The City of San Diego

Urban Runoff Management Program

Annual Report

Fiscal Year 2010

Cover Image:San Diego Bay – Source: David Liu (iStockphoto)

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Cover Image:San Diego Bay – Source: David Liu (iStockphoto)

Introduction

San Diego is a beautiful city

with a picturesque coastline and abundant aquatic resources and wildlife. San Diego also has many natural surface water resources—creeks, beaches and bays—providing miles of recreational opportunities for residents and serves as the centerpiece to San Diego's tourist industry. The potential pollution of these resources threatens the social and economic quality of life within the region. Preserving San Diego's natural water resources through the reduction of pollutants in storm water and urban runoff is one of the most important goals of the City of San Diego (City). The Storm Water Department is designated as the lead City agency to achieve this goal.

La Jolla Coast—Source: S. Greg Panosian (iStockphoto)

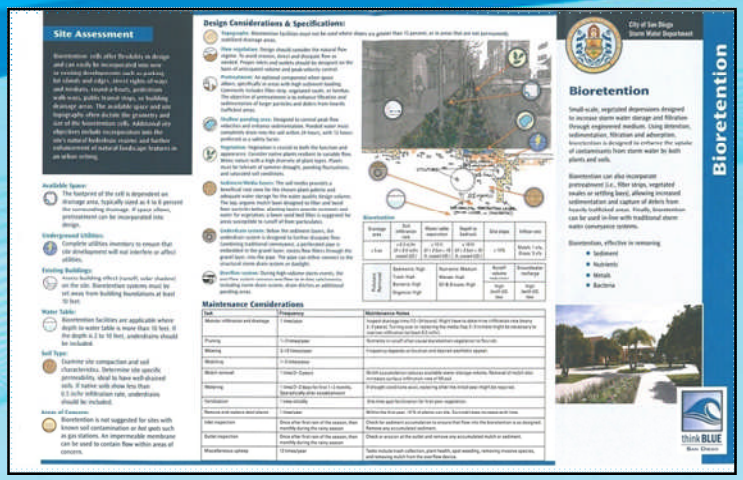
Urban runoff is an inevitable result of how a modern urban metropolitan society lives its daily life. Reducing urban runoff and improving water quality is reliant upon significant efforts by the City:

- A commitment to continual improvement in the effectiveness of the City's water quality protection services at the lowest possible cost
- Changing the behaviors of the residents, employees and businesses that call San Diego home
- Sound water quality science to identify sources and solutions for pollution
- A commitment to abating pollution sources with proactive education, incentive and enforcement programs

In the pages that follow, a summary is provided of the efforts that the City of San Diego implemented in Fiscal Year 2010 to both protect and restore water quality in its creeks, rivers, beaches and bays.

Balboa Park Reflection Pond—Source: City of San Diego

Activities



Bioretention Fact Sheet—Source: City of San Diego

Construction BMPs—Source: City of San Diego

Construction Activities—Source: City of San Diego

Development and Construction

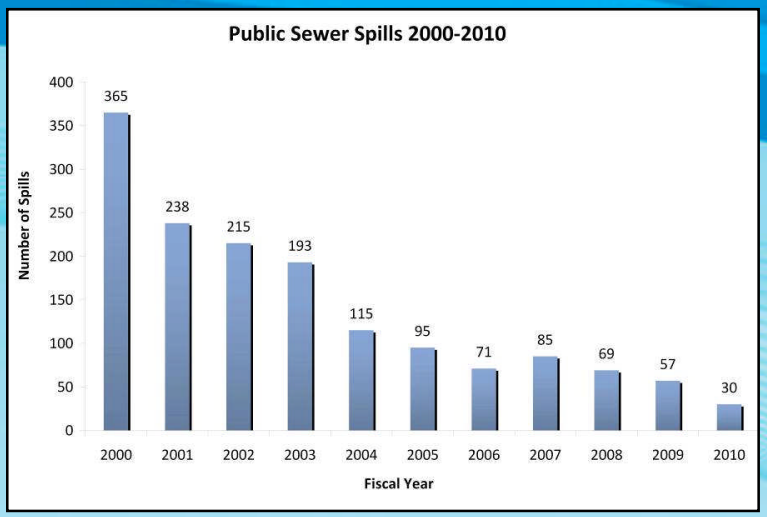
Land Development is one of the key areas where pollutant generation can be prevented by addressing the pollutants at their source through storm water friendly planning and design. As such, the City emphasizes the importance of urban runoff requirements as project applicants complete the development process.

During FY 2010 the City required appropriate priority development project (PDP) requirements, including Low Impact Development and treatment control BMPs. The City had a total of 113 private PDP projects and 4 capital improvement PDPs. Additionally, 316 private development sites who had constructed treatment control BMPs in past years were visited for inspections to determine their effectiveness at treatment of urban runoff.

In addition to completing the requirements of the City's JURMP Activities for Development Planning during the reporting period, the City began development of tools to support project applicants through the development process. These tools include guidance brochures that explain the City's requirements and provide information to assist applicants in meeting the requirements. An example is shown in the above left picture, an informational brochure for Bioretention.

From planning and design, projects move into the construction phase of development. The City performed approximately 100,090 construction inspections in FY 2010 for 17,919 construction projects. In general, the inspection process found project sites were in compliance with BMP implementation. In some instances, corrective actions or higher level of enforcement were necessary to obtain compliance.

Street Sweeper in Action—Source: City of San Diego



Public Sewer Spills—Source: City of San Diego

Municipal Activities

The City continued to place emphasis on storm water pollution prevention practices and awareness in all activities at municipal facilities and field operations in FY 2010. Efforts conducted include:

- Inspections and appropriate follow-up at over 800 facilities
- Collection of 6,500 tons of debris and sediment by conducting street sweeping of more than 100,000 miles
- Inspection of every channel within the City twice and removal of more than 20,500 tons of anthropogenic litter and sediment from 8 miles of channels
- Inspection of 33,189 inlets, catch basins and cleanouts
- Cleaning over 15,000 inlets, catch basins and cleanouts and 2.5 miles of pipeline which resulted in the removal of approximately 6,670 tons of debris and sediment
- Collection of 464 tons of Household Hazardous Waste

Another broad indicator of the effectiveness of the City's municipal program efforts to improve water quality is the reduction of public sewer spills – a direct and major contributor of indicator bacteria to surface waters. In 2000 there were 365 sanitary sewer spills; in FY 2010 there were only 30, a 90 percent reduction since 2000.

Education and Outreach

June 30, 2010, concluded the tenth year of the *Think Blue* Media, Education, and Public Advocacy Campaign. The campaign was able to put forth a broad, multifaceted effort, which included targeting external audiences as identified in the Municipal Permit (municipal departments and personnel, construction site owners and developers, industrial/commercial owners and operators, mobile businesses, and residential community, general public and school children), participating in grant funded education and outreach activities, and actively participating in regional outreach and education efforts with other Copermittees. One of the most impactful methods of direct outreach

has been the use of special events where the City uses booths to make direct contact with the target audiences. The image to the right demonstrates the use of this direct contact method.

In FY 2010 the City's *Think Blue* messages to the general public made over an estimated 68,750,000 impressions through PSA airtime, free placement on media websites, and PSAs in movie theaters. Internal education provided over 1,130 City staff with both general storm water education as well as job-specific storm water training.

Think Blue in Action (Dec Nights)—Source: City of San Diego

Commercial Trash Area—Source: D-Max Engineering

Commercial and Industrial Programs

The City continued to expand its industrial and commercial programs in order to institute effective measures to reduce pollutants and comply with the Municipal Permit. The City currently has an inventory of approximately 19,230 stationary facilities and 1,915 mobile businesses. The City inspected 100% of all stationary sites determined to pose a high threat to water quality. Approximately 29% of the City's commercial and industrial inventory received site visits and/or inspections. This represents more than 750 additional inspections conducted than are required by the City's JURMP.

The City's inspection program focused on key pollutant generating activities at business facilities, including: outdoor automotive facility storage and activities, over-irrigation, outdoor eating areas, and trash areas. These activities represent the highest threats to water quality at business facilities.

Several BMP Knowledge and BMP Implementation assessments are conducted during industrial and commercial inspections. These assessments were conducted during the inspection of industrial and commercial businesses to help gauge the knowledge and awareness of the regulated business community in implementing BMPs to prevent discharges. Overall, businesses have maintained a normal distribution with respect to their knowledge and implementation of BMPs.

Residential

The City's storm water activities related to the residential community includes outreach, and the verification and enforcement of the minimum BMPs for residential areas and activities throughout the City. During FY 2010, the Storm Water Hotline, (619) 235-1000, continued to be one of the most effective tools provided to the public so they could report violations of the City's Storm Water Ordinance. Violations were also recorded as observed by Code Enforcement staff in the field. During FY 2010, Code Enforcement staff conducted 640 investigations at residential locations mostly based upon incoming calls to the Storm Water Hotline.

Residential Washer Connected to Drain—Source: City of San Diego

As a result of the 640 residential investigations, the City's Storm Water Enforcement and Inspections Section conducted follow-up inspections, and compliance was achieved at 618 of the 640 residential investigations. Of the 22 investigations remaining, eight did not have site visits and 14 site cases are still in progress at the time of reporting.

These images depict an investigation that led to enforcement and abatement of a source of illegal discharge. The site had an outdoor clothes washing machine that discharged to a pipe that led to an outlet at the curb. This connection was removed immediately and the City abated this illegal discharge of pollutants.

Outlet Point in Front of House—Source: City of San Diego

Closeup of Discharge Point—Source: City of San Diego

Monitoring

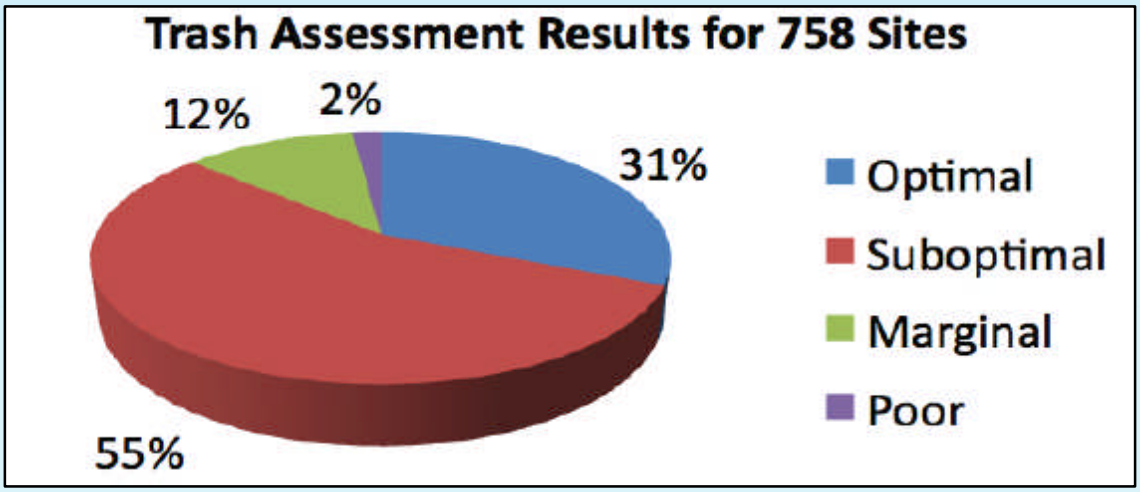
In addition to participating in regional monitoring efforts with the San Diego County Regional Copermittees, the City conducts a City specific Dry Weather Monitoring (DWM) Program. This program is designed specifically to detect and eliminate illicit connections and illegal discharges to the storm water conveyance system using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Typically the City's DWM sites are located at storm drain outlets, manholes, or storm drain catch basins.

Dry Weather Monitoring in MS4—Source: City of San Diego

The City completed field observations and screening for pollutants and analytical monitoring of more than 510 dry weather sites. As a result of the monitoring efforts, the City conducted more than 100 follow-up investigations resulting in 12 sites with illicit discharges.

Monitoring in Ditch—Source: City of San Diego

Monitoring is not only for water quality purposes. The City performs Trash Assessments as a part of its monitoring program as well. During the 2009 dry weather reporting period, trash assessments were performed at 758 sites. The resulting findings are shown in the graphic below.



2009 Dry Weather Trash Assessment Results—Source: City of San Diego

Special Projects

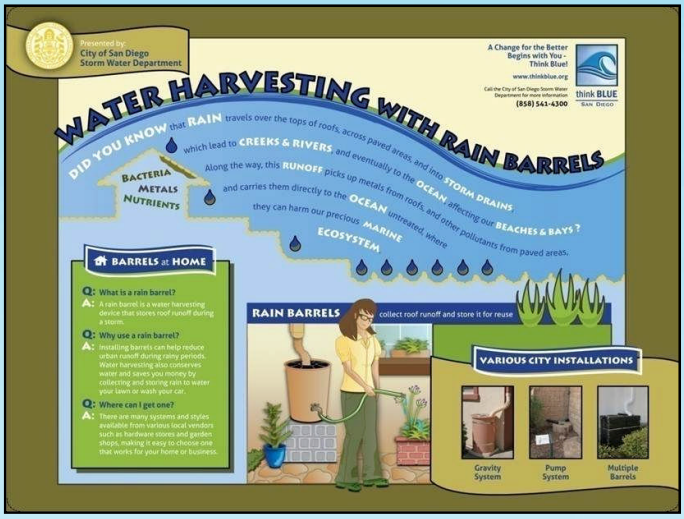
In FY 2010, the City continued to take actions towards water quality improvements as organized in their *Strategic Plan for Watershed Activity Implementation (Strategic Plan)*. The purpose of the *Strategic Plan* is to identify the most effective activities to address the highest priority pollutant sources in the highest polluting areas. There are many pollutant sources to address and an equally large list of potential activities from which to choose. By prioritizing the problems and ranking the solutions based on effectiveness, this approach maximizes City resources in protecting and improving water quality.

The City implemented many special projects during FY 2010 of which three are highlighted below: the Municipal Rain Barrel, Pet Waste Bag Dispenser Installation and Assessment Pilot Project Studies and the Strategic Planning Framework..

Municipal Rain Barrels

One of the special projects recently evaluated by the City is the use of rain barrels at municipal facilities. The purpose of the evaluation was to determine the practicality and effectiveness of these devices as BMPs for both pollutant and flow volume reductions. If proven practical and effective, the City may move towards a broader approach to utilizing rain barrels at more municipal, commercial and/or residential facilities.

Rain barrels store roof runoff during both wet and dry weather rain events. They come in all shapes and sizes, and can be made from a variety of materials. They are available on the internet and from local vendors as well.



Rain Barrel Brochure—Source: City of San Diego

Rain Barrel—Source: City of San Diego

In evaluating the rain barrels, the City installed 24 systems at 8 sites. The sites that had impervious surface areas adjacent to the structures included a planter box with native vegetation to filter the stored runoff.

The findings of the project included the following:

- Systems connected to landscaping are the most effective
- Planter systems are a viable option for sites lacking adjacent pervious areas
- Systems were effective at attenuating flows and to some extent reducing pollutants

The City is currently evaluating the feasibility of implementing an effective incentive program for residential and/or commercial users. The aim of the rain barrel incentive program would be to assist in attenuation of wet weather runoff from existing and new development areas within the City.

Pet Waste Bag Dispenser Installation and Assessment Pilot Project

Pet waste left on the ground by pet owners contributes indicator bacteria into urban runoff. This is often the case for highly frequented areas, e.g., parks and trails, where pet waste is left behind by pet owners. This study was conducted to answer specific questions related to pet waste: 1) Why do some people not pick up after their pets?; and 2) Does the installation of pet waste bag dispensers increase the amount of pet waste removed from trail areas?

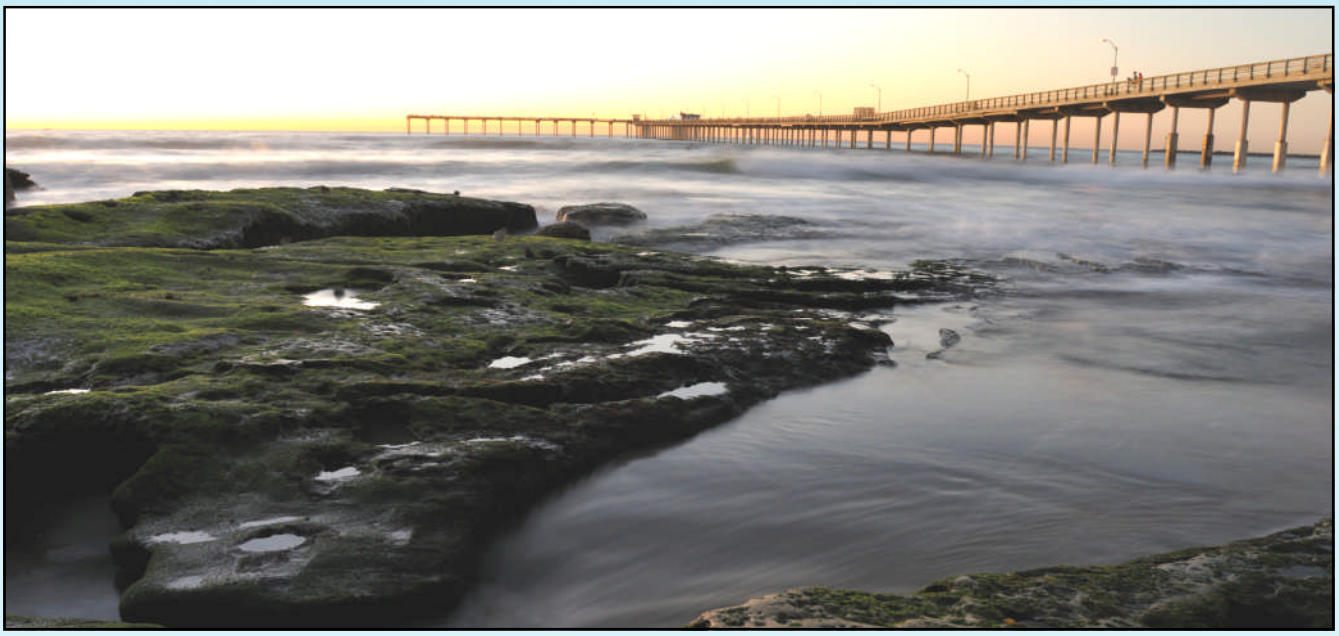
Pets at Park—Source: City of San Diego

The City's study was conducted at six locations within three of City's watershed areas. The study locations were at three parks and three trails. The first part of the approach was to make observations of pet owners at each of the areas, and question why some left pet waste behind. The second part of the approach was to compare the number of pet waste piles left behind by pet owners both pre- and post-installation of the bag dispensers.

The following is a summary of the findings:

- Top reasons given that people did not pick up after their pets:
  - Too soft
  - Did not notice the act by their pet
  - Did not have a bag to pick up
- Overall, there was a 47% reduction of pet waste piles left behind at the sites after pet waste bag dispensers were installed.

The next steps include another phase of the study to potentially involve homeowner groups, neighborhood group organizations and other community groups within the City.



Ocean Beach—Source: paule858(iStockphoto)

Strategic Planning Framework

During FY 2010, the City of San Diego Storm Water Department focused on optimizing its management process and practices and initiated the development of a Strategic Planning Framework. The goal of this Framework is to incorporate core management principles to align the management activities of the Department toward achieving its mission, goals, and objectives, and to promote efficiency, consistency, collaboration, and transparency in management of its storm water infrastructure system. As part of this effort, the Storm Water Department finalized the "Recommendations for the Development of a Strategic Business Plan" during FY 2010. This Plan establishes the planning framework that will be used to develop a Strategic Business Plan and defines the Department's mission, goals and objectives, and levels of service.

Ultimately, the Department will develop a Strategic Business Plan that will describe how the overall mission, goals and objectives, and levels of service will be integrated across all City departments and implemented via storm water master plans for each of the City's six watershed management areas (San Dieguito, Los Peñasquitos, Mission Bay, San Diego River, San Diego Bay and Tijuana River).

Lake Murray—Source: City of San Diego

***Think Blue*—Source: City of San Diego**

Conclusions

The City's overall program implementation continues to be a success. There are many program areas where the City has exceeded the implementation requirements, such as commercial/industrial inspections. Additionally, the City continues to be a leader in the region by conducting special studies and pilot projects aimed at identifying the highest threat to water quality sources and the most efficient and effective methods of mitigating those pollutants.

To continue program improvements in FY 2011, the Storm Water Department will focus a portion of its overall efforts on the following areas:

- Continue strategic, integrated approach to planning program efforts;
- Refinement and/or expansion of the Storm Water Department's data management and tracking capabilities to ensure permit compliance;
- Identification of data gaps and collection procedures to be modified to assist in activity and program effectiveness assessment;
- Standardization of data collection, greater departmental coordination, and refined management questions will enable the City to more effectively assess the significant activities during the FY 2011 reporting period; and
- Continuing implementation of the City's Strategic Planning Framework.

Additionally, the City will continue to pursue alternative funding sources for urban runoff management and water quality protection to support the anticipated expansion of the programs over time. As part of these efforts, the City will continue to partner with other stakeholders to develop water quality projects in order to compete for grant funds and leverage outside sources of funding. Staff will continue to work closely with other storm water program managers in the region to collaborate on program implementation strategies.

San Diego Bay – Source: David Liu (iStockphoto)

THE CITY OF SAN DIEGO

September 30, 2010

Christina Arias
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Subject: City of San Diego Jurisdictional Urban Runoff Management Plan FY 2010 Annual Report

Dear Ms. Arias:

Attached please find paper and electronic copies of the City of San Diego's Jurisdictional Urban Runoff Management Plan Fiscal Year 2010 Annual Report, and associated Appendices, submitted as part of the County of San Diego's Unified Jurisdictional Urban Runoff Management Program Annual Report.

If you have any questions, please contact Clem Brown, Senior Planner, at (858) 541-4336.

I certify under penalty of law that this Jurisdictional Urban Runoff Management Plan Fiscal Year 2010 Annual Report 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, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Kris McFadden
Deputy Director

KM/cb

Attachments: 1. Fiscal Year 2010 Jurisdictional Urban Runoff Management Plan Annual Report (with Appendices)

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1 INTRODUCTION

1.1 PROGRAM OVERVIEW FOR FISCAL YEAR 2010

The City has prepared this Fiscal Year (FY) 2010 Jurisdictional Urban Runoff Management Program (JURMP) Annual Report in compliance with San Diego Regional Water Quality Control Board Order R9-2007-0001 (Municipal Permit). The purpose of the report is to provide an account of the programmatic activities conducted by the City to meet the requirements of the Municipal Permit and the City's JURMP.

The Storm Water Department is the lead department for the efforts of the City of San Diego (City) to reduce pollutants in urban runoff and storm water to the maximum extent practicable and achieve compliance with Municipal Permit.

The Storm Water Department is actively engaged in a number of activities that will cumulatively result in protection of and improvements to storm water quality. The Citywide blueprint for protecting storm water quality is the JURMP, adopted by the City Council on January 22, 2008. The primary activities that the City continues to implement include, but are not limited to: public education; employee training; storm water quality monitoring; source identification; code enforcement; watershed management; and storm water best management practices (BMPs) development and implementation within the City's jurisdictional boundaries.

The City implements the JURMP within its jurisdictional boundaries. The Watershed Urban Runoff Management Plan (WURMP), Regional Urban Runoff Management Program (RURMP), and Total Maximum Daily Load (TMDL) programs are also implemented in conjunction with other stakeholders and jurisdictions to improve storm water quality. These programs are not only implemented within the City's jurisdictional boundaries, but at the watershed-scales and in partnership with other municipalities in the region under the auspices of the Municipal Permit.

The Storm Water Department represents the City on storm water and Municipal Permit issues in collaboration with the Principal Permittee (County of San Diego) and the San Diego RWQCB. Internally, the Storm Water Department provides technical expertise and guidance to all City departments to ensure implementation and compliance with the Municipal Permit. Furthermore, the Storm Water Department prepares and transmits this annual report of all City activities governed by the Municipal Permit to the County of San Diego for submittal to the San Diego RWQCB. The Storm Water Department is also the responsible entity that certifies that the City is in compliance with all Municipal Permit requirements.

During FY 2010, the City of San Diego Storm Water Department decided to focus on optimizing its management process and practices and initiated the development of a Strategic Planning Framework (Framework). The goal of the Framework was to incorporate core management principles to not only align the management activities of the Department toward achieving its mission, goals, and objectives, but also to promote efficiency, consistency, collaboration, and transparency in management of its storm water infrastructure system. As part of this effort, the Storm Water Department finalized the "Recommendations for the Development of a Strategic Business Plan" (Plan) during FY 2010. This Plan establishes the planning framework that will be used to develop a Strategic

Business Plan and defines the Department's mission, goals and objectives, and levels of service.

Figure 1-1 presents asset management planning elements used to achieve the mission goals and objectives and the figure identifies the eight planning elements:

- Mission
- Goals and Objectives
- Levels of Service
- Business Drivers
- Guiding/functional policies
- Organization capabilities
- Business process and practices
- Projects

The planning elements are designed to guide and align the business direction and the framework guides the business decisions by establishing the direction.

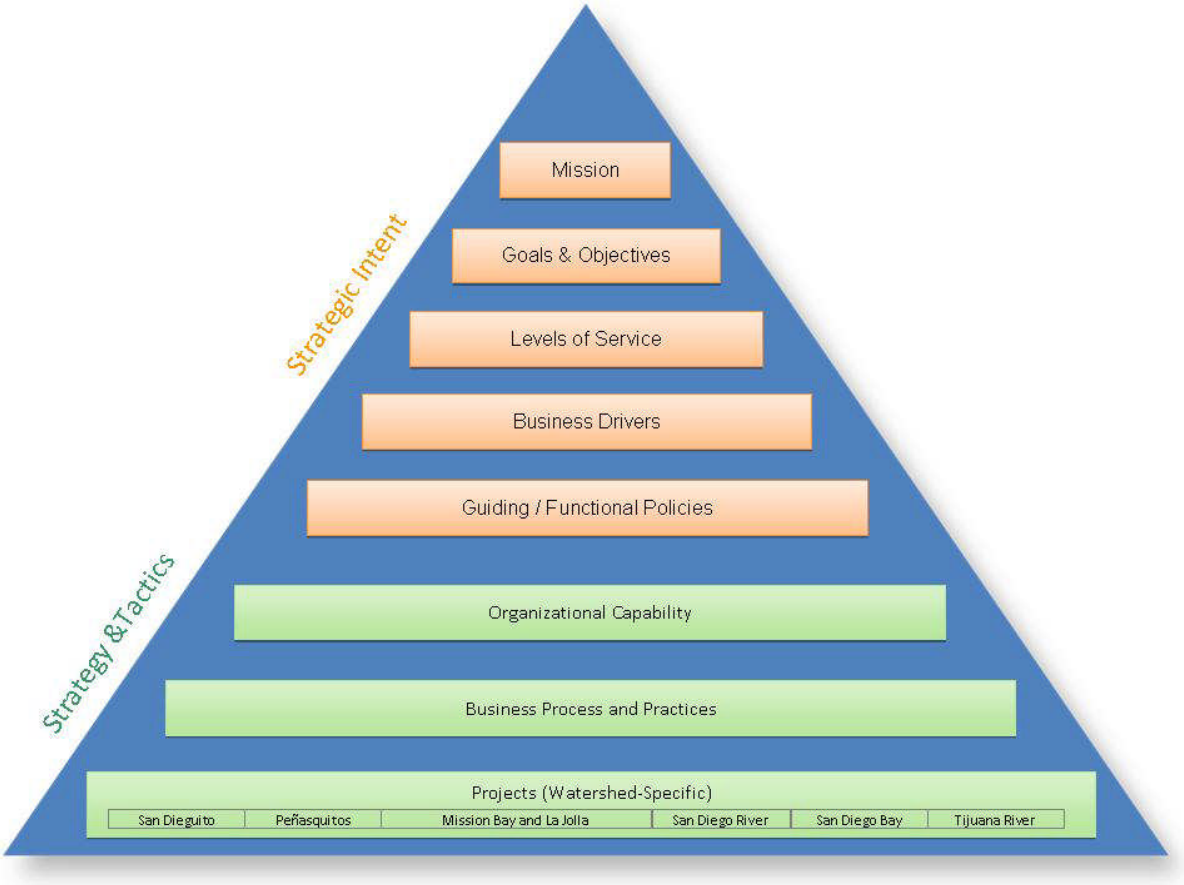

Figure 1-1: Asset Management Planning Elements

Based on the framework present in **Figure 1-1**, the "Recommendations for the Development of a Strategic Business Plan" document identifies the consensus-derived planning elements developed by the Department: mission, goals, and objectives, levels of service, business drivers, and guiding/functional policies. In addition the Plan provides recommendations for

deriving the remaining planning elements: organizational capability, and business process and practices.

Through the development process the Department updated and finalized a new mission statement. The mission of the Storm Water Department is:

> ***"To protect and improve water quality and to reduce flood risk through efficient storm water management."***

Ultimately, the Department will develop a Strategic Business Plan that will describe how the overall mission, goals and objectives, and levels of service will be integrated across all City departments and implemented via storm water master plans for each of the City's six watershed management areas (San Dieguito, Los Peñasquitos, Mission Bay, San Diego River, San Diego Bay and Tijuana River).

1.2 REPORT ORGANIZATION

This FY 2010 Annual Report has been organized into sections matching the table of contents agreed upon and submitted by the Copermittees to the San Diego RWQCB. In an effort to present a comprehensive report, the City has included a Special Projects section which is not included in the regional standard reporting format.

Each section of the FY 2010 Annual Report is consistent with the components of the Municipal Permit and, where applicable, identifies priority pollutant sources, applicable requirements, and notable implementation efforts.

1.3 REPORTING PERIOD

This Annual Report provides information for the reporting period of FY 2010: July 1st, 2009 to June 30th, 2010.

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2 DEVELOPMENT PLANNING

2.1 INTRODUCTION

The City continued to implement the Planning and Development Component of the JURMP to reduce the impacts of new development and redevelopment on storm water quality. Highlights of the City's Land Use Planning Component during FY 2010 include updates to and implementation of the *Storm Water Standards Manual*, implementation of the *Source Water Protection Guidelines for New Development*, and continued integration of storm water protection policies in the City's Community Plans and General Plan. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.1 of the Municipal Permit with the exceptions of the issues identified below.

2.2 LAND USE PLANNING

2.2.1 General Plan

The City completed its General Plan update in FY 2008. No modifications were made related to Storm Water issues during the FY 2010 reporting period.

2.2.2 Community Plans

Community plans are documents that guide the growth and development of a community. They include land use designations, design recommendations, and policies on a wide range of topics, including storm water quality protection. They are a part of the City's General Plan, and the City is continuing to implement the Community Plans where applicable. Community plan activities that occurred during FY 2010 related to storm water include:

Barrio Logan Community Plan – The Barrio Logan Community Plan will incorporate recommendations concerning the reduction of urban runoff and storm water quality in a number of the plan elements. Updates to the plan are significant to storm water quality because a tributary of Chollas Creek flows through the community into San Diego Bay. Furthermore, other storm drain inlets throughout the community output into the Bay. A primary recommendation that is currently being developed for the plan will be the inclusion of bioswales along major corridors (for example Harbor Drive) that will assist in reducing the pollution that enters the storm water system from trucks and autos detritus (such as copper from truck brakes). Another goal to be included in the plan will be to ensure a reliable system of water, storm water, and sewer facilities that will serve the existing and future needs of the community. During FY 2010, the Barrio Logan Plan Update Stakeholder Committee met on a regular basis and provided input and feedback on developing the draft policies and recommendations to improve the overall water quality of the community and San Diego Bay. It is anticipated that the draft Barrio Logan Community Plan will be released for public review in September 2010. Following the release of the draft Community Plan, it is anticipated that the Programmatic Environmental Impact Report for the Community Plan will be released in Spring 2011.

Grantville Redevelopment Master Plan – The Grantville Master Plan will incorporate recommendations concerning the reduction of urban runoff and storm water quality into Alvarado Creek and the San Diego River. Updates to the plan are significant to storm water quality since a portion of Alvarado Creek flows through the community and into the San Diego River. Goals to be included in the plan will be to ensure a reliable system of water, storm water, and sewer facilities that will serve the existing and future needs of the

community. During FY 2010, the Grantville Stakeholders Committee met on a monthly basis to develop a vision for the community. Over the next six months, the community will assist in developing policies and recommendations to improve the overall water quality of the community, the San Diego River and Alvarado Creek.

Ocean Beach Precise Plan Update – The Ocean Beach Community Plan will have broad goals and recommendations relating to urban runoff and storm water quality. Goals will include: ensuring a reliable system of water, storm water, and sewer facilities to serve the existing and future needs of the community; preserving the natural amenities of Ocean Beach, such as its open space, coastal bluffs, beaches, tidepools, and coastal waters; and protecting coastal and waterway resources by promoting sensitive development and restoring and preserving natural habitat. During FY 2010, the Ocean Beach Precise Plan Update Subcommittee met and reviewed draft elements of the Plan and offered revisions to City staff. The Plan is currently in the EIR phase. It is anticipated that a draft EIR will be ready for public review in Spring 2011.

San Diego River Master Plan – The San Diego River Park Master Plan makes broad recommendations concerning the impacts of urban runoff and storm water quality for the San Diego River. One of the primary principles for the master plan is to restore and maintain a healthy river system. To meet this principle, several recommendations were provided and include the following: Remove/circumvent obstacles that impede flow, remove invasive species, expand the river's recharge area, adopt programs to reduce/remove non-point source loads and incorporate hydrology and water quality considerations in all future planning and guidance documents, and monitor water quality following implementation. During FY 2011 internal staff and the community will continue the process of finalizing the Master Plan principles and recommendations and begin the EIR process.

Torrey Pines General Development Plan – In Feb 2010, the Torrey Pines City Park Advisory Board recommended approval of the Torrey Pines City Park General Development Plan (GDP) by the City of San Diego's Park & Recreation Board. It is anticipated that the Board will take action on the GDP this winter after a draft environmental document has been written. The GDP addresses the regional concerns of the site for recreation (various forms of soaring), historic and cultural resources, and for preservation and restoration of the site's natural resources. The plan will address the site concerns with storm water runoff that directly impact the adjacent ocean bluffs and associated beaches.

2.2.3 Drainage Design Manual

During the reporting period the Engineering and Capital Projects Department (ECP) continued efforts to develop a City supplement to the County of San Diego's *Drainage Design Manual* and *Hydrology Manual*. The original efforts began in FY 2006. As part of this effort, ECP continued to coordinate with Storm Water Department staff to incorporate new requirements associated with storm water quality protection. During the reporting period, the City continued to work with its consultant to develop the supplement and expects the efforts to be finalized in FY 2011. A review of City land development approval processes has found that modifications to this manual are not crucial for assuring effective implementation of BMPs for new development, and therefore the City is able to comply with the land development requirements prescribed in the Municipal Permit and JURMP.

2.3 ENVIRONMENTAL REVIEW PROCESS

The Environmental Analysis Section (EAS) in the Development Services Department (DSD) is responsible for using the California Environmental Quality Act (CEQA) Initial Study

checklist and consultation with other project review staff to identify projects that may result in storm water quality impacts during and/or after construction. EAS reviewed proposed projects subject to environmental review under CEQA, including City Capital Improvement Projects (CIPs), to independently determine proposed projects that have potentially significant impacts on the environment. To assist in identifying appropriate measures to mitigate potentially significant storm water quality impacts to below a level of significance, EAS staff consulted with DSD Engineering staff to determine appropriate storm water BMPs to be required. DSD Engineering staff reviewed and approved the storm water BMPs that were proposed by project applicants.

To continue the protection of wetlands, the City Planning and Community Investment Department focused on specific amendments to the Land Development Code (LDC) Environmentally Sensitive Lands (ESL) Regulations. These amendments consist of clarifications to the development regulations outside of the Coastal Overlay Zone pertaining to wetlands in the following three sections of the LDC: Development Regulations for Sensitive Biological Resources (Section 143.0141); Deviations from the Environmentally Sensitive Lands (ESL) Regulations (Section 143.0150); and the Biology Guidelines in the Land Development Manual (LDM).

The existing LDC, specifically the above-cited sections of the ESL Regulations and the Biology Guidelines, provide parameters to avoid impacts to wetlands, but do not provide enough guidance on specific circumstances where a deviation from the wetland regulations may be considered. The amendments would not replace the existing deviation findings, but are intended to provide clarity, consistency, objectivity, and predictability as to when wetland impacts would be allowed and what criteria and analyses would be required to make the findings.

The draft language provides clarity to the sections of the LDC pertaining to the deviation findings for impacts to wetlands for three scenarios – Essential Public Project Option, Economic Viability Option, and Biologically Superior Option. The Essential Public Project Option provides a wetland deviation in order for the City to carry out a range of public facilities and infrastructure projects including, but not limited to, specific design/construction projects, maintenance of existing infrastructure, and projects initiated by the City to meet state and federal regulatory requirements. The Economic Viability Option would allow a deviation only for circumstances not of the applicant's making. The proposed amendments provide criteria for the preparation of an economic analysis. The existing wetland regulations do not allow consideration of a biologically superior option to mitigate impacts, and therefore the preservation of low quality wetlands with little or no long-term biological benefit can currently occur as mitigation. However, a deviation from the LDC under the proposed Biologically Superior Option may be warranted if an alternative project or design achieves a superior biological result. Under the proposed three scenarios, the deviation findings would better meet the needs of the community while maintaining a net improvement to wetland resources.

A Draft Supplemental Environmental Impact Report (SEIR) was circulated for public review in 2009 and is expected to be presented to City Council Committees: Land Use & Housing and Natural Resources and Cultural, Planning Commission, and City Council in 2010.

2.4 DEVELOPMENT PROJECT APPROVAL AND VERIFICATION PROCESS

2.4.1 Source Characterization

Chapter III of the *Storm Water Standards Manual* identifies the anticipated pollutants from different land use types and the categories of project types that are likely to generate significant pollutants. The *Storm Water Standards Manual* requires priority projects to identify the pollutants of concern in receiving waters and requires that priority projects identify conditions of concern such as topography, site soils, vegetation conditions, and percent impervious area among others.

2.4.2 Best Management Practice Requirements

The Storm Water BMP Performance Standards as described in Chapter III of the *Storm Water Standards Manual* were required and applied to projects including standard and Priority Development Projects within the City.

The City reviewed its local SUSMP documents and determined that no updates were necessary for the BMP requirements. The City had previously modified the local SUSMP in March 2008 and updated requirements at that time. In November 2009, the City received Regional Board concurrence (by email) that further revisions to the SUSMP document were not necessary.

Prior to January 2010, the City modified the definition of a Priority Development Project by including projects that are pollutant generating and result in a land disturbance of one acre or greater. This project threshold inclusion is implemented by the City form titled "Storm Water Requirements Applicability Checklist" (form DS-560). This is an effective method as this form is a required submittal for all land development applicants

In addition to developing BMP requirements, the City also provides tools to assist the development community with the implementation of the requirements. To help development projects with the City's Low Impact Development (LID) BMP requirements; an LID Design manual was developed during the reporting period. During its development, all relevant departments participated in reviewing and providing input, including: Engineering and Capital Projects, Development Services, Park and Recreation, and General Services. The City plans to finalize this document during FY 2011.

2.4.3 Program Implementation

2.4.3.1 SUSMP

The City maintains listings of both private and public development projects that have been initiated and completed during the reporting period. A Storm Water Applicability Checklist is a required submittal during the project application process as a part of the urban runoff approval process. City project reviewers do not approve construction drawings until the recommendations of the Water Quality Technical Reports are incorporated onto the plans.

Based on established plan review process that all review staff are trained to follow, DSD evaluated all private development projects for SUSMP requirements. All applicable SUSMP BMP requirements were required to be implemented by all development projects. During FY 2010, of all the private projects reviewed as a part of the urban runoff approval process, 113 were determined to be Priority Development Projects (PDPs). Appropriate BMPs were required to be included as part of the project approval process, however, the City's electronic tracking system reports only 80 PDPs implemented TCBMPs as part of their projects.

The City had 261 CIP projects in the design process during the reporting period that were evaluated as a part of the urban runoff approval process. 204 of these projects are new to the City's project list, while the remaining 57 were included in the FY 2009 Annual Report. Of the 204 new projects, four were determined to be Priority Development Projects and appropriate BMPs were required to be designed into all four of the projects.

Appendix A contains a listing of the projects for which SUSMP Priority Development Project were required to be included during FY 2010. The listing includes both private and public projects. The applicability and confirmation of requirements is tracked through a combination of a project tracking database, Excel for private developments, and Primavera for public projects.

Included in **Appendix B** are two synopses of Priority Development Projects. The first is a private development project that was conditioned to meet SUSMP priority development requirements. The second is a CIP that was required to meet SUSMP priority development requirements. Included in the synopses are project information and a description of the required BMPs for each project.

2.4.3.2 Treatment Control BMPs

A watershed-based database was implemented in 2007 to track and inventory Treatment Control BMPs (TCBMPs) and their associated maintenance (see **Appendix C** for an updated Private and Public Treatment Control BMP Inventory). As a result of the inventory development and follow-up, the City has determined some inaccuracies in its recordkeeping and is continuing to resolve these issues.

The City conducted a thorough research of public and private projects that were approved between 2003 and 2007 to determine the level of SUSMP requirements for each project. The initial inventory was developed based on entering all projects that had a BMP Maintenance agreement. As the inspection program progressed, it became apparent that a number of the projects included on the initial inventory are standard projects (not Priority Development Projects) that did not require or propose treatment control BMPs. The City immediately began to investigate its TCBMP inventory in more detail to refine it and remove projects that did not require treatment control BMPs.

At the time of reporting, the City's inventory includes two groups of projects: projects that can be inspected, and projects that at present cannot be inspected. Projects that can be inspected have been visited and confirmed to have TCBMPs onsite or have not been visited but have BMPs clearly shown on drawings. Projects that do not have BMPs shown on drawings, projects for which clear drawings have not been located to date, and projects that have been visited and found to not have BMPs installed are classified as not-inspectable.

The inventory is annually updated by adding projects with approved TCBMPs. The Construction and Development Standards Section obtains a list of approved private projects from DSD on monthly basis and an update from ECP when a CIP project completes construction.

The City developed a prioritization scheme in 2007 to determine the frequency of sites inspection and the number of sites to be inspected annually to meet the permit's criteria. A score based prioritization system was developed that assigns each type of BMP a base score dependent on the frequency and difficulty of maintenance as obtained from literature review and best professional judgment. The base score was used with other factors, such as the

slope and proximity to the nearest receiving water body to determine a final prioritization score. This prioritization system was integrated into the tracking database and each BMP was assigned a prioritization score. This prioritization process did not yield any BMPs that were assigned a high inspection priority for this reporting period. In response to this, the City identified projects that it determined to be the highest priority (given BMP type and whether the site had ever been inspected before) and inspected them before the start of the rainy season. During FY 2010 the City developed a new prioritization system which determines the inspection priority based on the number and type of BMPs at a project, responses to maintenance verification letters, and date of project completion. These criteria, which more accurately identify high priority sites, will be used to reprioritize the City's entire TCBMP inventory in FY 2011.

2.4.3.3 Private Development Treatment Control BMPs

Annual Maintenance Verifications Results

During the FY 2010 reporting period, 850 projects were mailed routine annual operation and maintenance verification forms requesting the responsible party to provide documentation that demonstrated adequate maintenance of their TCBMPs had been performed. Of these, 506 (60%) responsible parties provided a response – an increase from 40% in the previous reporting period. An additional 25 responsible parties responded indicating that their sites had not been yet developed or are still under construction. Projects information was updated based on this information and these projects were moved to separate category in the database.

There were 319 private projects that did not respond to the maintenance verification forms. D-MAX performed inspections at 131 of these sites during FY 2010. Records research and further investigations were conducted on the 188 non-responding sites and concluded that 39 projects should be removed from the inventory for the following reasons, including: not a priority development project; not within the City's jurisdiction; under construction; or, the project was canceled. Please note that the number of annual verification forms mailed out is higher than the total inventory in the database; therefore, the City will continue the research and investigation effort on the remaining portion to determine if any projects are duplicates. Based on recent conversations with the Regional Board Staff, this element of the program is further detailed in the section below.

Annual Verification Procedure

The first year of implementation for the maintenance self-verification mailing program was FY 2009. A BMP maintenance verification form, FAQ sheet, and introductory letter were developed in FY 2008 (see **Appendix D** for examples). Since the beginning of this verification program over 1,000 letters have been mailed out to project responsible parties. During the reporting period, the City used the property owner names and addresses recorded in the City's BMP database to mail out BMP maintenance verification forms to private project responsible parties between July and September 2009.

City staff received a large volume of letters, phone calls, and emails from letter recipients. Responding to the contact from the responsible parties required full time efforts of one engineering staff plus some consultant support over the course of several months. Despite the large amount of effort, the final response rates for the program in FY 2009 were not as high as desired; therefore the evaluated areas for improvement in future years. Based on this evaluation, three main issues were targeted during the FY 2010 program:

- Inaccurate mailing address information
- Responsible parties' lack of knowledge of what BMPs were located at their sites

- Responsible parties' inability to identify different BMP types

In its second year conducting the maintenance self-verification mailings, the City worked to increase response rates by targeting the above issues. In addition to working with its TCBMP inspection contractor, the City hired a public relations consulting firm to help improve the contact with the responsible parties and increase the effectiveness of the program.

The primary causes of inaccurate mailing address information were identified as the sale of properties after they were entered into the database, and residential properties being subdivided into smaller parcels with an HOA being designated as the responsibility party rather than the original property owner, usually a developer. To improve the accuracy of mailing addresses, prior to the first mailing, the inspection contractor performed an update of all owner information based on parcel ownership data from the County Assessor's Office. From mid-July through early September, the contractor also performed continuing research to correct mailing addresses. This research was initiated whenever a form was returned by the US Postal Service as undeliverable or the recipient of the letter informed the City that they were not the responsible party. New responsible party and mailing address information was obtained through a combination of researching and correcting incorrect parcel numbers using ArcGIS, internet searches for property management and HOA information, and calling various construction and property management companies.

To address the poor understanding of treatment control BMPs on the part of responsible parties, the City worked with its public relations consultant to develop new and updated materials for inclusion in the mailing. The FY 2010 mailings included the following documents:

- Letter explaining the BMP inspection and maintenance verification program
- BMP inspection and maintenance information sheet
- Database-generated maintenance self-verification form

Templates of these documents are included in **Appendix D** for your reference, and the rationale behind the updates to the program documents is described below.

Based on results from the previous year's program, responsible parties were often unaware of what BMPs were on their property, and many had difficulty identifying them. To address these problems, the City's inspection contractor developed project-specific maintenance verification forms to replace the generic forms sent out in FY 2009. Rather than asking responsible parties to indicate all the BMPs on their property, the new database-generated form listed all the BMPs at the site and also provided descriptions of their locations. During FY 2009, many responsible parties indicated that they did not know what to look for when attempting to identify the BMPs on their site or that they did not know how to maintain BMPs that they had located. To address these common questions the City produced an improved information sheet. This new "BMP inspection and maintenance information sheet" included color photos of common BMP types and described typical maintenance activities.

Responsible parties were instructed to complete the maintenance self-verification form by indicating that maintenance had been performed on all BMPs or that it would be completed in the near future. If they reported that it was to be completed in the future, they were asked to indicate the scheduled date of maintenance. Additionally, responsible parties could indicate if the project-specific BMP information on their form did not match what was

present at their site. Completed forms were returned and receipt of the forms was recorded in the BMP Database. Updated contact information was entered into the database as it became available.

A second round of mailings was performed in mid-August 2009 for projects failing to complete and return the form sent in July. In the event that the mailing was returned to the City or the recipient reported they were not the responsible party for the project, research was conducted to update the mailing address. If new contact information was found, a new copy of the routine mailing packet was mailed to the updated address. In some instances, the second recipient also reported they were not the responsible party, and a third routine mailing was sent out in early September 2009 if new responsible party information could be found. If there was no indication that the first mailing had been sent to the wrong address, and the verification form was not returned, a follow-up mailing was sent to the same address. This packet had the same contents as the first mailing as well as a *"second notice"* letter requiring that the self-verification form be completed and returned by September 19, 2009.

Inspections

There were 449 total private development projects inventoried in the City's data base during FY 2010. Out of the 449 sites, 316 private sites were inspected for TCBMPs to evaluate maintenance and operation effectiveness, which is 70% of the total private inventory.

There were 316 total private development projects with drainage inserts inventoried in the City's data base during FY 2010. Out of the 316 sites, 281 private sites were inspected for TCBMP to evaluate maintenance and operation effectiveness for their drainage inserts, which is 89% of the total private inventory.

Follow-Up inspections

Follow-up inspections were conducted at sites that had maintenance deficiencies during a routine inspection in FY 2010, unless the responsible party returned a maintenance verification form shortly after the routine inspection and reported that maintenance had been performed. Follow-up inspections were conducted at 146 private sites that had at least one BMP with maintenance deficiencies ("requiring follow-up") during their first inspection of FY 2010. Follow-up inspections generally occur about two months after the routine inspection, therefore sites that were inspected toward the end of the year that were sent deficiency letters have not received follow-up inspections as of June 30, 2010. These projects are flagged as "Correction notice sent" and their follow-up inspection will be scheduled during FY 2011.

There were 87 follow-up inspections conducted during FY 2010 for sites that had maintenance deficiencies during FY 2009 routine inspections. Sites that received a follow-up inspection in FY 2010 for a deficiency found during FY 2009 routine inspections were referred to the Storm Water Enforcement and Inspection for further actions. All sites that received follow up inspections during FY 2010 and still had maintenance deficiencies were sent a "Second Notice of Deficient Maintenance". If maintenance deficiencies are not corrected a citation will be issued to the site from the Storm Water Department Enforcement Officers.

2.4.3.4 Municipal Treatment Control BMPs

Annual Maintenance Verifications Results

The Municipal Permit requires annual verification of operation and maintenance of municipal TCBMPs. Annual verification must be provided by the City department

responsible for TCBMP maintenance and submitted to the Storm Water Department prior to the start of the rainy season (October 1st).

Maintenance verification forms were sent to 42 municipal sites on the City's inventory. Forms were completed and returned for 12 of these sites. All 12 forms indicated that the necessary maintenance had been performed or would be performed soon. The Storm Water Department is currently working with remaining departments to complete the remaining 30 project site verifications forms. Responsible departments are being contacted by phone to schedule their BMP inspection and inspectors are taking the opportunity to explain the maintenance issues during the site inspection.

Inspections

The City conducted inspections for 12 municipal sites of the City's municipal TCBMP inventory. Of the 12 TCBMP inspections, six were found to be in adequate condition while the remaining six had some maintenance deficiencies. A "Notice of Deficient Maintenance" was sent and three of the municipal sites have reported that the maintenance deficiency is resolved. The remaining three are still working to correct their deficiencies. The Storm Water Department will continue to work with the other departments to resolve the maintenance deficiencies.

There were 17 total municipal sites with drainage inserts inventoried in the City's data base at the beginning of FY 2010. Out of the 17 sites, 11 municipal sites were inspected for TCBMP to evaluate maintenance and operation effectiveness for their drainage inserts, which is 65% of the total municipal inventory.

Follow-Up Inspections

Follow-up inspections were conducted at two municipal sites and one site will receive a follow-up inspection during FY 2011 since the routine inspection was done in late FY 2010.

2.4.3.5 TCBMPs Inspection Results and Action Plan

In last year's annual report, the City reported the TCBMPs that could not be located in the field at project sites. Investigations and research were conducted and sites that were clearly enforceable cases were forwarded to Development Services Department Neighborhood Codes Compliance for enforcement action. Enforceable cases are defined as sites where BMPs are clearly shown on the approved plans but were not constructed on site. City staff continues to investigate other projects with unclear plans or inaccurate project records to determine whether BMPs were constructed according to plans. Additionally, City staff continues to work on the improving the process and facilitate implementation of storm water regulations into development projects.

2.4.3.6 Post-Construction BMP Verification

The City has two departments that provide verification that BMPs are constructed prior to occupancy as required in the Municipal Permit, DSD and ECP. Each department has its own method of confirming the construction of the post-construction BMPs prior to giving building occupancy. DSD has a checkbox on its project inspection forms to flag when post-construction BMPs are adequately constructed. As reported last year, private projects with Building Permit-Only are assigned now to landscape inspectors to ensure that BMP construction is verified. ECP uses their standard method of inspection to ensure that what is shown and approved on the project plan set is what is constructed in the field, prior to approving the final project condition. Through close coordination and providing topic specific training to inspectors, the City anticipates that all post-construction BMPs will be verified prior to providing occupancy in the future.

2.4.3.7 Hydromodification Management Plan

The City has been involved in the Hydromodification Management Plan (HMP) development and continued to carry a significant workload during FY 2010. The City assigned two civil engineers the responsibility of assisting in the development of the HMP document. This included attendance at all Land Development Workgroup meetings, all Technical Advisory Committee meetings, and any special meetings where the HMP was a primary topic. The City also assisted the County in managing the project by participating in a series of meetings with the HMP development consultant team. In general support of the effort, the City also contributed to a variety of logistical needs such as providing conference rooms for the meetings.

Outside of the regional effort, the City also established a consultant agreement to assist City staff in the next reporting period. This assistance will incorporate the HMP requirements into the City's processes for review of private development applications and management of capital improvement projects.

Interim HMP requirements were effective for the entire reporting period, and each submitted project was evaluated for HMP applicability. Since the HMP requirements took effect (March 2008), the City has not had any Priority Development Projects trigger HMP requirements, those that are greater than 50 acres.

2.4.3.8 Enforcement

During FY 2010, no enforcement actions were taken for land development projects or for TCBMP sites and facilities. However, 102 correction notices were sent to private responsible parties to correct TCBMP deficiencies identified during inspections. 87 have been referred to the Enforcement & Inspection Section of the Storm Water Department for further investigation and potential enforcement. The remaining 15 have been scheduled for a follow-up inspection.

2.4.3.9 Education and Outreach to the Public

During the reporting period, the City utilized its TCBMP inspection and verification programs as a mechanism for education and outreach. The following is a summary of the various ways that education and outreach was achieved:

1) During 184 of the 316 site visits at privately owned sites, inspectors spoke to personnel on site. During these interactions inspectors explained the City's treatment control BMP maintenance inspection program. If the individual on site was the responsible party for BMP maintenance, the inspector also discussed maintenance techniques and requirements for the BMPs located at the site. These discussions were held with a wide variety of audiences including maintenance personnel, home owners, property management and HOA representatives, and industrial and commercial business employees.
2) Inspectors distributed printed materials with basic program information. This included a letter distributed to 183 on-site personnel that provided basic background information about the TCBMP Maintenance Inspection Program. Also, inspectors left door hangers at 69 sites where no person was present during the inspection. These door hangers gave a brief background of the program and provided phone numbers for the City's Storm Water Department as well as the City's inspection contractor. Additionally, inspectors distributed eight educational calendars during the beginning of the calendar year 2010. These calendars, developed by the Think Blue program, provided basic information about storm water pollution prevention.

3) The City developed a BMP inspection and maintenance information sheet for the FY 2010 maintenance verification program. In previous years it had come to the City's attention that many responsible parties had trouble identifying what BMPs they were responsible for at their site. To address this, the information sheet included photos and descriptions of common BMP types. It also described typical inspection and maintenance requirements for these BMP types.
4) The following educational resources were made available in PDF format on the City's website:
    a. **Best Management Practices (BMP) Handbooks** – California Stormwater Quality Association handbook which includes a section with detailed information about treatment control BMP types and maintenance
    b. **BMP Definitions** – a sheet listing descriptions of different types of BMPs
    c. **BMP Frequently Asked Questions** – Answers to questions frequently asked by responsible parties
    d. **BMP Cleaning and Maintenance Manual** – Specific maintenance requirements for select BMPs
    e. **Storm Water Standards Manual** – City of San Diego Land Development Manual
    f. **BMP Inspection and Maintenance Sheet –** Same as the sheet mailed during maintenance verification.

2.4.3.10 Notable Activities

The City made the following improvements to its treatment control BMP program during the FY 2010:

1. Developed database generated maintenance verification forms which listed specific BMPs located at each project. These forms replaced generic forms that required responsible parties to identify and list all the BMPs at their site.
2. Developed a BMP inspection and maintenance information sheet. This sheet, which included photos and descriptions of common BMP types, was included in maintenance verification mailings and available on the City's website.
3. Conducted research on BMPs that were found to be missing or had design or installation deficiencies. The results of this research allowed the City to determine whether these BMP issues were enforceable, and by which City department. Through this research the City also determined that some projects and BMPs had been added to the inventory in error and could therefore be removed.
4. Developed a "Second Notice of Deficient Maintenance" which was mailed to all sites with BMPs that had outstanding maintenance deficiencies during a follow-up inspection.
5. Changed the schedule of follow-up inspections so that follow-ups for all routine inspections in a given month are performed within eight weeks of the end of the month. In the past, follow-up inspections had generally been performed during the fiscal year following the routine inspection.
6. Developed a Technical Memorandum, "Evaluation of Proprietary Treatment Control BMPs" to serve as an assisting tool for City engineering staff to evaluate proprietary BMPs proposed for projects to determine if they adequately address the requirements of "Medium" or "High" effectiveness at pollutant removal.

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3 CONSTRUCTION

3.1 INTRODUCTION

The City continued to implement the Construction Component of the JURMP to prevent and reduce pollutants in runoff from construction activities within the City. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.2 of the Municipal Permit with the exceptions of the issues identified below.

3.2 SOURCE CHARACTERIZATION

During the entire reporting period, the City maintained a regularly updated construction site inventory. Throughout the reporting period, the City met the minimum JURMP requirement of making monthly updates to the inventory including additions and deletions of sites. There are two departments responsible for maintaining construction site inventories: ECP-Field Engineering is responsible for all of the City's CIP and grading projects; DSD is responsible for private development in the City.

The supervisors at the Field Engineering Division maintained a paper inventory that contained the most current information on when a site was last inspected and the current construction status, including priority adjustments. This paper record was updated through weekly reports from the Resident Engineers and the information was routinely transferred into a reporting spreadsheet.

During the reporting period Field Engineering continued to develop a Storm Water tracking database that is currently under final review. It is anticipated that the database will be used to track inspections and enforcement actions for projects under Field Engineering purview starting October 1, 2010.

DSD maintained an inventory of construction permits in Project Tracking System (PTS). The system was updated as new permits were issued or closed out. The building inspectors also provided updates to this inventory based on site inspections.

3.3 UPDATES TO ORDINANCES, BEST MANAGEMENT PRACTICE REQUIREMENTS AND APPROVAL PROCESSES

Construction sites are required by the Storm Water Ordinance to conform to the Construction Storm Water BMP Performance Standards described in Chapter IV of the City's Storm Water Standards.

There have been no modifications to the Storm Water Ordinance with respect to construction activities since the City's 2008 JURMP was developed and submitted. Refer to the City's 2008 JURMP and the Storm Water Standards for existing ordinance requirements.

3.4 PROGRAM IMPLEMENTATION

3.4.1 Construction Urban Runoff Approval Process

All construction sites within the City are required to undergo the City's construction urban runoff approval process to determine the appropriate construction requirements. There are two departments responsible for implementing the construction urban runoff approval processes: ECP is responsible for planning, design and construction of all of the City's CIP

projects; DSD is responsible for reviewing construction and development projects for private development in the City.

All ECP project managers of CIP projects were required to incorporate the construction requirements set forth in the *Storm Water Standards Manual*. The requirements are incorporated into the project specifications and plans prior to approval in order to fund the construction of the project.

To assist project managers in assuring consistency, storm water language is included in the boilerplate CIP Standard Specifications. During FY 2010, modifications to the City's Standard Specifications were made to accommodate the new Statewide Construction General Permit (CGP). Bid item dollar amounts were increased to pay for more storm water inspections, storm water monitoring and a higher level of expertise required by the new permit.

Standard drawings were also used in conjunction with project specific drawings where appropriate. Drawings were routed internally (within the design sections) as a "peer plan check" to ensure adequate inclusion of construction BMP measures.

Private projects were reviewed by DSD staff to ensure conformance to Chapter IV of the *Storm Water Standards Manual* prior to issuance of any construction permits. All applicable projects were required to incorporate construction BMPs on the project plans.

3.4.2 BMP Implementation

Through the development approval and construction inspection processes, the City confirmed that all designated BMPs were required to be implemented throughout the reporting period for all construction sites. During the active construction phase of projects, if BMPs were not implemented or adequately implemented, the inspection program identified those deficiencies and required that implementation or adequate implementation would be completed. The inspections, resulting enforcement and site compliance are discussed in the sections below.

3.4.3 Maximum Disturbed Area for Grading

During the reporting period the City did not have any projects that met the maximum disturbed area for grading criteria established in the City's 2008 JURMP. Therefore, there are no project sites to report for this reporting period.

3.4.4 Advanced Treatment Sites

During the reporting period the City did not have any projects that met the advanced treatment criteria established in the City's 2008 JURMP. Therefore, there are no project sites to report for this reporting period.

3.4.5 Inspections

3.4.5.1 Field Engineering

Construction sites are required to be inspected based on the frequency schedule set forth in the City's 2008 JURMP. Resident Engineers (REs) in the Field Engineering Division inspect BMPs associated with grading permits and/or public improvements (private projects) and all City CIP projects with the exception of several that Public Utilities Department Wastewater Branch manages directly.

In general, the REs inspected and issued Storm Water Notices as-needed in the dry season, and at least bi-weekly in the rainy season for high priority projects. In accordance with the City's JURMP, medium projects are inspected monthly during the rainy season and as-needed during the dry season. Low priority projects are inspected on an as-needed basis during both the rainy and dry seasons. A copy of the Storm Water Notice is provided to the contractor and one is filed with the project.

Appendix E lists all of the construction projects active during the reporting period and the following corresponding information on a project by project basis:

- City Work Order Number
- Project Location
- Storm Water Priority (Inspection Frequency)
- # of weeks active in the Rainy Season
- # of inspections in Rainy Season
- # inspections in Dry Season
- Total # of inspections for the site during the reporting period

During FY 2010, 203 Field Engineering construction sites were in the active construction phase: 44 high priority sites; 38 medium priority sites; and, 121 low priority sites. In total, the Field Engineering Division conducted 2,268 documented storm water inspections throughout the reporting period.

The following is a summary table of the number of high, medium and low priority projects and the inspections conducted at each type.

Table 3-1: FY 2010 Inspection Summary

Inspection Item	No. of Sites
High Priority Sites Receiving Required No. of Inspections	44
Medium Priority Sites Receiving Required No. of Inspections	38
Low Priority Sites Receiving Required No. of Inspections	121

In general, the FY 2010 inspections resulted in compliant construction sites. Due to the size of the City and the number of projects that are on-going in any given year, inspection results are widely variable. Common corrections needed after review by the City include:

- Maintaining Construction Exit/Entrances
- Dust Control
- Inadequate or poorly maintained silt fence
- Inadequate or poorly maintained erosion control

In order to ensure that all required inspection steps were performed to review for compliance, the City used a standardized process for all inspections. If compliance was not observed, enforcement actions ensued. As required by the JURMP, all inspections at a minimum included:

1. A check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
2. Assessment of compliance with the Construction Storm Water BMP Performance Standards located in Chapter IV of the *Storm Water Standards Manual* (and enforceable by San Diego Storm Water Management and Discharge Control Ordinance ("Storm Water Ordinance") Section 43.04, et seq.);

3. Assessment of BMP effectiveness;
4. Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
5. Education and outreach on storm water pollution prevention, as needed; and
6. Creation of a written inspection report.

3.4.5.2 Inspection Services

Building Inspectors in DSD's Inspection Services Division inspect construction BMPs associated with projects performing construction under building permits. The Inspection Services Division of DSD inspects building sites routinely for compliance with storm water requirements. Inspectors within the division are assigned a district and are responsible for monitoring projects in that area. Each inspector routinely monitors his/her district on a daily basis. Sites are also inspected at the request of another department or in response to complaints. The Inspection Services Division created and implemented a special Storm Water Correction Notice (DS-3) that is issued when corrections pertaining to storm water pollution prevention are needed to notify the contractor/owner that improvements must be made immediately. For more egregious or repeat issues, inspectors have been trained to issue re-inspection notices, which effectively stops work on the site until the corrections are made and the site is re-inspected. If the owner/contractor fails to comply with a Storm Water Correction Notice issued for their site, Inspection Services staff forwards the notice to the Storm Water Department or Neighborhood Code Compliance for further action.

During FY 2010, 17,716 building permits were active. (i.e., issued and/or with an open permit that has not been finalized). Based on the current database, the Inspection Services Division conducted 60,681 inspections at these active building sites. In total, including Building, Electrical, Plumbing and Mechanical Permits, the Inspection Services Division conducted 53,130 wet weather inspections and 44,692 dry weather inspections for a total of 97,822 inspections throughout the reporting period.

During this reporting period DSD investigated an issue with their Project Tracking System (PTS) as it relates to documenting DSD-IS inspections in an electronic format. The issue has been corrected and **Appendix F** reflects the number of weeks each project was active during the rainy season, though the active period is established by the date the permit was issued. Staff cannot determine the actual start of construction since a lapse of time may exist from ground breaking to when the first inspection is scheduled. Once inspections have begun, PTS tracks each inspection and will automatically schedule a Storm Water Inspection as required by the Storm Water Priority Tag assigned to the permit. Additionally, to enhance and clarify **Appendix F**, DSD staff reviewed each permit with an inspection priority of High and labeled those permits as "N/A" in Column "G" if no construction took place during the rainy season.

Appendix F lists all of the building permit construction projects active during the reporting period and the following corresponding information on a project by project basis:

- City Permit Number
- Project Title
- Inspection Frequency Priority (where applicable)
- # of weeks active in the Rainy Season
- # of inspections in Rainy Season
- # inspections in Dry Season
- Total # of inspections for the site during the reporting period

The City confirms that inspection frequencies were met with respect to inspections performed by DSD-IS. Most of the permits that are still active were initiated prior to the City assigning a priority to projects. The City has performed storm water inspections at these sites on a callout basis – i.e., when a regular building inspection is called for, the inspector performs a storm water inspection as well as the trade (plumbing, electrical, etc.) inspection.

In FY 2011, DSD-IS will re-evaluate its determination of the term "Active" as it relates to construction activity in the rainy season. Defining the active period of a permit based on when the first inspection takes place instead of permit issuance date may not represent the actual start of construction; however, it will more closely correspond to the amount of inspections performed with respect to the requirements of inspection priority of the project.

3.4.5.3 Public Utilities Department Wastewater Branch

Public Utilities Department Wastewater Branch, formerly the Metropolitan Wastewater Department conducts construction inspections of several of its capital improvement projects. During the reporting period, Public Utilities Department Wastewater Branch had 11 active high priority projects. The following is a summary of Public Utilities Department Wastewater Branch's construction projects:

Table 3-2: Public Utilities Department Wastewater Branch FY 2010 Construction Project Summary

Project Number/Name	Inspection Priority	# of weeks active during the rainy season	# of inspections during the rainy season	# of inspections during the dry season
152174; East Tecolote	High	15	20	N/A
160579;Mt Ashmun Pipe	High	1	1	3
161337;MH 346 Repair	High	0	0	5
168409;Euclid&Menlo	High	2	2	2
171516;MH88 Encanto	High	1	2	N/A
Carroll Canyon Emer.	High	2	7	N/A
MH 101 Emer.	High	1	4	N/A
MH 102 Emer.	High	2	2	N/A
MH 216 & 224 Emer.	High	3	6	N/A
MH 223&224 Emer.	High	5	12	N/A

3.4.6 Construction Enforcement

Some departments conduct their own construction inspection and enforcement for construction projects that are managed by their departments. The Storm Water Department also conducts enforcement for some limited construction activities; generally if it is called in to the Storm Water Hotline or if it involves a private residence with no building or construction permits associated to the property. The construction activity enforcement for the reporting period is described below.

Departmental inspection staff coordinates corrective actions and other enforcement directly with the responsible parties (e.g., contractors, owners, etc). Below is a summary of the corrective notices and notices of violations issued by the inspection staff through their regular and follow-up inspections.

Table 3-3: FY 2010 Corrective Actions Summary by Department

Corrective Department	Number of Corrective Notices Issued	Number of Notices of Violation Issued
ECP Field Engineering Division	508	1
DSD Inspection Services Division	157	-
Public Utilities Department Wastewater Branch – High Priority Projects	9	-

If issues are not resolved through corrective notices or notices of violation, enforcement actions are escalated to higher levels, including stop work orders (where work is halted until the site is brought into compliance with storm water regulations). In FY 2010, no stop work orders were issued by the Field Engineering Division; however, 9 were issued by Inspection Services Division at construction sites. The stop work orders are listed in the following table.

Table 3-4: Stop Work Orders Issued by DSD-IS Division

Project Name	Date Issued
2223 CORDERO RD	9/29/2009
5346 DIANE AV	10/1/2009
7930 RUFUS CT	10/9/2009
1676 PLUM ST	12/7/2009
1676 PLUM ST	12/11/2009
1676 PLUM ST	1/19/2010
11490 ALMAZON ST	2/3/2010
2223 CORDERO RD	3/30/2010
12840 VIA GRIMALDI	4/5/2010

In addition to the enforcement actions taken by the Public Utilities Department Waste Water Branch, Field Engineering and Inspection Services divisions, the Storm Water Department operates the Storm Water Pollution Prevention Hotline (619-235-1000) as well as other means of communication (e.g., website, main office line, and fax) to encourage the reporting of illegal discharges to the storm water conveyance system from locations within the City, including construction sites. 81 investigations were conducted at sites of construction activities in FY 2010. Investigations are primarily tracked by type of substance discharged. **Table 3-5** provides a summary of FY 2010 construction site investigations by discharge type. As a result of the investigations conducted by the Storm Water Department's Enforcement and Inspections Section, the enforcement actions summarized in **Table 3-6** were taken. Investigations where no responsible party could be identified after a thorough investigation resulted in a "no action taken" classification, and the discharge was most often abated and cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

Table 3-5: FY 2010 Construction Site Investigations by Type

Type of Observed Substance	Number of Investigations
Automotive Fluids	3
Blank (data entry error – nothing entered)	3
Construction Waste (e.g., cement-lie materials)	32
Other	9
Paint	2
Pool Discharge	1
Sediment	21
Waste Water (this includes wash water, car washing water, power washing water)	10
Total	**81**

Table 3-6: FY 2010 Summary of Code Compliance Enforcement Actions for Sites of Construction Activities

Type of Enforcement Action	Number of Actions
Citation	23
Education	17
Found to be Exempt	1
Letter	5
No Action Taken	6
No Evidence Found	4
Notice of Violation	23
Referred to another Department	1
To be Determined	1
Total	**81**

As a result of the 81 investigations, the Storm Water Department's Enforcement and Inspections Section conducted 30 follow-up inspections, and compliance was achieved at 78 of the 81 investigations of construction sites in FY 2010. There are 3 sites where investigations were conducted in June 2010 and are still in progress at the time of this reporting.

3.4.7 Construction Education

Aside from the staff education that is documented in Section 8, DSD-IS provided outreach by staffing an informational booth at the 2009 Fall and 2010 Spring Home/Garden Shows. The show was held over three days, September 18th – 20th, 2009 and March 5th – 7th, 2010 at the Del Mar Fairgrounds. Six Inspectors provided 50 hours of public service at the DSD information booth over these six days. Over 250 tri-fold "Clean Construction" brochures were distributed to show attendees.

The Storm Water Department also provided outreach and education to construction site owners and developers. The Storm Water Department's Enforcement and Inspections Section distributed 103 "Clean Construction" brochures and 103 "Construction BMPs" flyers to construction site owners and developers. Moreover, the Storm Water Department's Construction and Development Standards Section presented stormwater compliance information at a training session on the new Construction General Permit at a Construction Management Association of America (CMAA) San Diego Chapter Seminar on May 7, 2010.

3.4.8 Notable Activities

During the reporting period, DSD-IS developed a new protocol for prompting stormwater inspections. DSD modified the inspection tables to have the inspectors enter a Storm Water Inspection result in addition to the trade inspections they perform. Furthermore, during the FY 2010 reporting period PTS tables were changed to make this a mandatory attribute. DSD-IS inspectors are now required to enter a Storm Water Inspection result for every inspection they perform. This will ensure consistent and accurate reporting in the future.

4 MUNICIPAL

4.1 INTRODUCTION

The City implemented its JURMP for municipal facilities and activities in FY 2010. This section identifies the actions the City took during the reporting period to meet program objectives and Municipal Permit requirements. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.3.a of the Municipal Permit with the exceptions of the issues identified below.

4.2 SOURCE CHARACTERIZATION

The City submitted an inventory of municipal facilities with the 2008 JURMP that was developed utilizing San Diego Geographic Information Source (SanGIS) information. Since the 2008 JURMP submittal, each Municipal Department/Division has submitted updated inventory information, which provides a more accurate accounting of the City's municipal inventory. The City will continue to update the watershed based inventory as more up-to-date information is provided. **Appendix H** of this report contains the updated inventory and prioritization for municipal facilities. The City's inventory for FY 2010 contains 825 municipal facilities. There were 87 facilities added to the inventory in FY 2010 of which 80 were new facilities and 7 were facilities that were not included in the previous inventories. There were 6 facilities removed from the inventory in FY 2010. These facilities were determined to be either leased/managed by the Real Estate Assets Department (READ) or had been added to the previous inventory in error.

The Real Estate Assets Department (READ) is responsible for leasing and/or managing more than 590 City-owned leased properties with commercial, industrial or residential uses operating onsite. Although READ manages these leases, they are classified as commercial, industrial, or residential land uses and any applicable uses are included in the Industrial/Commercial Inventory or high priority residential areas inventory. The City considers the use of these properties as non-municipal activities and applies the associated JURMP requirements to the tenants.

4.3 PROGRAM IMPLEMENTATION

4.3.1 Municipal Facility Inspections

The 810 municipal facilities were inspected by the respective Departments during FY 2010. The Departments conducting inspections included:

- Airports
- City Treasurer – Parking Meter Services
- Environmental Services
- Facilities
- Fire and Rescue
- Fleet Services
- Homeless Services
- Library
- Park and Recreation
- Police
- Public Utilities Wastewater Branch
- Public Utilities Water Branch
- Stadium
- Storm Water Dept. Operations & Maintenance Division
- Streets

All municipal facility inspections conducted during FY 2010 addressed all of the required inspection steps to determine compliance by utilizing the City's municipal inspection form or

a department specific inspection form. The inspection forms were completed at each inspection location as well as applicable special events in order to confirm that the designated BMPs were implemented. The completed Departmental Municipal Inspection Forms are on file at the City of San Diego and can be provided upon request.

While the Fire and Rescue Department conducted all required inspections of 55 facilities in FY 2010, the inspection forms for the Fire Stations cannot be located due to staff changes and facility remodeling. The Fire and Rescue Department will make sure that the inspection forms are filed appropriately in FY 2011.

The Municipal Permit requires that the City implement additional BMPs at municipal facilities that discharge to, or are tributary to, a 303(d) listed water body, lagoon, or water body on environmentally sensitive lands (all City facilities are subject to this requirement as written in the JURMP). To meet this additional BMP requirement, each City facility conducts two annual facility inspections as opposed to just one as required by the Municipal Permit. As shown in the table below, the first inspection is recommended to occur in September (before the beginning of the rainy season), and the second inspection is recommended to occur between January and April (during the rainy season).

Table 4-1: Municipal Facility Inspection Requirements

Inspection	Timeframe
First	September
Second	January – April

During FY 2010, the City of San Diego conducted 1,555 inspections of municipal facilities. There were some required inspections that were not conducted due to staff oversight during the reporting period. There were four facilities that did not conduct the September inspections for the Police Department and therefore only received one inspection (per Municipal Permit) during FY 2010. Police Department staff are aware of the oversight and intend to conduct all required inspections in FY 2011. There were also four Park and Recreation facilities that were not inspected twice during FY 2010. Two of the facilities were not inspected during the reporting period and two facilities received one inspection (per Municipal Permit) rather than two. The Park and Recreation Department staff are aware of the missing inspections and are putting mechanisms in place to eliminate this issue. The City has a significant inventory of municipal facilities, and, through the efforts of dedicated staff, over 99% of the inventory received the required number of inspections.

As part of the Storm Water Department's ongoing effort to educate City staff and ensure that inspections are conducted properly, the Storm Water Department performed walk-along inspections with Library and Homeless Services staff during FY 2010. Walk along inspections provide training as well as fulfill inspection requirements and will continue to be conducted with departments as necessary.

In addition to the steps individual departments are taking to ensure that inspections are conducted in accordance with the City's JURMP, the Storm Water Pollution Prevention Division also sent out a memorandum to all departments in September 2009 reminding staff of the inspection requirements for municipal facilities. The Pollution Prevention Division plans to send out this memorandum annually. The Pollution Prevention Division will also meet with the Department's Storm Water liaisons twice a year.

The majority of municipal facilities inspected during FY 2010 did not have any storm water issues. The facilities where issues were noted typically included trash cans not being covered, cracked trash can lids, and storm drains needing stenciling. These issues were followed-up and corrected by closing trash can lids, replacing trash can lids where applicable, and stenciling the storm drains. In addition, there was one facility that had evidence of a small spill that did not enter the MS4. The spill was cleaned up utilizing appropriate methods.

4.3.2 Best Management Practice Requirements

City staff was required to implement the appropriate combination of minimum BMPs and activity-specific BMPs in accordance with the City's JURMP to prevent pollutant discharges to the storm drain system during FY 2010. Furthermore, all designated BMPs for pesticides, herbicides, and fertilizers were required and implemented in applicable municipal areas and activities in FY 2010.

The Airports Division operates Brown Field, Montgomery Field and leased non-aviation properties associated with these airfields. Numerous industrial tenants and activities comprise airport operations. In FY 2010, the City continued to rely on storm water representatives at each airport to work with tenant managers and owners to ensure storm water requirements are implemented at all times. Representatives also worked with vendors and ESD to ensure that hazardous materials, such as fuel/oil, batteries, and cleaning solvents, were stored and used appropriately and that hazardous wastes were disposed of properly.

READ's leased properties are required to implement BMPs based on the applicable land uses (industrial, commercial, residential) and are inspected under the requirements of the specific program component. During residential or industrial/commercial lease establishment, renewal, or amendment, READ staff ensured that the required BMPs identified in JURMP sections 6.4.3.1.1 and 6.4.3.1.2 were included in the lease contracts or provided as an exhibit to the contracts. During FY 2010, there were 5 renewed leases, 3 amended agreements, and 18 new permits that were executed with the updated BMP requirements language.

4.3.3 Pollutant Discharge Notification

The Public Utilities Department was the only Department to report and submit significant discharges that required a pollutant discharge notification to the San Diego RWQCB during FY 2010. During the reporting period, the Public Utilities Department Wastewater Branch responded to 30 public spills and the Public Utilities Department Water Operations Branch responded to 25 significant discharges from facilities.

4.3.4 Inspection and Maintenance of Municipal Treatment Control BMPs

The City's municipal Treatment Control BMP (TCBMP) inventory includes 42 constructed projects (**Appendix C**). The responsible City department for the maintenance of each municipal TCBMP performs inspections and cleanings of these BMPs on a routine basis. Please refer to Section 2.4.3.4 for more information on the inspection and maintenance of municipal TCBMPs

4.3.5 Catch Basins, Inlets, Cleanouts, Open Channels and MS4

The City has approximately 31,997 inlets and catch basins that are maintained by the Storm Water Department. During the reporting period the Storm Water Department Operations and Maintenance Division conducted 33,189 inspections of catch basins and inlets, and found and cleaned 15,092 catch basins and inlets with accumulated waste exceeding cleaning criteria[1]. The City's pipelines and inlets are not designed to contain debris and sediment. Therefore, any pipeline or inlet cleaned during the reporting period exceeded the cleaning criteria. During FY 2010 the Storm Water Department Operations and Maintenance Division updated the inlets and catch basins inventory by adding some facilities. This updated inventory will be used in FY 2011 to ensure that all catch basins and inlets are inspected and cleaned when necessary.

The City has approximately 901 miles of storm drain system. An updated map of the City's storm drain system is included as **Appendix I** of this report. The Storm Water Department Operations and Maintenance Division is responsible for the inspection, maintenance, and repair of the MS4 in the public right-of-way and in drainage easements. While the City's pipelines are designed not to catch any debris, storm drain pipes are visually inspected by observations from the cleanout/inlet. The distance viewed from each cleanout/inlet can vary and therefore is not formally tracked. During FY 2010, the Storm Water Department Operations and Maintenance Division found and cleaned approximately 2.55 miles of pipeline that had accumulated waste exceeding the cleaning criteria.

Approximately 6,119 tons of waste and litter were removed from catch basins, inlets, cleanouts, and the MS4 by the Storm Water Department Operations and Maintenance Division during the respective reporting period. The amount of material removed from catch basins, inlets, and cleanouts cannot be calculated separately from the MS4 because vactor truck loads contain material from both drain and pipe cleaning. In addition, a contractor hired by the City removed 117 tons from catch basins, inlets, and cleanouts. Therefore, a total of 6,236 tons of waste and litter were removed by the Storm Water Department Operations and Maintenance Division during FY 2010.

In addition to the City's Storm Water Department Operations and Maintenance Division, City Departments or Divisions that operate and maintain buildings are also responsible for inspecting and cleaning all associated storm drain facilities (approximately 3,055) as noted in Table 6.3-2 of the City's JURMP. During FY 2010 the responsible City Departments or Divisions conducted over 12,000 inspections of the storm drains. All storm drains that were found with debris were cleaned, and there was a total of 887,983 lbs (444 tons) of debris removed from these storm drain facilities (**Table 4-2**) during FY 2010.

Table 4-2: FY 2010 Storm Drain System Inspection and Cleaning by Department/Division

Department / Division	# of Storm Drains	Total # of Inspections	Amount removed (lbs)
Airports	29	42	0
ESD	10	20	78
Facilities	12	12	90
Fire	63	63	2,600
Libraries	12	12	Unknown
Public Utilities Department Wastewater Branch	220 (including channels)	9,400	424,000
Park and Recreation	2,497	2,497	456,950

1 Cleaning criteria – accumulated trash and debris greater than 33% of design capacity

Department / Division	# of Storm Drains	Total # of Inspections	Amount removed (lbs)
Parking Meters	1	4	30
Police	58	116	87
Stadium	28	66	600
Fleet Services	19	38	272
Public Utilities Department Water Branch	106	106	3,275
Total	**3,055**	**12,376**	**887,983**

As a result of efforts by City Departments and Divisions, a total of 6,674 tons (13,348,000 lbs) of waste and litter was removed from City catch basins, inlets, and cleanouts during FY 2010.

The City has approximately 50 miles of channels. Every City-owned channel within the City was inspected twice during FY 2010. The channels were inspected in the fall of 2009 before the rainy season and again in the spring of 2010. During FY 2010, approximately 8 miles of open channels were found with anthropogenic litter; 8 miles of channels were cleaned, and 20,591 tons of anthropogenic litter and sediment was removed. In addition, the Storm Water Department Operation and Maintenance crews removed 40,500 tons of debris from the Tijuana River and Smugglers Gulch channels during emergency operations in FY 2010.

4.3.6 Street and Parking Lot Sweeping

Approximately 1,384 curb-miles of improved roads, streets, and highways are identified as consistently generating the highest volumes of trash and/or debris within the City and are swept weekly. There are also approximately 313 curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris within the City and are swept monthly. Lastly, 3,540 curb-miles of improved roads, streets, and highways are identified as consistently generating low volumes of trash and/or debris within the City and are swept every other month. The sweeping routes and frequencies for high, moderate, and low volumes of trash and/or debris for improved roads, streets, and highways are included as **Appendix J**. The map represents the scheduled and actual sweeping frequencies for FY 2010. If a street sweeping machine was broken or staff was unavailable, the route was swept within the week in order to maintain the appropriate frequency. It is important to note that the City's sweeping frequencies for high and low volume trash and/or debris for improved roads, streets, and highways go above and beyond the frequencies required by the Municipal Permit. Through the implementation of the City's street sweeping program 101,048 curb miles were swept.

City Departments or Divisions that operate and maintain buildings and parking areas are responsible for sweeping the parking areas associated with their facilities as noted in Table 6.3-2 of the City's JURMP. There are approximately 395 municipal parking lots including five operation yards within the City.

With the exception of municipal operation yards, which are considered to generate medium volumes of solid waste and are required to be swept once a month, all parking lots are considered to generate low volumes of solid waste and were required to be swept once a year. All parking lots were swept at least once during FY 2010 and all operation yards were swept at least monthly during FY 2010.

The Storm Water Department Operation and Maintenance Division also conducts parking lot sweeping of their own operation yard and other departmental parking lots as part of their

street sweeping routes. Operation and Maintenance Division conducts parking lot sweeping for Parking Meters Services, Libraries, Facilities Division, Fleet Services, and partial sweeping of the Stadium in conjunction with the Street Division. The amount of debris removed from parking lot sweeping is not separated from the street sweeping debris.

During FY 2010 the City removed a combined total of 6,668 tons (13,335,145 lbs) debris, including sediment, as a result of street and parking lot sweeping (**Table 4-3**).

Table 4-3: FY 2010 Street and Parking Lot Sweeping Information by Department/Division

Department/Division	Amount Removed (lbs.)
Airports	194,000
ESD	100,000
Fire	275
Homeless Services	260
Police	210
Stadium	20,000
Storm Water Operations and Maintenance Division	12,834,000 (includes sediment)
Park and Recreation	140,000
Water	46,400
Total	**13,335,145**

4.3.7 Special Events

Several City Departments issue special event permits and inspect special event venues for compliance with the Municipal Permit, as outlined in the City's JURMP. These Departments include the Park and Recreation Department, Water Department, Qualcomm Stadium, and the Office of Special Events. Each Department designates the categories of special event permits it issues and the venues it inspects, as shown in the following table:

Table 4-4: Special Event Inspection Categories

Department	# of Categories	Type
Park & Recreation Dept.	2	Large Events[2], Small Events
Water Dept.	1	Land-Based Special Events
Qualcomm Stadium	1	Special Events
Office of Special Events	1	Special Events

As required by the City's JURMP, the Office of Special Events conducted an inspection (no less than once annually) to ensure that the Special Event Permit Requirements identified in Section 6.12.3.2 of the City's JURMP are effectively being implemented. During FY 2010, the Office of Special Events issued 381 City-wide special event permits for a total of 700 event dates and required Special Event BMPs to be implemented at special events, as applicable. The Office of Special Events inspected the 15th Annual Mardi Gras Festival and Parade located in the Gaslamp Quarter District of Downtown San Diego, and there were no deficiencies noted during the inspection. The inspection form is on file at the City and can be provided upon request.

2 >75 people

The Office of Special Events also provides informational messages to all special event organizers, providing notification of the BMP requirements for a Storm Water Pollution Prevention Plan and a Trash and Recycling Plan for each event through the Special Event Guidelines available to all applicants. During FY 2010, the Office of Special Events refined the Special Event Guidelines Storm Water Management section in order to convey the BMP requirements to applicants effectively (**Appendix K)**. During FY 2010, the Storm Water Department's Enforcement and Inspections Section's Program Manager became involved with the Office of Special Events to assist and support staff in the development and compliance with the City's storm water regulations. In addition, storm water requirements are discussed with applicants at City production meetings and storm water strategies or BMPs that have been successfully implemented by other event organizers are shared with the applicants.

During FY 2010, the Park and Recreation Department issued 5,880 special event permits and required Special Event BMPs to be implemented at Special Events, as applicable. In accordance with the City's JURMP the Park and Recreation Department conducted inspections of two special events: the EarthFair 2010 in Balboa Park and Sharon's Ride, Run, Walk for Epilepsy 2009 in De Anza Cover of Mission Bay Park. The EarthFair was a large event with an attendance of approximately 60,000 visitors and Sharon's Ride, Run, Walk for Epilepsy 2009 was a small event with expected attendance of approximately 600. There were no deficiencies noted during the inspections, and the inspection forms are available upon request. In addition to the required inspections by the City's JURMP, it is also the Park and Recreation Department's practice to inspect every site at the conclusion of the special event.

During FY 2010, the Public Utilities Department, Water Operations Branch issued 13 special event permits and conducted inspections of all 13 special events. The Water Operations Branch required Special Event BMPs to be implemented at special events, as applicable, during FY 2010. There were no deficiencies noted during the inspections and all of the inspection forms are available upon request.

Qualcomm Stadium issued 157 special event permits during FY 2010 and inspected 5 of the special events. All special events were required to implement all applicable Special event BMPs during FY 2010 and there were no deficiencies noted during the inspections. Inspection forms are available upon request.

In summary, over 6,000 events were permitted by the City during the reporting period. Special event inspections yielded no indentified deficiencies even with events as large as 60,000 attendees.

4.3.8 Prevention and Elimination of Infiltration from Sanitary Sewer to MS4

This section is applicable to the Public Utilities Department, Wastewater Branch which, among other activities, provides ongoing preventive cleaning, maintenance, and repair of the Municipal Sewage Collection System, including emergency removal of sewer line stoppages, equipment overhaul and repair, on-site facility inspections, and maintenance of the structural integrity of sewer mains and manholes in the collection system. The Wastewater Branch is responsible for the collection and conveyance of wastewater from residences and businesses in the City, serving a 330 square mile area with a population of approximately 1.3 million people.

The Wastewater Branch currently maintains over 3,000 miles of City sewer main line with over 250,000 service connections. During FY 2010, the department conducted field inspections and televised sewer lines, which can reveal blockages from debris to roots to grease and show pipeline cracks, breaks, or deterioration. Through proactive maintenance, spills or leaks to the storm drain system were minimized.

In FY 2010, the Wastewater Branch reduced the number of sewer spills and helped to protect storm water quality by inspecting or televising 94 miles, repairing or performing maintenance on 37 miles, and cleaning 1,961 miles of sewer lines. These efforts helped to prevent and eliminate sewer spills and the potential for sewer infiltration to the storm drain system in FY 2010. Further discussion on sewer spills will be included in the City's Illicit Discharge Detection and Elimination Section to be submitted December 15, 2010.

The Wastewater Branch also continues to implement the Grease Disposal Program to prevent sewer line blockages and resulting spills caused by the disposal of grease into the sewer system. The program aims to educate residents and businesses on the proper disposal alternative for fats, oils and grease. Information on this program can be found in Section 5, Industrial and Commercial, of this report.

4.3.9 Enforcement

The Storm Water Department Enforcement and Inspections Section enforces the City's *Storm Water Management and Discharge Control Ordinance* (§43.03 of the Municipal Code) citywide, including municipal facilities and activities. The Storm Water Department took measures to assist departments with the compliance of their facilities in regards to the requirements of the Municipal Permit, the City's municipal code, and JURMP during FY 2010.

In FY 2010, Pollution Prevention Division Code Compliance Officers conducted 127 investigations of potential discharges associated with municipal facilities or activities (**Appendix L**). Investigations are primarily tracked by type of substance discharged, and **Table 4-5** shows the FY 2010 municipal investigations by the type of observed substance.

Table 4-5: FY 2010 Municipal Facilities and Activities Investigations by Type

Type of Observed Substance	Number of Investigations
Automotive Fluids	4
Construction Waste (e.g., cement-like material)	2
Food Waste	1
Green Waste	2
Hazardous Materials	2
Illegal Connection	1
Other	6
Paint	3
Petroleum Hydrocarbons (e.g., transmission fluid, oil, gasoline)	2
Sediment	8
Sewage	6
Trash	1
Wastewater (this includes wash water, car washing water, power washing water)	87

Type of Observed Substance	Number of Investigations
Total	**127**

As a result of the investigations conducted by the Storm Water Department Enforcement and Inspections Section, the following enforcement actions were taken as show in **Table 4-6**. There were three sites that were reported but were not visited as a result of staff oversight. When the issue was identified it was no longer appropriate to conduct an investigation. In order to help prevent this situation from occurring again, the Enforcement and Inspections Section is producing bimonthly reports of the investigation database. As part of this quality control procedure, the reports are reviewed to make sure that all complaints are investigated in a timelier manner.

Table 4-6: FY 2010 Municipal Facilities and Activities Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Citation	0
Civil Penalty	0
Education	8
Found to be Exempt	6
Letter	6
No Action Taken	87
No Evidence Found	8
Not Visited	3
Notice of Violation	0
Referred to another Department	9
Total	**127**

Investigations where: 1) no responsible party could be identified after a thorough investigation; 2) it was an allowed discharge, or; 3) it was an overwatering issue, were classified as "no action taken" resolutions. If it was a discharge where no responsible party could be identified, then the discharge was most often abated and cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

As a result of the 127 investigations, the Storm Water Department Enforcement and Inspections Section conducted 19 follow-up inspections, and compliance was achieved at 126 of the 127 investigations of municipal facilities and activities during FY 2010. There was one investigation that was conducted in June 2010 and is still in progress at the time of this reporting.

4.3.10 Education and Training

For information on the FY 2010 departmental trainings and various public education and outreach activities conducted by individual departments/divisions refer to Section 8, Education, of this report.

4.3.11 Notable Activities

Several departments conducted activities above permit requirements during the reporting period as summarized below.

- In addition to parking lot and storm drain cleaning, the Park and Recreation Department also collected 412,455 tons of debris from the parks, beaches, and bay, including collecting over 200 tons of debris as a result of the 2009 July 4th holiday.

- Qualcomm Stadium, Park and Recreation Department, and the Public Utilities Department, Water Operations Branch conducted more inspections of Special Events than was required by the City's JURMP. The Park and Recreation Department inspected every Special Event site at the conclusion of the event which resulted in the inspection of 5,880 sites.

- The Storm Water Department Operation and Maintenance Division conducted weekly sweeping of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris and also conducted sweeping every other month of the improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris. These sweeping frequencies are above and beyond what is required by the Municipal Permit.

- The Storm Water Department Operation and Maintenance Division emergency maintenance activities to restore flood control facilities in the Tijuana River Valley during the 2009-2010 rainy season to reduce the chance of flooding that threaten surrounding life and properties. Specifically the project included the excavation of Smuggler's Gulch and Pilot Channel of the Tijuana River Valley to facilitate flows within these channels and prevent flooding. As noted above, 40,500 tons of trash and debris were removed.

- The Storm Water Department Pollution Prevention Division conducted a Municipal Rain Barrel and Downspout Disconnect Pilot study which is included in the City's WURMP Annual Reports. There were 7 municipal facilities included in the pilot study covering six watersheds. The pilot study determined that gravity barrel systems connected to landscaping are the most effective, and planter barrel systems are a viable option for sites that lack sufficient adjacent pervious areas. The systems installed at the municipal facilities attenuated flows by capturing 7,502 gallons of facility roof runoff and resulted in some minimal pollutant reductions. More detailed information can be found in the City's WURMP Annual Reports.

5 INDUSTRIAL AND COMMERCIAL

5.1 INTRODUCTION

Principally, Pollution Prevention Division staff carries out the industrial and commercial section of the City's JURMP. Other departments, such as Public Utilities Department Wastewater Branch, also conduct storm water inspections during their restaurant inspections to complement the Pollution Prevention Division's efforts. In addition to conducting industrial and commercial inspections, the Code enforcement staff within the Pollution Prevention Division enforces the City's Storm Water Management and Discharge Control Ordinance ("Storm Water Ordinance") at industrial and commercial facilities. This section describes the FY 2010 accomplishments of the industrial and commercial program elements. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.3.b of the Municipal Permit.

5.2 STATIONARY SOURCES ELEMENT

5.2.1 Background

Each facility within the City's jurisdiction has been inventoried and categorized as either commercial or industrial. Based on the prioritized category, specific BMPs are required and inspections are conducted. The industrial and commercial facilities that violate the City's JURMP requirements are notified, documented, and enforcement applied as described in the City's JURMP.

5.2.2 Source Characterization

A watershed-based inventory and prioritization of known industrial and commercial facilities within the City's jurisdiction has been updated for FY 2010 (**Appendix M**). This inventory is based on multiple sources of information including the City's business tax license list, the Statewide General Industrial Storm Water database, the City's Food Establishment Wastewater Discharge Program (FEWD) and Industrial Wastewater Control Program (IWCP) databases, and other sources of information, as appropriate. Of the 21,145 currently inventoried industrial and commercial facilities within the City, 19,230 are stationary facilities (the other 1,915 are mobile businesses). **Table 5-1** provides a summary of the inventoried stationary businesses threat to water quality (TTWQ).

Table 5-1: Inventoried Stationary Businesses TTWQ

TTWQ	Number of Inventoried Stationary Businesses
High Industrial	110
Medium Industrial	1,806
Low Industrial	1,572
High Commercial	546
Medium Commercial	9,369
Low Commercial	5,827
Total	**19,230**

5.2.3 Best Management Practice Requirements

Minimum BMPs required for industrial and commercial facilities within the City based on the type of activity that is being conducted are identified in *Appendix X, "Minimum BMPs for Industrial and Commercial Sites/Sources"*, of the City's 2008 JURMP. City-identified BMPs to be used at facilities that have the potential to discharge directly to Clean Water Act section 303(d) impaired water bodies, coastal lagoons, or water bodies on environmentally sensitive lands have also been incorporated into the list of minimum BMPs included in the City's 2008 JURMP. There were no updates to these BMP requirements during FY 2010.

5.2.4 Program Implementation

5.2.4.1 Inspection of Industrial and Commercial Facilities

The City completed industrial and commercial storm water compliance inspections using three methods: the City's IWCP inspection program; the City's FEWD program; and the City's Pollution Prevention Division's inspection program. The IWCP inspections focus on sites that have sanitary sewer pre-treatment permits, while the FEWD inspections focus on food service establishments. The FEWD Program regulates restaurants' sewer grease traps to ensure proper function and also reviews disposal procedures for oil and cooking grease. The program aims to prevent sewer line blockages and resulting spills caused by the disposal of grease into the sewer system.

Prior to the start of the Pollution Prevention Division's FY 2010 inspections, the City's inventory was prioritized according to a process consistent with the requirements of the Municipal Permit. This process was designed to assign the highest TTWQ to businesses at which relatively significant BMP implementation deficiencies had been noted. All high TTWQ sites were selected for inspection in FY 2010. Other sites selected for inspection included medium priority sites with no previous inspection history. These businesses were mainly selected from business categories identified as potential problems such as auto repair shops, auto paint and body shops, building material suppliers, contractors deemed likely to have storage yards, and trucking or other transportation operations.

Through the three programs, approximately 29% of the City's commercial and industrial inventory received site visits and/or inspections. Furthermore, 100% of all inventoried stationary sites determined to pose a high TTWQ were inspected during FY 2010.

During FY 2010, the Public Utilities Department Wastewater Branch IWCP staff performed 48 storm water inspections, while Public Utilities Department Wastewater Branch FEWD staff performed 3,159 storm water inspections. Complete lists of both IWCP and FEWD inspected facilities are included as **Appendix N**.

The Pollution Prevention Division conducted a total of 1,087 industrial and 5,306 commercial site visits in FY 2010; 10 other unclassified sites were also visited during the reporting period. Of these, 582 industrial and 3,137 commercial sites resulted in full inspections; and 505 industrial and 2,169 commercial sites were found to have either moved, be duplicates of other businesses, incorrectly classified because the NAICS code on the business license was not accurate, or not in the City's jurisdiction. There were also 107 commercial facilities and one industrial facility that were found to be mobile businesses (an additional two sites were unclassified as either commercial or industrial). A complete inspection listing for the Pollution Prevention Division of commercial and industrial inspections for FY 2010 is included as **Appendix O**. The inspection listing includes the

facility name, address, TTWQ, inspection date, inspection result, and follow-up inspection priority.

All inspections conducted during FY 2010 addressed the required inspection steps to determine full compliance by utilizing the City's standard industrial/commercial inspection form, which was designed to mirror the City's minimum BMP requirements. In addition to the inspection form an industrial attachment and a restaurant attachment were used where applicable to collect information on Industrial Permit compliance status and restaurant management. An inspection form was completed at all sites that received a full inspection. During FY 2010, the City revised the industrial and commercial inspection form and is no longer utilizing the separate pollutant discharge potential assessment (PDPA) supplemental questionnaire. The PDPA scoring grid that provides the numeric PDPA scores was added to the bottom of the Industrial and Commercial inspection form rather than being a separate page (**Appendix P**).

Table 5-2 below provides a summary of the full industrial and commercial inspections conducted by the Pollution Prevention Division and the Public Utilities Department Wastewater Branch.

Table 5-2: FY 2010 Summary of Commercial and Industrial Facility Full Inspections

Facility Type	Number of Full Inspections Conducted
High TTWQ Industrial	139
Medium TTWQ Industrial	317
Low TTWQ Industrial	126
High TTWQ Commercial	739
Medium TTWQ Commercial	1,351
Low TTWQ Commercial	1,047
FEWD	3,159
IWCP	48
Total	**6,926**

BMPs were required to be implemented at all industrial and commercial sites; and if BMPs were not implemented at facilities where inspections were conducted, then facility personnel were notified both verbally and by mail. Every business that received a full inspection was provided with inspection results by mail in the form of a database generated report. The results outlined the BMP deficiencies observed during the inspection and notified businesses of any Industrial Permit related violations. Inspection results were accompanied by a letter describing the City's storm water program and reason for inspection. The letter also directed facility personnel to the City's website where the minimum BMPs are posted.

Furthermore, the City utilized a priority rating system for follow-up inspections. **Table 5-3** provides a summary of the commercial and industrial facility follow-up inspection priority. Priority 1 ratings indicate that the facility was referred to the Storm Water Hotline and was followed-up within 24 hours for the issue(s) noted at the time of the inspection. Priority 2 follow-up ratings indicate that there was a BMP implementation deficiency and a follow-up inspection is recommended. Priority 3 follow-up ratings indicate that there were minor BMP implementation deficiencies and that corrective actions should be reviewed at the next routine inspection of the facility. It is also important to note that whether or not an industrial facility was in violation of the Industrial Permit had no effect on the priority rating. The priority rating only takes into account whether a facility is in compliance with

the City's Storm Water Ordinance (only BMP and IC/ID issues). A complete list of industrial facilities that were in violation of the Industrial Permit is included as **Appendix Q**.

During FY 2009, the Pollution Prevention Division Enforcement & Investigations Section determined that additional staff was needed to conduct and focus on follow-up inspections of industrial and commercial sites. FY 2010 marked the first year that the Pollution Prevention Division's Enforcement and Inspections Section was able to staff a dedicated Code Compliance Officer to conduct the follow-up inspections for industrial and commercial sites or sources. The Pollution Prevention Division Enforcement and Inspections Section secured interim staff to assist in follow-up inspections and data entry on a temporary basis and is currently in the process of hiring additional, permanent staff.

As a result of the additional code enforcement officer, the Enforcement and Inspections Section was able to conduct a total of 103 follow-up inspections, including 68 Priority 1 follow-ups, during FY 2010. There were some data entry errors that resulted in five Priority 1 follow-up inspections not being conducted. Three locations had responsible parties/units at the same exact address already entered in the database. Due to confusion of the locations, the information was only logged once because the locations appeared to be duplicates. In addition, there were 2 other locations that were not logged in the database due to staff oversight. The Enforcement and Inspection Section is exploring corrective actions to remedy these issues, which may include the inspection consultant providing a monthly summary report including the Priority 1 sites that have been identified or having the inspection consultant enter the Priority 1 cases directly in to the web-based Storm Water hotline to avoid intake errors and ensure that all Priority 1 follow-up inspections are being conducted.

Table 5-3: FY 2010 Summary of Commercial and Industrial Facility Follow-up Inspection Priority Ratings

Facility Type	Priority 1	Priority 2	Priority 3
High TTWQ Industrial	15	104	19
Medium TTWQ Industrial	0	41	270
Low TTWQ Industrial	0	1	125
High TTWQ Commercial	58	614	67
Medium TTWQ Commercial	0	203	1,066
Low TTWQ Commercial	0	25	952
Totals	**73**	**988**	**2,499**

Out of the 103 follow-up investigations conducted, the Enforcement and Inspections Section issued 57 Notices of Violation and 17 citations. In addition, 8 follow-up locations received letters, 12 received educational materials, 3 were referred to another department, 2 had no evidence found, 2 where there was no action taken and 2 where the action is to be determined. While all 103 of the follow-up locations have had investigations conducted and are being enforced, there are still 49 follow-up locations where the Enforcement and Inspections section is continuing to work with the facilities to resolve the issue or are working on the appropriate paperwork to close out the case in the database. Follow-up inspection cases often take more time than complaint investigation cases because there are usually multiple issues that need to be addressed for compliance. During FY 2010 the Enforcement and Inspection Section began sending out letters documenting the issues and requesting the industrial or commercial operator to fix the issues and send back photo

documentation of the corrective action taken to illustrate compliance within 10 business days. The City has found this to be an effective means of communication for achieving compliance and have received the requested documentation from the industrial or commercial operators.

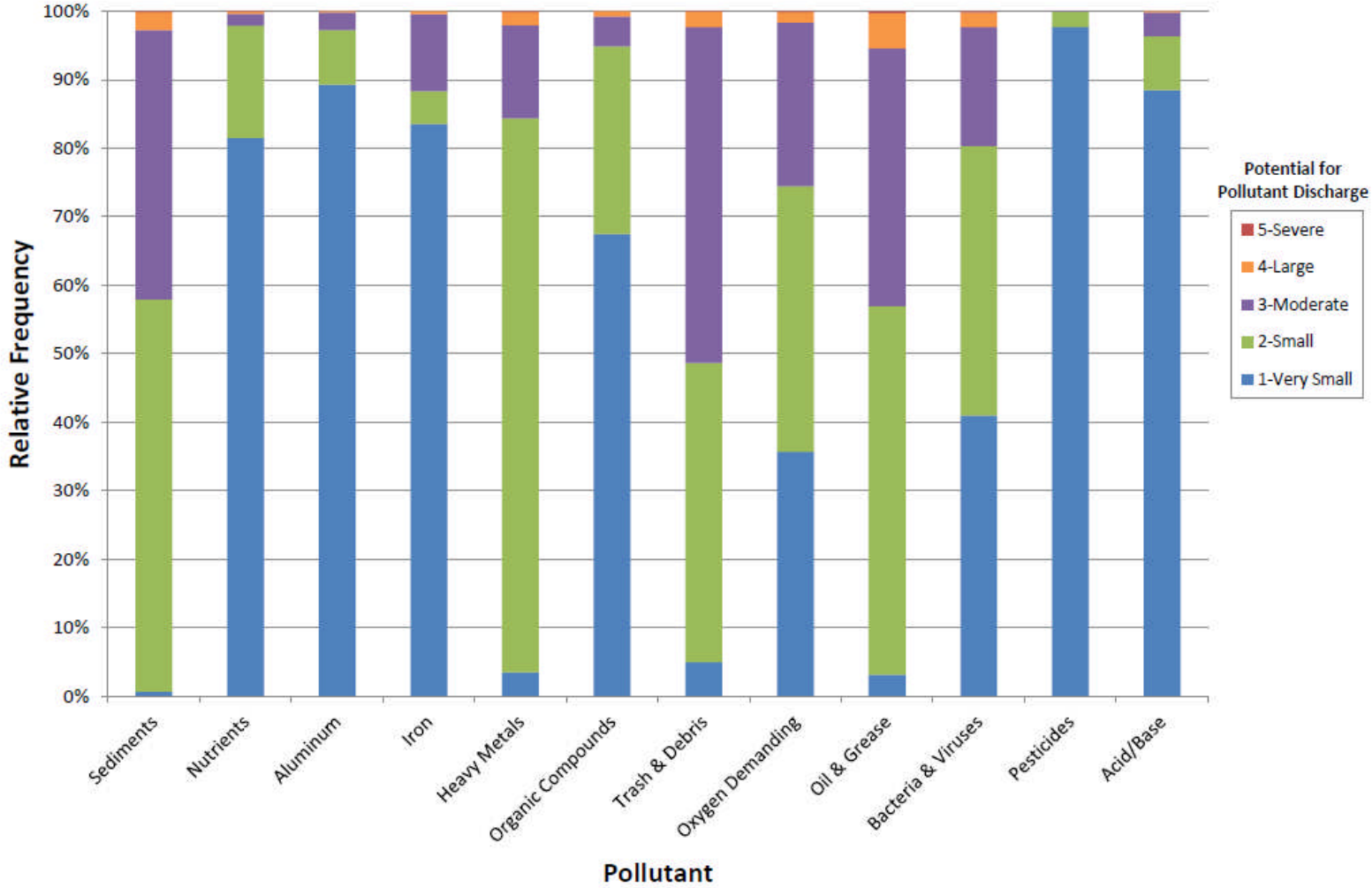
As previously mentioned, PDPA scores were utilized during the inspections to collect information for effectiveness assessment and source identification. Ideally, completing the PDPA will provide additional data to help refine the pollutant discharge potentials assigned to various source types in the Copermittees' Baseline Long-Term Effectiveness Assessment (BLTEA) (2005). The data is intended to be a semi-quantitative tool to identify sites that are major sources of the principal pollutants of concern for storm water. Inspectors record scores for the following pollutants: sediments, nutrients, aluminum, iron, heavy metals, organic compounds, trash and debris, oxygen demanding, oil and grease, bacteria and viruses, pesticides, and acid/base. For each of several main categories of pollutants, a numeric PDP on a scale from 1 (no discharge potential) to 5 (severe discharge potential) is assigned. **Figure 5-1**, on the following page, presents the frequency of scores for each pollutant.

5.2.4.2 Industrial Facility Monitoring

The City's JURMP requires that high TTWQ industrial facilities implement monitoring programs for runoff from their facilities. During FY 2010, there were 400 industrial facilities that were in violation of the Industrial Permit for their monitoring programs. Of the 400 industrial facilities, 48 were high TTWQ industrial facilities. All of the facilities were made aware of the requirement and the list was submitted to the San Diego RWQCB. A list of the facilities is included as **Appendix Q.**

Furthermore, General Industrial Permit compliance status was assessed during full inspections. Inspectors evaluated the existing SIC code or assigned an SIC code as appropriate. The SIC code was then evaluated for subjectivity to the Industrial Permit. Facilities that were conditionally subject were provided Notice of Non-Applicability/No Exposure Certification (NONA/NEC) paperwork if the facility did not have any exposure. Conditionally subject facilities with exposure were provided Notice of Intent (NOI) paperwork. If a facility had some exposure at the time of inspection but could eliminate exposure feasibly, facility personnel were provided with both NOI and NONA/NEC paperwork and told to file an NOI and informed that eliminating exposure could potentially qualify the site for NONA/NEC. Unconditionally subject sites (mandatory) were directed to file an NOI. If the facility had active Industrial Permit coverage, compliance with Industrial Permit requirements was assessed during the inspection. The assessment included reviewing the SWPPP for all required components and reviewing the monitoring program to ensure that the appropriate sampling had been conducted during the most recent wet season.

Figure 5-1
PDPA Score Frequencies by Pollutant, Industrial and Commercial Inspections



5.2.4.3 Enforcement of Regulations at Industrial and Commercial Facilities

Inspections or complaint investigations of industrial and commercial facilities may result in enforcement action. Enforcement of storm water regulations are conducted by City staff members with enforcement authority and, when necessary, by legal counsel. The inspectors, in accordance with the existing procedures for recording violations, properly document each observed violation.

The City's process for inspection and enforcement of violations ensures that industrial and commercial facility violations are abated. Sites with storm water violations noted during inspections by the inspection consultant are referred to the Pollution Prevention Division's Enforcement & Inspections Section for follow-up investigation and enforcement as noted in Section 5.2.4.1 above.

The Pollution Prevention Division operates the Storm Water Pollution Prevention Hotline (619-235-1000) as well as other means of communication (e.g., website, main office line, and fax); thereby, encouraging the reporting of illegal discharges to the storm water conveyance system from locations within the City, including commercial facilities. As a result of the hotline, a total 327 investigations were conducted at stationary commercial and industrial sites in FY 2010 (**Appendix L)**.

Investigations are tracked by substance discharged, and **Table 5-4** provides a summary of the FY 2010 stationary industrial and commercial investigations by discharge type.

Table 5-4: FY 2010 Stationary Industrial and Commercial Investigations by Type

Type of Observed Substance	Number of Investigations
Automotive Fluids	28
Blank (data entry error – nothing entered)	6
Construction Waste (e.g., cement-like material)	16
Food Waste	20
Green Waste	4
Hazardous Material	3
Illegal Connection	1
Other	27
Paint	7
Pet Waste	1
Petroleum Hydrocarbons (e.g., transmission fluid, oil, gasoline)	3
Sediment	11
Sewage	21
Trash	5
Wastewater (this includes wash water, car washing water, power washing water)	203
Total	**356**

As a result of the investigations conducted by the Storm Water Pollution Prevention Division's Enforcement & Inspections Section, enforcement actions were taken and are summarized in **Table 5-5** below.

Table 5-5: FY 2010 Stationary Industrial and Commercial Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Blank (data entry error – nothing entered)	7
Citation	70
Civil Penalty	0
Education	66
Found to be Exempt	6
Letter	42
No Action Taken	25
No Evidence Found	35
Not Visited	9
Notice of Violation	82
Referred to another Department	6
To be Determined	8
Total	**356**

There were seven entries where the enforcement action was left blank in the database due to data entry errors, and nine investigations that were not conducted. The nine sites were reported but were not visited as a result of staff oversight. When the issue was identified it was no longer appropriate to conduct an investigation. In order to help prevent this from occurring again, the Enforcement and Inspections Section is producing bimonthly reports of the investigation database. As part of this quality control procedure, the reports are reviewed to make sure that all hotline calls are investigated. Investigations where no responsible party could be identified after a thorough investigation resulted in a "no action taken" classification and the discharge was most often abated and cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

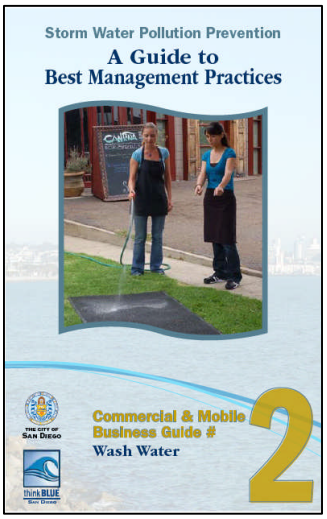
As a result of the 356 stationary industrial and commercial site investigations, the Storm Water Pollution Prevention Division's Enforcement and Inspections Section conducted 80 follow-up inspections. Compliance was achieved at 329 of the 356 industrial and commercial investigations. There were nine sites where no investigation occurred as noted above, and there are 18 sites that are still in progress. The Enforcement and Inspections Section is continuing to work with the owners or operators at these 18 locations in order to make sure that compliance is achieved. Additionally, it is important to note that 14 of the 18 in progress investigations were conducted in June 2010 and the follow-up was not completed at the time of this reporting.

5.2.4.4 Education and Outreach

During FY 2010, the Pollution Prevention Division targeted Industrial and Commercial Owners and Operators by distributing educational materials during facility inspections. A summary of the material distributed is included in **Table 5-6** on the following page.

Table 5-6: FY 2010 Educational Material Distributed to Stationary Industrial and Commercial Sites/Sources

Material	# Distributed
NOI	168
NONA/NEC	352
Copy of General Industrial Permit	3
Industrial Facilities Handout	14
Spills Handout (English)	978
Spills Handout (Spanish)	69
Impervious Surfaces Handout (English)	572
Impervious Surfaces Handout (Spanish)	76
Automotive Fluids Handout (English)	600
Automotive Fluids Handout (Spanish)	48
Industrial/Commercial Regulations Handout	1,377
Dumpsters and Loading Dock Areas Handout (English)	963
Dumpsters and Loading Dock Areas Handout (Spanish)	72
Car Washing Handout	12
Think Blue Poster (English)	373
Think Blue Poster (Spanish)	125
Authorization/Introduction Letter - English	2,994
Authorization/Introduction Letter - Spanish	195
What's Cookin'	162
BMP Poster (English)	183
BMP Poster (Spanish)	37
Think Blue Tips Trifold (English)	99
Think Blue Tips Trifold (Spanish)	71
BMP Guide – Trash	169
BMP Guide – Wash Water	87
BMP Guide - Landscaping	92
2010 Regional Storm Water Calendar	497
Template – Spill	422
Template – BMP	478
Template – Training Log	416
Template – Haz Mat Inventory	77
TOTAL	**11,781**



In FY 2009, *Think Blue* initiated a plan to implement more comprehensive outreach to local businesses in the City of San Diego. In FY 2010, an initial step of the plan involved the creation of several BMP Guidebooks for businesses. Each Guidebook is focused on specific activities and requirements under the Storm Water Ordinance. The eight topics covered include:

1. hazardous materials
2. wash water
3. commercial vehicles
4. landscaping
5. fire sprinkler discharges
6. trash storage and parking areas
7. employee storm water training
8. outdoor activity (signage and storm drain protection).

The Business Guidebooks are currently under development, and further information will be provided in the FY 2011 JURMP Annual Report.

The Storm Water Department's Enforcement and Inspections Section also conducted two seminars for the Industrial Environmental Association on storm water regulations, the Industrial Permit, and the City's minimum Best Management Practices. Additionally the Enforcement and Inspections Section conducted two presentations for Brickman Landscaping Company on storm water regulations.

The City's Airport Division also conducted outreach to the industrial target audience by sending informational material to tenants and lessees of the Airport policies regarding the Storm Water Pollution Prevention Plan (SWPPP) and the City's regulatory compliance expectations.

5.2.4.5 Notable Activities

The City conducted notable activities related to its implementation of the Industrial and Commercial component. These notable activities are described below.

- As an additional part of the illegal discharge investigative procedure, all Code Compliance Officers and Storm Water Inspectors were given formal training in water quality sampling. The officers and inspectors were formally trained in order to be able to conduct sampling of illegal discharges during an investigation and to obtain laboratory data, as needed, to determine the chemical content of an illegal discharge. This data is sometimes necessary during investigations of chemical spills, spills that are of indeterminate nature, and to provide formal data if there is potential of a criminal case.

- During the second quarter of the reporting period as noted above, a Storm Water Inspector was hired to conduct follow-up inspections for Industrial and Commercial sites and to provide enforcement, as necessary for the Pollution Prevention Division's Enforcement and Inspections Section.

- City minimum BMPs require several written components: a written BMP plan, a storm water training log, a written spill plan (as applicable), and a written hazardous material plan (as applicable). It was identified through inspections that these written requirements were generally difficult for the owners or operators of industrial and commercial sites to complete. Therefore, templates were developed to distribute to facility personnel so that these requirements could more easily be met. The templates are included as **Appendix R.** The distribution of the templates began toward the end of the reporting period.

- The Pollution Prevention Division Enforcement and Investigation section began to focus efforts on some of the larger chain stores such as Home Depot, Alta Dena Foods, Lowe's, Target, and Armstrong Garden Centers. Rather than contacting each individual store location, the Enforcement and Investigation section worked on communicating with the Corporate Regional Environmental Managers of the chain stores to distribute information to the individual store locations on the importance of and proper implementation of BMPs. There has been a good response from the Corporate Regional Managers and the Enforcement and Inspections Section has seen increased BMP implementation and compliance at locations where there had been persistent issues. The City will continue to look for opportunities to continue these efforts.

5.3 MOBILE SOURCES ELEMENT

5.3.1 Background

Mobile businesses have been identified as a significant potential source of non-storm water discharges. The very nature of mobile businesses makes the task of achieving compliance with storm water regulations difficult. The City has developed a program to identify mobile businesses that operate within the City, include these businesses in the industrial/commercial inventory, notify them of BMP requirements, inspect them on an as needed basis, and take enforcement actions when necessary.

5.3.2 Source Characterization

The mobile sources inventory is based on the same sources of information utilized for the industrial and commercial stationary inventory as noted above. Of the 21,145 currently inventoried industrial and commercial facilities within the City, 1,915 are mobile businesses (the other 19,230 are stationary facilities). When stationary business inspections were conducted, 110 businesses were determined to be mobile businesses which were then added to the mobile business inventory. There are zero high TTWQ, 621 medium TTWQ, and 1,261 low TTWQ commercial mobile businesses. There are also zero high or medium TTWQ, and 33 low TTWQ industrial mobile businesses. The FY 2010 updated inventory and prioritization is included in **Appendix M** of this report

5.3.3 Best Management Practice Requirements

The City has identified minimum BMPs that are required for all mobile businesses based on the type of activity that is being conducted (see *Appendix XI, "Minimum BMPs for Mobile Businesses",* of the City's 2008 JURMP). There were no changes to the minimum BMPs required in the City's 2008 JURMP during the FY 2010 reporting period.

5.3.4 Program Implementation

During FY 2010, the City identified 110 mobile businesses which were then added to the mobile business inventory through the commercial and industrial stationary inspections (**Appendix O**).

Please refer to Section 5.2.4.4 for information on education and outreach conducted.

5.3.4.1 Enforcement of Mobile Sources

The Pollution Prevention Division operates the Storm Water Pollution Prevention Hotline (619-235-1000) as well as other means of communication (e.g., website, main office line, and fax); thereby, encouraging the reporting of illegal discharges to the storm water conveyance system from locations within the City, including mobile sources. As a result of the hotline, a total 22 investigations were conducted for mobile businesses in FY 2010 (**Appendix L**). **Table 5-7** provides a summary of the mobile business investigations by discharge type.

Table 5-7: FY 2010 Mobile Business Investigations by Type

Type of Observed Substance	Number of Investigations
Automotive Fluids	1
Food Waste	1
Green Waste	0
Other	1
Paint	2
Wastewater (this includes wash water, car washing water, power washing water)	17
Total	**22**

As a result of the investigations conducted by the Storm Water Pollution Prevention Division's Enforcement and Inspections Section, enforcement actions were taken and are summarized in **Table 5-8** below. It is important to note that Civil Penalties noted in the database were recommended and may have not necessarily been issued during the respective reporting period. The recommended Civil Penalties need to go through a review process before they are issued to a responsible party. The two Civil Penalties noted in the database for FY 2010 were reviewed, and the Civil Penalties were determined to not be applicable. One site, however, was issued a $250 fine after it was reviewed. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

Table 5-8: FY 2010 Mobile Business Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Citation	5
Civil Penalty	2
Education	5
No Evidence Found	1
Notice of Violation	9
Total	**22**

As a result of the 22 mobile business investigations, the Storm Water Pollution Prevention Division's Enforcement and Inspections Section conducted seven follow-up inspections. Compliance was achieved for all 22 mobile business investigations.

5.3.4.2 Education and Outreach

Other than one-on-one outreach provided to individual mobile businesses, during investigations and/or enforcement, there were no education and outreach efforts conducted for mobile businesses during FY 2010.

5.3.4.3 Notable Activities

There were no additional notable activities conducted for mobile businesses other than the efforts described above during FY 2010.

6 RESIDENTIAL

6.1 INTRODUCTION

The City continued to implement the Residential component of its JURMP to prevent and reduce pollutants in runoff from residential areas within in the City. FY 2010 program accomplishments are described below and in Chapter 8, Education, of this report. *Think Blue*, the City's storm water education program managed by the Pollution Prevention Division's Education and Outreach Section, is a multi-faceted effort which provides education and outreach to a variety of audiences, including the City's over one million residents. Many of the activities reported in Section 8 are also applicable to the residential component. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.3.c of the Municipal Permit.

6.2 SOURCE CHARACTERIZATION

The City considers all residential areas within City limits to be high threat to water quality residential areas and activities.

6.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

There were no modifications to BMPs during FY 2010. For more details on Residential BMPs see *Appendix XII, "Minimum BMPs for Residential Areas and Activities"* of the City's JURMP.

6.4 PROGRAM IMPLEMENTATION

This section describes the steps taken to encourage and verify the implementation of the minimum BMPs for high priority residential areas and activities during the FY 2010.

6.4.1 Outreach for BMPs

In FY 2009, *Think Blue* introduced six new PSAs for television and one for radio and continued to air them in FY 2010. The award winning PSAs, entitled, "Pollution Prevention Requirements", which were produced in both English and Spanish, focus on the updates to the City's storm water ordinance that require residents and businesses to implement minimum BMPs to reduce pollution. The six topics cover:

1) residential wash water
2) commercial wash water
3) over irrigation
4) pet waste
5) automotive repair
6) home construction/do-it-yourself projects

The PSAs inform the public of the ordinance changes and provide easy-to-adopt behavior changes that can help residents prevent storm water pollution and avoid potential enforcement actions.

Think Blue continued to utilize radio, television and web platforms to maximize exposure of BMP messages to the public. For example:

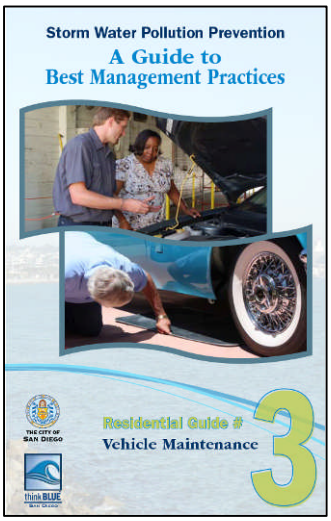
- KFMB TV created a series of 10 second spots, titled 'It's Easy to Be Green' that featured BMP specific messaging

- On air talent at radio stations also enhanced BMP messaging by providing 'ad lib' spots discussing proper disposal of pet waste, among others
- Short BMP related messages were created for banner ads on radio and television station web sites

In addition, the City used print media as a means of providing outreach. Five residential BMP guide booklets that were developed in FY 2009 were being utilized to promote proper BMP implementation. The booklets reinforce the updates made in 2008 to the City's storm water ordinance that requires residents to implement minimum BMPs to reduce storm water pollution. The five topics covered include:

1) vehicle maintenance
2) pet waste disposal
3) wash water and irrigation runoff
4) trash storage and disposal
5) landscaping

Think Blue created Spanish versions of the booklets in FY 2010, which are currently being printed, and will be available in FY 2011. The booklets are currently utilized by Code enforcement Officers as an educational outreach mechanism and *Think Blue* staff to distribute at various community events.



Example of Residential BMP Booklet – Residential Guide #3

Regional Residential Education Program

Think Blue was a sponsor of both the 2009 and 2010 San Diego County Fairs during FY 2010. *Think Blue* utilized pet and automotive-themed display booths and provided targeted information and giveaways to reach pet owners and auto enthusiasts. *Think Blue* also sponsored the Fair's "EnviroDay" on June 19, 2010 and invited members of the Regional Residential Sources Workgroup to distribute regionally-themed information. Additional information regarding Regional Residential Education activities for FY 2010 will be included in the Regional Urban Runoff Management Plan (RURMP) Annual Report submitted to the San Diego RWQCB in January 2011.

Management and Disposal of Used Oil and other HHW

ESD held eight auto product recycling events to provide City residents with opportunities to properly dispose of used oil, oil filters, and contaminated oil. ESD promoted the events in the Union Tribune and Pennysaver inserts, and produced ads in Spanish, Tagalog, and Vietnamese. During FY 2010, the Auto Product Recycling Event Insert for the Union Tribune was revised to be double-sided and have a targeted message for motorsport enthusiasts to "Take the Last Step" and recycle used motor oil and oil filters. Further information regarding the event promotional material is summarized in **Table 6-1**.

Table 6-1: FY 2010 ESD HHW Program Education and Outreach to the Public

Outreach Material	Target Audience[3]	# of times	Estimated # of people targeted
Auto Product Recycling Event Schedule – distributed to residents calling hotline for information	4	7,940	14,057
Auto Product Recycling Union Tribune Car Calendar in the weekly "Wheels" section	4	47	Circulation is 275,000 for each publication and it was included in 47 publications
Auto Product Recycling Info via Government Access Cable Channel video bulletin board	4,5	20,000	Unknown
Auto Product Recycling Event PennySaver Inserts	4,5 (all mailing addresses in selected zip codes)	8	Unknown
Used Oil & Oil Filter Collection/Recycling Education Power Site Web Ads	4	2	Unknown
Auto Product Recycling Event San Diego Union Tribune Inserts	4,5 (all mailing addresses in selected zip codes)	8	Unknown
Auto Product Recycling Event Flyer Water Bill Insert	4,5	1	Circulation is 270,000
Auto Product Recycling Event San Diego Auto Connection Insert – distributed at Used Car Sales Events at Qualcomm Stadium	4	2 Events	2,000
Auto Product Recycling Event Ad in The Filipino Press	4, 5	7	Circulation is 25,000 for each publication and it was included in 7 publications
Auto Product Recycling Event Ad in The Philippine Mabuhay News	4, 5	5	Circulation is 75,000 for each publication and it was included in 5 publications
Auto Product Recycling Event Ad in the El Latino newspaper	4, 5	8	Circulation is 80,500 for each publication and it was included in 8 publications
Auto Product Recycling Event Ad in Tieng Viet newspaper	4, 5	8	Circulation is 5,000 for each publication and it was included in 8 publications
Targeted Auto Product Recycling email announcements, car club calendars, or web postings[4]	4,5	10	3,700

3 1. Construction Site Owners and Developers; 2. Industrial Owners and Operators; 3. Commercial Owners and Operators; 4. Residential Community, General Public, and School Children; 5. Under-represented audiences in 1-4.
4 Targeted outreach included such groups as Miramar College Auto Tech Students, Mira Mesa High School Auto students, San Diego Automobile Connection Club, Porsche Club, BMW Car Club, Southwestern College Auto Tech students

Household Hazardous Waste Collection

ESD collected 464 tons of HHW as shown in **Table 6-2** during FY 2010. By law, HHW cannot be collected through regular refuse collection. When HHW is found, drivers tag the waste. The tag explains the proper disposal method for the HHW and lists the City's HHW hotline (858-694-7000) where more information can be obtained on proper HHW disposal methods. Public outreach was primarily provided through ESD customer service phone line. In addition, ESD landfill staff and the Miramar Recycle Center staff referred many residents to the HHW facility for proper disposal of HHW in FY 2010. The City's Miramar HHW facility was open 47 Saturdays during the respective reporting period and accepted all types of HHW from 9,220 participants.

Table 6-2: FY 2010 Environmental Services HHW Collection Data.

Event/Activity	HHW Collected (tons)
Load Check Program	17
Auto Product Recycling Events	28
HHW Transfer Facility	412
Door-to-Door Collection	7
Total	**464**

6.4.2 Verification of BMPs

Verification and enforcement of the Minimum BMPs for Residential Areas and Activities occurred at the jurisdictional level. During FY 2010, the Storm Water Hotline, (619) 235-1000, was a tool provided to the public so they could report violations of the Storm Water Ordinance. Violations were also recorded as observed by Code enforcement staff in the field. During FY 2010, Code enforcement staff conducted 640 investigations at residential locations (**Appendix L**).

Investigations are primarily tracked by type of substance discharged. **Table 6-3** shows the FY 2010 residential investigations by discharge type.

Table 6-3: FY 2010 Residential Investigations by Type

Type of Observed Substance	Number of Investigations
Automotive Fluids	124
Blank (data entry error – nothing entered)	11
Construction Waste (e.g., cement-like material)	47
Food Waste	1
Green Waste	15
Hazardous Materials	3
Illegal Connection	2
No Discharge	1
Other	35
Paint	40
Pesticide	1
Pet Waste	13
Petroleum Hydrocarbons (e.g., transmission fluid, oil, gasoline)	3
Pollutants on Impervious Surfaces	2

Type of Observed Substance	Number of Investigations
Pool Discharge	30
Sediment	27
Sewage	55
Trash	5
Wastewater (this includes wash water, car washing water, power washing water)	235
Total	**640**

As a result of the investigations conducted by the Storm Water Pollution Prevention Division's Enforcement and Inspections Section, the enforcement actions in **Table 6-4** were taken. It is important to note that Civil Penalties noted in the database were recommended and may have not necessarily been issued during the respective reporting period. The recommended Civil Penalties need to go through a review process before they are issued to a responsible party. During FY 2010, the Civil Penalty noted below was reviewed and determined to not be issued. Instead of the Civil Penalty a $500 fine was issued.

Table 6-4: FY 2010 Residential Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Blank (data entry error – nothing entered)	7
Citation	119
Civil Penalty	1
Education	91
Found to be Exempt	3
Letter	93
No Action Taken	64
No Evidence Found	63
Not Visited	8
Notice of Violation	171
Referred to another Department	15
To be Determined	5
Total	**640**

There were five investigations where a follow-up was scheduled and the enforcement action was to be determined. There were also seven entries where the enforcement action was left blank in the database due to data entry errors, and eight investigations that were not conducted. The eight sites were reported but were not visited as a result of staff oversight. When the issue was identified it was too late to conduct an investigation. In order to help prevent this situation from occurring again, the Enforcement and Inspections Section is producing bimonthly report of the investigation database. As part of this quality control procedure, the reports are reviewed to make sure that all hotline calls are investigated. Investigations where no responsible party could be identified after a thorough investigation resulted in a "no action taken" classification, and the discharge was most often abated and cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

As a result of the 640 residential investigations, the Storm Water Pollution Prevention Division's Enforcement and Inspections Section conducted 156 follow-up inspections, and compliance was achieved at 618 of the 640 residential investigations. There were eight sites

where no investigation occurred as noted above, and there are 14 sites that are still in progress. The Enforcement and Inspections Section is continuing to work with the residents at these 14 locations in order to make sure that compliance is achieved. Additionally, it is important to note that 11 of the 14 in progress investigations were conducted in June 2010 and the follow-up was not completed at the time of this reporting.

7 ILLICIT DISCHARGE DETECTION AND ELIMINATION

7.1 INTRODUCTION

Per RWQCB Addendum No. 2 to Order R9-2007-0001, the City will submit this section in its entirety on December 15, 2010.

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8 EDUCATION

8.1 INTRODUCTION

Think Blue is the City's storm water education program for both external and internal audiences, and is managed by the Storm Water Department Pollution Prevention Division's Education and Outreach Section. *Think Blue* is a multi-faceted effort which encompasses education and outreach to a variety of audiences including general residents, school-aged children, Hispanic and underserved communities, commercial and industrial businesses, construction developers and municipal employees. The program utilizes a number of outlets to promote storm water pollution prevention advocacy including mass media, public relations, community events, and training for both businesses and municipal employees. This section identifies the actions the City undertook during the reporting period to meet program objectives and Municipal Permit requirements. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.5 of the Municipal Permit.

8.2 STAFF TRAINING ELEMENT

Think Blue continued to spearhead the development and delivery of general storm water issue awareness to City employees whose primary job assignments may have little or no impact or relation to storm water. Individual departments, particularly those with field crews, which have more opportunities to cause potential discharges into the storm drain system, were responsible for training employees in storm water BMPs.

Training specifics include:

Municipal General Storm Water Training

New Employees

In FY 2010, *Think Blue* updated the storm water training module for general employees. A new training video was developed and produced, entitled, "Storm Water News You Can Use". The new training is focused on presenting storm water BMPs for City employees (to use at home and at work) in an entertaining and comprehensive way. In addition, a newly developed PowerPoint presentation was added as a component of the training. In response to the City's new quarterly training schedule, *Think Blue* conducted 6 monthly and two quarterly trainings at the City's "New Employee Orientation" (NEO) workshops. Newly hired City staff who were in attendance (between 35-55 per workshop) received a basic introduction to storm water issues through the new PowerPoint and "Storm Water News You Can Use" video training module created by *Think Blue*.

During the reporting period, 268 new employees received training. All staff who attended were given a pre-test and a post-test containing questions related to storm water and the topics covered in the training. In FY 2010, the pre- and post-test questions were revised to better assess an increase in knowledge of storm water issues among new employees. Statistical analyses revealed that the participants achieved higher scores after receiving the storm water training. Assessment analysis determined the average score on the pre-test was 3.7 out of 5 (74%), and the average score on the post-test increased to 4.89 out of 5 (98%). The video is also accessible on the videos page of the *Think Blue* website at http://www.sandiego.gov/thinkblue.

Existing Employees
During FY 2010, the Pollution Prevention Division began formulating ways to incorporate the new storm water training video into the "refresher" storm water training for existing City employees. The refresher training is intended to be given every two years to City staff with regular access to a computer. Research was conducted to determine the feasibility of implementing a training that contained a knowledge assessment component, and was administered through "e-tests" to City employees who were randomly selected to participate. In FY 2010, the City centralized employee training functions, and the Division began the development of the computer based training module in conjunction with the Employee Training Division and the web development team.

City Council
In an effort to keep members of the City Council informed and aware of local storm water issues, permit compliance, and state and local regulations, the Storm Water Department continued to schedule informational briefings with council members and staff throughout FY 2010. This fiscal year, emphasis was placed on educating Council members regarding the core functions of the Storm Water Department, and upcoming water quality CIP projects. Storm Water staff provided informational briefings to individual Council members and additional briefings to Council members and staff have been scheduled for FY 2011.

Activity-Specific Storm Water Training

Municipal Development Planning
City staff responsible for construction and grading review received training during FY 2010. The training information is summarized in **Table 8-1**. In addition to the training listed in **Table 8-1**, DSD Land Development conducted 5 in-house trainings for all applicable staff on Water Quality Technical Report (WQTR) review and the critical contents of a WQTR. DSD Land Development staff was also provided with "Construction Site Best Management Practices" educational posters and brochures during FY 2010. This material provided easy to follow graphic representations of steps that construction site managers and workers can reference to help them prevent debris, sediment and other pollutants from leaving construction sites and entering the storm drain system.

The Pollution Prevention Division's engineering staff assists other City Departments (such as ECP and DSD) with the training and implementation of the municipal storm water development planning requirements. In order to stay informed regarding new development planning storm water information and policies, Division staff received training from a variety of sources. During FY 2010, Division staff attended the following trainings:

- CASQA Quarterly Meeting Webcast (September 2009)
- Storm Water Treatment Training with Gary Minton (October 2009)
- CASQA 2009 Conference (November 2009)
- San Diego County SUSMP Seminar (March 2010)
- ASCE LID Conference (April 2010)

Additionally, staff from the Pollution Prevention Division's Construction and Development Standards section conducted an LID Workshop for approximately 50 City of San Diego upper management staff members. The Pollution Prevention Division also distributes the *Stormwater* Magazine and *Erosion Control* magazine as additional informative resources to Division staff.

Table 8-1: FY 2010 Municipal Development Planning Training Information

Training Module	Topics Covered				Date	Type of Staff Trained	# of Staff Trained
	Federal, state, and local water quality laws and regulations applicable to Development Projects	Connection between land use decisions and short and long term water quality impacts	How to integrate LID BMP requirements into the local regulatory program and requirements	Methods of minimizing impacts to receiving water quality resulting from development			
Storm Water Department's bi-weekly meetings with DSD staff	X	X	X	X	ongoing	Engineers	5
Permanent BMP Requirements Training, Session #1	X	X	X	X	8/6/2009 and 8/11/09	Project Managers, Engineers & Planners	50
Permanent BMP Requirements Training, Session #2	X	X	X	X	9/30/2009 and 10/7/09	Project Managers, Engineers & Planners	50
Storm Water and Redevelopment Training	X	X	X	X	11/18/2009	Project Managers, Engineers & Planners	24
Permanent BMP Requirements Training, Session #2	X	X	X	X	7/22/09 and 7/28/2009	Project Managers, Engineers & Planners	81
Permanent BMP Requirements Training, Sessions	X	X	X	X	1/14/10 and 1/21/10	Project Managers, Engineers & Planners	98
Statewide General Construction Permit	X	X		X	5/18/10 and 5/25/10	Project Managers, Engineers & Planners	80
Statewide General Construction Permit	X	X		X	6/2/10, 6/10/10 and 6/14/10	Project Managers, Engineers & Planners	180
LID Design Manual		X	X	X	1 training	DSD Land staff	8
WQTR review standards	X	X	X	X	5 trainings	DSD Land Staff	8

Training Module	Topics Covered				Date	Type of Staff Trained	# of Staff Trained
	Federal, state, and local water quality laws and regulations applicable to Development Projects	Connection between land use decisions and short and long term water quality impacts	How to integrate LID BMP requirements into the local regulatory program and requirements	Methods of minimizing impacts to receiving water quality resulting from development			
Storm Water Design Manual Review	X	X	X	X	Weekly from 7/1/2009 to 4/7/2010	DSD-Land staff	8
Vendor BMP Presentation			X	X	1 session	DSD Land Staff	8

Municipal Construction Activities
All staff responsible for construction, building, code enforcement, grading review, inspections, and other responsible construction staff have received training during FY 2010. The training information is summarized in **Table 8-2**.

The Pollution Prevention Division also conducted activity-specific training for staff during FY 2010. The Pollution Prevention Engineering staff is responsible for assisting other City Departments with the implementation and training of municipal construction activity requirements. Staff therefore receives training from a variety of sources in order to stay informed of any new storm water construction information. During FY 2010 staff attended the following trainings:

- CASQA Quarterly Meeting Webcast (September 2009)
- CASQA 2009 Conference (November 2009)
- CASQA BMP Web Portal: Tools for Complying with the New Construction General Permit (June 2010)
- Building Industry Association Construction Permit Training (June 2010)

Additionally, the Pollution Prevention Division also distributes the *Stormwater* Magazine and *Erosion Control* magazine as additional informative resources to Division staff.

Municipal Industrial/Commercial Activities
Industrial and commercial staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities received the required annual training as summarized in **Table 8-3**. In addition to the trainings noted in the table, the contracted inspectors for the City also received inspection manuals. The manuals include instructions on how to complete the inspection form, including details about how each BMP question on the form should be answered. General Industrial Permit subjectivity information is included in the manual as well. This information includes a subjectivity flow chart and table of SIC codes in relation to their Industrial Permit subjectivity.

Table 8-2: FY 2010 Municipal Construction Activity Training Information

Training Module	Topics Covered						Date	Type of Staff Trained	# of Staff Trained
	Federal, state, and local water quality laws and regulations applicable to construction and grading activities	Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities	Connection between construction activities and water quality impacts	Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application	Current advancements in BMP technologies	SUSMP requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms			
Wet Weather Training	X	X	X	X	X		10/13/2009, 10/14/2009, 10/15/2009	ECP Field – Resident Engineers	75
Permanent BMP Training		X				X	2 trainings	ECP Field staff	80
State General Construction Permit Training	X		X				2 trainings	ECP Field staff	80
Construction Storm Water Compliance Seminar	X			X			1 training	ECP Field staff	1
Storm Water Pollution Prevention Plan Web Seminar	X					X	3 trainings	ECP Field staff	3
Construction Management Academy and Storm Water Pollution Prevention Presentation	X					X	3 trainings	ECP Field staff	75

Table 8-3: FY 2010 Industrial and Commercial Training Information

Training Module/Item	Topics Covered			Date(s)	# staff trained
	Inspection and enforcement procedures	BMP Implementation	Review of monitoring data		
Storm Water Regulations and Inspections	X	X		2/4/2010	25
California EPA Inspector Training (regional)	X			3/23/2010	16
Photography for Code Compliance	X			4/8/2010	13
Storm Water Sampling	X			5/20/2010	7
Inspection Refresher Training	X	X		7/13/2009, 2/1/2010	13
Grease Bins and PDPA		X		7/17/2009	5
Investigation Case Reviews	X			Bi-monthly	7

Other Municipal Activities
Departments that performed work activities specifically identified in the Municipal Permit and/or performed work that directly impacted storm water quality provided activity-specific training sessions for their employees. In general, the trainings introduced the required standard operating procedures (work processes, functions, and behaviors) that incorporate the storm water minimum BMPs in order for staff to prevent illegal discharges into the City's storm drain system. During FY 2010, City Departments/Divisions conducted over 250 activity-specific trainings for staff (see **Appendix S** for more details).

8.3 EDUCATIONAL OUTREACH ELEMENT

In addition to municipal staff, the Permit requires the City to provide storm water education to the following target audiences:

- Commercial and Industrial owners and operators
- Residential Community, General Public, and School Children
- Construction site owners and developers

This section describes the education and outreach FY 2010 efforts for the specific target audiences. In addition, new development, construction, and industrial/commercial target audience outreach programs are also discussed in their individual sections of this report.

8.3.1 Outreach for Specific Target Audiences

8.3.1.1 Industrial, Commercial Owners and Operators, and Construction Site Owners and Developers

Think Blue's education and outreach goals include raising awareness and knowledge as well as encouraging behavior change in key target audiences. In FY 2010, *Think Blue* continued to promote minimum BMPs required under the Storm Water Ordinance adopted in FY 2008. These BMP requirements are included in Appendices X, XI, and XII, in Section 3.0, "Development Planning", in Section 4.0, "Construction", and in Sections 6.X of each municipal section of the City's 2008 JURMP. In accordance with the City's JURMP, BMPs were promoted and presented to the various target audiences listed above through a variety of outreach tools including informational booklets and public service announcements on radio, television and online outlets. *Think Blue* also began creating the companion BMP booklets designed for businesses focusing on materials storage, wash water, commercial vehicle maintenance, trash storage, landscaping, employee training and storm drain protection. For information on the education and outreach conducted for Commercial and Industrial Sites/Sources, Mobile Businesses, New Development, and Construction Owners and Operators please refer to Section 5.2.4.4, Section 5.3.4.2, Section 2.4.3.9, and Section 3.4.7 of this Annual Report respectively.

Business Outreach: Focus Groups
Think Blue also hosted several Focus Groups to conduct qualitative research to assist in its efforts to improve the *Think Blue* Program's communications and outreach to businesses. In June 2010, *Think Blue* completed a total of seven focus groups among business owners and managers who were in either the restaurant industry, the automotive repair industry or in the landscaping industry.

8.3.1.2 General Public

This subsection describes the venues and methods the *Think Blue* education and outreach program used to deliver its pollution prevention and storm water awareness messages to the general public, as well as a description of education and outreach activities employed by other City departments or divisions to augment *Think Blue*'s activities. For example, *Think*

Blue brochures and messages were distributed to the public by other city departments via City water bill inserts, newsletters, and public information racks in various City offices.

8.3.1.2.1 Underserved Communities

The Municipal Permit requires jurisdictions to conduct education efforts toward several audiences including underserved target audiences, as well as those audiences engaged in high risk behaviors and/or "allowable" behaviors and discharges. During FY 2010, the *Think Blue* program continued to formulate a comprehensive education and outreach program for underserved communities and target audiences.

Hispanic Outreach

Think Blue formed partnerships with local non-profits including I Love A Clean San Diego, the Media Arts Center and Tijuana River National Estuarine Research Reserve in an effort to engage and educate the Hispanic community within San Diego. *Think Blue* staffed a number of informational booths and handed out educational materials in Spanish at a number of Hispanic community events such as El Latino Film Festival. Additional events are detailed in **Table 8-5**. Other efforts included providing bilingual staff to answer questions and distribute informational surveys to assess knowledge of storm water issues among Hispanic and Spanish-speaking residents. *Think Blue* continued to air public service announcement in Spanish on both Spanish language television and radio stations. Other departments in the City, such as ESD, also utilized print media when targeting underserved audiences to inform individuals about auto product recycling events as noted in Section 6, Residential, **Table 6-1**. The City will continue to look for opportunities to reach other underserved target audiences including the Vietnamese and Filipino communities, among others.

8.3.1.2.2 Automotive Outreach

Think Blue began an automotive outreach campaign in FY 2009 which continued into FY 2010. Target audiences of auto enthusiasts were reached through *Think Blue*'s participation in and sponsorship of a variety of auto themed events, including the San Diego International Auto Show, the FMX and Monster Truck Exhibition at the San Diego County Fair, and smaller community events such as Cruise for a Cause. At auto themed events, *Think Blue* distributed educational material such as the BMP Guidebooks and the Green Wrench Guide. In addition, BMP incentive items were distributed to encourage compliance amongst the target audience. Incentive items included funnels and shammy towels to prevent fluid spills, and tire gauges to encourage proper tire pressure. Of the individuals who attended these events and completed a *Think Blue* survey (2,998), nearly 87% were concerned about automotive fluid as a form of pollution, and 86% reported that they knew the proper method for cleaning up a spill.

8.3.1.2.3 Pet Owner Outreach

In FY 2008 and FY 2009, *Think Blue* conducted preliminary pilot study outreach regarding pet waste (specifically dog waste) issues. Activities included the development of a pet waste focused BMP Guidebook (see Section 6.4.1) and airing of the Pet Waste PSA on both TV and radio (see Section 8.3.1.2.5). Preliminary research included a Community Based Social Marketing (CBSM) Study conducted in La Jolla Shores in FY 2008 and FY 2009, and the inclusion of pet waste awareness questions on the Annual Telephone Survey. Research results helped drive the development of campaign messaging and activities. In FY 2010, *Think Blue* launched a more aggressive campaign intended to reach pet owners (specifically dog owners) which included increased air-time for the Pet Waste BMP PSA, and attendance at multiple dog owner events to include Dog Days of Summer, the Doggie Street Festival, the Big Dogs Rock adoption event (in conjunction with media partner 101.5 KGB radio), and the Gaslamp Holiday Pet Parade. In addition, the Storm Water Department initiated two pet

waste pilot studies focused on the use of pet trash bag dispensers. These studies are reported in the City's WURMP Annual Reports.

8.3.1.2.4 Advertising

In FY 2010, media advertising plans placed an emphasis on targeting a younger male audience as well as the traditional middle-aged female audience. Research conducted by the City has shown that young men are more likely to engage in high risk behaviors, have less knowledge of storm water issues, and are more likely to pollute than other demographics. Therefore, the media mix continued to focus on the male demographic, including sports and automotive programming on television and radio stations. A percentage of the advertising still targeted an older female demographic in order to maintain consistency with the previous year's campaign, and to continue to build awareness of the *Think Blue* brand and storm water issues across both genders.

In addition to continuing with the popular "Karma"-themed and Fowl Water public service announcements (PSAs) which aired during the first half of FY 2010, *Think Blue* continued to air the six new PSAs from FY 2009 entitled "Pollution Prevention Requirements". The BMP PSAs were produced for TV and radio in both English and Spanish, and focus on the City's storm water ordinance that requires residents and businesses to implement minimum BMPS to reduce pollution. Additionally, the City partnered with various media outlets that produced shorter versions of the BMP PSA to educate the public about easy ways they can prevent pollution.

Think Blue expanded its outreach to businesses by working with three local radio stations (KIFM-FM, XTRA-FM and KYXY-FM) to create a contest encouraging businesses to contact the stations and describe what their businesses do to "*Think Blue*" and prevent pollution in San Diego. More than 400 entries were received between the three stations, and prizes were awarded to those businesses that had the best or most innovative responses.

Additionally, television and radio media opportunities in FY 2010 continued to include several community events such as music festivals, car shows and live remotes to widen *Think Blue's* exposure to the target demographics. Other advertising elements included the incorporation of *Think Blue* tips and messaging on environmental-themed web pages of several media outlets. Local radio personalities from XTRA-FA and KGB-FM provided ad lib endorsement spots discussing pollution and storm water issues. This was done to encourage listeners to change their behaviors based on direct appeal from someone they like and trust as opposed to a generic PSA. *Think Blue* also leveraged partnerships with San Diego sports teams including the San Diego Padres, San Diego Chargers, and the San Diego State Aztecs in order to reach the young male target audience via sporting events and venues.

Think Blue also showed its popular Karma PSA in six movie theaters throughout San Diego. The spots ran prior to the feature movie and played intermittently on television screens located in the theater lobby. The spots began playing Labor Day weekend in FY 2010 and made an estimated 328,658 impressions during this reporting period.

Qualcomm Stadium also reached approximately 50,000 individuals by displaying the *Think Blue* message on the marquee at the stadium 20 times during the reporting period. Qualcomm Stadium also had signage to promote the proper disposal of trash and recycling during events at the Stadium and all inlet grates are painted with the "No dumping drains to Ocean" message. There were approximately 900,000 individuals at the Stadium during FY 2010 who may have been influenced by this signage.

8.3.1.2.5 Think Blue Media Purchase and PSA Airtime

During FY 2010, *Think Blue* aired PSAs on both local radio and television stations reaching the English- and Spanish-speaking communities. The bulk of the media buy in FY 2010 was devoted to a number of different messages including the *Think Blue* Pollution Prevention Requirement PSAs, which covered the topics of pet waste, automotive pollution, and over-irrigation, among others. All of the PSAs can be found on the City's *Think Blue* website (http://www.sandiego.gov/thinkblue/news/videos.shtml). The television and radio PSAs aired a total of 4,869 times and made an estimated 51,254,732 impressions. Additionally, placement on media websites resulted in an estimated 15,346,734 impressions during the reporting period.

In an effort to maximize the value of its media buy, *Think Blue* also secured extensive in-kind contributions from its media partners. Radio and television partners provided $573,491 of in-kind contributions. Leveraged in-kind airings are provided when time is available in the advertiser's inventory, which is not evenly distributed through the 12 month reporting period. Additionally, *Think Blue* received an estimated $247,347 of in-kind contributions through free placement on the media outlets websites.

Think Blue also increased emphasis in its online presence with SanDiego.com in an effort to reach the residents and tourists with pollution prevention and storm water education messages. The site (www.sandiego.com) spotlighted *Think Blue* events and posted pollution prevention messages on its homepage, Facebook page and Twitter feeds. The campaign yielded 978,745 impressions with 680 direct clicks through to the ThinkBlue.org page.

8.3.1.2.6 Print Media

Think Blue utilized a number of community newspapers for outreach in FY 2010, including the San Diego Daily Transcript, Downtown News, Beach and Bay Press, La Jolla Village News and La Jolla Light. Community papers are primarily used to notify the public about storm water public meetings, presentations and other project specific updates, such as changes to the City's commercial inspections program and information about when the *Think Blue* booth will appear at a particular community event within the paper's readership.

8.3.1.2.7 Community and Special Events

Community and special events offer a variety of opportunities for the *Think Blue* program to educate the public about storm water pollution prevention. The table below summarizes the community and special events that *Think Blue* implemented and/or participated in during FY 2010 in order to gain access to both the general public and specific target audiences for the purposes of education. A summary of the larger events attended by *Think Blue* is provided in **Table 8-4**.

In order to assess knowledge and awareness of storm water issues as well as program effectiveness, *Think Blue* solicited attendees to complete a brief survey about *Think Blue* and storm water issues. Members of the public who visited the *Think Blue* booth at various community events were encouraged to fill out one of several versions of a short 5-6 question survey. In addition to the general event survey card previously used, *Think Blue* developed three new survey cards focused on specific pollutants, including pet waste, automotive waste and litter in FY 2010 (see sample event survey cards in **Appendix T**). The cards also included an option for participants to provide contact information to be added to a mailing list. The contact list will serve as a mechanism for additional public participation opportunities for ongoing outreach, including newsletters, emails and for assessment activities such as focus groups.

Think Blue event survey cards were collected from booth visitors at a variety of events including, the 2009 and 2010 San Diego County Fair, the FilAm Festival, the Adams Ave Street Fair, Coastal Cleanup Day, December Nights, the 2009-10 San Diego International Auto Show, the Holiday Bowl Balloon Parade, SDSU sporting events, the Multi-cultural Festival, the San Diego Science Festival, San Ysidro Festival, Gaslamp Jazz Festival, the Doggie Street Festival and Creek to Bay. The majority of the surveys were collected at the Auto Show (26%), the County Fair (21%), the Science Festival (10%), December Nights (8%) and the Jazz Festival (5%).

Results of the *Think Blue* event survey efforts are below:

- Survey data were collected at 28 events between July 3, 2009 and June 29, 2010.
- A total of 10,762 event survey cards were collected
    - 4,537 were general storm water surveys
    - 1,484 were pet waste surveys
    - 2,998 were automotive surveys
    - 1,743 were litter surveys
- Fifty-six percent (56%) of the individuals who completed an event survey had heard of *Think Blue San Diego* prior to attending the event.
- Sixty-one percent (61%) of respondents knew that storm water is not treated
- Fifty-two percent (52%) of respondents listed an address in the City of San Diego, with 89% from San Diego County
- Approximately 4% of all of the surveys completed were completed in Spanish.
- Nearly 56% of those who filled out a survey card provided some type of contact information (approximately 5,000 people)

While the City conducted jurisdictional outreach, it is important to note that many of the City's outreach events were watershed focused and as such will be included in each of the WURMP Annual Reports, for which the City is a participating Copermittee. This will be a continuing trend as the City's outreach events become more audience, pollutant, and watershed specific. Event participation by the education program has become more sophisticated and via the surveys is now better able to gauge the efficiency of attended community events. As the data above indicates, audiences tend to be reached more effectively at events. Attending smaller community and neighborhood events has also proven to be effective at reaching specific target audiences or for focusing on specific pollutants. While *Think Blue* intends to continue to staff community events, each event, target audience, and outreach topic will be examined in order to best reach the specific demographic based on budget and return on investment.

Table 8-4: FY 2010 Community and Special Events

Date	Event Name	Organization	Type of Event	Location	Demographic	Attendance
7/3/2009	San Diego County Fair	State of CA, 22nd Agricultural District	Regional Fair	Del Mar Fair Grounds	General Public	1,000,000
7/8/2009	Junior Lifeguard's Environmental Day	*Think Blue*	Education/Outreach	Mission Bay	Male skewed	500
7/11/2009	Life's a Beach- KYXY Live Radio Remote	96.5 FM KYXY Radio	(No Booth)	Belmont Park/Wavehouse	General Public	No Participation Needed
7/17/2009	Harry Potter Movie Premiere	*Think Blue*	Education/Outreach	Mission Valley Theatre	General Public	1,000
7/18/2009	Scripps Birch Aquarium Lightbulb Exchange	*Think Blue*/ Environmental Services Department	(No Booth)	Scripps Birch Aquarium	General Public	200
7/26/2009	Extreme Auto Fest	91X FM Radio	Education/Outreach	Qualcomm Stadium	Underserved	8,000
8/6/09	Jr. Lifeguards Enviro Day	*Think Blue*	Education/Outreach	Mission Bay	Children/Teens	500
8/7/2009	Life's a Beach- KYXY Live Radio Remote	96.5 FM KYXY Radio	(No Booth)	Belmont Park/Wavehouse	General Public	No Participation Needed
8/9/2009	Fiesta Del Sol	Justice Overcoming Boundaries	Community Festival	Logan Heights	Underserved	60,000
8/15/2009	Cruise for a Cause	92.5 Radio	Education/Outreach	Chula Vista	General Public/Male Skewed	4000
8/18/2009	Dog Days of Summer	SD Padres	Education/Outreach	Petco Park	General Public	40,000
8/24/2009	SOPHIE Radio College Campus Appearance	103.7 Sophie Radio	(No Booth)	La Mesa College	College	10,000
9/1/2009	91X College Tour	91X FM Radio	(No Booth)	Chipotle Restaurant	College	100
9/2/2009	SOPHIE Radio College Campus Appearance	103.7 Sophie Radio	(No Booth)	USD Campus	College	10,000
9/2/2009	91X College Tour	91X FM Radio	(No Booth)	Mira Costa College	College	8,000
9/3/2009	91X College Tour	91X FM Radio	(No Booth)	CSU San Marcos/Palomar College	College	4,000
9/7/2009	SOPHIE Radio College Campus Appearance	103.7 Sophie Radio	(No Booth)	City College	College	No Participation Needed
9/8/2009	91X College Tour	91X FM Radio	(No Booth)	City College	College	2,000
9/9/2009	91X College Tour	91X FM Radio	(No Booth)	Grossmont College/Mesa College	College	4,000
9/12/2009	SDSU Aztec Football Game	SDSU	Football Game	Qualcomm Stadium	College/Male Skewed	50,000
9/15/2009	91X College Tour	91X FM Radio	(No Booth)	USD Campus	College	4,000
9/21/2009	San Diego Women's Foundation EnviroFair	San Diego Women's Foundation	Education/Outreach	Mission Trails Regional Park	General Public/	100
9/24/2009	SOPHIE Radio College Campus Appearance	103.7 Sophie Radio	(No Booth)	UCSD Campus	College	No Participation Needed
9/26/09-9/27/09	Adams Avenue Street Fair	Adams Ave. Business Association	Music Festival	Adams Ave.	General Public	100,000
9/23/09-	2009 San Diego Film	San Diego Film Foundation	Film Festival	Gaslamp Quarters	General Public	18,000

Date	Event Name	Organization	Type of Event	Location	Demographic	Attendance
9/27/09	Festival					
10/3/2009	Filipino American Arts & Culture Festival	FilmAm Fest	Regional Fair	Paradise Hill	Underserved	12,000
10/3/2009	SDSU Aztec "Green Expo"	SDSU	Football Game	Qualcomm Stadium	College	45,000
10/9/2009	Mexican Consulate "Living Green" Event	Mexican Consulate	Education/Outreach	Little Italy	Hispanic/Underserved	300
10/24/2009	Coastkeeper Ocean Gala	San Diego Coastkeeper	Community Gala Event	Hotel Del Coronado	Local Stakeholders	400
10/24/2009	Kick Gas Festival	Metropolitan Transit Systems	Go Green Festival	Qualcomm Stadium	General Public	10,000
12/04/09-12/05/09	December Nights	City of San Diego Collaboration	Community Festival	Balboa Park	General Public	325,000
12/12/2009	6th Annual Winter Wonderland Snow Day	Otay Mesa Recreation Council	Education/Outreach	Montgomery-Waller Community Park & Rec Center	General Public	7,000
12/12/2009	Gaslamp Pet Parade	Gaslamp Quarter Association	Education/Outreach		Pet Owners	
12/30/2009	Holiday Bowl Big Balloon Parade	Holiday Bowl Association	Football Game	QUALCOMM Stadium	General Public	59,106
12/30/09-12/31/09	San Diego International Auto Show	San Diego Auto Association	Auto Show	San Diego Convention Center	General Public	75,000
1/1/10 - 1/3/10	San Diego International Auto Show (cont)	San Diego Auto Association	Auto Show	San Diego Convention Center	General Public	75,000
1/19/2010	9th Annual San Diego Multicultural Festival	SD Center City Development Corp/KUSI News	Multicultural Festival	Martin Luther King Jr. Promenade	General Public	20,000
2/13/2010	SDSU vs. UNLV Basketball Game	SDSU	Basketball Game	Viejas Arena (formerly Cox)	General Public	25,000
2/27/2010	Heritage Day Festival & Parade	Operation BHILD	Community Festival	Market Creek Plaza	Underserved	10,000
2/28/2010	Doggie Street Festival	Media Arts Center of San Diego	Dog Adoption/Festival	Liberty Station, Point Loma	General Public	1,000
3/11-3/21/2010	El Latino Film Festival	Media Arts Center of San Diego	Film Festival	Ultra Star Cinemas Mission Valley	Underserved	10,000
3/23-25/2010	Wild & Scenic Environmental Film Festival	Pro Peninsula	Environmental Film Festival	Ultra Star Cinemas Mission Valley	General Public	3,500
3/27/2010	San Diego Science Festival	UCSD/San Diego Science Alliance	Children's Science Fair	Balboa Park	General Public	100,000
3/27/2010	Cesar Chavez Day	Cesar Chavez Commemoration Committee	Public Awareness/Education	Logan Ave.	Underserved	5,000
4/14/2010	Jack in the Box Environmental Fair	Jack in the Box	Employee Environmental Fair	Jack in the Box Corporate Headquarters	Business Outreach	2500
4/15/2010	Scripps Research Institute EnviroFair	Scripps Research Institute	Employee Environmental Fair	Scripps Research Institute	Business Outreach	1500

Date	Event Name	Organization	Type of Event	Location	Demographic	Attendance
4/22/2010	Hamilton Sundstrand Environmental Fair	Hamilton Sundstrand	Employee Environmental Fair	Hamilton Sundstratn Building	Business Outreach	1000
5/1-5/2/2010	Cinco De Mayo Event	XEWT Channel 12 News	Community Event	Old Town	Underserved	1,000
5/15/2010	San Ysidro Festival	XLTN Radio	Community Festival	San Ysidro	Underserved	7000
5/22/2010	Hoops on the Beach	Holiday Bowl Association	Basketball Tournament	Crown Point	Male Skewed	400
5/29/2010	Jazz Festival	98.1 FM Smooth Jazz	Jazz Festival	San Diego Gaslamp Quarters	General Public	10,000
6/6/2010	World Oceans Day	SD Coastkeeper/UCSD/*Think Blue* Collaboration	Education/Outreach	La Jolla Shores	General Public	250
6/11/10-6/27/2010	San Diego County Fair	State of CA, 22nd Agricultural District	Regional Fair	Del Mar Fair Grounds	General Public	1,000,000
			Total Reached			**3,131,356**

The San Diego International Auto Show: The San Diego International Auto Show is a five day event that takes place every year at the San Diego Convention Center. The show is used to showcase new car models for the New Year as well as exotic cars, eco-friendly cars, and concept cars. In FY 2010, the Show also had a section dedicated to boats. The Auto Show is a family friendly event that featured a Jeep Ride and a kid day. Patrons could test drive new vehicles and explore the features of hundreds of models on display. For the second year, *Think Blue* sponsored the Eco-Center area of the Auto Show. The Eco-Center area was comprised of electric cars, hybrids, hydrogen powered vehicles, bikes and other earth friendly cars. The *Think Blue* booth is very popular among Auto Show attendees, and was consistently busy throughout the show. This event was an effective way to reach out to the auto enthusiast community and focus on preventing pollution caused by vehicles. *Think Blue* staff gave away items that are automotive specific, such as the oil funnel and absorbent shammy towel. The event attracted over a hundred thousand attendees over five days and gave *Think Blue* the opportunity to educate and raise awareness of the *Think Blue* program to thousands of people.

The San Diego City College Earth Fair: The San Diego City College Earth Fair is a school event open to the community, annually hosted by and held at San Diego City College. This was an excellent community event to reach college students of the Chollas Creek watershed. Many students and staff stopped by the table during passing periods between classes. The *Think Blue* booth was centrally located at the festival. The booths were primarily environmental non-profit organizations. Many visitors recognized the "*Think Blue*" brand but were not clear about the program. Some students were working on beach cleanup projects for classes and were particularly interested in getting extensive information from the booth. Some staff and community members did not recognize the "*Think Blue*" brand and were unfamiliar with the program. After additional explanation, many visitors stated that they had not been fully knowledgeable about the difference between the sewage system and the storm water system. All of the visitors wanted to be environmentally conscious, after learning more about the storm water system. They also recognized the importance in keeping the streets free of pollution. The event was a success with nearly all visitors filling out surveys and taking written materials and giveaway items.

San Diego Science Festival: In FY 2010, *Think Blue* once again participated in the San Diego Science Festival (SDSF) presented by the University of California, San Diego. The Festival, in its second year, is held in cooperation with over 200 companies, 100 schools, and hundreds of volunteers. *Think Blue* had a booth at the Science Expo on Saturday, March 27, 2010**.** Expo Day is a day-long event, which was originally held at Balboa Park, but in FY 2010 was moved to Petco Park in downtown San Diego to accommodate the 60,000 plus attendees. On Expo Day, exhibitors had some 300 hands-on activities, demonstrations, experiments, contests, and performances. The San Diego Science Festival was a collaboration of over 100 leading science organizations and was facilitated in part by BioBridge, a program of UC San Diego. The event brought together over 200 different booths which included more than 25 science-related performances. *Think Blue* was a Silver Sponsor and in collaboration with the organizers, provided a booth using a watershed model demonstration for children and families. The watershed model showcased an interesting way science and technology fit into our planet and the "green" act. The festival proved to be quite effective at helping students learn about science. Based on the final report provided by the Science Festival Staff, the majority of participants considered the SDSF extremely successful at providing examples of the science surrounding in everyday life, at inspiring attendees to learn more about science, and in many cases, it helped to improve the overall opinion of science and their interest in science related careers.

Doggie Street Festival: *Think Blue* participated in the 2010 Doggie Street Festival held at the Naval Training Center (NTC) Promenade in Point Loma. The Festival was free to the public and strived to educate the public on issues pertaining to animal safety, health and responsible pet ownership. The Festival aimed to increase public attention on issues surrounding pet homelessness in an effort to encourage the public to get involved helping rescue groups and shelters in their day to day efforts to save pet lives and achieve positive change. Also, pet adoption agencies participated free of charge to promote San Diego County breed-specific rescue groups and shelters with adoptable dogs. *Think Blue* was able to provide storm water outreach to over 3 dozen pet adoption agencies and thousands of attendees during the Festival.

8.3.1.3 Web Page

www.thinkblue.org provides a wide variety of storm water related information for residents and businesses. The Storm Water Department completed a redesign of both the www.thinkblue.org and www.sandiego.gov/stormwater websites to provide improved access and navigational ability for both sites. The site provides a number of resources including: program updates, downloadable program brochures, fact sheets, and various reports. Other information is available about Project SWELL, TMDLs and ASBS. As previously mentioned, both audio and video versions of *Think Blue* PSAs can be found on the website. BMP information and minimum BMP Fact Sheets are available for businesses and industries located within the City. In addition, the *Think Blue* page provides users with links to storm water and watershed education resources available from other organizations and institutions. The *Think Blue* website had 130,974 visits during FY 2010, averaging 10,800 visits a month; an increase in nearly 1,500 visitors a month from last year. A visit is a series of actions that begins when a visitor views their first page from the server and ends when the visitor leaves the site or remains idle beyond thirty minutes.

The Storm Water Department also maintains its own departmental website at http://www.sandiego.gov/stormwater. This site provides technical information about the department and provides links to the online storm water violations page: http://www.sandiego.gov/thinkblue/index.shtml. In this reporting period the website received 34,943 visits.

More information regarding both websites is available in Section 9, Public Participation, of this report.

Additionally, the Public Utilities Department provided a wide variety of information, including storm water, on their website during FY 2010. The Department provided informational videos on the website that could be accessed by the public, and the website was visited by an estimated 300,000 individuals.

8.3.1.4 Speakers Bureau

During FY 2010, the Storm Water Department continued to be utilized as experts regarding storm water issues. Department staff participated in four speaking engagements during the respective reporting period (**Table 8-5)**. In addition, many staff speaking engagements in FY 2010 were focused on watershed specific issues or projects (such as the ASBS in La Jolla) and is recorded in the FY 2010 WURMP Annual Reports.

Table 8-5: FY 2010 Speakers Bureau Events

Date	Event Type	Topic Covered	Audience	Estimated # of Attendees
7/23/2009	Meeting	Rain Barrels Program Overview	San Diego River WURMP workgroup	7
8/26/2009	Meeting	Storm Water Quality Protection in San Diego: New and Emerging Issues	San Diego Women's Environmental Council	16
9/9/2009	Meeting	Flooding Issues in Tijuana River Valley	Regulatory Agencies involved in the Tijuana River Valley Emergency Permit	20
4/15/2010	Meeting	Industrial and Commercial Compliance Program Training	Industrial Environmental Association	65
Total Number of Attendees				108

8.3.1.5 Collateral Materials

Table 8-6 identifies the *Think Blue* collateral materials available and distributed in FY 2010 to both general and targeted audiences. The italicized entries were new items for FY 2010. During FY 2010, the Pollution Prevention Division distributed a total of 86,370 materials, 82,643 of which were in English and 3,727 of which were in Spanish.

Table 8-6: FY 2010 *Think Blue* Collateral Materials by Target Audience

Category Title	English	Spanish	Municipal	Residential	Commercial	Industrial	Construction	Children	Quantity Distributed in FY 2010
Informational Material									
Think Blue Tips Brochures	4,265	643	X	X	X	X	X	X	4,908
Think Blue 3Cs Cards	966	314	X	X	X	X	X		1,280
IPM Pest Tip card sets	94	34	X	X					128
Think Blue Laminated Tip Cards	223	0	X	X	X	X	X	X	223
Mission Bay Postcard- Boater	981	126		X					1,107
Mission Bay Postcard- RV	208	79		X					287
Mission Bay Postcard- Welcome	1,315	76		X					1,391
Mission Bay Postcard- Dump Station Map	162	57		X					219
Kids Worksheets	100	0	X	X				X	100
Residential Guide #1 Wash Water and Irrigation Runoff	*466*	*10*	*X*	*X*					*476*
Residential Guide #2 Landscaping	*444*	*35*	*X*	*X*					*479*
Residential Guide #3 Vehicle Maintenance	*525*	*60*	*X*	*X*					*585*
Residential Guide #4 Trash Storage and Disposal	*350*	*15*	*X*	*X*					*365*
Residential Guide #5 Pet Waste Disposal	*545*	*35*	*X*	*X*					*580*
Green Wrench Guide	165	34			X	X			199
What's Cooking	160	0			X	X			160
Clean Construction Brochure	785	67	X	X			X		852
Incentive Items									
Brooms	10	0	X	X	X	X	X		10

Category Title	English	Spanish	Municipal	Residential	Commercial	Industrial	Construction	Children	Quantity Distributed in FY 2010
Dustpans	1,229	453	X	X	X	X	X		1,682
Magnetic Notepads	4,202	11	X	X	X	X	X	X	4,213
Think Blue Stickers	3,803	703	X	X				X	4,506
Pencils	7,028	774	X	X	X	X	X	X	7,802
Pet Trash Bag Containers	5,236	0	X	X				X	5,236
Pet Trash Bag Refills	3,001	0	X	X				X	3,001
Floating Key Chains	*1,356*	*0*	*X*	*X*					*1,356*
Eco-Friendly Pen	3,254	10	X	X				X	3,264
Frisbees	1,575	191	X	X				X	1,766
Backpack	6,093	0	X	X				X	6,093
Shammy Towel	2,420	0	X	X				X	2,420
Credit Card Holder (beach)	59	0	X	X	X	X	X		59
Air Freshener	1,485	0	X	X	X	X	X		1,485
Tire Gauges	2,273	0	X	X	X	X	X		2,273
Oil Funnel	1,164	0	X	X	X	X	X		1,164
BMP Poster	233	0	X	X	X	X	X	X	233
Think Blue Lanyard	100	0	X	X	X	X	X	X	100
Dog Bowl	906	0	X	X					906
Calendar	2,550	0	X	X				X	2,550
Rally Towels	3,373	0	X	X				X	3,373
Coloring Books	954	0	X	X				X	954
Coloring Crayons	948	0			X			X	948
Recycled Plastic Visor	*255*	*0*	*X*	*X*				*X*	*255*
Plant-A-Shape Herb Garden Bookmark	*249*	*0*	*X*	*X*					*249*
Garden Knee Pad/Stadium Cushion	*488*	*0*	*X*	*X*				*X*	*488*
Mission Bay Boater Poster 11"x17"	*23*	*0*			*X*	*X*			*23*
Water Bottles	*100*	*0*	*X*	*X*	*X*	*X*	*X*	*X*	*100*
Pocket Ashtray Keychain	*465*	*0*	*X*	*X*					*465*
Reusable Grocery Bag (Chico Bag)	*16,057*	*0*	*X*	*X*					*16,057*
Total Distributed	**82,643**	**3,727**							**86,370**

Other City Departments/Division also distributed additional collateral materials to target audiences in FY 2010 and the information is summarized in the following table.

Table 8-7: FY 2010 City Department/Division Collateral Materials Distribution by Target Audience

Department/Division	Collateral Material	Target Audience	Estimated # of people targeted
DSD Land	Construction Posters and brochures	1,2,3,4	Varies
DSD Land	Development process: Step by Step webpage	1,2,3,4	Varies
DSD Land	Proper SW pollution prevention practices video	1,2,3,4,5	Varies
DSD Land	Construction Posters and brochures	1,2,3,4	Varies
ESD's HHW Program	Customer Service Hotline	1,2,3,4	11,353
Fire	Boaters- Sewage/Bilge BMPs	4	200
Fire	Recreation Vehicle- Sewage BMPs	4	200
Fire	Beach Day Users- BMPs	4	200
Fire	Mission Bay Boater's Guide/Map	4	200
Public Utilities Department Wastewater Branch	Food Establishment Wastewater Discharge Program (FEWD)	3	3,500
Public Utilities Department Wastewater Branch	The FOG Program Brochures, Magnets, Grease Scrapers, Pencils, etc.	3,4,5	Varies
Public Utilities Department Wastewater Branch	School Education Tours of Treatment Plants	4	750
Public Utilities Department Wastewater Branch	Pt. Loma Wastewater Treatment Plant Brochure	2,3,4	Varies
Public Utilities Department Wastewater Branch	South Bay Water Reclamation Plant Brochure	2,3,4	Varies
Public Utilities Department Wastewater Branch	North City Water Reclamation Plant Brochure	2,3,4	Varies
Public Utilities Department Wastewater Branch	Metro Biosolids Center Brochure	1,2,3,4,5	Varies
Public Utilities Department Wastewater Branch	North City Water Reclamation Plant Brochure	1,2,3,4,5	Varies
Public Utilities Department Wastewater Branch	Industrial Wastewater Control Program (IWCP) Brochure	1,2,3,4,5	Varies
Public Utilities Department Wastewater Branch	Ocean Monitoring Brochure	4,5	Varies
Public Utilities Department Wastewater Branch	Water/Sewer Bill Inserts	2,3,4,5	275,000 Homes
Public Utilities Department Wastewater Branch	Public Utilities Department Wastewater Branch Brochure	2,3,4,5	Varies
Public Utilities Department Wastewater Branch	PUBLIC UTILITIES DEPARTMENT WASTEWATER BRANCH Energy Fact Sheet	2,3,4,5	Varies
Public Utilities Department Wastewater Branch	City Hall Elevator Posters	3,4	Varies
Parks and Recreation	Providing General Development Plan's (indicating all storm drains) along with Park permits if the activity could potentially impact a storm drain	4	1,176,000 (Est)
Parks and Recreation	BMP information handouts – distributed with permits issued by the Department to address potential pollutants that may result from activities	4	1,176,000
Parks and Recreation	Providing General Development Plan's (indicating all storm drains) to consultants/contactors/vendors if the activity they are performing could potentially impact a storm drain	3,4	230

Department/Division	Collateral Material	Target Audience	Estimated # of people targeted
Parks and Recreation	BMP Information handouts – distributed to consultants/contractors/vendors performing work within City Parks if the activity they are performing could potentially impact the storm drain	3,4	230
Parks and Recreation	Distributing outreach materials developed by the Storm Water Program to our recreation centers and permit centers for their counters, bulletin boards, and/or literature racks	4	30,723
Stadium	Visitor information provided and posted in various locations on proper disposal of trash	4,5	900,000
Stadium	BMPs for Stadium Vendors	3	50,000
Stadium	*Think Blue* Message on Friars Rd. Marquis	1,2,3,4,5	50,000
Stadium	Provide Vendors and Contractors access to Stadium activity specific BMPs	1,3,4	20,000
Street Division	Door-hangers with Storm Water Message	3,4	Varies
Public Utilities Department Water Branch	Annual Drinking Water Quality Report	1,2,3,4,5	550,000
Public Utilities Department Water Branch	Lakes Brochure and Insert	4	5,000
Public Utilities Department Water Branch	Letter to Miramar and Murray Residents	4,5	250
Public Utilities Department Water Branch	Customer Survey for Street Division Services	3,4	Unknown
Public Utilities Department Water Branch	Customer Survey for Water Operations Services	3,4	Unknown
Public Utilities Department Water Branch	City of San Diego Weekly Web Feature	3,4	Unknown
Public Utilities Department Water Branch	Annual Article on Lake Murray for *Mission Times Courier*	4	25,000
Public Utilities Department Water Branch	Water Bill Inserts	2,3,4,5	270,000
Public Utilities Department Water Branch	Water Conservation Calendar	3,4	10,000

8.3.2 Education for School Age Groups

Student-age directed outreach and education will continue to be a long-term commitment for the City's Storm Water Department. Through the "Project SWELL" elementary school curricula, the City will continue to educate school children about the importance of our recreational waterways and human-water interaction through a well-balanced, comprehensive and hands-on water quality and pollution prevention curricula.

Project SWELL balances environmental and scientific studies as a comprehensive and hands-on K-12 water quality and pollution prevention curricula. The San Diego Unified School District, the City, and San Diego Coastkeeper have united to enhance the existing science curriculum used with inquiry-based FOSS (Full Option Science System) hands-on science kits. The lessons align with the State Science Content Standards for California Public Schools, Science Framework for California and meet the State's environmental education requirement. SWELL teaches children about the importance of our recreational waterways

and human-water interaction from both environmental-conservation and environmental-science standpoints.

This unique San Diego-based education program supports progressive change by educating our children about pollution prevention and how their participation can help to improve the health of our ocean and waterways. Through these lessons, students learn how they can minimize impacts to this sensitive coastal environment and address environmental issues pertaining specifically to our region.

In 2009-2010, Project SWELL reached more than 50,000 students in five grades in San Diego Unified School District (SDUSD) and one grade level in Oceanside Unified School District (OUSD). It was taught in 135 elementary schools in SDUSD and 17 elementary schools in OUSD. Lessons for the 2nd, 4th and 5th grade were maintained, 6th grade lessons were edited to meet curriculum adoption changes, and will be piloted in FY 2011 (July 2010). Separate SWELL hands-on materials kits have been created for all grade levels to ensure that students and teachers have adequate resources to thoroughly explore their local water issues.

The Kindergarten lessons, entitled, "Clean Water in San Diego" were launch in May 2010 in the SDUSD. City of San Diego Mayor Jerry Sanders, SDUSD Board of Education President Richard Barrera, and San Diego Coastkeeper Executive Director Bruce Reznik spoke at a press event during which 50 Ocean Beach Elementary School students participated in lesson demonstrations about storm drain pollution and the plants and animals living in San Diego's aquatic environments. Each year, the curricula is reviewed and updated to ensure that it meets state and district standards and remains relevant to the current on-the-ground ecological situation. The development of the 1st grade curriculum is planned to begin in late 2010 with implementation targeted for the 2010-11 school year. This will add approximately 10,000 students to the program resulting in a 50% program growth in two years: from 40,000 in 2008-09 to 60,000 in 2010-11.

Since 2000, science education and performance has improved dramatically in SDUSD. As a result of SDUSD district-wide improvements in science curriculum and programs and valuable partnerships, including Project SWELL, there has been a five percent increase in science proficiency for 5th grade students each year based on results of the California Standardized Test (CST). According to the CST and District's Standards Based Report Cards, in 2007 14.6% of 5th grade students were below basic standards in science on the CST; by 2009 that number had decreased to 9.8%. During this same period, students performing at the advanced proficiency level increased from 9.1% to 21.3%. Test scores in science outpaced advancements in other subjects, and SDUSD is now competitive with coastal districts in terms of science performance and is currently the most proficient urban district in California in science performance (SDUSD is the 2nd largest district in California).

Unfortunately in FY1010, severe State and District education budget cuts, a change in focus and two major District reorganizations have changed the way science is taught in SDUSD. San Diego Coastkeeper was asked by SDUSD board members to convene and chair a Science Advisory Blue Ribbon Task Force (BRTF) to evaluate SDUSD's science curricula and its

delivery to the classroom. The BRTF developed a report and presented the recommendations to the Board of Education to help SDUSD stay on track to create a world-class science program.

In addition to SWELL in the classroom, San Diego Coastkeeper (project partners) participated in several community education events based on Project SWELL lessons to ensure that students without access to hands-on science kits in their classroom are able to experience the benefit of Project SWELL's unique learning system. Events included: San Diego Junior Lifeguards Environment, San Diego High Tech Fair, San Diego Science Festival, Walk the Watershed, World Oceans Day, Kids Korp summer camp program, and Coastkeeper's Signs of the Tide education forum.

The impact of Project SWELL can depend upon the engagement of individual students and the experience of the teachers who deliver the lessons. To assess and improve teachers' experiences with Project SWELL, the program partners introduced teacher feedback forms in late FY 2010. In addition, student evaluation forms are being tested in 4th grade classrooms in order to better understand students' experiences with the lessons and how to improve their education through Project SWELL. Student evaluations will be developed in FY 2011 for the 2nd, 5th, 6th and Kindergarten classrooms, as well. The results will be shared when data becomes available.

Think Blue and the program partners are moving forward with expansion efforts to reach more students in the region with important pollution prevention education and plan to explore opportunities to introduce Project SWELL's environmental science curricula in San Ysidro School District (SYSD). SYSD comprises eight K-8 schools and approximately 5,000 students. This expansion is particularly significant because it supports education in a neighborhood in which only 17 percent achieve high school graduation; five percent are non-Hispanic white. In addition, *Think Blue* and the program partners plan to continue to expand SWELL in OUSD and in Vista schools. In 2010/2011, the Project SWELL curricula will reach more than 60,000 students in six grades in SDUSD—including the implementation of the 1st grade curriculum, and in 6th grade classrooms in OUSD.

Table 8-8 identifies the *Think Blue* collateral materials available and distributed in FY 2010 to student age groups by *Think Blue*.

Table 8-8: FY 2010 *Think Blue* Collateral Materials for Student Age Groups

Category Title	Children	Quantity Distributed in FY 2010
San Diego Unified School District SWELL: Kindergarten, "Clean Water in San Diego"	X	10,904
San Diego Unified School District SWELL:2nd grade "Pebbles, Sand, and Silt" Kit	X	10,256
San Diego Unified School District SWELL: Investigation 4th Grade "Ecosystems" Kit	X	9,554
San Diego Unified School District SWELL: Investigation 5th Grade "Water" Kit	X	10,024
San Diego Unified School District SWELL: Investigation 6th Grade "Landforms" Kit	X	9,964
Oceanside Unified School District SWELL: 5th Grade Kit	X	1,638
Total		**52,340**

Watershed Education Presentations: In July 2009 of FY 2010, *Think Blue* and I Love A Clean San Diego (ILACSD) developed a high school watershed education program which included a pre- and post-survey, PowerPoint slideshow, a demonstration activity, and a classroom interactive activity. The presentations focus on the role that watersheds and the storm drain conveyance system play in carrying pollution to our local creeks, rivers, bays and ocean. Specifically, each constituent of concern, as laid out in the Municipal storm water permit, and the effect each have on the environment and human health would be discussed. Lastly, the presentation would help students discover easy solutions to storm water pollution.

Think Blue and ILACSD implemented the Watershed Education Presentation program at 18 middle and high schools throughout the City of San Diego. 124 classroom presentations and two marketing and community outreach events were successful in engaging 9,056 students from grades 7 through 12. The classroom watershed presentations reached a total of 3,356 students, while the two marketing and community outreach events reached 5,700 students. The presentation was designed to increase knowledge of local watersheds and to promote behaviors that prevent the pollution of storm water. Survey results from the fall of 2009 showed that students' had a 55% increase in knowledge about watersheds, storm drains, and pollution prevention after hearing the presentation than they did before the presentation. In addition, behavioral intention to personally take actions to prevent storm water pollution also increased by 29% compared to baseline.

The presentation script was developed for consistency and accuracy of messaging. In addition, changes were made to the PowerPoint graphics based on feedback from high school teachers who participated in the County of San Diego's watershed education program. These changes included illustrations of the eutrophication process, pictures of the trash problem in the Northern Pacific Gyre and in San Diego, a diagram comparing the sewer to the storm drain system, and additional pictures of our storm drain conveyance system. The students were interactive, asked pertinent questions and showed concern about storm water pollution. In addition, many of the students requested to receive ILACSD's volunteer newsletter so they could learn how to participate in cleanup and recycling events. Teachers responded positively to the visual presentation of the PowerPoint and appreciated the Drop in the Bucket demonstration and the Sum of the Parts activity. The teachers were also pleased with how the information connected with their curriculum.

Watershed Interactive Activity: As a part of the presentation, ILACSD included an interactive activity called "The Sum of the Parts" from the *Project WET Activity Guide*. In "The Sum of the Parts", students were asked to form a meandering line around the classroom representing a major river within their watershed. One student volunteered to be either the Pacific Ocean or the San Diego Bay, depending on their watershed. Items representing various point and non-point source pollutants, such as plastic bottles, oil containers, bags of sediment, etc. were given to each student to be passed downstream. All of the items of pollution flow to the last student, representing the ocean or bay, who must try to hold all of the items. Most often, the last student is not able to hold all of the items, comically illustrating the cumulative effects of pollution on ecosystems. After passing the pollution, students were asked reflective questions such as how it felt to be at the head versus the end of the watershed, and how can we prevent non-point source pollution in our

communities. The activity effectively engaged both students and teachers and assisted in their understanding of the material presented.

Watershed Presentation Assessment: A pre/post survey assessment tool was developed to gauge student knowledge of watersheds, storm water pollution, actions students can take to prevent pollution, and to evaluate the effectiveness of the presentation. The survey was given before and after the presentation to measure increases in knowledge and behavioral intent. The age appropriate survey included 11 multiple choice questions that were the same on both the pre- and post- survey. In total, 3,356 surveys were given to students, averaging 27 completed surveys per class. A preliminary analysis of the survey results from the FY 2010 fall semester's classes showed that students' had a 55% increase in knowledge about watersheds, storm drains, and pollution prevention after hearing the presentation than they did before the presentation. In addition, behavioral intention to personally take actions to prevent storm water pollution also increased by 29% compared to baseline. Surveys collected at the classroom presentations in spring of FY 2010 are still being analyzed.

Watershed Presentation Teacher Evaluations: Each of the 43 participating teachers was asked to fill out an evaluation form during or after seeing the presentation. The evaluation forms requested the teachers to give feedback on the presentation, including suggestions on what they would add or change. A total of 43 presentation evaluation forms were distributed at the presentations and 38 evaluations (88%) were collected. Teacher suggested ideas included; increasing student interaction; adding a handout or pre-packet of information; and adjusting the presentation for ESL and hard of hearing students. These valuable suggestions will be used to update the PowerPoint presentation for FY 10/11 to strengthen the clarity and impact of the overall message of the program.

Junior Lifeguards Environmental Day: The San Diego Junior Lifeguard program is a City program run by the Lifeguards Division of the Fire-Rescue Department. The program is implemented every summer for two one month sessions. The Junior Lifeguards program introduces young people to safe marine and aquatic recreational opportunities, and is designed to improve young people's physical conditioning, their understanding and respect for the environment, and their respect for themselves and others. Junior Lifeguards (JGs) range in age from 9-17 years old. In FY 2009, *Think Blue* developed an environmental awareness program specifically for the Junior Lifeguards program entitled, "*Think Blue* Environmental Day", which was designed to focus on environmental awareness gained with daily physical contact with the environment and through lectures and interactive discussions focused around the marine and aquatic life, water conservation, recycling, pollution and prevention. FY 2010 was the 2nd Annual *Think Blue* Environmental Day for the Junior Lifeguards.

EnviroDay: The first EnviroDay was held in FY 2010, and was a one-day event that took place during both of the 2009 summer sessions (July 8 and August 6, 2009). *Think Blue* partnered with several other City Departments as well as several NGO's to create a broad-based experience for the children. Partners included *Think Blue*, City of San Diego Lifeguards, City of San Diego Environmental Services Department, City of San Diego Public Utilities Department, Water Conservation Division, I Love A Clean San Diego and San Diego Coastkeeper.

The Environmental Day event was set up like an educational fair, with each partner hosting a booth focused on environmental topics. The children spent approximately 15 minutes and at each booth, then rotated to the next booth. The following activities were among the topics presented at the various educational booths: E-waste, Water Conservation, Environmental Jeopardy, Marine Life Critter Learning Station, Recycle Relay Race, Watershed Model Demonstration and a Water Quality Testing Demonstration. Each summer session enrolled approximately 250 children and a total of 521 children were educated as a result of *Think Blue*'s Environmental Day.

9 PUBLIC PARTICIPATION

9.1 INTRODUCTION

This section describes the steps taken primarily by the Storm Water Pollution Prevention Division to facilitate public participation during FY 2010. While closely linked to public education efforts (see Section 8, "Education"), public participation involves interacting and assessing the public's willingness to participate and ability to retain storm water messages. As summarized in the Permit Component Table (**Appendix G**), the City was compliant with all elements of Section D.6 of the Municipal Permit.

9.2 PROGRAM IMPLEMENTATION

The Storm Water Department's *Think Blue* education and outreach program has engaged and embraced the critical role public participation plays in the ability to assess the success of pollution prevention efforts. Specific public participation goals and objectives were identified in the City's JURMP. The following storm water pollution prevention public participation efforts were implemented by the City of San Diego during FY 2010.

Residential Telephone Survey

The Storm Water Pollution Prevention Division conducted a telephone survey of adult residents in the City of San Diego in February 2010. The purposes of the survey included:

- To explore residents attitudes about storm water pollution;
- To explore barriers to behavioral change that might reduce storm water pollution; and
- To assess different potential motivations for change including those that address barriers.

Approximately 800 telephone interviews were conducted with adult residents using a random-digit dial methodology, in which active residential and wireless telephone numbers served as the sample. Of these interviews 25% were completed via wireless telephone numbers, and 3.5% were completed in Spanish. The margin of error for citywide results is plus or minus 3.4% at a 95% confidence level.

Key findings include:

- 47% of all San Diego residents have heard the *Think Blue* slogan, up from 39% in FY 2009 (a 52% increase since 2001)
- 52% of residents know that storm water is not treated, which is an increase from 44% in FY 2009 and up from 39% in FY 2008
- Residents who had heard of *Think Blue* or steps the city has been taking to prevent storm drain pollution were more than twice as likely to make a behavior change.

A few questions in this survey were asked in similar studies conducted in previous years. As seen in the key findings, some of the results were compared to those from previous surveys. The report also presents results by subgroups of adult residents (i.e., by men versus women or by zip code) only if the differences are both statistically significant and are of relevance. Where statistically significant and relevant, the results are broken out by watershed. The survey findings are included as **Appendix U**.

Event Surveys

Additionally, the *Think Blue* program gathered feedback on storm water issues and the program at community events. Members of the public who visited the *Think Blue* booth at various community events were encouraged to fill out one of several versions of a short 5-6 question survey. In addition to the general event survey card previously used, *Think Blue* developed three new survey cards focused on specific pollutants, including pet waste, automotive waste and litter in FY 2010. Survey data were collected at 28 events between July 3, 2009 and June 29, 2010. During FY 2010, a total of 10,762 event survey cards were collected, of which 4,537 were general storm water surveys, 1,484 were pet waste surveys, 2,998 were automotive surveys, and 1,743 were litter surveys. The cards also included an option for participants to provide contact information to be added to a mailing list. Nearly 50% of those who filled out a survey card provided some type of contact information, adding to a contact list database of names consisting of over 5,000 records. The contact list will provide a mechanism to provide additional public participation opportunities for ongoing outreach, including newsletters, emails and for assessment activities such as focus groups. Additional information regarding the surveys can be found in the Chapter 8, Education, of this report.

Business Outreach: Focus Groups

Think Blue also hosted several Focus Groups to conduct qualitative research to assist in its efforts to improve the *Think Blue* Program's communications and outreach to businesses. In June 2010, *Think Blue* completed a total of seven focus groups, among business owners and managers who were in either the restaurant industry, the automotive repair industry or in the landscaping industry. Six of the focus groups were conducted in English and one was conducted in Spanish.

Key Findings include:

- High awareness of *Think Blue* ads and storm water pollution issues
- Knowledge of Storm Water Regulations, mostly from contact with the City
- English language business owners and managers readily made the connection between water pollution, the economy, and themselves
- Regulations seen as needed, but a sense of unfairness and imbalance could undermine willingness to comply
- Cost, labor, and lack of reliable alternatives were stated as a major barrier to compliance among gardeners and landscapers

Think Blue intends to use the findings of this research and public feedback to help inform and develop better outreach programs and materials to local businesses. However, as always with qualitative research, focus group participants are not selected randomly, and the results from group discussions, while informative and instructive, should not be viewed as being representative of the views of all restaurant, auto repair, or garden service business owners and managers in San Diego.

Public Reporting of Storm Water Violations

The (619) 235-1000 Storm Water Hotline provided the public the opportunity to contact the Storm Water Department in the event potential water nuisances or illegal discharges entering the storm drain system were observed. During FY 2010, an online reporting web page component was implemented at http://www.sandiego.gov/stormwater/services/servicerequest.shtml to provide the public with additional resources to report storm water violations. Both the hotline and webpage were useful mechanisms in the identification of residents and businesses that were

potentially violating the City's Storm Water Ordinance. In FY 2010, the Enforcement and Inspection Section conducted 876 investigations as a result of hotline calls and online reporting. The results of these investigations are summarized throughout this document.

Storm Drain Stenciling

The City coordinated with I Love A Clean San Diego to facilitate the City's Storm Drain Stenciling Program which encouraged volunteers and businesses to paint a "No Dumping/Drains to Ocean" bilingual message above storm drain inlets to increase awareness about litter prevention and watershed connectivity from inland areas to the coast. To help ensure that volunteers were painting the stencils correctly, *Think Blue*, ILACSD and American Dream Cinema wrote and produced a storm drain stenciling instructional video that would be shown to all volunteer groups and businesses that picked up kits. The video received positive feedback from the public and was perceived as a useful and valuable tool to ensure proper stenciling procedures.

Throughout FY 2010, ILACSD coordinated 574 volunteers that painted 1,543 storm drains in 52 communities within the City of San Diego, and contributed 1,982 service hours. This was an increase of 489% of storm drains painted from the previous fiscal year. Increased program participation was attributed to effective program management, three special events, and City storm water inspection letters to businesses. ILACSD made further program improvements including the creation of a new stencil with a revised design and bilingual message, instructional video for volunteers, new program materials, and streamlined scheduling and tracking procedures. In the future, the City will coordinate with ILACSD to create a comprehensive GIS inventory and database of all newly stenciled storm drains.

Web Site

As comprehensive information repositories, the City's two storm water related web sites (http://www.sandiego.gov/thinkblue/ and http://www.sandiego.gov/stormwater/index.shtml) continued to encourage public involvement by informing the residents about the important issues associated with the Storm Water Department. During the reporting period, the *Think Blue* website was visited 130,974 times (**Table 9-1**), while the Storm Water Department site was visited 34,943 times (**Table 9-2**). A "visit" is considered a series of actions that begins when a visitor views the first page they are taken to in the site (from a search engine or other source) and ends when the visitor leaves the site or remains idle beyond thirty minutes. The City also undertook a dramatic redesign of both the City's Storm Water Department web site as well as the *Think Blue* web sites in an effort to freshen each site and make relevant information easier to locate. Both new sites launched in late May 2010 with updates and additional information added monthly.

Table 9-1: FY 2010 *Think Blue* Website Visits

Month	Number of Visits
July 2009	9,841
August 2009	11,131
September 2009	12,536
October 2009	11,083
November 2009	9,576
December 2009	7,902
January 2010	9,290
February 2010	10,588
March 2010	14,636
April 2010	10,658
May 2010	17,645
June 2010	6,088
Total	**130,974**

Table 9-2: FY 2010 Storm Water Website Visits

Month	Number of Visits
July 2009	2,791
August 2009	2,771
September 2009	3,579
October 2009	3,004
November 2009	2,595
December 2009	2,528
January 2010	3,191
February 2010	2,559
March 2010	2,871
April 2010	2,498
May 2010	3,318
June 2010	3,238
Total	**34,943**

Additionally, the Storm Water Department highlighted its Street Sweeping Pilot Study and *Think Blue* education and outreach program_on the City of San Diego home page (www.sandiego.gov) as part of its rotating 'Weekly Web Feature.' The feature is designed to promote achievements, milestones and news stories among City department sites and provides space for a link and small photo.

Speakers Bureau

The Storm Water Department continued to place an increased emphasis on its Speakers Bureau engagements, which help to educate the public about storm water issues and leave ample time and opportunity for audience questions. Questions were recorded and logged as appropriate to ensure the public issues are understood, and will be potentially useful in helping to guide future outreach efforts. Please refer to Section 8.3.1.4 of this report for information on the Speakers Bureau engagements conducted by the Storm Water Department in FY 2010.

Door-to-Door Notification

The Storm Water Department continued to utilize doorhangers when necessary to ensure residents in a particular community are receiving critical storm water related information. In FY 2010, The Storm Water Department utilized a general storm water BMP document entitled "Contain, Control, Capture" when Code enforcement staff saw a potential violation or cannot determine the source of a violation within a neighborhood area. Code Enforcement staff hang the document on homeowners doors as an educational tool they can leave behind for those residents who are not at home. During FY 2010, the Code enforcement officers distributed door hangers with a storm water message to approximately 500 residents.

Meetings, Hearings, Open Houses, and Workshops

The City continued to host and attend public meetings in an effort to provide the public the opportunity to have questions answered and concerns acknowledged. The City continued to properly notify the public of these meetings, and provided times and locations that are convenient for the public to attend.

On May 27, 2009, the City Planning and Community Investment Department (Planning Department) conducted a meeting with fifteen attendees on the San Diego River Master

Plan. The water quality of the San Diego River and associated wetland buffers were discussed at the meeting. There was also an opportunity for public participation at a Planning Commission hearing on May 13, 2010 regarding the Storm Water Maintenance Programmatic Environmental Impact Report (PEIR). Additionally, Planning Department staff attended the Wetland Deviations Wetland Advisory Board meeting regarding new ESL regulations on January, 14, 2010 and a meeting regarding Grantville Redevelopment Area Alvarado Creek to discuss recontouring the creek on May 10, 2010. There were over 20 and 18 attendees respectively.

The Public Utilities Department Wastewater Branch participated in two community events in FY 2010. The Wastewater Branch staff participated in the San Diego County Apartment Owners Convention (approximately 3,500 attendees) on May 19, 2010, and the Earth Fair in Balboa Park (approximately 40,000 attendees) on April 18, 2010. By participating in these events, staff was available to discuss issues regarding grease in sewers and answer questions from the public. The Wastewater Branch also conducted 42 educational school tours of treatment plants, reaching approximately 750 school children in FY 2010.

Partnerships

The City continued to seek out and coordinate initiatives and activities with well-established organizations in an effort to engage the public and encourage their support and participation. During FY 2010, *Think Blue* and the Storm Water Department continued to work with local stakeholder groups including San Diego River Foundation, San Diego Coastkeeper, I Love A Clean San Diego, Groundwork San Diego Chollas Creek, the Tijuana River Estuary, and San Dieguito River Valley Conservancy among others to educate the public about storm water issues in each community. The Storm Water Department also maintained partnerships with San Diego Unified School District and San Diego Coastkeeper to continue and expand the Project SWELL curriculum. Further information about this program is detailed in Section 8, Education, of this report.

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10 FISCAL ANALYSIS

10.1 INTRODUCTION

The Standardized Fiscal Analysis Method and Format (Fiscal Analysis Method) was collaboratively developed and adopted by the Copermittees in January 2009 in accordance with sections G, J.1.a(3)(k) and J.1.c(1)(d) of the Municipal Permit. The Fiscal Analysis Method document was submitted to the San Diego RWQCB by January 31, 2009, as Attachment 1 of the Regional Urban Runoff Management Plan (RURMP) Annual Report for 2008-2009. As a result, the City is utilizing the format and guidelines described in the Fiscal Analysis Method for this reporting period.

10.2 GENERAL BUDGET INFORMATION

The Pollution Prevention Division is responsible for annually reporting on the JURMP, WURMP, and RURMP's fiscal analysis to the San Diego RWQCB in accordance with the Fiscal Analysis Method. The Pollution Prevention Division collected and analyzed financial information from 22 City departments through "Annual Report Form Questions", as well as financial information from within the Division. A summary of the findings is included below.

10.3 FISCAL ANALYSIS METHODS

While the City utilized the format and guidelines included in the Fiscal Analysis Method for reporting purposes, there were a few modifications that were made due to the way expenditures are tracked internally at the City. These modifications to the expenditure categories are described in the relevant sections below. Additionally, since the City does not explicitly track expenditures by municipal permit component for its budgeting purposes, in many cases estimated percentages were utilized to allocate expenditures into the appropriate municipal permit component categories, including watershed and regional.

10.4 FISCAL ANALYSIS RESULTS

10.4.1 Expenditures

The City's FY 2010 jurisdictional (JURMP), watershed (WURMP), and regional (RURMP) expenditures for the implementation of the Municipal Permit requirements are summarized in **Table 10-1**.

Table 10-1: FY 2010 Jurisdictional, Watershed, Regional Expenditures Summary

FY 2010 Expenditure Summary	
Jurisdictional Component	
Administration	$5,650,463
Development Planning	$2,220,923
Construction	$1,171,212
Municipal (including Non-emergency Fire Fighting expenditures)	$15,966,603
Industrial and Commercial	$1,723,142
Residential, Education, and Public Participation	$3,216,076
IDDE	$5,634,190
Jurisdictional Total	**$35,582,609**
Watershed Component	
San Dieguito Watershed	$252,830
Los Peñasquitos Watershed	$839,112
Mission Bay Watershed	$1,248,001
San Diego River Watershed	$800,059
San Diego Bay Watershed	$3,861,996
Tijuana River Watershed	$299,826
Watershed Total	**$7,301,824**
Regional Component	
Total Copermittee Cost Share for the City of San Diego	$610,285
Additional Regional Costs for education efforts, monitoring, document reviews, regional meeting attendance, and special projects	$285,680
Regional Total	**$895,965**
Total Costs	**$43,780,398**

JURMP Expenditures

The City's FY 2010 City-wide expenditures for the implementation of the jurisdictional Municipal Permit requirements are depicted in **Figure 10-1**. In many cases expenditures were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Pollution Prevention Division utilized the expenditure categories detailed in the Fiscal Analysis Method for jurisdictional reporting. However, due to the implementation overlap of the City's education, public participation, and residential Municipal Permit components, it is difficult to separate out individual component costs. Therefore, the expenditures for residential, education, and public participation are reported as one expenditure category.

A total of $35,582,609 was expended in FY 2010 for the implementation of City-wide JURMP activities. This amount includes costs paid by sewer and water rate payers and costs reimbursed by project applicants. An overview of the expenditures reflected in this component is described below.

Administration ($5,650,463)

Activities identified in this section represent personnel and non-personnel expenses for administration and contracts, grant management, city-wide management, reporting and assessment of the Municipal Permit.

Development Planning ($2,220,923)

Activities identified in the Land Use Planning for New Development Section represent personnel and non-personnel expenses for plan check reviews, project design and SUSMP implementation, and General Plan updates.

Construction ($1,171,212)
Activities identified in this section represent personnel and non-personnel expenses for plan check review services, field inspections related to grading permits, public improvements, and building activities.

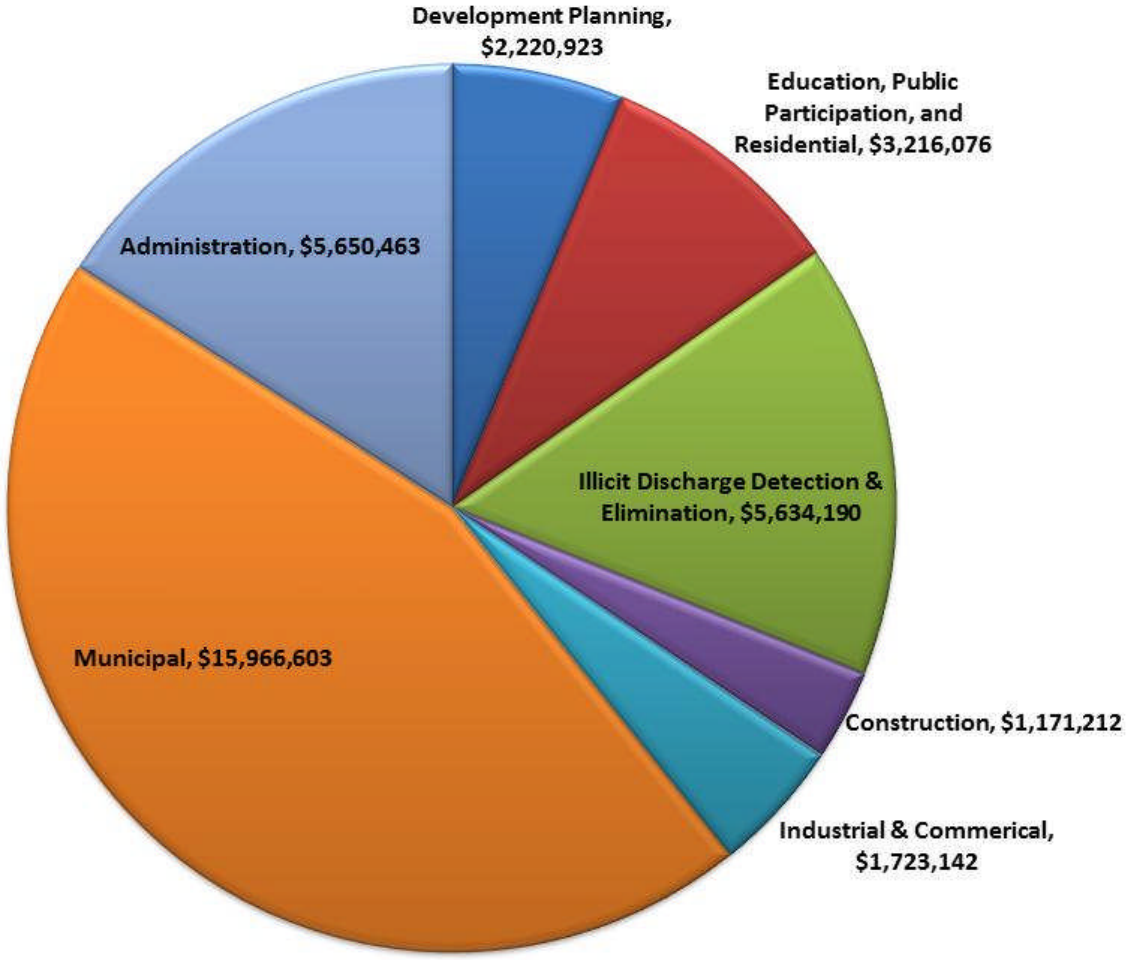
Municipal ($15,966,603)
Activities identified in this section represent personnel and non-personnel expenses for street sweeping, storm drain and channel maintenance, BMP implementation, and municipal facility and activity inspections. Additionally, this section includes the expenditures for non-emergency fire-fighting.

Industrial and Commercial ($1,723,142)
Activities identified in this section represent personnel and non-personnel expenses for inspection of industrial and commercial facilities. This also includes personnel and non-personnel expenses for FEWD and IWCP inspections.

Residential, Education, and Public Participation ($3,216,076)
Activities identified in this section represent personnel and non-personnel expenses for educational materials, outreach efforts and events, PSAs, HHW and used oil outreach, and community events.

Illicit Discharge Detection and Elimination ($5,634,190)
Activities identified in this section represent personnel and non-personnel expenses for identification and elimination of illicit discharges, enforcing the City's storm water ordinance and implementation of the administrative civil penalties and citation process, and the urban runoff monitoring program.

Figure 10-1: FY 2010 City-wide JURMP Expenditures by Permit Area



WURMP Expenditures

The City's FY 2010 watershed expenditures for the implementation of the watershed Municipal Permit requirements were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Pollution Prevention Division utilized the expenditure categories (administration, watershed activities, cost share contribution, and other) detailed in the Fiscal Analysis Method for watershed reporting. The watershed expenditures included in this report only capture City expenditures and do not account for any expenditure disbursed by other Copermittees included in the watershed(s).

A total of $7,301,824 was expended in FY 2010 for the implementation of City-wide WURMP activities. This amount includes costs for the implementation of applicable TMDLs along with special studies.

RURMP Expenditures

The City's FY 2010 regional expenditures ($895,965) for the implementation of the regional Municipal Permit requirements were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Pollution Prevention Division utilized the expenditure categories (administration, cost share contribution, regional activities, and other) detailed in the Fiscal Analysis Method for regional reporting. The regional expenditures included in this report only capture City expenditures and do not account for any expenditure disbursed by other Copermittees in the region.

10.4.2 Grant Funding for Special Studies

In addition to resources identified for Municipal Permit requirements, the City actively seeks grants and other funding sources for special studies and CIPs. Funding for these projects are limited to the projects specified and cannot be reallocated to other projects. Therefore, these resources are currently not used in calculations for total expenditures. The following table lists projects that were initiated and/or in progress during FY 2010. It is important to note that the projects span multiple years and the amounts listed below are not just representative of FY 2010.

Table 10-2: Funding for Special Projects.

Funding Source	Project	Amount ($)	Matching Fund Amount ($)	Total Amount ($)[5]
State Water Resources Control Board	Tijuana River Trash and Sediment BMP Studies	700,000	N/A	700,000
State Water Resources Control Board	Proposition 50 ASBS Grant (Low Flow Diversion)	700,000	175,000	875,000
State Water Resources Control Board	Avenida Del La Playa Low Flow Diversion	1,690,000	465,000	2,155,000
State Department of Water Resources	Dalbergia and Thor Green Mall	625,974	368,474	994,448
Environmental Protection Agency	Kellogg Park Green Lot	873,000	714,000	1,587,000
Total Grant Funding		**4.6 million**	**1.7 million**	**6.3 million**

10.4.3 Funding Sources

City-wide implementation of Municipal Permit requirements is funded through four main types of governmental funds: the General Fund, Special Revenue Funds, Enterprise Funds, and Internal Service Funds.

5 Amounts span multiple years and not just FY 2010

10.4.3.1 General Fund

The General Fund is the main fund for the City that is supported by major revenue sources that include property tax, sales tax, transient occupancy tax and franchise fees. Departments funded by the General Fund provide core community services.

10.4.3.2 Special Revenue Funds

Special Revenue Funds account for revenues received for specifically identified purposes. Some of the larger funds that fall under this category include Transnet, Gas Tax and Special Promotion programs.

10.4.3.3 Enterprise Funds

Enterprise Funds are initiated for specific purposes and funded through fees for services. This funding type is designated for the operations, management, maintenance, and development of the department providing the service. For implementation of City-wide JURMP activities, activities are funded through the following enterprise funds:

- Airports Fund
- Development Services Enterprise Fund
- Golf Course Enterprise Fund
- Recycling Fund
- Refuse Disposal Fund
- Sewer Revenue Funds
- Water Utility Fund

10.4.3.4 Internal Service Funds

Internal Service Funds are comprised of fees for services provided by one City department to another City department or division. For implementation of City-wide JURMP activities, activities are funded through the following internal service funds:

- Engineering and Capital Projects Fund
- Equipment Division Funds

11 SPECIAL PROJECTS

This section identifies and describes the City's completed, ongoing, and planned special projects and grants that are designed to examine and/or improve storm water quality or habitat conditions in the San Diego region.

In addition to its JURMP activities, the City also participates in the implementation of six WURMPs in cooperation with other stakeholders and jurisdictions to improve storm water quality not only within the City's jurisdiction but also in its watersheds. Below is a summary of the City's special projects that will be reported by the Watershed Copermittees in the City's FY 2010 WURMP Annual Reports. The special projects discussed in the WURMP Annual Reports also include projects implemented under other regulatory programs such as ASBS, TMDLs, and CAOs.

Special Projects to be Included in the San Dieguito WURMP Annual Report:

- Geographically-based Business Inspections
- Restaurant BMP Booklet Distribution
- Bernardo Center Drive Trash segregation device installation
- Route Posting and Median Sweeping, Phase III
- Rancho Bernardo Library Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment

Special Projects to be Included in the Los Peñasquitos WURMP Annual Report:

- Geographically-based Business Inspections
- Los Peñasquitos Lagoon TMDL Development – Carroll Canyon Sediment Source Study
- Mira Mesa Library Bioretention and Infiltration Project
- Marindustry Drive Hydrodynamic Separator
- Route Posting and Median Sweeping, Phase III
- Phased Green Mall and Underground Vault Pilot
- Restaurant BMP Booklet Distribution

Special Projects to be Included in the Mission Bay and La Jolla WURMP Annual Report:

- Geographically-based Business Inspections
- Targeted Auto Facility Inspections
- Restaurant BMP Booklet Distribution
- Targeted Aggressive Street Sweeping
- Mission Bay Focused Outreach
- La Jolla ASBS Compliance Monitoring
- Mission Bay Sewer Interceptor System Upgrades
- Kellogg Park Green Lot Retrofit Project
- Mount Abernathy "Green Street" Retrofit Project
- Osler Street Hydrodynamic Separator
- La Jolla Dry Weather Flow Diversions (Phase IV)
- Bannock Avenue Streetscape Enhancements
- Avenida de la Playa Low Flow Diversion
- La Jolla Shores Lane Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment
- San Diego Crew Classic

- Beach Area Low Flow Diversions, Phase III

Special Projects to be Included in the San Diego River WURMP Annual Report:

- San Diego River Foundation Sponsorship
- Geographically-based Business Inspections
- San Diego River Bacteria Source ID Study and Catch Basin Inlet Cleaning Pilot Project Phase I Water Efficiency Park Project
- Route Posting and Median Sweeping Pilot Study – Phase III
- Cabrillo Heights Park Rain Garden Filtration Project
- Park Ridge Blvd Bacteria Treatment BMP
- Famosa Slough Erosion Sediment Control BMP
- Robb Field Water Treatment and Reuse
- Restaurant BMP Booklet Distribution
- Qualcomm Stadium Trash Segregation BMP
- Allied Gardens Green Lot Filtration
- Complex Street Green Mall Filtration

Special Projects to be Included in the San Diego Bay WURMP Annual Report:

- Targeted Auto Facility Inspections
- Targeted Aggressive Street Sweeping Pilot Study – Phases I & II
- Chollas Creek Diazinon TMDL Monitoring
- Chollas Creek Dissolved Metals TMDL Monitoring
- Chollas Creek Water Effects Ratio Study for Dissolved Copper
- Copper Brake Pad Alternative Legislative Mandate
- Switzer Creek Pesticide Monitoring
- Mobile Trash Collection and Assessment, part of Groundwork San Diego Chollas Creek's Family Stream Team Project
- Community Based Social Marketing Pilot in Chollas Creek
- Shelter Island Yacht Basin Copper TMDL Monitoring
- Southcrest Park Infiltration Retrofit
- El Cajon Boulevard Trash Segregation BMP Installation
- Memorial Park "Green Lot" Infiltration Project
- 43rd and Logan Biofiltration Project
- Maple Canyon Water Quality Improvement Pilot
- Beta Alley Green Street Filtration
- Dalbergia (Main) Street Green Mall Filtration

Special Projects to be Included in the Tijuana River WURMP Annual Report:

- Targeted Auto Facility Inspections
- Beyer Blvd Trash Segregation Device Installation
- San Ysidro Green Mall Infiltration Retrofit
- Tijuana River Gross Solids and Sediment BMPs Design
- San Ysidro Celebration
- Smuggler's Gulch, Pilot Channel, and Northern Channel Sediment and Debris Removal

The following projects span all six of the City's watersheds and may be reported in each of the WURMP Annual Reports:

- LID Regulatory Barriers and Solutions Project
- I Love a Clean San Diego Trash Clean-up
- San Diego Coast Keeper Trash Clean-up
- Municipal Artificial Turf Evaluation
- San Diego Coast Keeper Trash Clean-up
- Municipal Rain Barrel and Downspout Disconnect Pilot Project
- Irrigation Hardware Giveaway and Cash for Plants Assessment
- Residential Rain Barrel, Downspout Disconnect, and Xeriscaping Project
- Strategic Plan implementation
- Public Service Announcements
- Pet Waste Dispenser Program
- Watershed Brochures

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12 EFFECTIVENESS ASSESSMENT

12.1 INTRODUCTION

The Municipal Permit specifies that Copermittees assess both annually and in the long term (five-year intervals), the effectiveness of their JURMP at three levels: programmatic, component, and activity-specific. The City uses these effectiveness assessments as part of an iterative feedback loop that incorporates planning, implementation and assessment of its overall Storm Water Program.

This section outlines an integrated effectiveness assessment process that includes compliance assessment results for FY 2010, and presents the BMP[6] Efficiency Assessments and Storm Water Program recommendations for FY 2011. For the FY 2010 reporting period, the City successfully met a majority of its targeted outcomes for demonstrating compliance with the Municipal Permit. Although some targeted outcomes were not achieved, the City has identified areas for future improvement, such as enhanced data collection and information sharing, as well as more frequent departmental coordination. These efforts will help to ensure that the City meets all targeted outcomes for compliance with the Municipal Permit during future reporting periods.

In addition to assessing compliance with the Municipal Permit, the City conducts special studies and BMP Efficiency Assessments for a select group of pilot activities to generate recommendations for optimizing its Storm Water Program. This section provides an update on those assessments.

12.2 EFFECTIVENESS ASSESSMENT PROCESS

The 2008 JURMP describes the City's overall process for assessing and optimizing its Storm Water Program. An abridged version of this process is presented below.

The City's Effectiveness Assessment process is driven by the following goal:

Optimization of the "means & methods" of implementing its Storm Water Program

- Optimization meaning the most cost-effective allocation of resources to effect pollutant load reductions and improvements to storm water quality
- "Means & methods" meaning the processes, materials, treatment controls, equipment, etc. that are used to achieve pollutant load reductions and improvements to storm water quality

The City uses a simplified approach to assessing the effectiveness of its Storm Water Program. Assessment is one phase of the Storm Water Program "Process", which also includes Planning and Implementation phases (**Figure 12-1**).

[6] Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits (RWQCB Order R9-2007-0001, 2007)

It is noted that the City does not include in their effectiveness assessment the following items as discussed in the Permit to be used where applicable and feasible:

1) Utilization of outcome levels 5 & 6 to assess the effectiveness of program activities, components and the program as a whole
2) Utilization of monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness of program activities, components and the program as a whole

The above items are found to not be applicable assessment tools at a jurisdictional level because water quality results are not easily associated with the activities as they are implemented, reported and assessed in jurisdictional programs. The above items are better assessed on a watershed basis where there is a nexus between drainage areas (e.g., watersheds) and water quality. Therefore an Integrated Assessment that includes MS4 contributions and receiving water conditions is not included at this time.

As shown in **Figure 12-1**, the Assessment phase includes an integration of the Baseline BMPs and BMP Efficiency Assessments. By using what is learned about effectiveness and the resources necessary to implement BMPs, the City can refine its Baseline BMPs to maximize resources. The following subsections include descriptions of the two integral pieces of the Assessment phase of the Storm Water Program Process.

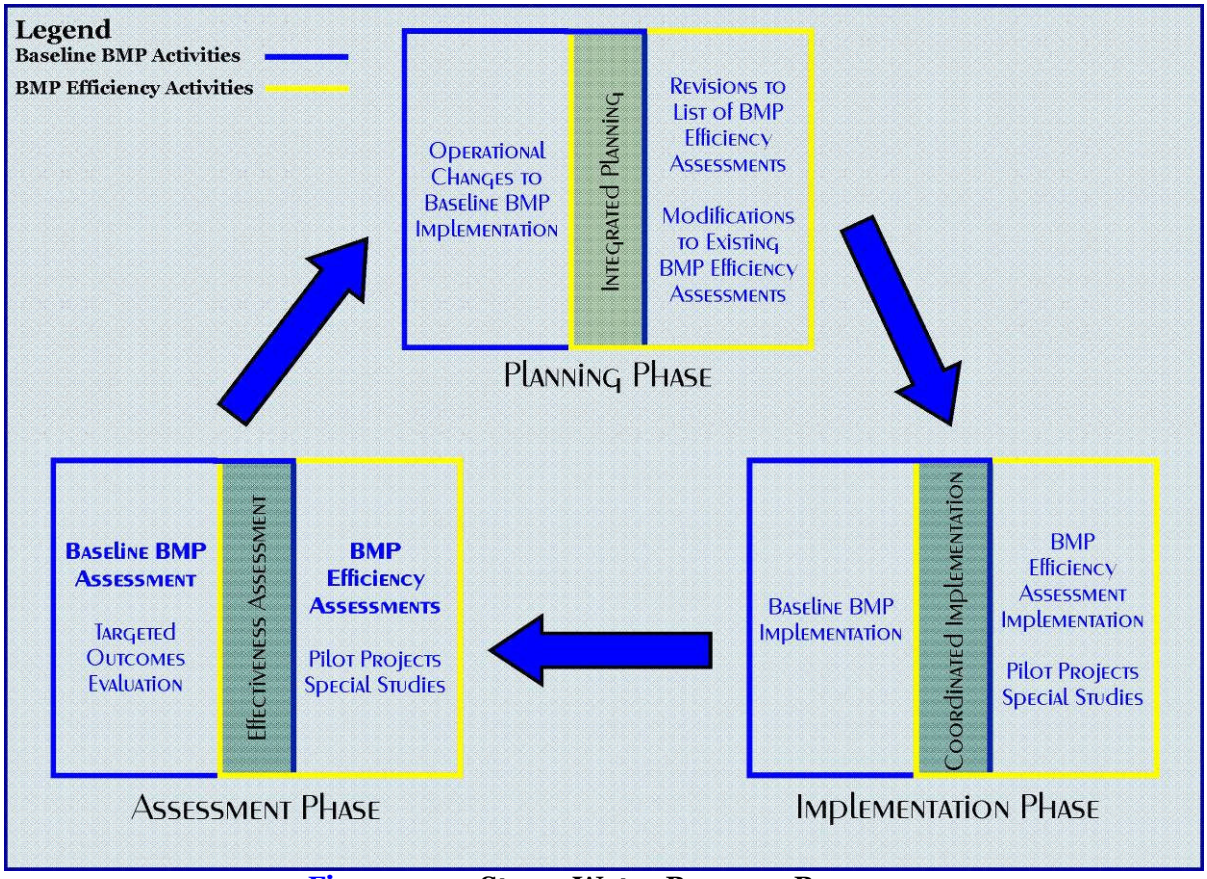

Figure 12-1: Storm Water Program Process

Baseline BMPs

Baseline BMPs include specific Storm Water Program significant activities as identified in the Municipal Permit and the City's 2008 JURMP. The majority of these BMPs are implemented at the jurisdictional level (i.e., citywide). The City uses the Effectiveness Assessment Levels (1-4) defined in the Municipal Permit to evaluate its Baseline BMPs to determine compliance. If targeted outcomes are met, compliance is achieved. If targeted outcomes are not met, the Baseline BMP Assessment will generate recommendations for improvements to the Planning and/or Implementation phases of the City's Storm Water Program Process (**Figure 12-1**). These improvements will ultimately result in the City meeting its targeted outcomes for compliance with the Municipal Permit.

The Baseline BMP Assessment for FY 2010 is located in Section 12-3.

BMP Efficiency Assessments

BMP Efficiency Assessments[7] are defined as pilot projects and special studies or evaluations. The purpose of the BMP Efficiency Assessments is to obtain data and information that may be used to evaluate both the effectiveness and efficiency of certain BMPs. By implementing and assessing these pilot projects and special studies, the City can make more informed decisions about the appropriate allocation of limited storm water resources to maximize pollutant load reductions and improvements to storm water quality. Furthermore, the results of the BMP Efficiency Assessments will be used to generate recommendations for improvements to the Planning and Implementation phases of the City's Storm Water Program Process.

The City maintains a list of conceptual BMP Efficiency Assessments for program planning purposes. When applicable, each assessment is designed to answer specific management questions for optimizing current Baseline BMPs. Priority for implementation of BMP Efficiency Assessments is based on several factors, including: results of Baseline BMP Assessments, availability of mechanisms to implement the assessments, and availability of resources.

A list of conceptual BMP Efficiency Assessments can be found in Section 12.3.

Integrated Program Assessment

The City integrates its Baseline BMP Assessment and BMP Efficiency Assessments to develop recommendations for optimizing its Storm Water Program.

These recommendations typically fall in one of the three following categories:

1) Revisions to the list of conceptual BMP Efficiency Assessments (additions, deletions or reprioritization)
2) Revisions to implementation of specific BMP Efficiency Assessments
3) Modifications to Baseline BMP implementation (processes, materials, equipment, etc.)

It is this iterative feedback loop that will drive the City's Storm Water Program toward optimization.

7 BMP Efficiency Assessments are assessments of activities that are above and beyond the Baseline BMPs required by the Jurisdictional portion of Order R9-2007-0001, and may include Pilot Studies and Special Projects or Evaluations.

Long-Term Assessment

The City participates in efforts of the WURMPs and the Regional Copermittees to develop and implement long-term effectiveness assessments of the programs. These long-term efforts include long-term effectiveness assessments as well evaluation of Outcome Levels 5 & 6 at a watershed scale.

12.3 EFFECTIVENESS ASSESSMENT RESULTS

12.3.1 Baseline BMP Assessment

The City assesses the effectiveness of its specific activities, program components and overall JURMP by evaluating at the following outcome levels.

Table 12-1: Effectiveness Assessment Outcome Levels 1-4

Outcome Level	Description	Assessment
1	Program Compliance	Measured by comparison to targeted outcomes, and the City's effectiveness at implementing the Municipal Permit
2	Changes in Attitudes, Awareness and Knowledge	Measured by pre- & post-surveys and questioning of specific regulated communities
3	Behavioral Changes and BMP Implementation	Measured by analysis of inspection findings
4	Load Reductions	Measured by direct method – how much waste material is collected and disposed

Level 1 – Compliance Assessment—Activity, Components and Program

Overall program compliance is based on the summation of the individual Municipal Permit component compliance evaluations. Municipal permit component compliance is determined by comparing data collected from departments citywide to the targeted outcomes for specific activities. For FY 2010, the targeted outcomes for each permit activity are defined as fulfilling the baseline Municipal Permit requirements of Order R9-2007-0001. The assessment results at the significant activity level are provided in tables as **Appendix G**.

Overall, the City met 72 out of 75 targeted outcomes for Baseline BMP significant activities. Some highlights from the City's Baseline BMP activities include the following:

- Estimated 51,254,732 Public Services Announcement (PSA) impressions were made – the television and radio PSAs aired a total of 4,869 times
- Estimated 15,346,734 impressions from placement of PSAs on media websites were made
- Estimated 328,658 movie theater impressions were made from "Karma" advertisement
- Estimated 3,131,356 people reached through *Think Blue* community and special events
- Approximately 6,674 tons of debris and sediment removed from City catch basins, inlets, and cleanouts
- Swept approximately 101,048 curb miles and municipal parking lots removing approximately 6,668 tons of debris and sediment from city roadways and parking lots
- ESD collected approximately 464 tons of HHW
- Field Engineering and the Inspection Services Division conducted approximately 100,090 construction site inspections.

- Conducted more than 5,575 inspections of commercial and industrial businesses, resulting in 750 businesses inspected above and beyond the Permit requirements

Level 2 – Changes in Knowledge, Awareness and Attitudes Assessment

During FY 2010, the City continued its efforts to collect data and information regarding changes in attitude, awareness and knowledge. Methods of data collection included commercial/industrial business inspections, surveys and assessments of training.

BMP Knowledge Assessments

As in previous years, part of the commercial and industrial business inspection process was to assign each facility inspected a rating to reflect the level of BMP implementation noted at the site (Level 3 Assessment **Figure 12-2**), and a separate rating to reflect the facility manager/responsible party's level of storm water knowledge. The assessment ratings were designed to gauge knowledge of storm water pollution prevention measures and implementation of effective BMPs. The ratings were assigned based on how many of the following questions were answered correctly:

- What is storm water?
- What is the difference between the storm drain system and the sanitary sewer system?
- Where does storm water flow?
- Is storm water treated prior to discharge?
- What are examples of pollutants?
- Is sediment a pollutant?
- Do you know what good house keeping or best management practices are?
- Do you know what NPDES is or means?

Individuals who answered all of the aforementioned questions correctly and demonstrated an in-depth knowledge of storm water pollution prevention measures and NPDES were rated "Level 5". Individuals who answered four or more questions correctly, and had a basic understanding of storm water pollution prevention measures but did not know or understand what the NPDES Storm Water Program was received a "Level 4" rating. A "Level 3" rating indicated an individual who answered three questions correctly, "Level 2" indicated one or two correctly answered questions, and a "Level 1" rating indicated that the individual was not able to answer any of the questions correctly.

Figure 12-2 shows the BMP knowledge assessments obtained through the business inspections conducted over the past six years. Since the number of inspections varied over the six years, the chart is based on the relative score frequencies so that the data can be more directly compared. As shown in the figure, there has been a decline in the higher knowledge of BMP related information amongst the businesses inspected. It is unknown at this time what may be causing these results. The City will be investigating this issue with its contract inspectors and determine if modifications to the program are necessary to provide different outreach materials.

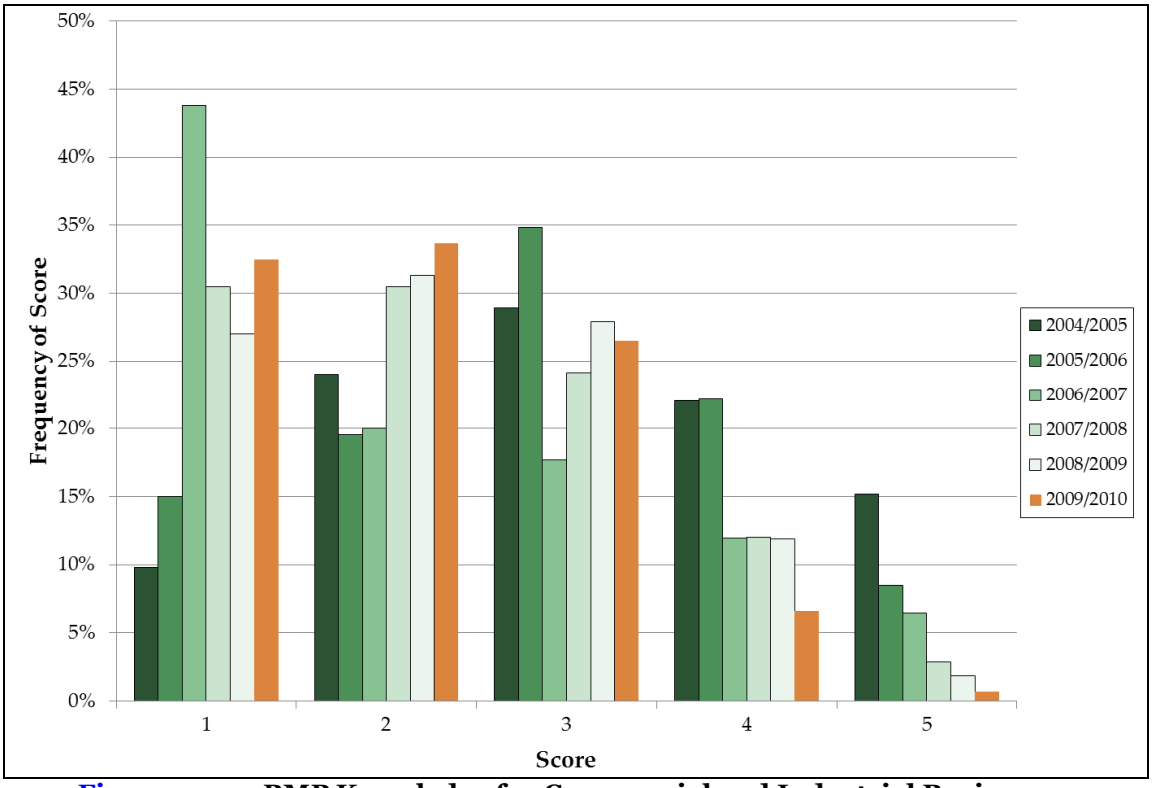

Figure 12-2 – BMP Knowledge for Commercial and Industrial Businesses

Residential Telephone Survey
The Storm Water Pollution Prevention Division conducted a telephone survey of adult residents in the City of San Diego in February 2010. Approximately 800 telephone interviews were conducted with adult residents using a random-digit dial methodology, in which active residential and wireless telephone numbers served as the sample. Of these interviews 25% were completed via wireless telephone numbers, and 3.5% were completed in Spanish. The margin of error for citywide results is plus or minus 3.4% at a 95% confidence level.

Key findings include:

- 47% of all San Diego residents have heard the *Think Blue* slogan, up from 39% in FY2009 (a 52% increase since 2001)
- 52% of residents know that storm water is not treated, which is an increase from 44% in FY2009 and up from 39% in FY2008

Residents who had heard of *Think Blue* or steps the city has been taking to prevent storm drain pollution were more than twice as likely to make a behavior change.

Event Surveys
In order to assess the effectiveness of event attendance, *Think Blue* implemented a program by which it solicited participation in a brief survey about storm water issues. The survey cards consist of five to six questions designed to measure storm water knowledge, awareness and behavioral intentions. In FY 2010, *Think Blue* developed three new survey cards focused on specific pollutants, including pet waste, automotive waste and litter. Data from the *Think Blue* event surveys include:

- A total of 10,762 event survey cards were collected

  - 4,537 were general storm water surveys
  - 1,484 were pet waste surveys
  - 2,998 were automotive surveys
  - 1,743 were litter surveys
- Fifty-six percent (56%) of the individuals who completed an event survey had heard of *Think Blue* prior to attending the event.
- Sixty-one percent (61%) of respondents knew that storm water is not treated
- Fifty-two percent (52%) of respondents listed an address in the City of San Diego, with 89% from San Diego County
- Approximately 4% of all of the surveys completed were completed in Spanish.
- Nearly 56% of those who filled out a survey card provided some type of contact information (approximately 5,000 people)

The data presented above represent a positive response to *Think Blue's* campaign efforts, including attendance at special events. The fact that nearly 90% of those completing a survey card were willing to provide contact information is a strong indication that the City's efforts are putting them in contact with people who are interested in improving storm water quality and the messages that *Think Blue* generates.

When comparing the FY 2010 event survey data to the FY 2009 data, which was the first year of implementation, some improvements are demonstrated. During FY 2010, there was a 42% increase in the number of event surveys completed as well as a 6% increase in the number of individuals who had heard of *Think Blue* prior to attending the event compared to FY 2009.

While the City conducted jurisdictional outreach, it is important to note that many of the City's outreach events were watershed-focused, and as such, will be included in the WURMP Annual Reports, in which the City is a participating Copermittee. This will be a continuing trend as the City's outreach events become more audience, pollutant and watershed-specific. Event participation by *Think Blue* staff has become more sophisticated and via the surveys is now better able to gauge the efficiency of attended community events. Larger general audiences tend to be reached more effectively at larger events. Conversely, attending smaller community and neighborhood events reach far fewer people, but may be more effective for reaching specific target audiences or focusing on specific pollutants. While *Think Blue* intends to continue to staff community events; each event, target audience and outreach topic will be examined in order to best reach the specific demographic based on budget and return on investment.

New Employee Training
Think Blue conducted monthly trainings at the City's "New Employee Orientation" (NEO) workshops. Newly hired City staff who were in attendance received a basic introduction to storm water issues through a video, "Storm Water News You Can Use", a training module updated by *Think Blue* in the reporting period. In FY 2010, 268 new employees received the training. All staff who attended were given a pre-test and a post-test containing questions relating to storm water topics covered in the training. In FY 2009, the pre- and post-test questions were revised to better assess an increase in knowledge of storm water issues among new employees. Statistical analyses revealed that the participants achieved higher scores after receiving the storm water training. Assessment analysis determined the average score on the pre-test was 3.7 out of 5 (74%), and the average score on the post-test increased to 4.89 out of 5 (98%).

Level 3 – Behavioral Changes and BMP Implementation Assessment

During FY 2010, the City continued its efforts to collect data and information for assessing behavioral changes and BMP implementation. The primary method of data collection was inspections of various sites/facilities to determine BMP implementation. Currently, there are only confirmations of BMP implementation available for the majority of the site/facility types with the exception of the commercial/industrial businesses.

As in previous years, part of the commercial and industrial business inspection process was to assign each facility inspected a rating to reflect the level of BMP implementation noted at the site. At the conclusion of each inspection, the inspector evaluated his or her notes and corrective actions and assigned each facility a BMP assessment rating. The following provides a breakdown of how BMP assessment ratings were designated at inspected facilities:

- "Rating 5": means all required general and activity specific BMPs had been implemented effectively. If available, monitoring results indicated that all constituents sampled were below established benchmarks.
- "Rating 4": means BMPs had been implemented effectively but a dumpster lid was observed open and/or oil stains were noted in the parking lot (but were not associated with the business' activities). If available, the monitoring data indicated that one or two constituents were slightly above the established benchmarks.
- "Rating 3": means BMPs had been implemented with the less than two corrective actions identified during the inspection, with the exception of dumpster lids being open or oil stains in the parking lot. If available, monitoring data indicated that one constituent consistently exceeded the established benchmarks.
- "Rating 2": Minimal BMP implementation was in place. Three or more corrective actions were noted, with the exception of dumpster lids being open or oil stains in the general parking lot. No illegal discharge or illicit connection was noted. If available, monitoring data showed concentrations of two or more constituents well above the established benchmarks.
- "Rating 1": A violation of one or more of the City's Storm Water Ordinances (illegal discharge, illicit connection, failure to properly implement required BMPs, and/or significant littering) was noted. BMP implementation was poor.

The commercial/industrial BMP implementation ratings for the past six years are presented in **Figure 12-3**. Since the number of inspections varied over the six years, the figure reflects the relative score frequencies so that the data can be more directly compared.

As shown in **Figure 12-3**, there has been a slight decrease in the higher rates of implementation of BMPs (rating of 4) and a slight increase in the lower rate of implementation of BMPs (rating of 2) amongst businesses. All other rates of implementation appear to have maintained their status from the previous reporting period. The City will monitor this information and may make adjustments to their program in the event that this shift becomes an on-going trend.

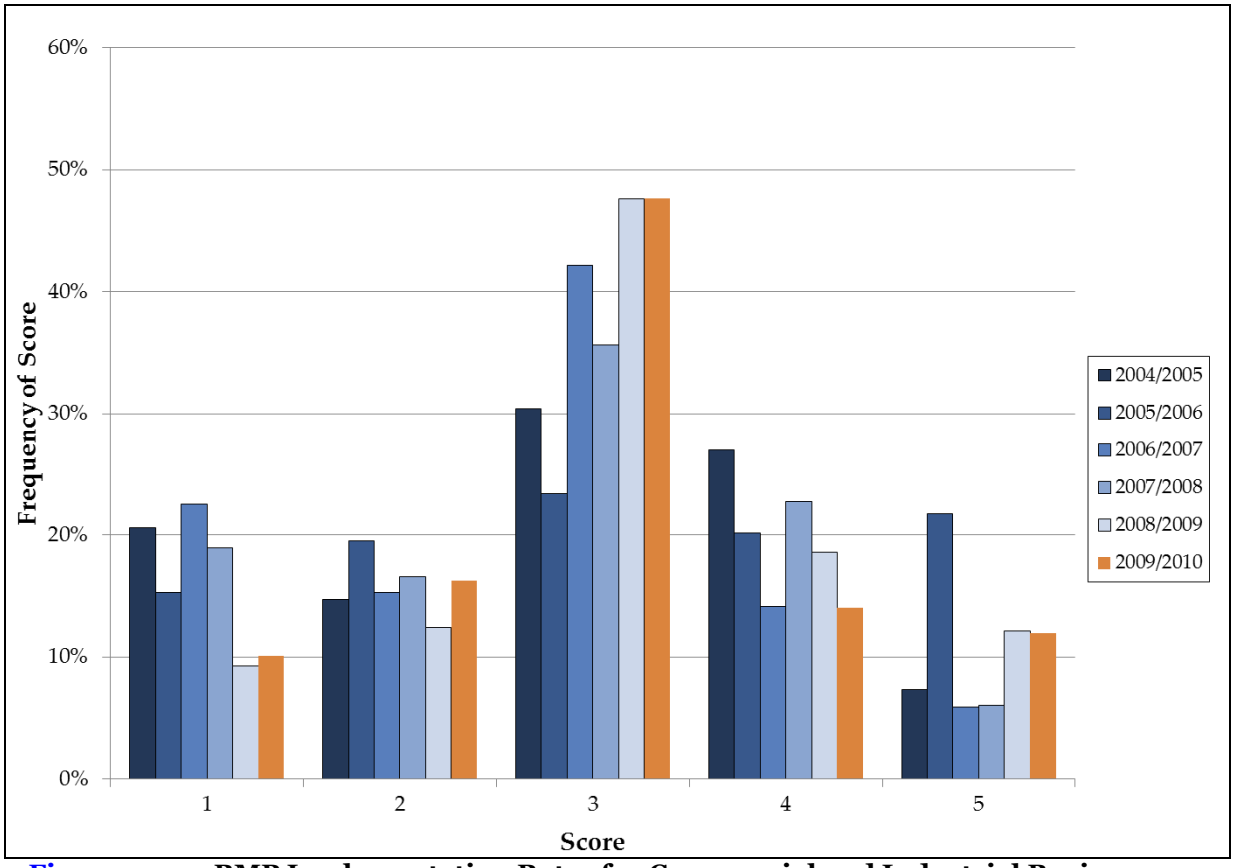

Figure 12-3 – BMP Implementation Rates for Commercial and Industrial Businesses

Level 4 – Load Reduction Assessment

During FY 2010, the City continued its efforts to collect data and information for assessing pollutant load reductions. The primary method for determining pollutant load reductions was to collect data from departments on specific storm water activities; such as storm drain cleanings, parking lot sweeping, and municipal inspections. Until more data and information becomes available to accurately estimate pollutant load reductions from non-cleaning activities, the City will rely on these activities as the primary quantifiable pollutant load reduction activities.

Below is a summary of the quantifiable pollutant load reduction activities that the City conducted during the FY 2010 reporting period:

- ESD collected 464 tons of HHW.
- The Park and Recreation Department collected 412,455 tons of debris from the parks, beaches, and bay, including over 200 tons of debris collected during the 2009 July 4th holiday along the shoreline of Mission Bay and Shoreline/Beach Parks.
- Storm Water Operations and Maintenance Division conducted 33,189 inspections of catch basins and inlets, and found and cleaned 15,092 catch basins and inlets with accumulated waste exceeding cleaning criteria.
- Storm Water Operations and Maintenance Division found and cleaned approximately 2.55 miles of pipeline that had accumulated waste exceeding the cleaning criteria.

- Total debris removed from catch basins, inlets, cleanouts, and the MS4 was 6,236 tons of waste and litter by the Storm Water Department
- Additionally, other City Departments removed 444 tons of debris through storm drain cleaning at municipal facilities.
- The City has approximately 50 miles of channels. Every channel within the City was inspected twice during FY 2010. The channels were inspected in the fall before the rainy season and once in the spring. Approximately 8 miles of open channels were found with anthropogenic litter, 8 miles of channels were cleaned, and 20,591 tons of anthropogenic litter and sediment was removed.
- The Storm Water Department Operation and Maintenance crews removed 40,500 tons of debris and sediment from the Tijuana River and Smugglers Gulch channels during emergency flood mitigation operations.
- Through the implementation of the City's street sweeping program, 101,048 curb miles were swept and 6,417 tons of debris (including parking lots) was removed within the City.
- Departmental parking lot sweeping resulted in the removal of 251 tons of debris.

12.3.2 BMP Efficiency Assessments

The City has identified BMP Efficiency Assessments to collect data for its programmatic optimization strategy as described in the 2008 JURMP. As previously stated, the City will use several factors to prioritize the implementation of these assessments.

As a part of the BMP Efficiency Assessments, the City has initiated multiple special and pilot projects through its WURMPs. These projects include the collection of targeted data for calculating pollutant load reductions, and activity-specific costs for determining project efficiencies (see project table below). These projects are designed to answer specific management questions and generate recommendations that will feed into the City's overall Integrated Assessment Program. This will ultimately result in greater Storm Water Program optimization.

Table 12-2 below lists the special and pilot projects that are currently in implementation and planned for future implementation. These projects are intended to provide additional data for BMP Efficiency Assessments is provided below:

Table 12-2: BMP Efficiency Special and Pilot Projects by Watershed

Project	San Dieguito River	Los Peñasquitos	Mission Bay & La Jolla	San Diego River	San Diego Bay	Tijuana River
Geographically-based Business Inspections	X	X	X	X		
Route Posting and Median Sweeping, Phase III	X	X		X		
Rancho Bernardo Library Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment	X					
Mira Mesa Library Bioretention and Infiltration Project		X				
Phased Green Mall and Underground Vault Pilot		X				
Targeted Auto Facility Inspections			X			X
Kellogg Park Green Lot Retrofit Project			X			
Mount Abernathy "Green Street" Retrofit Project			X			
Osler Street Hydrodynamic Separator			X			

Project	San Dieguito River	Los Peñasquitos	Mission Bay & La Jolla	San Diego River	San Diego Bay	Tijuana River
La Jolla Shores Lane Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment			X			
Cabrillo Heights Park Rain Garden Filtration Project				X		
Park Ridge Blvd Bacteria Treatment BMP				X		
Robb Field Water Treatment and Reuse				X		
Allied Gardens Green Lot Filtration				X		
Complex Street Green Mall Filtration				X		
Targeted Aggressive Street Sweeping Pilot Study – Phases I & II					X	
Mobile Trash Collection and Assessment, part of Groundwork San Diego Chollas Creek's Family Stream Team Project					X	
Community Based Social Marketing Pilot in Chollas Creek					X	
Southcrest Park Infiltration Retrofit					X	
Maple Canyon Water Quality Improvement Pilot					X	
Memorial Park "Green Lot" Infiltration Project					X	
43rd and Logan Biofiltration Project					X	
Beta Alley Green Street Filtration					X	
Dalbergia (Main) Street Green Mall Filtration					X	
San Ysidro Green Mall Infiltration Retrofit					X	
Tijuana River Gross Solids and Sediment BMPs Design						X
LID Regulatory Barriers and Solutions Project	X	X	X	X	X	X
Municipal Artificial Turf Evaluation	X	X	X	X	X	X
Municipal Rain Barrel and Downspout Disconnect Pilot Project	X	X	X	X	X	X
Irrigation Hardware Giveaway and Cash for Plants Assessment	X	X	X	X	X	X
Residential Rain Barrel, Downspout Disconnect, and Xeriscaping Project	X	X	X	X	X	X

Several of the BMP Efficiency Assessments have been completed and others have completed initial planning phases. Since the above list includes activities implemented as WURMP Watershed Water Quality Activities, the implementation updates will be reported in the respective WURMP Annual Reports.

12.3.3 Integrated Program Assessment

Baseline BMP Assessment

The City recognizes that in order to have an efficient Storm Water Program, it is important to maintain compliance with the Municipal Permit. During the first quarter of FY 2011, the City has already begun the process of addressing each of the missed targeted outcomes as identified in relevant component sections. The first and foremost action is for the Storm Water Department to provide support to other City departments to complete their specific requirements.

The City of San Diego is one of the largest and most complex municipalities in the region. Having a large and complex organization poses many challenges, such as varying data

tracking and reporting systems and multiple lines of communication for educating staff. However, the City is committed to instituting the necessary changes to current processes, protocols and systems to ensure that program requirements are implemented, tracked and reported adequately to the Regional Board. **Table 12-3** lists areas identified for improvement in FY 2011 and provides the status of the corrective actions planned to address these issues.

Table 12-3 Programmatic Corrective Actions

General Issue	Corrective Actions	Current Status
Treatment Control BMPs	Identifying projects in TCBMP inventory that are inappropriately included. This also involves identifying projects that are missing TCBMPs. When these missing TCBMPs are identified, the project is turned over to Neighborhood Code Compliance for enforcement of the Land Development Codes.	Continuing process initiated and implemented in FY 2009 and FY2010
Tracking Development Projects for Reporting	Development Services Department (DSD) will continue using their database to track all development projects that are subject to SUSMP requirements. During FY 2009 and FY 2010, DSD tracked the Priority Development Projects, but during FY 2011 will also track Standard (non-Priority Development) projects and all of the SUSMP requirements and information associated with Standard and Priority Development Projects. For FY 2011, the electronic tracking systems will make it feasible to report in the Annual Reports.	DSD will begin using their tracking database to identify all Standard and Priority Development Projects
Tracking Inspections for Reporting	DSD-Inspection Services Division will continue to investigate and make corrections to its tracking database so that it can accurately report on the permit required information, including: Project priority, number of weeks the project was active in the rainy season, number of rainy season inspections conducted, the number of dry weather inspections conducted and a total number of inspections conducted at the site.	DSD-IS has made changes to the database to rectify the issue
Municipal Inspections Not Completed	The Storm Water Department has sent and will send regular reminders to all of the departments to conduct the appropriate municipal facility inspections and that all inspections must be documented. Additionally, the Storm Water Department will conduct meeting with the other Department's storm water liaisons twice a year and will conduct training via walk-along inspections as requested.	These actions are currently being implemented
Complaint Investigations Follow-up	Storm Water Department Pollution Prevention Division Enforcement and Inspections Section is producing bimonthly reports of the investigation database. As part of this quality control procedure, the reports are reviewed to make sure that all complaints are investigated.	The Enforcement and Inspections Section has started this procedure

In addition to the specific corrective actions identified in **Table 12-3**, the City will conduct post-annual report meetings with City departments. These meetings will focus on revising procedures and developing corrective action plans to address the issues identified above. In the event that there are modifications to the JURMP as a result of the post-annual report debrief process, those modifications will be reflected in next year's annual report.

Additionally, in order to ensure that inspections are conducted in accordance with the City's JURMP during the next reporting period, the Pollution Prevention Division sent out a memorandum in September 2010 to all departments reminding staff of the inspection requirements for municipal facilities and rainy season requirements. The Pollution Prevention Division plans to send out this memorandum annually. The Pollution Prevention Division will also meet with the Department's Storm Water liaisons twice a year, and Pollution Prevention staff will be available to conduct training via walk-along inspections of municipal facilities.

BMP Efficiency Assessments

The City implemented several BMP Efficiency Assessments (pilot studies and special investigations) during the FY 2010 reporting period. As previously stated, the majority of these will be presented and assessed as individual WURMP Activities. One example of a BMP Efficiency Assessment conducted during the reporting period has the following findings:

Targeted Business Inspections

The targeted business inspections WURMP activity generated several recommendations for consideration by the City for modifications to the planning and implementation of Baseline BMPs. **Table 12-4** provides a brief summary of the findings; more details can be found in the City's FY 2010 WURMP Annual Reports to be submitted in January 2011.

Table 12-4: Targeted Business Inspections
BMP Efficiency Assessment Findings and Recommendations

Findings	Recommendations
Trash areas, over-irrigation and storm drain maintenance are the highest threats to water quality for commercial properties	Review of the Storm Water Standards Manual to determine if BMPs required for trash enclosures, loading and unloading areas and irrigation systems are adequately described
	Review of Minimum BMPs Requirements for possible revisions
Increased inspection frequencies at automotive facilities did not increase the rates of BMP implementation	Maintain current inspection frequencies for automotive facilities
Property based inspections have the potential to be effective and efficient	Education/outreach, inspection and enforcement to focus on commercial property managers and owners. This will be further evaluated in FY 2011 via a revised Inspection Pilot Study

The City is implementing various activities and projects aimed at determining effectiveness and efficiencies of BMPs. Until the City collects more data and information regarding BMP Efficiencies, the Integrated Assessment Programs will be limited to shorter-term outcomes. The assessment results may be modifications to current City functions to increase communications, productivity and meeting the current targeted outcomes: permit compliance; positive changes in knowledge and awareness and positive changes in behavior. As the City's depth and breadth of information regarding BMPs becomes more robust, additional programmatic modifications may occur to increase pollutant load reductions. These assessments and program modifications will be reported in appropriate future years.

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13 JURMP REVISIONS

In order to improve the efficiency and effectiveness of the City's efforts in protecting and improving storm water quality, the City updated its JURMP in March 2008. Additional revisions since the 2008 update may be made as necessary, and **Table 13-1** summarizes the revisions made during FY 2010 (specific language changes are in **Appendix V)**.

Table 13-1: FY 2010 Summary of JURMP Revisions

JURMP Annual Report Section	JURMP Revisions
Municipal	– Revised minimum BMP language in Sections 6.x.3.1.1 o The revision is applicable to all Municipal sections 6.x.3.1.1. Appendix X provides an example of the revision. This revision is applicable to Sections 6.2.3.1.1, 6.3.3.1.1, 6.4.3.1.1, 6.5.3.1.1, 6.6.3.1.1, 6.7.3.1.1, 6.8.3.1.1, 6.9.3.1.1, 6.10.3.1.1, 6.11.3.1.1, 6.12.3.1.1, 6.13.3.1.1, 6.14.3.1.1, 6.15.3.1.1, and 6.16.3.1.1

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14 CONCLUSIONS AND RECOMMENDATIONS

14.1 SUCCESSES AND CHALLENGES

14.1.1 Successes

Special projects are an integral tool in the City's effort to leverage limited resources with grant dollars and partnerships with environmental organizations and agencies. During FY 2010, the Pollution Prevention Division participated in seven TMDL programs (either through implementation or development of TMDLs) and numerous special water quality monitoring investigations to determine the sources of various storm water quality problems. In addition, the Storm Water Department implemented various special storm water quality projects designed to optimize and determine the efficiency of jurisdictional programs and activities, such as street sweeping (details will be included in the FY 2010 WURMP Annual Reports associated with those watersheds). The findings of these special projects will be used to improve the effectiveness of the City's overall Storm Water Program.

In addition, the City's Pollution Prevention Division achieved significant benefits to storm water quality beyond its budget by leveraging special projects. Specifically, over the course of several years in many cases, the City has received approximately $4.6 million in grant funds, supplemented by approximately $1.7 million in City and partner agency matching funds. The grants, which generally span multiple years, helped further the City's clean water efforts in San Diego Bay, Tijuana River, and Mission Bay.

The Pollution Prevention Division achieved many other successes in implementing the JURMP in FY 2010.

- Removed 67,765 tons of debris, anthropogenic litter, and sediment from City catch basins, inlets, cleanouts and open channels
- Removed 6,668 tons of debris from City parking lots and streets
- Continued its efforts to seek out and abate illegal discharges; and was responsible for issuing 291 notices of violation, 220 citations, and conducted 288 follow-up inspections for FY 2010.
- The *Think Blue* messaging effort provided approximately 15,346,734 impressions from placement of PSAs on media websites.
- The *Think Blue* storm water education campaign made contact with approximately 3,131,356 individuals through special events.
- Revised and completed new annual reporting forms to assist in data collection for the City's JURMP Annual Report.

Through the efforts of the Pollution Prevention Division and other City staff, there has also been a reduction in the percentage of beach advisories and closures per total beach mile days possible over the last nine years (see **Figure 14-1**). This data is based on calendar year, and 2009 recorded an 87% reduction in the number of beach postings and closures since 2000. In addition to reducing beach postings, the City has also reduced the number of sewage spills between 2000 and 2010 (see **Figure 14-2**).

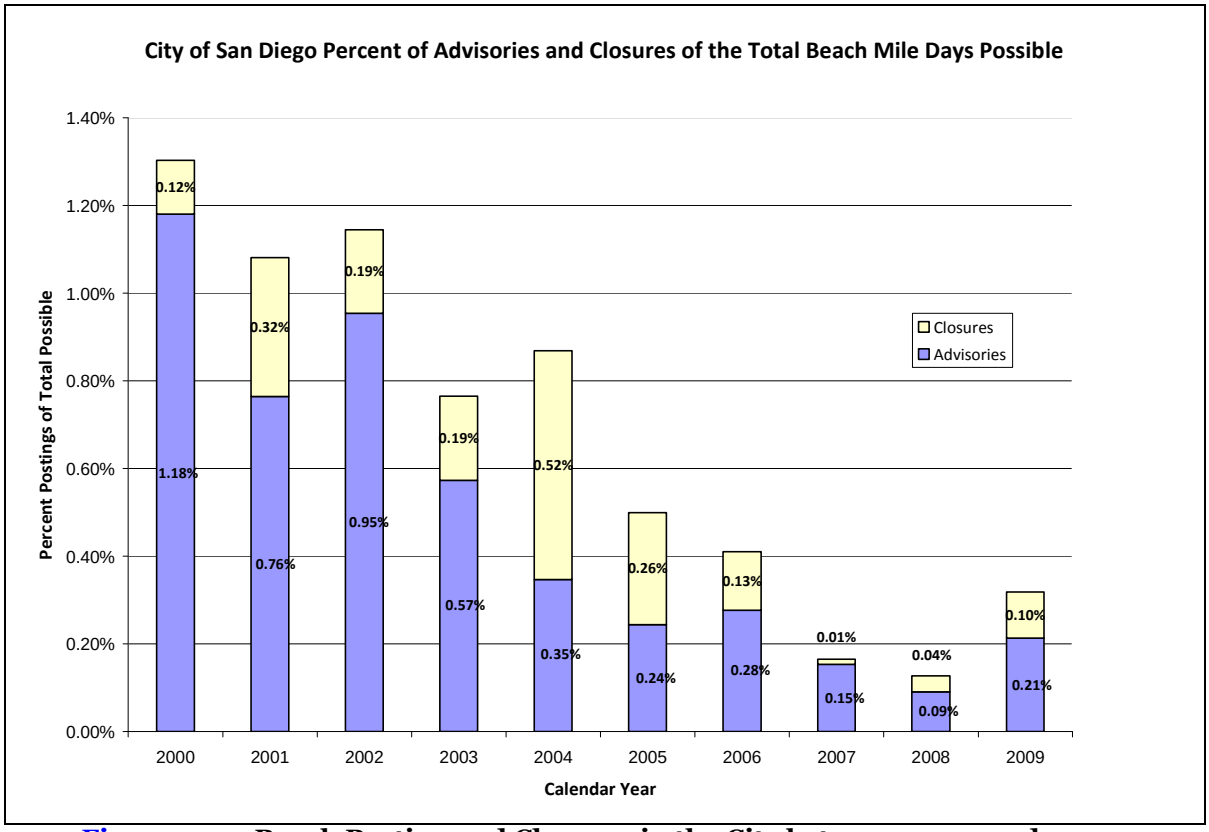

Figure 14-1: Beach Posting and Closures in the City between 2000 and 2009.

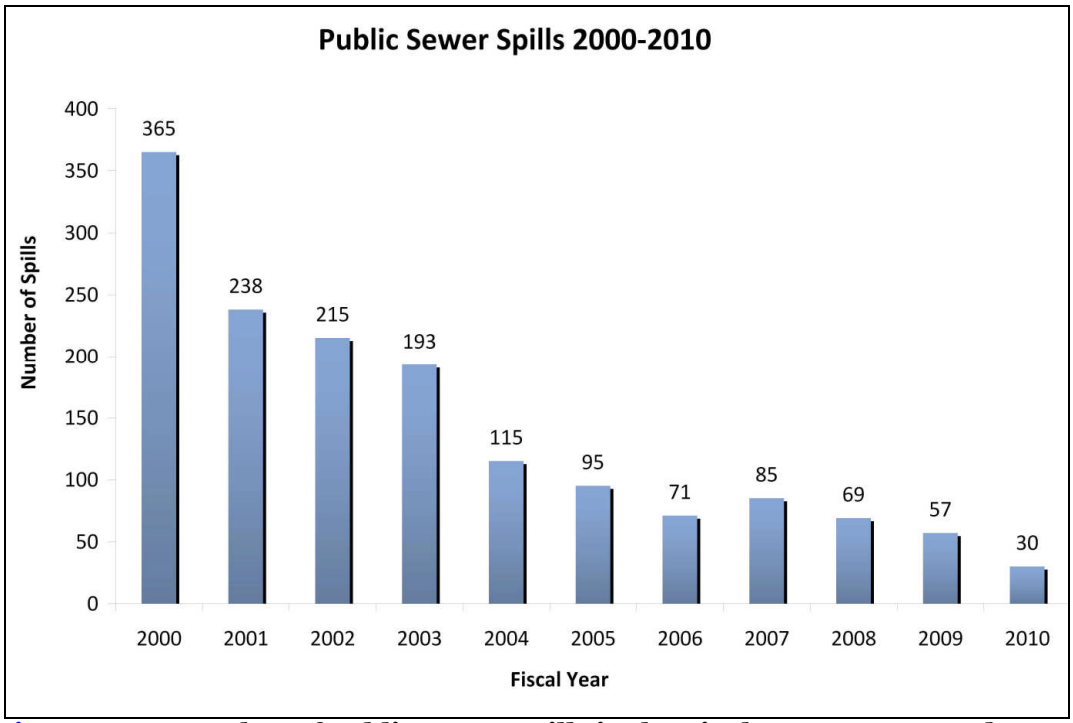

Figure 14-2: Number of Public Sewer Spills in the City between 2000 and 2010.

14.1.2 Challenges

Although the City's programs are continually implemented, there are still many challenges that pose issues to staff and the functionality of certain aspects of the program. Some of these challenges are discussed below.

In addition to the Municipal Permit, the City must also simultaneously comply with the requirements of other regulatory programs, such as ASBS, TMDLs, and CAOs. Although these regulatory programs are separate from the Municipal Permit, their ultimate goal is the same—the improvement and protection of the region's water quality. The convergence of these regulatory programs mandates that the City devote resources to advance planning efforts and nurture even stronger bonds and partnerships with other stakeholders in the region to achieve its goal of improved storm water quality. A discussion of the City's advance planning efforts is provided in Section 14.2, Future Recommendations.

The City faces significant challenges in effectively gathering and managing storm water program data. With a growing population of over 1.2 million residents and 237 square miles of urbanized development, the City is larger than other incorporated jurisdictions in the region. The enormity of the data management challenge is something the Pollution Prevention Division and other departments are continually working to improve. For example, DSD must manage data from 100,000 inspections per year and are continuously working on improvement to its data tracking systems. To address the need for effective data management capabilities, the Pollution Prevention Division completed a division-wide data needs assessment and began developing an integrated database and software system in FY 2008. The system was designed to manage storm water data and enforcement and inspection information citywide. The Pollution Prevention's database (SAP) went live in November 2008. As a result of moving to the new integrated database there were issues that arose during the reporting period which resulted in the identification of areas where data collection procedures needed to be refined. In specific cases, the SAP database needs to be revised or training provided to staff on data entry to resolve these issues. The City will continue to focus on these modifications and the standardization of data collection in order to assist in annual reporting and activity and program effectiveness assessments.

The City of San Diego has a sizeable inventory of municipal facilities, and during FY 2010 99% of municipal facilities received two inspections. In order to ensure that inspections are conducted in accordance with the City's JURMP during the next reporting period, the Pollution Prevention Division sent out a memorandum in August 2010 to all departments reminding staff of the inspection requirements for municipal facilities and rainy season requirements. A second reminder was also sent towards the end of September 2010. The Pollution Prevention Division plans to send out these reminders annually. The Pollution Prevention Division will also meet with the Department's Storm Water liaisons twice a year, and Pollution Prevention staff will be available to conduct training via walk-along inspections of municipal facilities.

Lastly, the Treatment Control BMPs have posed significant issues for the City. It has been acknowledged that the City's tracking systems related to treatment control BMPs needed improvement. This issue has permeated throughout several City departments and elements of the program. The City is continuing to improve upon this issue and making great strides towards rectifying the issue at all levels of implementation.

14.2 FUTURE RECOMMENDATIONS

To continue to improve program efforts, the Pollution Prevention Division has identified four major program goals, as detailed below.

1) *Continue strategic approach to program planning and implementation (Municipal Permit, ASBS, and TMDLs).* The City is subject to multiple water quality regulatory programs, namely: the Municipal Permit, TMDLs, ASBS, and CAOs. By setting stringent water quality standards that the City must meet, these regulatory programs require the implementation of structural (e.g., CIPs) and non-structural (e.g., education and outreach, street sweeping) activities in order to meet compliance targets. Given that these regulatory programs require similar outcomes, careful program coordination is needed to avoid unnecessary overlapping efforts, wasted resources, and loss of time. Therefore, the City is employing an integrated approach towards meeting the requirements of these regulatory programs simultaneously. The Pollution Prevention Division began planning for an integrated approach to implementation called the "Strategic Plan for Watershed Activity Implementation" in FY 2006 and continued to employ this approach in FY 2010 with the initiation of an effort to develop a Strategic Business Plan for the Storm Water Department. The initial focus of the approach is on the City's watershed-based programs and activities (particularly in the Chollas Creek, Tecolote, and Rose subwatersheds). However, as knowledge is gained from the implementation and assessment of the watershed-based activities, it can be applied citywide to ultimately help improve the City's jurisdictional activities. The City will continue efforts to maximize efficiencies of programs and activities through assessment of pilot project efforts.

2) *Improve Post-Construction BMPs programs:* The City will continue to coordinate internally to ensure that all actions related to TCBMPs are properly enacted and tracked to implement the required TCBMP program. This includes implementing the requirements at project outset through confirmation that the TCBMPs are constructed per the approved plans. For the post-construction phase, the City will continue to research and field verify TCBMPs on its inventory to address potentially missing BMPs and make corrections for inaccuracies in the database. Together, these actions will ensure the City's TCBMP program is operating effectively.

3) *Improve data management, reporting and assessment.* The City will be working with the other Copermittees in refining their reporting and effectiveness assessment standards to facilitate cross-jurisdictional and cross-programmatic comparisons and evaluations. The refined standards will lead to a more regionally-integrated approach to storm water quality improvement efforts. In addition to continued inter-jurisdictional cooperation, the Pollution Prevention Division will continue to increase coordination with other City departments to ensure permit compliance and data collection. The Pollution Prevention Division will also look for methods to modify and improve data gaps and collection procedures to assist in activity and program effectiveness assessment.

4) *Refine municipal inspection program.* The Pollution Prevention Division will continue to work with departments to ensure that the City meets its inspection requirements as outlined in the City's JURMP. Specifically, the Pollution Prevention Division will send out reminders citywide about Municipal Permit responsibilities in FY 2011.