

# *Chapter 1*

## **MUNICIPAL OPERATIONS PROGRAM POLLUTION PREVENTION AND GOOD HOUSEKEEPING**

### **I. Introduction**

Municipal operations include a wide variety of activities conducted to maintain City owned property and facilities, such as public streets and the storm drain system. Significant amounts of urban pollutants are found on street and road surfaces due to pavement abrasion and littering. Hydrocarbons and heavy metals are deposited on roads from clutch and brake wear, vehicle exhaust, and leaking motor fluids. These pollutants are also found on sidewalks and parking lots, and in the storm drain system. In addition to litter and debris, vegetation management and herbicide use are concerns associated with maintenance of street medians, parks, and other landscaped areas. Street repairs typically involve asphalt or concrete removal/addition and, therefore, materials such as saw-cut slurry and leftover waste must be properly contained to avoid discharge to the storm drain. The cleaning of buildings and walls can introduce soap and particulates, including paint chips, to the storm drain system if precautions are not taken.

The objective of the City's Municipal Operations Program is to prevent pollutants generated by municipal operations and activities from entering the storm drain system by doing the following:

- Develop and implement Best Management Practices (BMPs) in order to prevent or reduce pollutant runoff from municipal operations.
- Develop and apply measurable goals to evaluate the success of the BMPs.

It should be noted that, while this chapter focuses on practices that the City is incorporating into its municipal operations, many of the pollutants in urban areas are also controllable through education and outreach of the residents and businesses (which is addressed in other programs).

### **II. Pollutants of Concern and Target Audience**

As described above, there are numerous pollutants of concern associated with municipal operations because there is such a wide range of work in a variety of fields. The primary pollutants of concern include: trash, debris, motor oil, metals, detergents, saw cut slurry, and hazardous materials.

EPA guidance documents identify sediment, debris, and other pollutants on roads and parking lots as pollutants of concern. Street sweeping is thus recommended on a regular basis to minimize these pollutant sources. EPA guidance documents also recommend storm drain

cleaning to reduce the amount of trash, debris, and pollutants being discharged into the storm drain system and local waterways. In addition, EPA guidance documents highlight the importance of proper hazardous materials storage; landscaping and lawn maintenance practices to minimize the discharge or runoff of pesticides and fertilizers; and proper municipal fleet maintenance.

The target audience is City staff primarily from the Parks and Recreation, Public Works, and Water Departments. This is because these are the principal departments responsible for conducting municipal operations work and the implementation of BMPs. Also targeted will be contractors hired by the City.

### **III. Program Elements and Best Management Practices**

The City first determined which elements comprised the Municipal Operations Program and then selected the most appropriate Best Management Practices (BMPs) in order to reduce the pollutants of concern described above to the maximum extent practicable.

The Municipal Operations Program is comprised of the following elements:

- ❖ Street Sweeping and Cleaning
- ❖ Sidewalks, Plazas, and Parking Lot Cleaning
- ❖ Medians, Parks, Municipal Golf Course, and Other Landscaped Areas
- ❖ Repair and Maintenance of City Surfaces
- ❖ Painting, Paint Removal, Building Cleaning, and Graffiti Removal
- ❖ Storm Drain System Inspection and Cleaning
- ❖ Sanitary Sewer System Inspection and Cleaning
- ❖ Repair and Rehabilitation of Sanitary Sewer and Storm Drain Lines
- ❖ Dry Weather Storm Water Diversion Projects
- ❖ Municipal Facilities and Site Specific Operations
  - Corporation Yard
  - Municipal Swimming Pool
  - Municipal Golf Course Maintenance and Storage Areas
  - Parks and Recreation Department Yard
  - Parks and Recreation Remote Storage Areas
  - Fire Stations
  - Wastewater Treatment Plant
  - Resource Recovery Facility

- ❖ Beaches, Parks and Open Spaces
- ❖ Neary Lagoon Management
- ❖ Drinking Water Distribution System
  - Repair and Maintenance of City Water Infrastructure
  - Facilities and Operations Outside of City Limits
  - Water Department Remote Storage Areas
- ❖ Best Management Practices
- ❖ Training and Education of City Staff
- ❖ City-wide Watershed Issues Team

The program elements are described in more detail in the sections below. The selected BMPs are listed and described under each program element.

### **Street Sweeping and Cleaning**

A wide variety of urban pollutants are found on city streets and road surfaces. For example, concrete and asphalt particles from pavement abrasion, heavy metals from leaking vehicle fluids, and litter are constantly deposited on our streets and roads. These pollutants ultimately runoff or find their way into the nearest drain inlet and enter the storm drain system.

The City conducts street sweeping for aesthetic, safety, and public health reasons. Studies show that approximately 90% of dirt and debris on the street is located within 12 inches of the curb. The City's street sweeping program utilizes several practices to reduce polluted runoff as follows:

- Increased street sweeping frequency in areas most prone to litter and dirt accumulation with focus on the San Lorenzo watershed to reduce sediment and bacteria loading.
- Replacement of old sweepers with new, more advanced equipment, Regenerative Air PM10 Compliant sweepers, which pick up finer particulates. The City has replaced its three street sweepers with the Regenerative Air PM10 Compliant models.

Currently, street sweeping operations sweep approximately 35 miles of city streets per day. In the spring and summer, the sweepers collect approximately 2.6 tons per day of loose debris. In the fall and winter, the street sweepers collect about 5 tons of material, which is mainly comprised of leaves and mud, daily. The street sweepers typically operate between 5:00 am and 11:00 am. Street sweepers are cleaned at the City's Corporation Yard wash rack, which is plumbed to the sanitary sewer system.

In addition, manual hand sweeping is often conducted in tandem with the mechanical street sweepers in order to pick up larger debris and objects. Manual sweeping is also conducted whenever necessary in order to clean up after a particular event or accident. It is estimated that

manual hand sweeping removes about 1,448 pounds of trash, abandoned furniture, weeds, leaves, etc. each day.

### Street Sweeping Frequency

As mentioned above, mechanical street sweeping is conducted on all City streets on a regular basis. However, some areas are swept more frequently than others based on which streets accumulate the most trash. Streets in all commercial areas are swept either once or twice per week depending upon where they are located. For example, streets in the “primary” commercial areas of downtown Santa Cruz and near Main and Cowell Beaches are swept twice per week because they accumulate the most trash and debris. In addition, these areas drain directly either to the San Lorenzo River or the beach. Streets in the “non-primary” commercial areas are swept once per week because they also accumulate substantial amounts of trash and debris. Most residential areas are swept twice per month although a resident may request that their street be swept more frequently if the other residents on the street support the request.

*BMP #MO-1: Sweep City Streets By Mechanical Sweepers*

### **Sidewalks, Plazas, and Public Parking Lot Cleaning**

Sidewalks, plazas, and municipal parking lots are cleaned for aesthetic, safety, and public health reasons. Like streets, the pollutants found in these areas are usually associated with litter and vehicle use. During the fall season, leaves also clog the storm drain inlets.

### Litter Control

The City has “No Littering” signs posted where appropriate. Litter and recycling receptacles are placed and maintained in areas of high use, such as the downtown area and near the Municipal Wharf. City staff empties litter and recycling receptacles daily in the downtown and Municipal Wharf areas, while receptacles in other commercial areas are cleaned and maintained as needed. In addition, receptacles in the City parks are cleaned on a daily basis. Since the waste and recyclables are collected as part of an aggregate route, the City is unable to quantify the amounts collected specifically from the high use areas as a measurable goal metric.

*BMP #MO-2-: Take Measures to Control Litter*

### Sidewalk and Plaza Cleaning

The City currently cleans public sidewalks and plazas either by sweeping or by pressure washing using contractors hired by the City. Contractors hired by the City to pressure wash or steam clean the downtown shopping area sidewalks and other outdoor areas are required to collect the wastewater and discharge it into the sanitary sewer.

Sidewalks are typically hand swept in the “downtown” area three times per week. Sidewalks on downtown side streets are hand swept as necessary, for example some portions are done twice per week. Improved alleys are typically cleaned and hand swept once per month.

### Leaf Program

Currently, the City is implementing a program called the “Leaf Program” in the downtown area during the fall months. Every Monday through Friday during the fall season, leaves are picked up off the sidewalks and streets to keep them from blowing into the storm drains. The leaves are brought to the City’s Resource Recovery Facility where they are added to the *GreenCycle* (vegetation, yard clippings, etc.) wastes and converted into mulch.

### Public Parking Lots and Municipal Garages

The City cleans the public parking lots (Nos. 2,3,4,5,6,7,8,9,10,11,13,14,16,17,20,23), Locust Garage and Soquel/Front Garages with a mechanical vacuum sweeper 6 days per week in lieu of wet cleaning. Lots 12, 18, 24 and 25 are mechanically swept once per week. The City will continue to do these lots and garage sweeping.

In past years, the City has had the municipal parking garages annually cleaned (by pressure washing) by a contractor. The City is now planning to do this work in-house. The contractor was required to collect the wastewater and dispose of it in the sanitary sewer. City staff oversaw these cleaning events to ensure proper disposal of the wastewater. Currently, the City is in the process of obtaining the proper equipment to pressure wash and vacuum up the water for disposal in the sanitary sewer. Emergency work may still be done by a contractor who would also be required to collect and dispose of the water in the sanitary sewer.

City contractors are required to abide by the mandatory BMPs for outside cleaning in commercial and retail areas. For example, the wastewater from pressure washing of sidewalks, alleyways, and public garages is not allowed to be discharged into the storm drain system.

*BMP #MO-3- Sweep Public Parking Lots and Municipal Garages Regularly*

### **Medians, Parks, Municipal Golf Course, and Other Landscaped Areas**

The primary pollutants of concern from medians, municipal golf courses, and other landscaped areas are sediment from erosion; nutrients from fertilizer use and organic matter (grass clippings and leaves); and heavy metals and toxic organics from pesticide/herbicide use. Erosion from areas where landscaping or other cover has deteriorated or never existed adds sediment to urban runoff. Litter and organic matter, such as clipping and leaves, may enter storm drain inlets. Fertilizers and pesticides applied prior to rainfall or in excessive amounts can run off into the street or storm drain. Debris and illegal dumping in public areas are also a source of pollution.

### Landscaping Methods to Minimize Erosion

Medians, embankments, and City parks are planted with vegetation and maintained for both aesthetics and erosion control. Native species are planted in municipal landscaped areas whenever possible to minimize the need for watering and use of fertilizers. Irrigation systems are installed to minimize excess watering and reduce irrigation water runoff. Irrigation systems are inspected regularly to ensure that leaks are detected and repaired as soon as possible.

### City's IPM Policy for Pesticide and Herbicide Use

In 1998, the City instituted an Integrated Pest Management (IPM) Policy to govern the use of pesticides and herbicides at parks, the municipal golf course, and other landscaped areas such as street medians. The IPM policy requires City departments to consider non-pesticide alternatives first when purchasing products to control pests and plant diseases. Eliminating pesticide use near watercourses and riparian areas is a priority. The policy's goal is also to eliminate the use of Toxicity Category I and II pesticides. Fertilizers are applied only as needed and the minimum amount necessary for the job is used.

### Municipal Golf Course

The Golf Course has a computerized irrigation system that helps to prevent over-watering. Storm water runoff from the golf course is minimal because most of the runoff the area is retained in the turf. Grass clippings from turf maintenance are left in place on golf course. In 2005, the Golf Course installed an oil and grease separation unit at the discharge point for parking lot drainage to separate oils and solids prior to leaving the site.

### Parks Cleaning

Some City parks have bleachers and buildings that periodically need cleaning. The Parks and Recreation Department cleans bleachers and under the awnings and eaves of buildings (for cobwebs) typically by pressure washing. This practice is used only in situations where the wastewater falls onto grassy areas or soil. If sufficient grassy area or soil is unavailable to catch and absorb runoff, the City either pressure washes and collects the runoff for disposal in the sanitary sewer or uses dry cleanings methods.

## **Repair and Maintenance of City Surfaces (i.e. streets, roads, sidewalks)**

These types of activities include repair work, such as asphalt or concrete removal, patching of potholes, resurfacing, and sealing pavement surfaces. Storm water pollution can occur when broken up asphalt, concrete cuttings, saw cut slurry, sediment, debris, and fuel or oil from construction equipment find their way into the storm drain system if precautions are not taken. Repair activities are conducted by both City personnel and contractors hired by the City.

### Street Cutting and Road Work

City crews carefully follow BMPs in order to keep materials from entering the storm drain system while they are working. For example, nearby storm drain inlets are protected when breaking up asphalt or concrete and during saw cutting. After breaking up old pavement, crews sweep thoroughly and recycle the materials or properly dispose of the non-recyclable materials. Saw-cut slurry is removed when dry or by the end of the day. Material stockpiles are stored under cover to prevent the discharge or drifting of particles and materials into the street or storm drain system. It is also standard procedure to remove stockpiles of materials by the end of the day even if the job is not yet completed.

### Street Patching, Resurfacing, or Surface Sealing

Patching, resurfacing, or surface sealing is not scheduled during wet weather. When striping is removed from City streets, it is typically blasted off with slurry comprised of baking soda and water. Sand is no longer used for blasting at the request of the local Air Pollution Control Board.

During blasting, City crews block the nearby storm drains and the wastewater is collected and neutralized prior to discharge to the sanitary sewer. After the job is done, the street is carefully swept multiple times to ensure that all particulates are picked up.

#### Concrete Work

Concrete mixers are washed out in designated areas and concrete is never discharged into the storm drain system. Whenever possible, the concrete washout is pumped back into the mixers for disposal at a concrete plant.

#### Bridge Work

When work is conducted on a bridge, City crews take precautions to ensure that materials are not blown or runoff into the water below. The three major downtown bridges, which span the San Lorenzo River, have all been recently retrofitted and do not contain any storm drains that directly release runoff into the river. This is also true of an older bridge, called the Market Street Bridge, which spans Branciforte Creek on the outskirts of town.

#### Equipment Leaks and Spills

City crews utilize dry clean up methods to clean up equipment leaks and spills. Typical dry methods include the use of absorbents such as kitty litter. Dry absorbents are picked or swept up after use and disposed of properly.

### **Painting, Paint Removal, Building Cleaning, and Graffiti Removal**

Urban runoff pollution can also result from activities such as painting, paint removal, building cleaning, and graffiti removal. When painting or removing paint, care must be taken to prevent spills and paint particulates from reaching the storm drain. Building cleaning often involves pressure washing, grinding, or sand blasting which requires storm drain protection.

City crews generally transfer and load paint from the paint storage area at the Corporation Yard, into their vehicles prior to driving to a job site. This storage area is secondarily contained. Staff attempts to use up all paint in stock and leftover paint so that there is little waste. Leftover paint, that is not reused, is taken to the County of Santa Cruz landfill for recycling.

#### Marking Streets and Parking Lots

The City currently uses a “thermo-plastic” application to mark streets and parking lots in lieu of using paint. This dry application method creates markings that last longer and eliminates the chance of paint spills to the storm drain system.

#### Paint and Graffiti Removal

Paint is removed by grinding instead of blasting and it is the City’s policy to remove graffiti by “painting over” whenever possible to prevent the discharge of pollutants to the environment. Both City crews and hired contractors conduct graffiti removal. Graffiti found on non-painted surfaces (where painting over is not possible) is removed with power washing.

As of May 2002, the City contains the wastewater from power washing for graffiti removal by using berms. The water is collected using a shop vacuum and then discharged to the sanitary

sewer. City contractors, conducting power washing to remove graffiti, were required to prevent the discharge of untreated wastewater to the storm drain system as of March 2003. This requirement applies to graffiti removal from all types of locations and surfaces including pavement, walls, buildings, and bridges.

### Building Cleaning

Exterior building cleaning is generally conducted by pressure washing. City staff protects all nearby storm drains from pressure washing runoff by covering them with heavy rubber mats that are held down by sand bags. The wastewater is then collected and disposed of in the sanitary sewer. Again, both City crews and contractors will be required to follow BMPs.

## **Storm Drain System Inspection and Cleaning**

A variety of urban pollutants can flow to and accumulate in the storm drain system. For example, trash and litter from food packaging and paper products lodge in storm drain inlets. Organic matter and sediment can also clog catch basins. Heavy metals and toxic chemicals from the illegal dumping of waste antifreeze and oil, leaking vehicle fluids, and runoff of fertilizers and pesticides are also found in storm drain inlets and catch basins. Many pollutants are also flushed into receiving waters by dry weather flows or storm water in the wet season, particularly the season's first heavy storm. It should be noted that illicit connections are another source of pollutants in storm drains and are addressed in the Illicit Discharge Detection and Elimination Program.

Under the Wastewater Mains Division, the Public Works Department implements an aggressive "Team Clean Program" to clean and maintain the storm drain system prior to the onset of the rainy season. The Team Clean Program is typically conducted between September and November of each year. Team Clean focuses on the San Lorenzo watershed (Downtown, Lower Ocean Street area and the Beach flats).

### Inspection, Cleaning and Repair of Catch Basins and Inlets

The Wastewater Mains Division crews inspect all Downtown, Beach Flats, and lower Ocean Street storm water catch basins and inlets in the City annually in the Fall in order to identify those in need of cleaning or repair. The City focuses on cleaning storm drain inlets in these areas because they are "high use" areas and most drain directly to the San Lorenzo River.

Each catch basin or inlet needing cleaning or repair is marked on a map of the storm drain system. The Wastewater Mains Division then schedules and conducts the appropriate remedial actions, such as cleaning or repairs, as part of the Team Clean Program. Basins, inlets and pipelines determined to be a "problem" or within an area of "intensive use," such as the downtown area are cleaned annually.

In addition, after large storm events during the wet season, the Wastewater Mains crews inspect the catch basins in the Downtown, Beach Flats, and lower Ocean Street areas and re-clean them as needed.



Some of the storm water catch basins and inlets in other areas of the City are also inspected annually and cleaned if needed dependent upon the staff time available after the primary focus areas are addressed.

Drainage ditches are also cleared of vegetation and debris to facilitate the flow of storm water. In general, if a catch basin needs a repair, the City will upgrade the catch basin rather than just making the repair.

In addition, the Wastewater Mains Division cleans and inspects pipelines from inlets to the mains as necessary, such as when a blockage or obstruction arises.

*BMP #MO-4: Inspection, Cleaning and Repair of Catch Basins and Inlets*

Branciforte Storm Water Conveyance Channel

As mentioned in the Overview section, Branciforte Creek is listed on the Section 303(d) list for impaired water bodies for sedimentation/siltation. The potential sources stated are non-point source, road construction, and silviculture. In addition, the RWQCB has adopted a TMDL for Fecal Indicator Bacteria for Branciforte Creek. The potential sources are urban runoff, septage disposal, nonpoint sources, and natural sources. Thus, targeting the sources of these pollutants to Branciforte Creek is a high priority.

As part of the Team Clean Program, the Wastewater Mains Division inspects and schedules as needed removal of all large trash and debris items (i.e. shopping carts, tires, etc.) in the conveyance channel from the Market Street bridge to the Ocean Street/Dakota street bridge prior to the onset of the rainy season.

*BMP #MO-5: Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed*

Pump Stations Along the San Lorenzo River

There are five storm water pump stations located along the San Lorenzo River. These pump stations are cleaned twice per year, prior to the onset of the rainy season and during the Spring. Additional cleanings are also conducted during the wet season after large storm events if needed.

The lines to the pump stations in the downtown and Beach Flats areas are also flushed and cleaned annually as needed each fall because these tend to carry the greatest amount of debris.

*BMP #MO-6: Clean Pump Stations Along the San Lorenzo River*

CDS Unit

The City has agreed to maintain a CDS unit, installed by the County of Santa Cruz, located at Soquel Avenue and Capitola Road. This CDS unit was installed to treat runoff that drains into Arana Gulch from Soquel Avenue. Typically, there is no flow during the summer months. Thus,

the City will clean the unit in the fall and spring each year. In addition, the City will inspect the unit monthly during the wet season and clean if needed. The City hopes that the CDS unit will improve the water quality of the urban runoff flowing through this site by removing gross pollutants such as cigarette butts, plastic, and other debris.

*BMP #MO-7: CDS Unit Maintenance*

Storm Drain System Cleaning Wastes

Storm drain system cleaning wastes are typically brought to the City's Wastewater Treatment Facility (WWTF) for dewatering prior to disposal at the City's landfill. All wastewater is thus discharged into the WWTF sanitary sewer line and is prevented from running off into the storm drain system. Once dewatering has been completed, the wastes are brought to the City's landfill for disposal.

Inspections of Storm Drain Lines

The City will conduct TV camera inspections of the storm drain system annually on an as-needed basis. In addition, TV camera inspections may be used on a particular line when an illegal connection is suspected. The City's measurable goal is that, over a 5 year period, we will TV or visual inspect the inside of an average of 1000 feet of pipeline per year.

*BMP #MO-8: Conduct Inspections of Storm Drain Lines*

**Sanitary Sewer System Inspection and Cleaning**

The City will clean all sanitary sewer main lines every 18 months. Follow-up TV inspections will be done if during the cleaning process a problem is discovered in the line.

*BMP #MO-9: Clean Sanitary Sewer Main Lines*

**Repair and Rehabilitation of Sanitary Sewer and Storm Drain Lines**

Deteriorating or leaking pipes in the sanitary sewer or storm drain systems contribute to urban runoff pollution in our waterways. Sanitary sewer and storm drain pipelines are sometimes laid in close proximity to each other making them particularly susceptible to infiltration. Infiltration of sewage and other pollutants into the storm drain system occur as the underground pipes age and develop cracks, leaks, and breaks. Infiltration is especially a problem in lower lying areas of the City, particularly near the San Lorenzo River, because the water table is so high. Pipes may also have structural failures, which are repaired by the City as soon as they are detected. A break in a sewer lateral or main can result in a direct discharge to a creek, the San Lorenzo River, or other water body depending upon the location. City line maintenance crews rapidly clean up spills and correct blockage problems using one of the City's vacuum trucks.

Sanitary Sewer Main Lines and Private Laterals

The City has an aggressive sanitary sewer rehabilitation program to repair/replace undersized, cracked, broken, faulty, or aging pipes. In general, the City fixes deteriorating or leaking sanitary

sewer pipes by either replacing the line or lining the inside to seal off cracks, holes, and leaking areas. In the past several years, the City has done considerable sewer rehabilitation in areas around the San Lorenzo River because the poor condition of these pipes was thought to be causing sewage infiltration into the river. In 2001, the City rehabilitated approximately 13,000 feet of sanitary sewer main lines by either “pipe bursting” or “pipe lining.” In 2002, the City rehabilitated approximately 11,495 feet of sanitary sewer main lines. The City is currently working on developing a mapping system that will allow the sanitary sewer pipelines to be mapped according to their age.

In addition, in past few years, the City has rehabilitated or replaced a small number of private laterals from the main to the cleanout in the sidewalk. This is because leaking private sanitary sewer laterals also contribute to infiltration problems and may cause discharges to the storm drain system. Private laterals are the responsibility of the property owner. However, the property owner often does not know if their lateral is deteriorating or has a leak. Even if they are aware of a problem, repairs or replacement are sometimes put off due to the expense. Thus, private laterals are often the source of chronic spills or leaks. Occasionally, the City will clean up spills from private lines and attempt to open blockages in laterals if immediate action is necessary, or if the job is easy and does not interfere with scheduled work. Otherwise, a property owner must hire a plumbing service to remove the blockage.

Past City efforts to rehabilitate or replace private sewer laterals in critical areas include the following:

In 2000, approximately 50 private laterals were rehabilitated or replaced.

In 2002, approximately 50 private laterals were rehabilitated or replaced.

In 2002, 16 private laterals were rehabilitated or replaced.

In 2003, the City replaced approximately 80 private laterals including 70 laterals done under the Clean Beaches Initiative Project (CBI Grant Program, Proposition 13) as described below.

In addition, in 2004, the City was awarded Clean Beaches Initiative Project funding (CBI Grant Program, Proposition 13) from the State Water Resources Control Board (SWRCB) for the City’s Sanitary Sewer Rehabilitation and Storm Drain Dry Weather Diversion Projects. In accordance with this grant, the City provided matching funds for the project. The purpose of this project was to investigate and correct the sources of bacterial contaminants that enter the lower San Lorenzo River via the storm drain system in order to improve water quality at Main and Cowell’s Beaches. The bacterial contaminants were thought to originate from both the sanitary sewer and storm drain systems due to cracked and leaking pipes, and urban runoff.

A TV camera investigation of existing sanitary sewer lines and laterals in the “Beach Flats” area was conducted in 2003 in order to identify areas of infiltration and exfiltration. The investigation revealed many leaky mains and private laterals (from the main to the cleanout at the property line). These mains and laterals were repaired in 2003 and 2004 in order to help eliminate exfiltration of bacteria sources into the San Lorenzo River groundwater. Approximately 6,000 linear feet of mains and approximately 70 laterals were replaced. The total project cost was

approximately \$800,000. This work was significant towards improving the water quality in the San Lorenzo River and the San Lorenzo River Lagoon which are listed on the Section 303(d) list of impaired water bodies for pathogens.

Currently, the City will replace or fully rehabilitate, on average, 3,000 feet of sewer main pipeline per year over the five year permit period.

*BMP #MO-10: Replace or Rehabilitate Sanitary Sewer Main Lines*

#### Lateral Inspection Program

In the future, the City is planning to develop and implement a Lateral Inspection Program in order to minimize subsurface leakage of sanitary sewage into ground water and nearby storm drain lines, and to minimize line blockages which can cause spills into the storm drain system.

*BMP #MO-11: Development and Implementation of a Lateral Inspection Program*

#### Repairs and Rehabilitation of Storm Drain Lines

The City repairs or rehabilitates storm drain lines that have deteriorated. The City will repair or rehabilitate, on average, 100 feet of pipeline per year over the five year permit period

*BMP #MO-12: Conduct Repairs and Rehabilitation of Storm Drain Lines*

### **Dry Weather Storm Water Diversion Projects**

#### Dry Weather Storm Water Diversion Project-CBI Grant #1

As part of the CBI Grant funding, Proposition 13, for the sanitary sewer work described above, the City also inspected and rehabilitated portions of the storm drain system along the San Lorenzo River levee. In addition, the City completed significant dry weather diversion work at three flood control pump stations along the lower San Lorenzo River to enable the diversion of storm water runoff to the City's Wastewater Treatment Facility during the dry season. As mentioned above, the project was designed to reduce sources of bacteria from entering the San Lorenzo River and adjacent beaches (Main Beach, Cowell Beach and Seabright Beach) that are visited by several million people each year. This work is also significant because the San Lorenzo River and the San Lorenzo River Lagoon are both listed on the Section 303(d) list of impaired water bodies for pathogens as mentioned above. The San Lorenzo River is also listed for sediment and nutrients.

The large storm drain pipelines along the river levee were inspected by TV camera (over 16,000 lineal feet) and subsequently repaired. As mentioned above, the project involved retrofitting three pump stations/wet wells, Pump Stations, 1, 1A , and 2, along the San Lorenzo River in order to divert dry weather flows and groundwater to the sanitary sewer system rather than pumping this water into the San Lorenzo River. Also, as part of this project, approximately 2,500 linear feet of large diameter storm water pipeline adjacent to the San Lorenzo River levee (along Elm Street, Spruce Street, and Center Street) were lined in order to prevent groundwater and

sand from entering the existing non-gasketed concrete storm drain lines. This was done to reduce the amount of water to be pumped and diverted to the Wastewater Treatment Facility. The project began in 2003 and the work was completed in 2005. A map of the pump stations/wet wells along the lower San Lorenzo River is included in Attachment # 29.

Both the Beach Flats Sewer Replacement and the Dry Weather Storm Flow Diversion projects are monitored in cooperation with the County of Santa Cruz Environmental Health Department's Beach and Ocean Monitoring Program. The County program also provides monthly monitoring of each wet well (pump station) associated with the retrofit project as well as weekly lagoon and ocean monitoring at Cowell Beach, Main Beach, Seabright Beach, and the San Lorenzo River mouth. The County program provided data on total coliform, fecal coliform, and enterococcus bacteria at areas where regular beach closings have occurred in the past. The frequency and length of beach closings, following the retrofit projects, will be compared with data collected from 1995–2001 to ascertain effectiveness of eliminating bacteria exceeding levels of safe water contact.

Thus, each year, the City will conduct dry weather diversion of storm water from San Lorenzo River pump stations 1, 2, and 1A to the Wastewater Treatment Facility (WWTF). Although storm water and urban runoff flows around the clock into the pump stations and is thus diverted daily from the River, the actual pump downs of water to the WWTF is done on a weekly basis. Exceptions to this are periods during the summer when the River is shoaled and the diversions are temporarily ceased in order to avoid pumping groundwater to the WWTF.

*BMP #MO-13: Dry Weather Diversion of Storm Water from SLR Pump Stations 1, 2, and 1A to the Wastewater Treatment Facility*

#### Dry Weather Storm Water Diversion Project-CBI Grant #2

In 2006, the City was awarded Clean Beaches Initiative (CBI) Project funding from the State Water Resources Control Board (SWRCB) for the Dry Weather Diversion Project at San Lorenzo River Pump Stations 1B and 3. The purpose of this project is to install dry weather diversion equipment at the two other control pump stations (see CBI Grant #1 above) along the lower San Lorenzo River so that storm water runoff may be diverted to the City's Wastewater Treatment Facility (WWTF) during the dry season. The project's goal, as with the first grant work, is to reduce the levels of bacterial contaminants entering the lower San Lorenzo River via the storm drain system in order to improve water quality at Main and Cowell Beaches. The bacterial contaminants are thought to originate from both the sanitary sewer and storm drain systems due to cracked and leaking pipes, and urban runoff.

To date, the City has accomplished the storm drain lining work and the diversion pumps have been installed at Pump Stations #1b and #3. Currently, the City is installing nine rubber duck bill tideflex valves on storm drain gravity outlets in the San Lorenzo River as part of the diversion work. Four have been installed so far and plans are to complete the remaining five by Fall 2008. The goal is to reduce river flow back into the pump stations to eliminate unnecessary flow to the WWTF through the diversions. As mentioned above, monitoring for the project will be done in cooperation with and by the County of Santa Cruz Environmental Health Department. The

County will provide monthly monitoring of each pump station as well as the weekly lagoon and ocean monitoring at Cowell Beach, Main Beach, Seabright Beach, and the San Lorenzo River mouth which they currently conduct as part of their Beach and Ocean Monitoring Program. A map of the pump stations/wet wells along the lower San Lorenzo River is included in Attachment # 29.

As with the CBI Grant #1 work above, this project should be effective at reducing the bacteria levels in the San Lorenzo River and the San Lorenzo River Lagoon, which are listed as impaired for pathogens and covered under the RWQCB adopted *TMDL for Pathogens in the San Lorenzo River Watershed Waters*.

Thus, each year, the City will conduct dry weather diversion of storm water from San Lorenzo River pump stations 1b and 3 to the Wastewater Treatment Facility (WWTF). Although storm water and urban runoff flows around the clock into the pump stations and is thus diverted daily from the River, the actual pump downs of water to the WWTF is done on a weekly basis. Exceptions to this are periods during the summer when the River is shoaled and the diversions are temporarily ceased in order to avoid pumping groundwater to the WWTF.

*BMP #MO-14: After CBI Grant Project Completion, Dry Weather Diversion of Storm Water from SLR Pump Stations 1B and 3 to the Wastewater Treatment Facility*

## **Municipal Facilities and Site Specific Operations**

### Corporation Yard

There are multiple urban runoff issues associated with corporation yards and other municipal operations areas because these sites typically conduct vehicle and equipment repair work, washing, and fueling. These sites also frequently have storage areas for a variety of new and waste chemicals, such as paints, pesticides, lubricating oils, soaps, solvents, and cleansers.

The City owns and operates a corporation yard for the maintenance and parking of City-owned vehicles. The Corporation Yard includes a fueling area for City vehicles. Table 1-0 below lists these activities and the corresponding urban runoff concerns.

**Table 1-0**

### **Corporation Yard Activities and Urban Runoff Concerns**

| <b>Activity/Source</b>                                     | <b>Urban Runoff Concern</b>  |
|--|--|
| Vehicle washing, equipment cleaning, engine steam cleaning | Discharge of soap, cleansers, heavy metals, and sediments to the storm drain |
| Changing auto fluids                                       | Spills of fluids, especially in outdoor or uncovered areas                   |
| Vehicle fueling  | Fuel spills  |
| Parked vehicles and equipment                              | Fuel leaks and drips outdoors  |
| Outdoor materials/waste storage                            | Release/spill of stored materials  |

The hazardous storage is managed by the Facility Maintenance Division. The County of Santa Cruz Environmental Health Department conducts annual inspections of all hazardous storage at the Corporation Yard.

*Site Inspections:*

City Environmental Compliance Inspectors conduct annual inspections at the Corporation Yard for compliance with sanitary sewer and storm water pollution prevention requirements. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

Fleet Vehicle Maintenance and Repairs

The City's BMPs for Vehicle Service Facilities are directly applicable to activities conducted at the Corporation Yard. Therefore, the Corporation Yard is already implementing these control measures in addition to following the BMPs for Municipal Operations. Routine maintenance and repairs are performed in a designated auto repair shop building that is comprised of multiple work bays that do not have floor drains. Drip pans are always used when a mechanic changes automotive fluid or works on a vehicle part that might leak fluids and the shop is equipped with spill control materials, solvent recycling containers, drip pans, and other such measures to ensure that vehicle fluids do not reach the outside. Cleaning of the fuel island is only done using dry methods, i.e. absorbent. City vehicles that are maintained and repaired here include the City's fleet cars and trucks, street sweepers, sanitation trucks, Police vehicles, and Fire engine trucks.

The City conducts routine maintenance of all its vehicles to prevent breakdowns while out in the field. However, when a vehicle does breaks down in the field, a City mechanic travels to the vehicle wherever it has parked or pulled over. The mechanic brings and uses drip pans and "socks" to contain any spills or leaks, and dry absorbent materials. The Corporation Yard repair shop abides by the BMPs for Vehicle Service Facilities.

*Site Inspections:*

Staff from the Mechanical Division conducts daily, weekly, and monthly inspections of the Corporation Yard fueling site (see below), water reclamation system, lubricant storage, and work bays cleanliness. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

Fleet Vehicle and Equipment Washing

Vehicle and equipment washing is conducted in three designated wash pad areas at the Corporation Yard as described below:

1. The first wash rack, which is designated for use by Fleet Maintenance, is used to clean cars and truck that are in the garage for service. This wash rack is covered and sloped to prevent discharged of wash water outside. The wash rack also has a hot pressure washer that is used for engine steam cleaning. Due to the engine steam cleaning work, all the wastewater from this wash rack (even the exterior vehicle wash water) is discharged to a closed loop system. The closed loop system consists of a recycling unit with a 1,000 gallon holding tank.
2. The second wash rack is designated for use by Sanitation. This wash area is used to clean sanitation dumpsters and residential trash containers. The wash rack is covered

and sloped to prevent discharged of wash water outside. The wastewater is plumbed to a three-stage clarifier that discharges to the sanitary sewer.

3. The third wash pad is also designated for use by Sanitation. This wash pad is located outside and was made for the cleaning of large vehicles such as garbage trucks. The City's street sweepers are also cleaned here. The wash pad is currently uncovered, however, it is sloped. The wastewater drains to a three-stage clarifier which discharges to the sanitary sewer.

#### *Site Inspections:*

Staff from the Mechanical Division conducts daily, weekly, and monthly inspections of the Corporation Yard fueling site. The fueling site inspection is a mandated program from the Monterey Bay Unified Air Pollution Control District and the County of Santa Cruz Environmental Health Department. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

#### Spill Response Plan and Clean-Up Materials

The Corporation Yard has developed a spill response plan for the clean up of accidental spills. Possible accidental spills include spills of gasoline, diesel, or oils (engine oil, hydraulic oil) at the fueling area.

Clean-up materials include dry absorbent materials (Absorb-All) located in a large drum at the fuel island in case of a gasoline or motor oil spill. Other potential spills at the Corporation Yard include spills of coolant, antifreeze, and asphalt emulsion oils. There are containers of dry absorbent materials (Absorb-All) located in the garage and work bays. All locations have brooms and dustpans to pick up the used absorbent. Spills are cleaned up immediately, and precautions are taken during clean up to keep spills from escaping and for worker safety. Cleaned up waste materials are disposed of as hazardous waste. Rags may also be used to clean up drips and very small spills. Used rags are returned to an industrial cleaner for cleaning and reuse.

Garbage trucks, which are the most prone to breaking down, routinely carry dry absorbent materials on board

#### Municipal Swimming Pool

The primary pollutant of concern related to municipal swimming pools is chlorine.

The City's municipal pool is located in Harvey West Park and is managed by the Parks and Recreation Department.

#### *Pool Maintenance:*

The City has significantly reduced its use of chlorine in the local public pool (located at Harvey West Park) by using bromine on a daily basis, although the pool is treated with chlorine twice a month. When the water from the municipal swimming pool is drained for cleaning, it is discharged to the sanitary sewer. (As for private residences, the City has banned the discharge of swimming pool water to the storm drain system.)



*Site Inspections:*

Municipal pool staff conducts annual site inspections at the pool for safety and cleanliness. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

Municipal Golf Course Maintenance and Storage Areas

Urban runoff concerns at golf course maintenance and storage areas include golf cart and equipment washing, proper storage of pesticides and herbicides, and waste vegetation disposal.

The Municipal Golf Course, which is managed by the Parks and Recreation Department, has several areas where maintenance activities are conducted or materials are stored. The maintenance shop repairs and cleans equipment, such as grass mowers, used to maintain the golf course. Dry methods, such as use of kitty litter, are used in the shop to clean up spills. The equipment wash rack is covered and plumbed to the sanitary sewer. In addition to the BMPs for Municipal Operations, the yard implements all applicable BMPs for Vehicle Service Facilities.

There is a “cart barn” which houses golf carts, although the carts are actually maintained by a City contractor. There are two small hazardous materials storage buildings, one that is used to store pesticides (primarily fungicides) and one that stores gasoline, oil, and paint. Double containment is provided for storage of hazardous materials.

*Site Inspections:*

Golf Course staff conducts annual site inspections at the golf course maintenance and storage areas for safety and cleanliness. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

Parks and Recreation Department Yard

The Parks and Recreation yard provides parking for the Department’s fleet vehicles. However, fueling and most of the vehicle repair and maintenance work is conducted at the Corporation Yard. The City installed a vehicle and equipment wash rack at this site in 2003. The wash rack wastewater is filtered/treated and then discharged to the sanitary sewer. In addition to the BMPs for Municipal Operations, the yard implements all applicable BMPs for Vehicle Service Facilities.

Equipment such as tractors and mowers are kept at the Parks and Recreation Yard. Parks Mechanics work on all the tools & equipment. The fuel for large moving equipment is stored in a storage locker for flammables. Paints are also stored in this locker. There is a small equipment shop where items, such as mowers and tree stump grinders, are repaired and maintained. The storage locker and sheds undergo a complete inspection once a month and are checked weekly for spills and leaks. The Parks and Recreation Department keeps records of all inspections.

*Site Inspections:*

Parks Department staff conducts annual site inspections at the Parks and Recreation Yard for safety and cleanliness. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

### Parks and Recreation Remote Storage Areas

Remote storage areas are generally used for the storage of landscaping equipment and gasoline. There are numerous remote storage areas located at Parks and Recreation sites throughout the City. The majority are small buildings or closets. They typically house gardening tools and gasoline for lawn mowers or leaf blowers. Gasoline is properly contained according to state regulations. The remote storage areas are used or checked by City crews daily. These storage areas undergo complete inspections once a month and are checked weekly for spills and leaks.

#### *Site Inspections:*

Parks Department staff conducts annual site inspections at all remote storage areas for safety and cleanliness. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

### Municipal Wharf

The Municipal Wharf (Wharf) offers tourists and locals a place to shop, dine, or watch the sea lions and elephant seals lying on the wooden crossbeams below. The wharf is also an attraction for various species of gulls and other birds that perch on the buildings, railings, and utility poles.

The Parks and Recreation Department manages the Wharf. Wharf staff makes considerable effort and implements multiple measures to maintain cleanliness at the Wharf. In addition to providing a clean and safe environment for those patronizing and working at the Wharf, these efforts also greatly help to reduce the amount of pollutants that might drop or be blown off the Wharf into the Bay below. For example, the following measures are typically taken:

1. Sweep all public decks by mechanical sweepers on a daily basis. Staff hand sweeps and uses a grab-stick to clean the areas not open to the sweeper.
2. Sweep deck and stairs of overhead walkway and north commons building on a weekly basis.
3. Empty public trash cans on a daily basis on weekdays.
4. Empty public trash cans twice a day on weekends and holidays
5. Empty Wharf HQ trash cans on a daily basis
6. Empty public recycling cans twice a week
7. Clean and maintain public benches twice a day
8. Clean and maintain Wharf stage twice a day
9. Maintain fish sinks twice a day
10. Spot clean compactor enclosures on a weekly basis
11. Clean recycle collector areas on a weekly basis

In addition, parking and outdoor eating areas are swept instead of pressure washed. The Wharf does not routinely hose down or “power wash” the sidewalks. Localized cleaning is typically done using a mop and limited amounts of water. During the summer, in preparation for public events/festivals, the large public area is cleaned to remove bird droppings. This is either done by the Wharf crew using wet cleaning methods (scrubbing and no soap) with booms to catch the water, which is then vacuumed up and discharged into the sanitary sewer. Or, more frequently, the City hires a pressure washer for this work because the contractor also collects the water and discharges it into the sanitary sewer. The City hires a pressure washer to clean the buildings and

awnings between Memorial Day and October each year in this fashion too. Soap and detergents are not used.

Occupants of the larger buildings on the Wharf used to clean their roofs on a monthly basis during the summer to remove bird droppings, but Wharf staff has encouraged them to use netting instead to discourage the birds from landing. So far this approach appears to be effective. Staff has implemented a variety of other methods to discourage the birds from perching on the wharf because their droppings are unsightly and it is difficult to clean wharf surfaces without the droppings reaching the water below. Currently, architectural devices for railings and roofs are employed to discourage perching. When a section of wharf railing is rebuilt, a railing with a specially designed top to discourage bird perching is installed. (Apparently railings without a flat top are uncomfortable to birds for perching for long periods of time).

#### *Site Inspections:*

In addition to the cleanliness measures detailed above, Wharf staff conducts annual site inspections for safety and cleanliness. A log is kept of the inspections. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

#### Fire Stations

The main storm water issue of concern at local Fire Stations is the on-site washing of fire engine trucks. Currently, fire trucks are currently being washed at each of the three fire stations. Washing is done with plain water only, except after an emergency fire activity when biodegradable soap is used.

Fire engine maintenance and mechanical repairs are conducted at the Corporation Yard.

#### Wastewater Treatment Facility

The City's Wastewater Treatment Facility is operated under NPDES Permit No. CA 0048194. All outdoor drains at the Wastewater Treatment Facility are routed to the sanitary sewer influent in order to prevent anything, such as spilled sanitary wastes, from being discharged to the storm drain system. This means that rain water is also routed to the sanitary sewer from paved surfaces around the treatment plant. This effectively prevents rain from carrying any pollutants to the storm drain that might unknowingly be on the pavement. This is allowed by the City of Santa Cruz Wastewater Treatment Facility NPDES permit.

#### Resource Recovery Facility

The Resource Recovery Facility (RRF) includes a municipal solid waste landfill and a recycling center. The RRF has several issues of concern related to storm water runoff. Leachate seeps may runoff the landfill and enter the storm drain system if they are not noticed and repaired quickly. In addition, there is a small shop where equipment maintenance is conducted.

The RRF currently operates in accordance with a Waste Discharge Requirements Order, No.R3-2006-0018, and the required Monitoring and Reporting Program issued by the RWQCB. The RRF is also currently permitted under an Industrial Activities Storm Water General Permit. A Notice of Intent (NOI) was submitted to the State Water Resources Control Board on July 1, 1997. The City conducts sampling and submits annual reports regarding storm water discharges,

as required by the permit, to the Central Coast RWQCB. The City has also a Storm Water Pollution Prevention Plan for the site. In addition, landfill slopes and decks are visually inspected by landfill staff, particularly during the rainy season, in order to detect and prevent/repair leachate seeps as soon as possible.

The landfill has a maintenance shop that conducts repairs of landfill equipment. The shop implements the applicable BMPs for Vehicle Service Facilities. The landfill's maintenance shop abides by the BMPs for Vehicle Service Facilities.

#### *Site Inspections:*

An Environmental Compliance Inspector inspects the RRF on an annual basis for storm water and wastewater compliance. This site inspection focuses on the recycling, equipment maintenance, and office areas of the RRF. Site inspections will ensure adequate implementation of all applicable storm water BMPs.

## **Beaches, Parks and Open Spaces**

### Beaches

The Parks and Recreation Department is responsible for cleaning Main and Cowell Beaches, which are the primary tourist beaches in the city. The Municipal Wharf is basically the divides the two adjacent beaches. The San Lorenzo River empties into Monterey Bay at the south end of Main Beach. Main Beach is also flanked on the east side by the Santa Cruz Beach Boardwalk, which is also a very popular tourist destination and includes an amusement park. Cowell Beach is bordered on the north side by cliff walls.

Staff manually cleans both Main and Cowell Beaches daily throughout the year. During the summer, in addition to the manual cleaning, a sand sifting machine is also used to remove and clean smaller particles from the sand. Parks and Recreation staff also conducts an annual spring cleaning at these beaches, typically in late March or April after the last big rainstorm and before the start of the tourist season and "spring break."

During this annual spring cleaning, crews spend approximately 2 weeks cleaning the beaches both by hand and using a tractor to remove the larger debris found on the sand. In addition to litter left by the public, winter storms can also cause significant amounts of debris to be deposited on the beaches. Much of it comes from the debris that is flushed into the San Lorenzo River during storm events. The debris is either deposited directly onto Main Beach at the river mouth or carried by currents along the beaches and then washed ashore by waves and high tides. The debris components typically range from smaller items, such as cigarette butts, pieces of polystyrene, bottles, and cans, to large items such as wood and mixed garbage. Crews have even found unusual items such as a dishwasher on the beach.

During the 2008 spring cleaning, staff collected approximately 100 tons of debris from Main and Cowell Beaches

*BMP # 15: Conduct Cleaning at Main and Cowell Beaches*

## Parks and Open Spaces

The Parks and Recreation Department manages the City's parks and open spaces. In addition to basic litter control measures as discussed above, the Department takes additional measures to keep these areas clean and free of debris. In particular, efforts are undertaken to address the trash and debris resulting from illegal campsites that spring up in the City's parks and open spaces. Areas that tend to have these illegal campsites include DeLaveaga Park, Pogonip Open Space and Pogonip Creek, Arana Gulch, and Moore Creek and the San Lorenzo River corridor between the Jesse Street Marsh and Paradise Park.

Parks and Recreation currently implements an Illegal Campsite Clean-Up Program in order to keep these areas clean and prevent environmental degradation resulting from illegal campsites. This is because illegal camping tends to result in litter and debris, and the discharge of human waste to the environment. Often illegal camping is found along creeks and the San Lorenzo River which amplifies the concerns since any illegal discharges, such as litter or human waste (which can carry bacteria and other pathogens), can quickly enter the waterway and degrade habitat.

As part of the Illegal Campsite Clean-Up Program, Park Rangers and City Police work together to contact illegal campers and gain compliance. Rangers and Police walk through the areas that tend to have illegal campsites on an annual basis or more as needed. After the illegal campers have been evicted, Parks Crews remove the remains of the illegal campsites and any trash or debris. After the clean-up efforts, Parks crews will also take measures to restore areas that have been degraded or eroded by the illegal camping.

*BMP # 16: Implement Illegal Campsite Clean-Up Program In City Parks and Open Spaces*

## **Neary Lagoon Management**

The Neary Lagoon Watershed is located within a mile of the City's downtown area and comprises approximately 850 acres. The watershed includes the UCSC campus and approximately one half of the west side of the City, most of which is residential neighborhoods. Other land uses within the watershed include roads, open spaces, churches, schools, and a small amount of commercial businesses. Neary Lagoon itself is comprised of approximately 44 acres of wetland, riparian and woodland habitats. In general, the lagoon is shallow with few areas more than 4 feet deep although a fixed weir controls the lagoon water level. The lagoon detains storm water, urban runoff, and groundwater from the watershed prior to its discharge into Monterey Bay and the Pacific Ocean.

Management of Neary Lagoon includes flood protection for the surrounding areas, enhancement of lagoon water quality, vegetation and wildlife habitat maintenance and improvements, mosquito control, and lagoon aesthetics. Dry season inflows into Neary Lagoon are primarily from domestic activities in the watershed, such as a lawn watering and car washing, and water from the natural seeps and springs that dot the City's West Side. Sampling of the lagoon conducted by the City indicates that high coliform concentrations are present, which are possibly due to the waterfowl using the area. During the dry season, the City diverts surface water from

Nearby Lagoon to the Wastewater Treatment Facility (WWTF) so that this water may be treated prior to discharge into the Pacific Ocean.

During the wet weather season, Nearby Lagoon outlets to Monterey Bay at Cowell Beach via a 66" gravity storm pipeline and one force main storm pipeline. The force main is used when the City activates the flood control pumps at the lagoon in order to prevent flooding of adjacent areas during storm events when the capacity of the gravity pipeline is not sufficient to handle the flows. There are three flood control pumps, each rated at 33,600 gallons per minute.

The City is incorporating the following BMPs, for both the dry and wet weather seasons, for Nearby Lagoon Management into the Municipal Operations Program. In addition, although, the City no longer conducts testing of the flood control pumps, the City has developed a BMP for pump test discharges in the event that, in the future, there may be a need to test these pumps.

## **Dry Weather Season**

### Dry Weather Diversion from Nearby Lagoon to Wastewater Treatment Facility

Dry weather surface water discharge from Nearby Lagoon to Monterey Bay is prohibited. The only exception is for any pump test discharges conducted in accordance with the BMP "*Manually Operate Pumps During Flood Control Pump Tests*" as detailed below. As mentioned, during the dry weather season the lagoon's discharge is diverted to the WWTF via a 12-inch bypass line so that this water may be treated prior to discharge into the Pacific Ocean. The bypass line runs only if the water level is high enough in the lagoon.

The "dry weather season" is generally defined as April 1-October 3 when the WWTF has adequate capacity. However, the City may divert lagoon water to the WWTF during the "wet weather season" if the treatment plant has adequate capacity, including both hydraulic and organic loading, at that time. This is done upon occasion to maintain consistent lagoon levels, and to minimize pump operation and discharges to the beach, in addition to treating the water prior to discharge. Diversion to the WWTF will cease if the City believes it may cause a treatment plant permit violation.

The dry weather diversion to the WWTF is important for the receiving water quality because during the spring and summer months the bacteria levels in Nearby Lagoon tend to increase primarily due to the reduced freshwater flows into the lagoon and the presence of the many birds that utilize the lagoon. Thus, this water is diverted to the treatment plant for treatment prior to discharge to the Pacific Ocean in lieu of being discharged to Cowell's Beach, which is one of Santa Cruz's most popular tourist beaches. The City intends to divert lagoon water to the WWTF at least 108 days per year.

### *BMP #MO-17: Dry Weather Diversion from Nearby Lagoon to Wastewater Treatment Facility*

### Clean Storm Drain Lines and Discharge Stagnant Water to the Sanitary Sewer System

During the dry season, the water sitting in the force main storm drain pipe and the gravity storm drain line running in between the lagoon and the Cowell Beach outlet becomes stagnant, and accumulates sediment and high bacterial counts. Therefore, prior to the onset of the wet weather

season, the Wastewater Mains Division hydro-cleans these pipes and pumps the water into the sanitary sewer system/WWTF using portable pumps. In conjunction with pumping, the force main and gravity lines are hydro flushed as needed. This flushing process continues until there is insufficient water in the pipelines to continue pumping. Water from the lagoon is also diverted to the WWTF (via the bypass system) in order to lower the bacteria levels that have built up during the summer.

As with the dry weather diversion mentioned above, this line cleaning work and flushing to the WWTF is important for the receiving water quality because the bacteria levels in these storm drain pipelines become elevated during the spring and summer when they are not being used. Thus, this water is treated prior to discharge to the Pacific Ocean in lieu of direct discharge to Cowell's Beach.

The City therefore will clean these lines and discharge the water to the sewer system for approximately 3 weeks each year during the Fall Season. An accounting of the pumping, including the duration and amount of water discharged to the sanitary sewer system, will be provided to the RWQCB as part of the City's storm water annual report.

*BMP #MO-18: Clean Neary Lagoon Storm Drain Lines and Discharge Bacteria Laden Water to the Sanitary Sewer System*

#### Lagoon Water Sampling

Coinciding with the pumping/flushing process described in the above BMP, the City conducts sampling inside the lagoon to assess water quality, particularly bacteria levels. Sampling is conducted as detailed below:

Sampling is conducted at the following times:

- 1) Before pumping to the sanitary sewer commences
- 2) After pumping to the sanitary sewer is terminated

Grab samples are taken at the following locations:

- 1) At the pump station
- 2) At the outlet from the lagoon into the gravity storm drain line (under the trestle)
- 3) At the outlet from the lagoon into the force main storm drain pipe
- 4) At the head wall at Cowell Beach

The samples are analyzed for the following parameters:

- 1) Fecal coliform bacteria
- 2) Enterococci bacteria
- 3) TOC (Total Organic Carbon)
- 4) Ammonia
- 5) pH

The City will maintain information about lagoon water monitoring, including sampling results, on file. Lagoon water sample results will be provided in the SWMP annual reports.

## **Wet Weather Season**

During the rainy season when the lagoon elevation becomes too high, the City manually operates the flood control pumps in order to prevent flooding of the adjacent areas. In addition, the City abides by the following conditions for flood control pump operations:

1. Two hours prior to operation of the flood control pumps, the City will notify in writing, by fax or email, the following agencies of the date of discharge: the Central Coast Regional Water Quality Control Board (RWQCB), the Monterey Bay National Marine Sanctuary, the Coastal Commission, and the County of Santa Cruz Environmental Health Department. If two hours notice is not possible, due to unforeseeable circumstances such as the weather, the City may provide less notice. The City, as its discretion, will also notify other interested parties if possible.
2. Prior to pump operation, the City will notify the public in the area of the impending discharge. In addition, the City has a permanent sign posted at the outfall structure and another sign (which gets flipped at the time of opening the outfall prior to the wet weather discharge) at the stairs leading to the beach that warns the public of contaminated water. Also, the County of Santa Cruz, Department of Environmental Health, provides signage as necessary concerning health risks at Cowell Beach.
3. Prior to pump operation, whenever possible, the City will prepare the beach in front of the outfall structure to form a channel leading to the beach.

In addition, during the wet weather months the Wastewater Mains Division strives to maintain an open gravity system from the Lagoon to Cowell's Beach via the 66" gravity storm pipeline. This helps to reduce complaints from the public about pump operations and odors from the force main water.

### Receiving Water Monitoring

The City will conduct receiving water monitoring coinciding with the first discharge of the wet weather season that requires operation of the flood control pumps. The receiving water monitoring will be conducted as detailed below:

Grab samples will be collected at the following times and locations:

- 1) Within an hour before discharge:
  - a. At the shoreline in front of the outfall structure
- 2) Within 24 hours after discharge:
  - a. At the point of contact at the shoreline
  - b. At the point of contact in the channel created by the discharge

Samples will be analyzed in accordance with the following:



| CONSTITUENTS  | OCEAN WATER CONTACT STANDARDS FOR A SINGLE SAMPLE |
|---|---|
| Fecal coliform bacteria (tested via membrane filter method or approved equivalent as promulgated in 40CFR 136 Table 1A) | 400 fecal coliform bacteria per 100 ml            |
| Enterococci   | 104 enterococcus bacteria per 100 ml              |
| pH  | NA  |
| TOC   | 20,000 ppb  |

During both sampling times, the City will record the following information about the sampling conditions:

- a) Weather observations.
- b) A description of receiving water characteristics.
- c) A description of the sampling stations.

The City will maintain information about receiving water monitoring, including sampling results and a description of the sampling conditions on file; and all information of this type will be provided in the SWMP annual reports. The information will include the analytical results for each station and identification of the test methods used.

### **Flood Control Pump Testing**

Although the City no longer conducts testing of the flood control pumps, the City may want or need to test these pumps in the future. If so, the City will test the pumps by manual activation and will implement the above BMP “*Clean Storm Drain Lines and Discharge Stagnant Water to the Sanitary Sewer System*” prior to commencing the pump test. The City will also conduct receiving water monitoring as detailed in the above BMP “*Conduct Receiving Water Monitoring.*”

In addition, the pump test will be conducted in accordance with the following conditions:

1. Twenty-four hours prior to the proposed pump test, the City will notify in writing, by fax or email, the following agencies of the date of discharge: the Central Coast Regional Water Quality Control Board (RWQCB), the Monterey Bay National Marine Sanctuary, the Coastal Commission, and the County of Santa Cruz Environmental Health Department. The City will also notify other interested parties 24 hours prior to pump testing.
2. Prior to the pump test discharge, the City will notify the public in the area of the impending discharge. In addition, as previously mentioned, the City has a permanent sign

posted at the outfall structure and another sign (which gets flipped at the time of opening the outfall prior to the wet weather discharge) at the stairs leading to the beach that warns the public of contaminated water. Also, the County of Santa Cruz, Department of Environmental Health, provides signage as necessary concerning health risks at Cowell Beach.

3. Prior to the pump test discharge, the City will prepare the beach in front of the outfall structure to form a channel leading to the beach.
4. The City will schedule the pump test discharge to coincide with the outgoing tide.
5. The City will maintain information about any pump test discharges to the Monterey Bay on file. In addition, all information of this type will be provided in the SWMP annual reports. The pump test discharge information will include the following:
  - a) Estimated amount of gallons discharged
  - b) Estimated duration of the pumping
  - c) Time
  - d) Weather
  - e) Beach observations

## **Drinking Water Distribution System**

### Repair and Maintenance of City Water Infrastructure

The Water Department conducts activities in order to maintain the drinking water distribution system including water main flushing, dewatering, line disinfections, fire hydrant testing, and pipeline and street repairs. Some of these activities are of concern due to their potential to release chlorinated water or sediments into the storm drain system. For example, flushing water mains at high velocities can erode soil, uproot vegetation and cause drainage problems. Chlorine, in concentrations exceeding 0.05 ppm, can kill nitrifying bacteria and other aquatic life. Water main flushing is conducted for the following reasons: sediment removal; taste and odor control; control of color, high turbidity, low chlorine residuals, or bacterial growths; corrosion control; and in response to customer complaints. Dewatering of trenches during pipeline repair activities, for example, can cause significant amounts of sediment to be released to the storm drain system if care is not taken. Dewatering occurs in the following situations:

- Trench dewatering during distribution system maintenance and construction activities (when water in trench is from leaking water pipe, not exclusively from groundwater)
- Main or hydrant flushing
- Hydrant testing
- Main dewatering

Street repairs, done as a result of water pipeline installation, maintenance, and repair, are conducted in accordance with the BMPs for Municipal Operations, Repair and Maintenance of City Surfaces.

In many instances, Water Department maintenance, repair, and construction activities require de-chlorination procedures and/or sediment control prior to the discharge of water to the storm drain system or the wastewater treatment plant. The Water Department has developed standard operating procedures (SOPs) to ensure that all discharges from the distribution system do not reach waters of the state or that they are in compliance prior to discharge to the storm drain or sanitary sewer system. The SOPs are included in the BMPs for Municipal Operations, Attachment 8.

Standard operating procedure (SOP) #7102-01, “Super-chlorinated Potable Water Discharges,” describes the procedures to be followed when flushing any part or portion of the water distribution system and the free chlorine residual exceeds 2 parts per million (ppm). This procedure addresses manual de-chlorination of the Department’s generated potable water discharges and applies primarily to the de-chlorination of water that has been injected with chlorine to disinfect new water main. The purpose of the SOP is to ensure that chlorine does not reach waters of the state and cause damage to plant and animal life.

Standard operating procedure (SOP) #7102-02, “Low-Chlorine Potable Water Discharges,” describes the procedures to be followed when flushing any part or portion of the distribution system and chlorine residual is less than or equal to 2 parts per million (ppm). This includes water discharged during flushing activities, hydrant testing, and main breaks.

Standard operating procedure (SOP) #7105-01, “Sediment Control During Open Channel Water Discharges,” describes the procedures to be used to minimize the transport of sediment to storm drains or receiving waters during open channel discharges containing sediment or having the potential to entrain sediments. This includes water pumped from excavations for water main repairs.

#### Facilities and Operations Outside of City Limits

The Water Department owns facilities and conducts operations at sites located outside of the City limits. These facilities include pump stations, dams, reservoirs, wells, and the Water Treatment Plant. The Water Department abides by the BMPs at all of its facilities whenever applicable, both within and outside of City limits.

In addition, the Water Department owns approximately 3,880 acres of watershed lands that have a water conveyance system that spans approximately 25 miles. There are approximately 60 miles of associated roads, which are maintained by the City, that provide access to these facilities. Associated drainage facilities are inspected and cleaned on a regular basis including before, during and after the onset of the winter rainy season. The Water Department has contracted with a Registered Professional Forester and has a Certified Erosion Control Specialist on staff to conduct inspections and oversee maintenance on these facilities. Additionally, the Department has a Draft Watershed Management Plan that identifies Best Management Practices for maintenance of the forest roads and associated drainage infrastructure that provide access to the Department's watershed lands.

Under the Statewide General NPDES Permit No. CAG990005 for Discharges of Aquatic Pesticides, the Water Department is permitted to use aquatic pesticides to control harmful algae

blooms in Loch Lomond Reservoir. Copper containing pesticides have been used since the reservoir was first constructed. Since then improved application methods and materials have resulted in an 80% decrease in the amount of copper necessary to achieve effective algae control. The Water Department is currently testing an alternative algae control pesticide, sodium carbonate peroxyhydrate, that specifically targets algae of concern and leaves no chemical residuals after the treatment. As required by the NPDES Permit, the City developed rigorous Best Management Practices and conducts extensive monitoring of any aquatic pesticide application. In the future, copper pesticide will only be used if alternative pesticides are not successful for protecting the beneficial uses of the City's reservoir.

#### Water Department Remote Storage Areas

There are numerous remote storage areas located at Water Department facilities. The majority of these remote storage areas are small buildings or closets. They typically house gardening tools, such as rakes, and gasoline for lawn mowers or leaf blowers. Gasoline is properly contained according to state regulations. The remote storage areas are used or checked by City crews daily. These storage areas undergo complete inspections once a month and are checked weekly for spills and leaks.

### **Best Management Practices for Municipal Operations**

In 2002, the City developed Best Management Practices (BMPs) for Municipal Operations. The BMPs, which are compiled in a brochure, address the various municipal activities that could potentially contribute pollutants to the storm drain system. Included in the BMPs are pollution prevention and good housekeeping measures for sidewalk and parking lot cleaning, street and sidewalk repairs, erosion control in landscaped areas, etc. A copy of the BMP brochure is included in Attachment 8.

The City is planning to review and revise this BMP brochure as necessary, and will republish for distribution to the applicable Departmental Supervisors, specifically those with field crews. The applicable BMPs will be incorporated into the training for City field crews as described below.

*BMP # MO-19: Revise Municipal Operations BMPs If Necessary and Republish BMP Brochure*

### **Training and Education of City Staff**

Training and education of City staff is an important component of this program. Since 2002, Public Works Engineering has held numerous meetings with personnel from various departments in order to keep staff informed about the new General Permit requirements and implementation of BMPs. The meetings have been held with Parks and Recreation, Planning, Public Works, and Water Department personnel who are key players in implementation of the SWMP.

For example, in 2002 and 2003, Public Works Engineering held several meetings for staff, particularly those who oversee street and parking lot maintenance, to discuss the new pressure washing and steam cleaning regulations. A meeting was also held with Parks and Recreation Department staff that clean parks and downtown sidewalks, and conduct graffiti removal to educate them about these new regulations. In 2003, a meeting was held with Parks and

Recreation managers and field supervisors discuss the new storm water regulations and implementation of BMPs.

The City has and will continue to offer on-site training classes on BMPs and pollution prevention issues. For example, in April 2002, the City offered a class (taught by a contractor) to all “field crews” and other personnel on Best Management Practices for sediment control. On September 18, 2003, a training class was held for Public Works staff, particularly operations crews, on field methods to prevent polluted runoff during City maintenance operations. The operations crews that attended included street maintenance and wastewater mains staff. The class was taught by an outside contractor and was sponsored by the Monterey Bay National Marine Sanctuary. In addition, staff is encouraged to attend off-site classes and workshops by other agencies and organizations on related pollution prevention issues and practices.

Lastly, each department will ensure that the appropriate personnel are trained on the BMPs applicable to their activities or areas of responsibility upon hiring and annually thereafter. The City will develop a Storm Water BMP training piece based on the City’s BMPs for Municipal Operations. This piece may consist of one or more of the following: a visual presentation on the applicable BMPs, written training materials, on-site videos, or on-site classes. Staff that will receive training include field personnel from Public Works, Water, and the Parks and Recreation Department.

*BMP # MO-20- Develop A Storm Water BMP Training Piece*

*BMP #MO-21: Train and Educate Appropriate City Field Crews*

### **City-wide Watershed Issues Team**

The City created a Watershed Issues Team several years ago with staff from each of the various departments in order to address and discuss watershed issues such as TMDLs, local and state plan revisions, etc. This team is comprised of staff from the various departments, such as Public Works, Planning, Water, Parks and Recreations, and the City’s Manager’s office. This city-wide participation helps ensure that all departments are kept informed on relevant watershed issues and involved/coordinated in any City actions or measures. As part of the SWMP, the Watershed Issues Team will meet semi-annually, or more if needed, to discuss watershed issues particularly those related to TMDLs and impaired water bodies, and other storm water topics.

*BMP #MO-22: City-wide Watershed Issues Team Meetings to Discuss Watershed Issues Re TMDLs and Other Related Topics*

### **City Contractors**

Contractors hired by the City are required to abide by the City’s mandatory storm water BMPs for a specific job. Currently, each department and division is responsible for including this requirement in their contract language. In order to ensure that this is universally applied, the City will develop and include boilerplate language that requires contractors to abide by the applicable

mandatory storm water BMPs in the “bid masters” for City contracts and/or the City contract master. To accomplish this, Public Works staff will work with the Purchasing Division and the City Attorney’s office to develop and include this language for City contracts.

*BMP #MO-23: Develop Boilerplate Contract Language Requiring City Contractors to Abide by the Applicable Mandatory Storm Water BMPs*

## **IV. Program Implementation**

### **City Personnel**

The City is already implementing BMPs in order to prevent storm water pollution while carrying out routine municipal activities. Some practices, however, are improvements to existing municipal activities and functions. Departments currently responsible for these activities will continue to implement their portion of the program.

### **Implementation Timetable and Measurable Goals**

The City is already implementing the Municipal Operations Program. Measurable goals will be used to assess the City’s efforts to reduce urban runoff pollution and to evaluate the success of the BMPs each year. A list of the BMPS, measurable goals, and the implementation schedule are detailed in Table 1-1 below:

**Table 1-1**

**BMPs, Measurable Goals, and Implementation Schedule**

| <b>BMP #</b> | <b>BMPs</b>  | <b>Measurable Goals</b>  | <b>Responsible Dept. or Division</b>               | <b>Implementation Schedule</b> |
|--------------|--|--|--|--------------------------------|
|              | <b>Street Sweeping and Cleaning</b>                              |  |  |                                |
| MO-1         | Sweep City Streets By Mechanical Sweepers                        | <ol style="list-style-type: none"> <li>1. Sweep primary streets in downtown and main beach areas twice per week</li> <li>2. Sweep primary streets in other commercial areas once per week</li> <li>3. Sweep 75% of residential streets twice per month</li> <li>4. Sweep streets upon special request</li> </ol> | Public Works<br>Streets                            | Year 1-5                       |
|              | <b>Sidewalks, Plazas, and Public Parking Lot Cleaning</b>        |  |  |                                |
| MO-2         | Take Measures to Control Litter                                  | <ol style="list-style-type: none"> <li>1. Maintain litter and recycling receptacles in the downtown and Wharf areas, and in City parks, on a daily basis</li> <li>2. Receptacles in other areas emptied as needed</li> </ol>   | Public Works:<br>Refuse<br>Parks and<br>Recreation | Year 1-5                       |
| MO-3         | Sweep Public Parking Lots and Parking Garages Regularly          | Clean lots w/a mechanical sweeper either 2x or 6x per week depending upon which location   | Public Works:<br>Streets                           | Year 1-5                       |
|              | <b>Storm Drain System Inspection and Cleaning</b>                |  |  |                                |
| MO-4         | Inspection, Cleaning, and Repair of City Catch Basins and Inlets | 1. Clean 90% of catch basins and inlets located in the Downtown, Beach Flats,  | Public Works:<br>Wastewater Mains                  | Year 1-5                       |

| <b>BMP #</b> | <b>BMPs</b>  | <b>Measurable Goals</b>   | <b>Responsible Dept. or Division</b>               | <b>Implementation Schedule</b> |
|--------------|--|---|--|--------------------------------|
|              |  | <p>and lower Ocean Street areas annually in the Fall</p> <p>2. Clean and repair 100% of storm drains or catch basins identified as clogged or non-functional annually in the fall or as soon as possible</p> <p>3. After large storm events during the wet season, inspect 90% of catch basins in the Downtown, Beach Flats, and lower Ocean Street areas and re-clean them as needed.</p> <p>4) Inspect 50% of the catch basins in the outlying areas of the City annually and clean as needed</p> |  |                                |
| MO-5         | Inspection of Branciforte Storm Water Conveyance Channel and Trash Removal As Needed | <p>1. Annual inspection</p> <p>2. Removal of 100% of large trash and debris items.</p>  | Public Works:<br>Wastewater Mains                  | Year 1-5                       |
| MO-6         | Clean Pump Stations Along the San Lorenzo River                                      | Clean twice per year (Spring and Fall)<br>Additional cleanings, if needed, during wet season after large storm events   | Public Works:<br>Wastewater Mains                  | Year 1-5                       |
| MO-7         | CDS Unit Maintenance   | <p>1. Clean twice per year in Fall and Spring and</p> <p>2. Inspect and clean, if necessary, monthly during the wet season</p>  | Public Works:<br>Wastewater Mains                  | Year 1-5                       |
| MO-8         | Conduct Inspections of Storm Drain Lines   | TV or visual inspect the inside of an average of 1,000 feet of pipeline each year over a 5 year period  | Public Works:<br>Engineering &<br>Wastewater Mains | Year 1-5                       |
|              | <b>Sanitary Sewer System Inspection and Cleaning</b>                                 |   |  |                                |



| <b>BMP #</b> | <b>BMPs</b>  | <b>Measurable Goals</b>  | <b>Responsible Dept. or Division</b>                              | <b>Implementation Schedule</b> |
|--------------|--|--|---|--------------------------------|
| MO-9         | Clean Sanitary Sewer Main Lines  | 1. Clean all sanitary sewer main lines every 18 months.<br>2. A follow-up TV inspection will be done of 100% of the lines where a problem is discovered during the cleaning process. | Public Works:<br>Engineering &<br>Wastewater Mains                | Year 1-5                       |
|              | <b>Repair and Rehabilitation of Sanitary Sewer and Storm Drain Lines</b>   |  |   |                                |
| MO-10        | Replace or Rehabilitate Sanitary Sewer Main Lines  | Replace or rehabilitate an average of 3,000 feet of sewer main pipeline per year over the 5 year permit period   | Public Works:<br>Engineering &<br>Wastewater Mains                | Year 1-5                       |
| MO-11        | Development and Implementation of a Lateral Inspection Program   | 1. Outline of Program Details<br>2. Implementation of Program  | Public Works:<br>Engineering<br>Public Works:<br>Wastewater Mains | 1. Year 3<br>2. Year 5         |
| MO-12        | Repair and Rehabilitation of Minor Storm Drain Lines   | Repair or rehabilitate an average of 100 feet of pipeline per year over the 5 year permit period   | Public Works:<br>Engineering                                      | Year 1-5                       |
|              | <b>Dry Weather Storm Water Diversion Projects</b>  |  |   |                                |
| MO-13        | CBI Grant #1: Dry Weather Diversion of Storm Water from SLR Pump Stations 1, 2, and 1A to the Wastewater Treatment Facility (WWTF) | Divert SLR pump station water to WWTF 90 days per year   | Public Works:<br>Engineering                                      | Year 1-5                       |
| MO-14        | CBI Grant #2: After CBI Grant Project Completion, Dry Weather Diversion of Storm Water from  | Divert SLR pump station water diverted to WWTF 90 days per year once project work is completed   | Public Works:<br>Engineering                                      | Start date TBD                 |

| <b>BMP #</b> | <b>BMPs</b>  | <b>Measurable Goals</b>   | <b>Responsible Dept. or Division</b> | <b>Implementation Schedule</b> |
|--------------|--|---|--------------------------------------|--------------------------------|
|              | SLR Pump Stations 1B and 3 to the Wastewater Treatment Facility                                      |   |                                      |                                |
|              | <b>Beaches, Parks and Open Spaces</b>  |   |                                      |                                |
| MO-15        | Conduct Cleaning at Main and Cowell Beaches  | 1. Daily maintenance cleaning<br>2. Annual spring cleaning to remove debris following winter storms                     | Parks and Recreation                 | Year 1-5                       |
| MO-16        | Implement Illegal Campsite Clean-Up Program In City Parks and Open Spaces                            | Cleanup of illegal campsites at the appropriate locations on an annual basis  | Parks and Recreation                 | Year 1-5                       |
|              | <b>Neary Lagoon Management</b>   |   |                                      |                                |
| MO-17        | Dry Weather Diversion from Neary Lagoon to Wastewater Treatment Facility                             | Divert lagoon water 108 days per year   | Public Works:<br>Wastewater Mains    | Year 1-5                       |
| MO-18        | Clean Neary Lagoon Storm Drain Lines and Discharge Bacteria Laden Water to the Sanitary Sewer System | Clean storm drain lines and discharge the water to the sewer system for approximately 3 weeks each year during the Fall | Public Works:<br>Wastewater Mains    | Year 1-5                       |
|              | <b>Best Management Practices for Municipal Operations</b>  |   |                                      |                                |
| MO-19        | Revise Municipal Operations BMPs If Necessary and Republish Brochure                                 | Distribute revised BMPs to applicable City Department Supervisors   | Public Works:<br>Engineering         | Year 1-5                       |
|              | <b>Training and Education of City Staff</b>  |   |                                      |                                |

| <b>BMP #</b> | <b>BMPs</b>  | <b>Measurable Goals</b>  | <b>Responsible Dept. or Division</b>   | <b>Implementation Schedule</b> |
|--------------|--|--|--|--------------------------------|
| MO-20        | Develop A Storm Water BMP Training Piece   | Training brochure, power point presentation, or other effective method   | Public Works<br>Parks and Recreation<br>Water Planning                             | Year 3                         |
| MO-21        | Train and Educate Appropriate Field Crews  | 1. Train 100% of appropriate staff annually.<br>2. Train new staff within 3 months of the beginning of employment. | Public Works<br>Parks and Recreation<br>Water Planning                             | Year 1-5                       |
|              | <b>City-wide Watershed Issues Team</b>   |  |  |                                |
| MO-22        | City-wide Watershed Issues Team Meetings to Discuss Watershed Issues Re TMDLS and Other Related Topics                 | Meet semi-annually or more as needed   | Public Works<br>Planning<br>Water<br>Parks and Recreation<br>City Manager's Office | Year 1-5                       |
|              | <b>City Contractors</b>  |  |  |                                |
| MO-23        | Develop Boilerplate Contract Language Requiring City Contractors to Abide by the Applicable Mandatory Storm Water BMPs | Inclusion of boilerplate language for bid masters and/or the City contract master.                                 | Public Works<br>Purchasing<br>City Attorney's Office                               | Year 2                         |

**Table 1-1: Responsible Department or Division Contact Information**

Public Works Department: Engineering  
Associate Civil Engineer, (831) 420-5428

Public Works Department: Environmental Compliance  
Environmental Compliance Manager, (831) 420-6040

Public Works Department: Operations (includes Fleet Maintenance)  
Operations Manager, (831) 420-5556,

Public Works Department: Refuse Disposal  
Superintendent, (831) 420-6273

Public Works Department: Sanitation  
Superintendent Solid Waste, (831) 420-6273

Public Works Department: Streets  
Public Works Operations Superintendent, (831) 420-5530,

Public Works Department: Traffic Maintenance  
Field Supervisor, (831) 420-5524

Public Works Department: Wastewater Mains/Flood Control  
Public Works Operations Superintendent, (831) 420-6036

Public Works Department: Wastewater Treatment Facility  
Wastewater Treatment Facility Superintendent, (831) 420-6044

Parks and Recreation Department  
Parks Superintendent, (831) 420-5366

Parks and Recreation Department: Golf Course  
Golf Course Superintendent, (831) 420-6121

Parks and Recreation Department: Tree Median  
Urban Forester, (831) 420-6120

Parks and Recreation Department  
Recreation Superintendent, (831) 420-5279

Fire Department  
Fire Chief, (831) 420-5283

Water Department  
Director, (831) 420-5200

## **V. Program Documentation and Reporting**

The City will maintain records to document program implementation and annual progress. The City will report the results of the program in the annual SWMP report to the Regional Water Quality Control Board. The report will include information and a summary of the progress made relative to the measurable goals.