are issued, and investigations are conducted to ensure compliance. In FY 04, there were 6,530 investigations conducted, which resulted in one enforcement action. While the investigations increased by approximately 38%, there was a reduction in enforcement actions due to enhanced education efforts and a thorough permit issuance program.

2.3 STREET MAINTENANCE

The City's street sweeping service is one of the largest and most effective programs supporting storm water pollution prevention. The majority of streets and street medians in Long Beach are swept on a weekly basis, which greatly exceeds the permit requirement of twice per month. Pine Avenue and adjacent streets located in the downtown area of Long Beach are swept five days per week. All streets in the harbor district are swept daily. To increase the effectiveness of street sweeping, signs are posted and citations issued to encourage vehicle owners to leave certain streets vacant on street sweeping days. In addition, street sweeping and refuse collection routes have been better coordinated this past year to provide more efficient service, such as having street sweeping occur after refuse collection on a given street. Environmental Services Bureau collected approximately 13,113 tons of debris while sweeping 165,426 street and alley miles last year. This is approximately 3.8% more than the 12,619 tons collected in FY 03. The Street Maintenance Division of Public Works also collected approximately 122 tons of trash and debris from alleys and sidewalks.

Good housekeeping practices are implemented in all Departments involved in construction-type activities to properly manage wastes that are generated during street, road and other maintenance activities. Employees who conduct maintenance activities are educated about the potential pollutants that may be released as a result and trained in the usage of appropriate BMPs.

2.4 STORM DRAIN SYSTEM OPERATIONS AND MAINTENANCE

The City owns 3,872 catch basins, which are cleaned and maintained by the Water Department. During FY 04, the total amount of trash and debris collected was 712 yd³. This is approximately 111% increase compared to the 334 yd³ collected the previous year. Waste characterization shows that the predominant types of debris include trash (a combination of plastics, polystyrene-foam, glass, and paper) and greenwaste. The most likely source of the trash is littering, whereas the most likely source of the greenwaste is individuals and landscapers sweeping, hosing, or blowing this material into the storm drain. The Water Department maintains a storm sewer cleaning database that includes the number of catch basins, cross drains, and grates cleaned for



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each date as well as categories and quantities of the debris removed for each date. Within the City limits, there are about 383 miles of active storm water carriers, which include pipes, open channels, ditches, culverts, connector pipes and drains. 180 miles of those carriers are City-owned, 142 miles are LA County-owned and 40 miles are Caltrans-owned with various other owners making up the difference. The City maintains 5.5 miles of channels and ditches, LA County has 32 miles of open flood control channels (i.e. LA River, San Gabriel River, Los Cerritos Channel, etc.) and Caltrans has 11 miles of channels and ditches.

This year the City partnered with the Boy Scouts of America to conduct an audit of the City's storm channels in an effort to ensure that all channels were properly maintained. The storm channel system, made up of 13 City-owned channels, are cleaned annually sometime between May 1 and September 30.

There are 23 City-owned pump stations, all of which are cleaned annually. The trash and debris collected in FY 04 amounted to 80 yd³. This is the same as was collected in FY 03. Table 2.4 shows the amount of trash and debris collected during the cleaning of catch basins and pump stations.

Table 2.4: **INLET MAINTENANCE**

Activity	Quantity	Yd ³ Collected
Catch Basin Cleaning	3,872	712
Pump Stations	23	80
TOTAL		792

Areas of the MS4 have been designated as high priority based on the amount of trash and debris normally collected. A Rain-Emergency Checklist identifies catch basins, grates, cross drains, etc. that are checked immediately prior to rain being forecasted. These areas are cleaned of any trash and debris prior to a storm event to ensure that these pollutants are not washed into the receiving waters. To ensure that no clogged systems contribute to flooding, a separate list is maintained at areas to be checked while it is actually raining.

The Water Department also operates and maintains the City's sanitary sewer system, as detailed in the Public Agency Activities section of the LBSWMP. Procedures are implemented to keep sewage from entering the storm drain system. Methods may include education, inspection, covering or blocking storm drain inlets and catch basins or containing and diverting the sewage away from open channels and other storm drain



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facilities. In FY 04, the Water Department responded to five sewer overflows totaling 2,900 gallons (compared to eight overflows totaling 3030 gallons in FY 03). This 40% decrease is due to educating the community about the effects of fats, oils, and grease in the sewer system.

2.5 PUBLIC CONSTRUCTION ACTIVITIES

Public construction activities within the public street right of way incorporate and implement appropriate controls to reduce pollutant discharges from entering the storm drain systems.

City projects are those construction contracts administered by one of many city departments. City design staff or consultants prepare plans and specifications. The design staff and consultants have the responsibility to include appropriate BMPs in the design plans and specifications. BMPs selected are to be based on rational criteria including magnitude and type of potential pollutant.

The Public Works Department regulates non-City construction projects within the public street right of way by issuing Public Works permits. The Construction Division of Public Works has the responsibility of requiring appropriate BMPs in the Public Works Permit Conditions.

Municipal inspectors routinely verify that the construction work is in compliance with the contract documents or Public Works permit for construction projects within the public street right of way. This effort nearly doubles during the wet weather season. When a project is not in compliance with the contract documents or Public Works permit, the municipal inspectors have the authority to enforce the contract or permit by issuing verbal warnings, written notices, withholding progress payments, or suspending the work. In FY 04, Public Works inspectors filed 80 NPDES Inspection Reports (See Appendix O for NPDES Inspection Checklist).

2.6 LANDSCAPE MAINTENANCE

The goal of this component is to make storm water quality a concern when conducting landscape maintenance activities. These include

- pesticide, herbicide, and fertilizer usage,
- native vegetation practices, and
- municipal swimming pools maintenance.



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Greenwaste disposal was previously covered in Section 2.1.4.

2.6.1 Pesticide, Herbicide, and Fertilizer Usage

Pest Control Advisors licensed by the State Department of Agriculture supervise the use of pesticides, herbicides, and fertilizers for street medians and parks. These products are applied only "as needed" and never just before or during a rain event. All grounds and landscape maintenance contractors with the Parks, Recreation, and Marine Department must possess a Pest Control Advisors License, have certified Pest Control Applicators on staff, and possess a Los Angeles County Agricultural Permit. All Staff receive annual updates in the laws governing the use and storage of these chemicals and applicable BMPs, such as restricted use around waterways and prohibition of spraying when rain is forecasted.

Cesar Chavez Park and Queensway Bay both employ Integrated Pest Management (IPM) practices to minimize the necessity for pesticide applications. It should also be noted that Cesar Chavez Park employs a state-of-the-art BMP known as "fertigation," which is a system that applies fertilizer efficiently and with a minimal amount of run-off. The fertigation system at Chavez Park applies liquid fertilizer to approximately 25-acres of turf and landscaped areas (23-acres for Chavez Park and then the remainder is the acreage for other small greenbelts in the area). This system consists of pumps, timers, flow meters and several underground tanks that are tied into the Cal Sense irrigation system on the site. A valuable feature for water conservation efforts and NPDES is that the irrigation system has a master valve function that acts in case of an emergency. In the case of a large break after hours, the system will read that an excess of gallons per minute are flowing through the regulator and will automatically shut the system down.

2.6.2 Native Vegetation Practices

Native plant materials are of particular concern in three locations – the El Dorado Nature Center, the Queensway Bay Area (which includes Golden Shore Marine Reserve), and the Jack Dunster Marine Biological Reserve. The maintenance staff at El Dorado Park is responsible for the maintenance of the landscaping at the El Dorado Nature Center. The nature center is a mixture of native and non-native plant material that was originally planted over thirty years ago. It is department policy to replace any material that must be removed (for various reasons such as disease or general decline) with native plants. In addition, any new plantings are designed with native plants only. The expansion site at the nature center is exclusively native plant material. Maintenance staff works in conjunction with the El Dorado Nature Center to ensure that



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SECTION 2

plant material selections are appropriate and sustainable. The plant material is irrigated only on an as-needed basis as determined by the maintenance and nature center staff. Herbicides and pesticides are minimally used to eliminate invasive weeds.

In the Queensway Bay Area, native species have been planted in Shoreline Park (Lighthouse Point and Beach Garden) and in the restored wetland area commonly referred to as the "Golden Shore Marine Reserve". The selection of native species, which include perennials, grasses, and aquatic species, has been done with input from consultants (i.e., MBC Applied Environmental Science, Acorn Group) and from qualified in-house staff. All invasive weeds are removed by hand, with no herbicides or pesticides. Removal of trash from Golden Shore Marine Reserve is done by hand with great care on a limited or as needed basis to prevent any human impact on the site. Staff from the Golden Yard performs record keeping.

The Los Cerritos Wetland Steward, who is experienced in maintaining delicate habitats, maintains Jack Dunster Marine Biological Reserve. Only native non-invasive plants that are on the original approved plant pallet are used. All invasive and non-native plants are removed by hand, using no herbicides or machinery. Mulch is then applied to the site to prevent plants from returning until the native plants have colonized. Steven Ormanye and Associates perform all procedures and record keeping of Jack Dunster Marine Biological Reserve.

Chapter 18.95, "NPDES and SUSMP Regulations," of the Long Beach Municipal Code requires that during subdivision design, native vegetation clearing should be limited to the minimum needed to build lots, allow access, and comply with fire protection regulations. The Parks, Recreation, and Marine Department holds an annual Native Plant Sale, which results in native plants being placed in the community.

2.6.3 Municipal Swimming Pool Maintenance

The City owns four municipal swimming pools. Two of these pools discharge water directly into the sanitary sewer. In the other two, the water is dechlorinated by evaporative loss (all pump and chemical systems shut down) for a period of 72 hours prior to discharging into the storm drain system. One of the City's future goals is to have all municipal swimming pools connected to the sanitary sewer.

2.7 TRAINING

All City staff whose job activities directly affect storm water quality and those who respond to questions from the public related to storm water pollution prevention and



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SECTION 2

education receive a mandatory annual refresher training regarding the requirements of the storm water management program, BMP implementation, and identifying and reporting illicit connections and discharges.



MANAGEMENT PROGRAM FOR DEVELOPMENT PLANNING AND CONSTRUCTION

SECTION 3

3.0 MANAGEMENT PROGRAM FOR DEVELOPMENT PLANNING AND CONSTRUCTION

The Development Planning and Construction program is in place to have developers and owners consider storm water quality management during the project's planning phase and implement appropriate controls during construction. This program applies equally to privately and publicly owned property. Projects within the public right of way are addressed in the Public Agency Activities Section (2.0). Applying this program to applicable development projects will effectively prohibit non-storm water discharges and reduce the discharge of pollutants into the storm drain system. To achieve this objective, the City has implemented the following:

- California Environmental Quality Act (CEQA) guidelines,
- General Plan considerations for watershed and storm water management,
- Chapter 18.95, "NPDES and SUSMP Regulations," of the Long Beach Municipal Code, and
- Training.

3.1 CEQA

Under the CEQA Act of 1970, the City of Long Beach is required to consider the potential environmental impacts of proposed developments. The Planning and Building Department's Environmental Planner conduct this review. Environmental review is required for projects that cause a public official or body to take "discretionary" action in approving or denying a project. The environmental review documents serve as guidance and informational documents provided to the person or persons who must make a decision about the project. Projects may be processed as a Categorical Exemption (exempt from CEQA Act), a Negative Declaration (declares that there are no impacts or that impacts can be mitigated), or an Environmental Impact Report (done for large projects that are likely to have significant effects on the environment). The outcome of the environmental review is included in Council reports, and documents are attached in the case of Negative Declarations and Environmental Impact Reports.

3.2 GENERAL PLAN

The Land Use and Mobility elements are in the process of being rewritten and are scheduled for completion in 2005. The Air Quality, Housing, Seismic Safety, Public Safety, Noise, Local Coastal Program, and Conservation elements are also being



MANAGEMENT PROGRAM FOR DEVELOPMENT PLANNING AND CONSTRUCTION

SECTION 3

rewritten, although a schedule has yet to be finalized. The City will notify the Regional Board of the dates once they have been finalized.

3.3 CHAPTER 18.95, “NPDES AND SUSMP REGULATIONS,” OF THE LONG BEACH MUNICIPAL CODE

The Long Beach Municipal Code includes a chapter specifically for NPDES / SUSMP requirements. This addresses requirements for BMPs, Storm Water Pollution Prevention Plans, and Standard Urban Storm Water Mitigation Plans. Enforcement actions are currently not documented separately from inspections. Table 4.1 shows FY 04 statistics for Development Planning and Construction.

Table 4.1: **DEVELOPMENT PLANNING AND CONSTRUCTION STATISTICS**

Number of projects requiring SWPPPs in FY 04	20
Number of Inspections in FY 04	*+10,513
Number of development projects for which SUSMPs were completed in FY 04	41
Number of development projects for which SUSMPs were completed since the permit was adopted	72

*This includes enforcement actions.

+One site may have several inspections done during one visit. Checking each BMP is considered a separate inspection (See Appendix P for NPDES Inspection Report).

3.4 TRAINING

Development planning, construction, and inspection staffs receive training on storm water management requirements and BMP implementation. The Developer Information Handbook remains current and is available online. The City continues to use the handbook in conjunction with existing training materials.



MANAGEMENT PROGRAM FOR ILLICIT DISCHARGES AND ILLICIT CONNECTIONS

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4.0 MANAGEMENT PROGRAM FOR ILLICIT DISCHARGES AND ILLICIT CONNECTIONS

The general objective of this program is to improve the quality of storm water by effectively prohibiting illicit discharges and eliminating illicit connections, which allow for the release of illicit discharges. The goal is to reduce the pollutants entering the storm drain system that may negatively affect receiving water quality.

Departments such as Fire, Harbor, Health and Human Services, Planning and Building, Public Works, and Water play important roles in investigating possible illicit connections and discharges. They communicate their findings to the Stormwater Management Program and other appropriate parties, oversee cleanups, and follow-up as needed. Incident documentation is recorded and maintained by the responsible department. Reports of suspected illicit connections and discharges may also come from the public via the Stormwater Management Program hotline, 562-570-DUMP (3867) and website, www.lbstormwater.org.

4.1 ILLICIT DISCHARGES

When the City is informed of an alleged illicit discharge(s), the Fire Department is the lead responder. The Fire Department evaluates the situation and, when necessary, will dispatch the Hazardous Materials (Haz Mat) unit of the Department of Health and Human Services. The Haz Mat unit will then verify the magnitude of the spill, identify the responsible party, and give instructions on how to proceed with the cleanup. The responsible party is then required to have the area cleaned up. The education and procedures serve as preventive measures for future illicit discharges. Haz Mat will oversee the cleanup and decide when the situation has been adequately remedied. If the responsible party does not have an established account with a cleanup contractor, the City's contractor is used and the expense charged to the responsible party. The responsible party may choose to do the cleanup personally if the amount is small. In this case, the responsible party may dispose of materials at a household hazardous waste roundup. These disposals must be verified by the presentation of a receipt to the Haz Mat Specialist. If no responsible party can be identified, the City will pay for the cleanup through a contractor, or if the discarded amount is small, the Haz Mat Specialist will personally conduct the cleanup.

The Department of Health and Human Services responded to and provided cleanup oversight to 343 hazardous material release incidents, 53 trauma scene incidents and 99 non-hazardous waste spills in FY 04. This is approximately 23.1% fewer hazardous



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material release incidents, 29.3% fewer trauma scene incidents, and 15.4% fewer non hazardous waste spills compared to FY 03.

Other tools which have proven to be very useful in assisting with the cleanups and elimination of illicit discharges, are the Stormwater Management Program hotline and website. It is important to note that the calls that come in from the public expedite the cessation of illicit discharges and elimination of illicit connections that may have otherwise gone undiscovered. Calls are responded to immediately, and most issues are resolved within one business day.

Annual refresher training for Inspectors and field workers is conducted through the use of instructional videos and guest lecturers used in conjunction with a review of the department/division procedures. This training specifically addresses how to identify and report illicit discharges.

4.2 ILLICIT CONNECTIONS

An illicit connection is any man-made conveyance that is connected to the storm drain system through which prohibited flows are discharged. The City of Long Beach rarely issues permits for storm drain connections. The Public Works Construction Division maintains a database of permitted connections. Historically, the City has encouraged through-curb connections rather than direct pipe connections because these are the easiest and least expensive to survey for illicit connections that convey illicit discharges. They are located above ground and can be easily observed by City staff. In addition, City staff checks the inside of catch basins and the sides of open channels during regular maintenance activities for any illicit connections. All open channels and catch basins owned by the City have been inspected for illicit connections.

Historically, investigating underground pipes for pipe-to-pipe illicit connections is the most expensive and least effective for illicit connection inspection. The Water Department uses special camera equipment to inspect storm drain pipes 36-inches in diameter or greater for illicit connections. In FY 04, 6.5 miles of pipeline were inspected.

If the presence of an illicit connection is suspected, storm sewers are investigated and the necessary action is taken to eliminate the connection. Thorough investigating found no illicit connections in FY 04. The Water Department spent \$22,000 actively looking for illicit connections in the last year.



PUBLIC INFORMATION AND EMPLOYEE TRAINING PROGRAM

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5.0 MANAGEMENT PROGRAM FOR PUBLIC INFORMATION AND EMPLOYEE TRAINING

The City of Long Beach takes a comprehensive approach to storm water and urban runoff educational outreach. The goal is to provide information about the impacts of storm water and urban runoff pollution to:

- General public / city residents
- Commercial/industrial establishments
- School children
- City employees

This effort is lead by the City's Stormwater Management Program. Many city departments are also active in educational outreach. Most include urban runoff pollution prevention messages in their programs and materials. Throughout the year, City staff participates in numerous activities to deliver the storm water message and supply the tools and guidance on how to be the solution to pollution.

The Stormwater Management Program continues to develop materials that are applicable to more than one targeted audience or pollutant and explain the nature of non-point source pollution and its significant contribution to water quality impairment. These materials are used to encourage behavioral changes that will lead to reducing pollutants at the source.

5.1 GENERAL PUBLIC / CITY RESIDENTS

The Long Beach Stormwater Management Program continues to be the principal player in educating the public on ways to modify behavior that will lead to improved water quality. The information and reporting hotline, 562-570-DUMP (3867), and website, www.lbstormwater.org, are excellent educational tools that give the public a way to become active participants in the fight against pollution by being able to easily report illegal dumping via telephone or email 24-hours a day, seven days a week. Hotline calls and emails are received and reviewed by Stormwater Management Program staff and are then routed to the appropriate department for investigation and subsequent cleanup or enforcement action. Once the issue has been resolved, the Stormwater Management Program is informed of the outcome for record keeping (See Appendix Q for 570-DUMP Log sample). In the past year over 100 storm water complaints have been responded to and resolved.



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The City prioritizes inter-agency cooperation when dealing with storm water issues. On a daily basis the Stormwater Management Program staff resolve issues with members of other city departments, especially Health, Planning and Building, Public Works Construction, Water and Fire. On many occasions the Program staff join forces with other government agencies. An example of this cooperative effort occurred recently in the City of Long Beach. The Program staff received several complaints from residents near a construction project located at 388-455 Ocean Blvd. The contractor was using Styrofoam pellets to texture the buildings exteriors. Although the LA Regional Water Quality Control Board issued the project permit, the City responded to the complaints. After receiving a constituent complaint via the 570-DUMP Hotline the Stormwater Management Program staff contacted the Health Dept. to investigate. Subsequently, the Health Dept. and the LARWQCB issued notices of violation. The Department of Planning & Building confirmed the SCAQMD was notified and investigated the complaint. Through communication between the LARWQCB and the City the use of Styrofoam on the project was terminated (See Appendix R for Pictures).

Another useful educational tool is the City's telephone system. Callers on hold hear a series of messages including one that has the Stormwater Management Program's key educational points, hotline telephone number, and website address.

The City of Long Beach has a diverse population that is the recipient of outreach and public education efforts. The Stormwater Management Program is always looking for new opportunities to deliver the message. Promotional items such as magnets, pencils, and rulers are made available and informational literature is printed in several different languages. Advertising in a variety of publications is paramount to this public education effort. Some of the publications the Program advertises in include the Ecolink insert of the Press-Telegram newspaper, Long Beach Chamber of Commerce Membership Directory, School News, and Parks, Recreation and Marine quarterly schedule of classes (See Appendices S, T, U, V for PR&M Schedules of Classes). This publication accounts for approximately 1,846,088 annual impressions.

During special events, such as community meetings and watershed cleanups, the Stormwater Management Program staff is present to listen to constituent concerns and answer storm water related questions from the attendees. In FY 04 Stormwater Management Program staff reached thousands of constituents through the City's Stormwater Program's website, the Southern California Association of Apartment Owners convention and the Los Altos United Methodist Church's Environmental Fair. The Program has used the City's new website as a vehicle for announcing important information about storm water projects. For example, tasks for the Colorado Lagoon Feasibility Study have been posted on the site as they have been completed. And, the



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final report will be available for residents to download as soon as the report is completed.

On September 23, 2004 the Stormwater Program's analyst spent the day on the Queen Mary talking with hundreds of apartment owners about the importance of making sure that contractors hired to maintain their properties need to follow the City's NPDES regulations.

An additional medium for outreach is the 6-panel kiosk strategically placed in the Civic Center Plaza, which is centrally located in the area of City Hall, public parking, and the library. During September and October of each year, people are exposed to these storm water pollution prevention panels aimed at educating and modifying personal behaviors.

In FY 04, target audiences were also reached via the *School News* publication. *School News* is distributed to every teacher and principal in the Long Beach Unified School District as well as a variety of local businesses and organizations. This publication accounts for approximately 90,000 annual impressions (See Appendix W for School News Advertisement).

The Stormwater Management Program was awarded a \$281,588 for a Used Oil Opportunity Grant from the California Integrated Waste Management Board (See Section 1.3.10). The proposed program that this grant will fund is aimed at reducing illegal dumping of used oil in the Southern Los Angeles River watershed area. The program will focus on conducting research and implementing outreach efforts and will be detailed in next year's annual report.

The Stormwater Management Program continues to take advantage of the Adopt-A-Waterway™ (formerly Adopt-A-Stormdrain) program. Adopt-A-Waterway™ is a national program, which raises non-taxpayer dollars through business sponsorships to help municipalities fund storm water pollution prevention and education activities. This program brings revenue into the City specifically for storm water pollution prevention and education but also educates the public with its signs. There are currently 24 signs installed, and each has an environmental message, such as "Please Do Not Litter," displayed below the corporate sponsor's information. These signs are placed in high traffic areas and account for approximately 82,292,000 annual impressions.

The Environmental Services Bureau (ESB) staff participated in approximately 48 events/meetings to promote environmental programs. These included City Council and neighborhood association meetings, safety and community fairs, composting and



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vermiposting classes, and support to events held by other departments. As mentioned in the Public Agency Activities Section, ESB continues to display tri-lingual street pole banners promoting motor oil recycling as a behavior that will lead to cleaner beaches and waterways. The Bureau also has an informational and reporting hotline, 562-570-2876, which is staffed by five full-time employees (FTEs) Monday through Friday and one FTE for a half day on Saturdays. After-hours callers have the option to leave a message in the hotline voicemail box, which is then responded to during the next business day.

The **Developer Information Program** continues to be used by the Planning and Building Department to educate contractors, developers, and “do-it-yourselfers.” In addition, during normal business hours, permit applicants have access to staff at the Development Services Center. Information about storm water management, applicable BMPs, various brochures, pamphlets, and handouts, and related permit requirements are made available in the Development Services Center on the 4th floor of City Hall and via the City’s web site.

Water Conservation is a top priority of the Water Department, especially the Long Beach Board of Water Commissioners. Implementation of conservation BMPs and a variety of educational outreach programs are integral parts of their master plan. This is another example of how the City of Long Beach exceeds the permit requirement (Part 3,I, A, 2,f, Water Conservation Practices). The “Water Ambassador” volunteers of the Water Department routinely attend events throughout the year to promote water conservation and water quality issues. The Department continues to make use of a mobile, interactive water conservation kiosk, which rotates to different City buildings for display and use in the lobby area. Landscape/gardening education classes, which address issues such as water conservation and fertilizer/pesticide use, are sponsored by the Water Department. Recently, the department revised its public information video/DVD and redesigned its website, www.lbwater.org, which serves as an educational medium for water-related issues such as water conservation.

The programs and services provided by the El Dorado Nature Center (EDNC) of the Parks, Recreation and Marine Department are critical to the success of the City’s public information and education program for storm water. EDNC is a 102.5-acre wildlife habitat with two lakes, a stream, two miles of dirt trail, and a 1/4-mile paved access trail. The site is near the mouth of the San Gabriel River, one of the largest conveyers of storm water in the City. EDNC also has interactive, hands-on exhibits in a museum and offers a wide variety of educational programs. All of this makes EDNC the perfect setting for NPDES education. Following are brief descriptions of EDNC’s educational



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outreach programs and events that address issues of non-point source pollution and storm water management and are geared towards the general public.

Adopt-A-Beach is an innovative conservation program which allows school clubs, businesses, community associations and other groups to get involved, agreeing to clean up a quarter mile section of the Long Beach shoreline four times annually. People of all ages and diverse backgrounds have become part of the solution to ocean pollution, increasing public awareness that trash on the land inevitably becomes trash on the beach. This past fiscal year, more than 476 volunteers from 14 community groups contributed more than 3,200 hours to collecting non-point source pollution on City beaches.

The **Adopt-A-Wetland** cleanups at Golden Shore Reserve happened in December, October, January and May. Dunster Marine Reserve volunteer work parties took place in December, March, and July of 2004. Colorado Lagoon clean-up events took place in November, February, June, August and September. Hundreds of individuals received education about non-point source pollution, while removing debris and litter.

As a special wetlands project, the Nature Center is partnering with community groups such as Friends of the Colorado Lagoon, Calif. State Univ. Long Beach, Long Beach City College, and the Aquarium of the Pacific to create the Colorado Lagoon Wetlands and Marine Science Education Center. This new resource for area students will do much to advance watershed education.

At the **20th Annual International Coastal Cleanup** in September, nine sites along the City's beaches, LA River and Colorado Lagoon were cleaned by 1,235 people. At the "Birds, Bikes and Trash Cleanup event in May, 54 volunteers collected 30 bags of trash along the San Gabriel River. Between the two events, 6.4 tons of trash and debris were collected.

Parades are another way to reach out to the community. The El Dorado Nature Center staff participated in the Daisy Lane Christmas Parade and Martin Luther King Holiday Parade, increasing the Nature Center's profile and sharing the message of renewal and restoration. Staff handed out "You're the Solution to Ocean Pollution" items to thousands of parade-goers.

5.2 COMMERCIAL / INDUSTRIAL ESTABLISHMENTS

The educational site visit program is used to distribute and discuss applicable BMP and educational materials to business owners/facility operators including information about



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the City's Municipal NPDES permit, and requirements regarding Notice of Intent (NOI) and Storm Water Pollution Prevention Plans (SWPPP). The City's Department of Health and Human Services (DHHS) performs the educational site visits and has enhanced its database used to track visits and other information. In FY 04, DHHS conducted 1009 educational site visits. Staff also check for applicable Notices of Intent and Storm Water Pollution Prevention Plans at phase I industrial facilities.

The Stormwater Management Program continues to reach out to the business community through its membership with the Long Beach Area Chamber of Commerce. The 2004 edition of the Business Referral Guide and Membership Directory features an advertisement that targets the business community. It introduces them to the Adopt-A-Waterway™ program and encourages their participation (See Appendix X for Business Referral Guide and Membership Directory).

Through the months of June and July the City hosted the International Aquatics Grand Prix and U.S. Olympic Swimming Trials. These prestigious events were held in two temporary swimming pool facilities near the Long Beach Sports Arena. As part of the City's ongoing effort to ensure that chlorinated pool water and filtering materials were disposed of properly, the City Water Department required the event organizers to pull a NPDES permit and monitored the pool discharge (See Appendix Y for Water Dept. Letter of Support).

5.3 SCHOOL CHILDREN

Getting the storm water message and materials into the Long Beach Unified School District (LBUSD) continues to be an extremely important goal and several different programs are in place and/or being created to specifically target this very important audience. At outreach events open to the general public, school children are often enticed by the Program's promotional items and are undoubtedly being influenced by their messages. In addition, Stormwater Management Program staff go out to schools to give presentations and answer questions about storm water quality issues, the storm drain system, the effects of pollution, and behavioral changes that children can make to keep the ocean and other waterways clean. Furthermore, the Program purchased two Enviroscape displays, which have proven to be successful tools in demonstrating the effect of pollution on watersheds. The Enviroscape model is an interactive unit that dramatically demonstrates how different land uses create pollution and their effect on water quality. One example of this was the Program's staff attending the Long Beach Unified School District Science Fair held on Saturday, April 24, 2004 (See Appendix Z for Thank You Letter).



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The Aquarium of the Pacific, located in Long Beach, is one of the largest aquariums in the United States. Its nearly 1,000 species fill 19 major habitats and 32 focus exhibits and take visitors on a journey throughout the Pacific Ocean's three regions: Southern California/Baja, the Tropical Pacific, and the Northern Pacific. The City's Storm Water Management Program Officer participated in a watershed forum held on June 10, 2004 for the purpose of helping to design two new exhibits at the aquarium focusing on the San Gabriel and Los Angeles River watersheds (See Appendix AA for Thank You Letter).

The City found through surveys and direct contact that the "Window On Our Waters" Tidepool Cruiser used for LBUSD outreach efforts was so well received that funding in FY05 was doubled to \$20,000. This mobile educational vehicle addresses many of the critical issues of nonpoint source (NPS) pollution and its effect on the marine environment in an exciting, innovative, and hands-on way (See Appendix BB for Windows on Our Waters Letter of Recommendation). Most importantly, participants are given the tools they need to decide for themselves the type of impact they will have on the beaches and coastal waters. In FY 04, the Tidepool Cruiser brought its message to 2067 students compared to 1,861 students in FY 03.

The Stormwater Management Program was once again able to contribute \$4,000 to support Heal the Bay's "Key to the Sea" Marine Education Program. This will allow over 1,400 LBUSD students to participate in the program, which helps instill in students a sense of social responsibility toward their environmental choices. (See Appendix CC for Key to the Sea 2003-2004 Program Accomplishments).

In addition, the Stormwater Management Program continues to support Partners of Parks (POP), a nonprofit organization supporting Long Beach parks, recreation, and beaches. A pollution prevention account has been established for an NPDES Educational Scholarship Fund. The Program's original plan for the monies set aside in the POP account was to conduct essay contests and award several small scholarships. The contests were scheduled to start this year, however, the idea was put on hold until discussions with the Aquarium of the Pacific could begin in the hopes of partnering on a broader, more inclusive scholarship opportunity for LBUSD students.

The City is in the process of finalizing an agreement that will support the Aquarium of the Pacific Scholarship Fund. This scholarship program, primarily funded by POP, but supported with additional Adopt-A-Waterway funds, will provide an extraordinary learning experience to approximately 1,125 students and 50 teachers. This scholarship program will begin in FY05. A detailed report of the program's success will be included in next year's annual report.



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TREC, the Traveling Recycling Education Center, is used by ESB staff to conduct extensive public outreach to LBUSD schools. This year the City's Health Department joined with ESB to promote this program. TREC is a mobile classroom used to educate students and Long Beach residents at public events. During FY 04, TREC made a total of 4 visits to 4 LBUSD schools, making 45-minute presentations to over 17 4th grade classes. This significant decrease from the previous year is due to TREC undergoing a major refurbishment that took most of the year. TREC also participated in one weekend event, spreading the recycling and anti-littering message to the Long Beach community. Also, the Environmental Services Bureau has assisted 46 LBUSD schools to establish or maintain recycling programs. This is an increase of two facilities in the past year.

The Water Department has recently made an impact on school children with two new programs. The first is a joint effort between the department and the Aquarium of the Pacific. Together, an education program was created for all Long Beach Unified School District third grade classes who visit the Aquarium. The program is designed to inform and educate the third grade students about water, water conservation, the water cycle, marine life and habitat, and the protection of all water supplies. Another program that was recently implemented is the Admiral Splash Program. This is a program that allows our Water Ambassadors (the Department's volunteer group) to visit schools within our service area and teach lessons about water, water conservation, urban runoff, and the effects of pollution.

Discover Long Beach Parks is a program conducted by the EDNC that works with third graders, getting them actively involved in the care and maintenance of "adopted" parks and neighborhoods. Among other lessons, this program addresses the problem of urban runoff and the resulting impact on ocean water quality. Students tabulate the types and amounts of trash found in the gutters of each park. They learn about the storm drain system and about the effects of trash and debris on wildlife and human health. Naturalists worked with more than 860 third graders in 43 classes on the **Adopt-A-Gutter** curriculum. The curriculum has been extended to include student monitoring and characterization of trash in gutters around each student's home as well as basic storm drain education. Students received materials enabling them to perform these studies. They are given magnets, rulers, pencils and literature to remind them that they personally are the solution to ocean pollution. Upon completion, students are awarded buttons and certificates.

The Nature Center's Moveable Museum includes two presentations that foster community awareness of water quality issues, i.e., 'Protect Our Watery World' and 'Paws and Jaws', and one presentation on Native Americans called 'Acorn, Sea and



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Sage'. Trained volunteer docents visited some 144 classrooms in Long Beach area elementary schools. POWW includes hands-on exploration of coastal marine life and illustrates negative impacts of litter and non-point source pollution on the aquatic ecosystem. Students learn that their choices and behaviors do make a crucial difference.

'Paws and Jaws' conveys a strong message of stewardship for our planet and especially for our aquatic eco-systems. It, too, includes Adopt-A-Gutter as one way young people can make a difference in protecting habitat. Magnets, pencils, rulers and posters reinforce the message. POWW training involves twenty-five hours, including in-depth education about non-point source pollution effects on marine life, human health and regional water quality and cleanups of Los Cerritos Wetlands and Golden Shore Marine Reserve.

The Long Beach Health Department's Bureau of Environmental Health has developed a curriculum entitled **The Junior Health Inspector Program**, which targets children to enhance their understanding of a healthy and safe home and community environment. Upon completion of the program, students will be able to name techniques to reduce and/or eliminate hazards in the home. The health hazards include mold contamination, lead poisoning, storm water pollution, vector, household hazardous waste and unintentional injuries. The program began in March 2004 and has reached 670 students. The Stormwater Management Program has provided \$8,000 in financial support for this important program (See Appendix DD for Junior Health Inspector Form).

The **Environmental Defenders** is a program of the Los Angeles County Department of Public Works. It is a free assembly geared for children in grades K-6. Two professional actors present the interactive 30-minute program. Through animated and live action video segments, role-playing, an action-packed game and educational giveaways, students are taught about important environmental concepts. Topics covered in the assembly include the Three R's (Reduce, Reuse and Recycle), storm water pollution, household hazardous waste, illegal dumping and water conservation. This program received extra promotion last year through an announcement in *School News* sponsored by the Stormwater Management Program. In FY 04, the Environmental Defenders program visited a total of 3,447 students in eight LBUSD schools.

5.4 CITY EMPLOYEES

City employees are educated about storm water issues through trainings, flyers, displays, the Intranet and Internet, and other viable means. Annual training of City employees takes place at the department level and varies depending on the time of



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year and the type of personnel. The Stormwater Management Program has paid for and will send employees to appropriate external training workshops, such as the BIA Construction Storm water Compliance Training Seminar, and then follow up with a survey to get feedback from those who attended. Videos from our expanding video library are available for training purposes and periodically shown at Task Force meetings. Within the Engineering Bureau of Public Works, NPDES training is incorporated into quarterly safety meetings and is viewed by the entire Bureau. Many Departments incorporate NPDES training into their regular training and safety meetings.



6.0 ASSESSMENT

The Long Beach Stormwater Management Program (LBSWMP) continues to be implemented, revised, and expanded as needed to ensure effective reduction in urban and storm water pollution. The effectiveness of our efforts, as detailed in this report, is confirmed by qualitative and quantitative methods. The methods include surveys, pre and post assessment, feedback received via hotlines and Internet sites and monitoring. Three major reporting and informational hotlines remain available to the public 24-hours per day: 570-DUMP (Storm water), 570-2876 (Refuse) and 570-4199 (Beach Advisory). Despite large fiscal deficits, in FY 04, the City spent \$20,436,525 (\$44.08 per capita) on NPDES expenditures, which is a 10.1% increase compared to FY 03 (See Appendix EE for the FY 04 Stormwater Management Program Expenditures).

Proof that the LBSWMP implementation is working effectively is demonstrated by the following: \$4,600,000 structural BMP's constructed and installed prior to rainy season; 32% increase in the collection of waste and recyclables; 12.3% increase in trash and debris collected from beach and marina receptacles; 8.6% increase in trash and debris collected from Neighborhood Cleanups; 22.3% increase in collection of large and oversized items from the improved Dumped Item Program; 3.8% increase in street sweeping collection; 6.3% increase in enforcement efforts by the Long Beach Police Department; 111% increase in trash and debris removed from the storm drains system; 40 % reduction in sanitary sewer overflows due to target Fats, Oils, and Grease campaign; and 84 million storm water impressions.

The successes of the Long Beach Stormwater Programs are directly attributable to the well defined and fully implemented LBSWMP and the level of commitment from the City Manager, City Council and the City staff. On a scale of 1 to 10, the City of Long Beach should receive a 10 based on its commitment to the full implementation of the requirements of its municipal MS4 permit.

6.1 ASSESSMENT OF MANAGEMENT PROGRAM FOR PUBLIC AGENCY ACTIVITIES

Overall, the City spent \$16,135,279 (79% of LBSWMP budget) for expenses associated with Public Agency Activities, which is an increase of 10.8% from FY 03. Additional litter receptacles have been placed in parks, beaches, and marinas that resulted in the collection of 12.3% more trash (2,367 tons) from beaches and marinas alone. One illustration of a very successful Public Agency Activity (PAA) is the Neighborhood Cleanup Assistance program. There were 173 clean up events held and 1,980 tons of



waste collected by volunteers in FY 04. This is an 8.6% increase compared to FY 03. The Household Recycling program has been expanded, as more parts of the City are educated about the benefits of recycling and given the tools that make it easy to do, which resulted in 32% more recyclables (25,826 tons) being collected in FY 04 versus FY 03. Also, the amount of illegally dumped items collected increased by 23.3%. The Department of Public Works Street Maintenance Division collected 122 tons of trash and debris from cleaning alleys and sidewalks, which is 22.1% more than the 95 tons collected last year.

Code enforcement issues and/or subsequent violations have become less of a problem due to educating the public and explaining the Long Beach Municipal Code and the associated consequences for failing to comply. This is demonstrated by a decrease of approximately 1.5% in property maintenance violations corrected and 12% weed abatement violations corrected.

During FY 04, the total amount of trash and debris collected from the storm drain system was 712 yd³. This is approximately 111% increase compared to the 334 yd³ collected the previous year. Additionally, a 3.8% increase in the amount of trash collected by street sweeping was achieved.

The Parking Lot Washing Program has improved significantly since last year. The City maintains 35 parking lots, which are washed five days a week. This accounts for 9,100 washes at an expense to the City of \$209,858. Enforcement of private parking lots has been more challenging due to the shrinking number of enforcement officers. However, enforcement of the City Municipal Code continues.

Other innovative PPA programs showing tangible results include: the No Litter Zone Campaign, the Adopt-A-Street program where 6.0 miles of street were adopted this year; the Grasscycling program that yielded 69,882 tons; Code enforcement investigations lead to 1,821 Notices to Clean and a 32% increase in the removal of abandoned vehicles.

6.2 ASSESSMENT OF MANAGEMENT PROGRAM FOR DEVELOPMENT PLANNING AND CONSTRUCTION

Development Planning and Construction costs increased by approximately 19% from FY 03 to FY 04. This is due to increases in environmental review and developer storm water information program implementation.



The number of projects requiring Storm Water Pollution Prevention Plans (SWPPPs) decreased 79%, the number of projects for which Standard Urban Stormwater Mitigation Plans (SUSMPs) decreased 56%, yet the number of inspections increased 46% from FY 03 to FY 04.

6.3 ASSESSMENT OF MANAGEMENT PROGRAM FOR ILLICIT DISCHARGES AND ILLICIT CONNECTIONS

The costs associated with Illicit Connections and Illicit Discharges remained the same compared to FY 03. Expenditures for inspections have risen while the Department of Health and Human Services responding to approximately 23.1% fewer chemical release incidents, 29.3% fewer trauma scene incidents, and 15.4% fewer non hazardous waste spills in FY 04 compared to FY 03.

The Water Department inspected more than 6.5 miles of 36-inch or greater storm drain pipe in FY 04 using state of the art equipment and well-trained staff.

6.4 ASSESSMENT OF MANAGEMENT PROGRAM FOR EDUCATION AND PUBLIC INFORMATION

This program element is probably the most important component of the LBSWMP because it leads to behavior changes and tangible improvements. This past year, the Stormwater Management Program's special event outreach alone resulted in over 580,000 impressions, while several other departments continue to implement additional educational programs that include the NPDES stormwater message. When ads in publications, Adopt-A-Waterway™ signs, educational programs, and other media are included, well over 84 million impressions were made in FY 04. This far exceeds the permit required 1.5 million annual impressions. The beach cleanups are being expanded into the inland community and occur at several water bodies, not just beaches. This helps to reinforce our overarching messages that "The Ocean Begins At Your Front Door" and "Storm Drains Lead Directly to the Ocean." 860 third graders in 43 classrooms learned about the Adopt-A-Gutter program as a result of the City's "Protect Our Watery World (POWW)" train the trainer program. The Department of Health and Human Services diligently conducting 1,009 educational site visits and brought the newly created, "Junior Health Inspector Program" to 670 LBUSD students. In addition, LBTv8, the local cable channel, has been an excellent medium for disseminating information. Shows such as Snapshot Long Beach, Heart of the City, and recorded City Council presentations have provided new avenues for storm water education to a vast and very diverse audience. Two exemplary contracted out



educational outreach programs showing tremendous success are the Tidepool Cruiser (Windows-On-Our-Waters) and Key to the Sea (Heal The Bay). The Tidepool Cruiser delivered its message to 2,067 LBUSD students in FY 04 (10% increase) and the Key to the Sea program brought the message to some 1,400 LBUSD students.

6.5 ASSESSMENT OF WATER QUALITY MONITORING

During the course of the initial five-year permit; the monitoring program has made major steps towards addressing the primary objectives of the program. Among the major accomplishments during this past time period are:

- Determination of initial load estimates from the four mass emission sites.
- Successful implementation of an intensive toxicity-testing program that incorporated multiple species and Toxicity Identification Evaluations (TIE's). This program has implicated organophosphates as the most common toxicant associated with toxicity to water fleas, and dissolved metals, primarily copper, lead, nickel and zinc, as the most common toxicants impacting sea urchin fertilization.
- It is clearly demonstrated that activation of a dry weather interceptor in Basin 24 had no impact on bacterial concentrations in Alamitos Bay.
- A successful study was conducted to characterize contaminants and toxicity associated with parking lot runoff. Contaminants and causes of toxicity were consistent with results of testing conducted at the mass emission stations.
- Initial studies have been implemented to determine the magnitude and extent of storm water impacts on the receiving waters. The first such investigation demonstrated no evidence of toxicity and relative low levels of contaminants in association with a very large runoff event.

6.6 SPECIFIC HIGHLIGHTS AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD

- Timely submittal of the ROWD, including a draft permit.
- Construction, installation and bringing "online" \$4.2 million of structural BMPs prior to the 2004 winter wet weather season (See Section 1.3).
- Securing funding (\$481,588) and beginning two studies:
 - Colorado Lagoon Restoration Feasibility Study (1.3.6).
 - California Integrated Waste Management Board Used Oil Opportunity Grant (1.3.10).



6.7 SUGGESTIONS TO IMPROVE LBSWMP

Despite dramatic increases in program compliance costs and equally dramatic decreases in revenue offsets, the City's program remains strong and effective. However, the data and achievements to date indicate that improvements to this program would come from a reallocation of resources within the Stormwater budget.

Each year nearly \$500,000 is spent on water quality monitoring with little or no return on this costly investment. It is our recommendation that the Water Quality Management budget be reallocated so that up to 20 percent (\$100,000) be dedicated to Regional Studies, up to 20 percent (\$100,000) be used to supplement a countywide monitoring program (implemented by the Regional Board or LADPW), and the balance of the funds (\$300,000) be redistributed by the City to enhance those LBSWMP elements that tangibly reduce and/or eliminate pollutants from entering the storm drain system.

6.8 THE FUTURE

- Develop and implement a "Priority" Inspection program for storm drain pipes 36-inches or greater.
- Develop and implement the City Manager's "Litter Abatement and Awareness Campaign" to provide a cleaner and safer community.
- Develop and implement programs to complement the City Council's FY 2005 stated goal of "Improve Environmental Conditions."
- Develop and implement LBUSD and AOP partnership programs.
- Actively participate in development and enhancement of the SMC's Standard Data Transfer program.
- Develop and implement programs to complement the ROWD's enhanced LBSWMP and permit.