

OVERVIEW

I. Introduction

Urban runoff and other “non-point source” discharges are regulated by the 1972 Federal Clean Water Act (CWA), through the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program is implementing non-point source regulations in two phases. Phase I regulations, effective since 1990, require NPDES permits for storm water discharges for certain specific industrial facilities and construction activities, and for municipalities with a population size greater than 100,000. Phase II regulations expand the NPDES program to include all municipalities with urbanized areas and municipalities with a population size greater than 10,000 and a population density greater than 1,000 persons per square mile. Phase II regulations also expand the NPDES program to include construction sites of 1 to 5 acres.

The City of Santa Cruz (City) has developed a Storm Water Management Program (SWMP) in order to fulfill the requirements of the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4) (General Permit) and to reduce the amount of pollutants discharged in urban runoff. The City’s program is based on the requirements and guidelines of the General Permit. The Model Urban Runoff Program, developed by the Cities of Santa Cruz and Monterey, the California Coastal Commission, the State Water Resources Control Board, Monterey Bay National Marine Sanctuary, AMBAG and Woodward-Clyde Consultants, was also used to develop the SWMP.

Prior to developing a SWMP, the City mapped the watersheds and land uses within each watershed, in order to assess resources and urban runoff issues. The City also identified the potential sources of pollutants within each watershed. Upon review of the watersheds and the potential sources of pollutants, the City determined to focus its effort on sediment and bacteria within the San Lorenzo watershed. This coincides with the TMDL identified pollutants. Beyond this focus the City will take an overall approach to reducing these pollutants in other watersheds and all other urban runoff pollution.. This is primarily because there are multiple land uses within each of the City’s watersheds and because no other single watershed is significantly more impaired than another. Also, the City concluded that an overall approach, aimed at reducing urban runoff pollution from each and all of the identified significant sources, would result in a more thorough and effective SWMP.

In compliance with the Phase II regulations, the City has developed a comprehensive SWMP that is designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. The SWMP is tailored to meet the City’s needs and requirements. The SWMP includes the six required control programs and the two recommended control programs for industrial facilities and commercial facilities. Thus, the eight control programs are as follows:

- ❖ Municipal Operations/Pollution Prevention and Good Housekeeping
- ❖ Illicit Discharge Detection and Elimination
- ❖ Public Participation
- ❖ Public Education
- ❖ Construction Site Storm Water Runoff Control
- ❖ Post Construction Storm Water Management
- ❖ Industrial Facilities
- ❖ Commercial Facilities

These eight programs will work together to comprise a well-rounded and multi-faceted approach to reducing urban runoff pollution within the City. The programs include urban runoff control policies, outreach and education efforts, site visits, and the implementation of Best Management Practices (BMPs).

It is important to the City to implement a well rounded SWMP so that healthy watersheds are maintained and pollutants are kept from degrading our creeks, water bodies, the San Lorenzo River, and Monterey Bay. Implementation of the SWMP should be effective towards protecting our natural resources, including preserving the water quality and habitat in our aquatic ecosystems. It is also important to the City that our beaches are clean and safe for swimming, and that the Monterey Bay National Marine Sanctuary remains a healthy marine environment.

II. Municipal Assessment

Characteristics of the City

The City of Santa Cruz is one of the oldest cities in California. Founded in 1791 and incorporated in 1866, it is located approximately 75 miles south of San Francisco and is situated on the northern shore of Monterey Bay.

The City occupies a picturesque location along the banks of the San Lorenzo River, between the Pacific Ocean and the Santa Cruz Mountains. The City limits enclose approximately 12 square miles. Public and privately owned lands along the City's western, northern and eastern boundaries form a greenbelt of open space land uses which include agriculture and grazing lands, natural areas, parks, coastal recreation and low-density residential areas. The major industries are tourism, manufacturing, food processing, and high tech firms. About 10% of the land area of the County is devoted to State Parks, several of which are within or adjacent to the City limits. The climate is mild. The average high temperature is 69 degrees Fahrenheit and the average low temperature is 44 degrees Fahrenheit. Rainfall averages 32 inches per year.

Santa Cruz is the largest city in Santa Cruz County and serves as the County seat. It has been the urban center of the County providing employment and commercial, governmental, social, educational and cultural services to the area. The establishment and growth of the University of California/Santa Cruz have reinforced the City's role as a major social and cultural center. In

2001, the City had a population of 54,593 people including the residents on the University of California/Santa Cruz (UCSC) campus. Subtracting out the 4,179 students and professors that live on the UCSC campus, the City's population is 50,414.

The City is governed by a City Council comprised of the Mayor and six Council members. The seven Council members are elected for four-year terms. Each year in November, the Council elects one of its members as Mayor and another as Vice Mayor. The City Council sets the policy for the City and appoints citizens to serve on boards, commissions, committees, and task forces to assist and advise in formulating policy. These advisory bodies provide recommendations to assist the Council in making decisions. While the City Council functions as the governing body, the day-to-day management is handled by the City Manager. City functions are distributed between ten departments. The City's organizational structure is included in Attachment 1.

The City exercises zoning control and provides public services including water, sewer, refuse, parks, police, and fire protection. The City also has a Local Coastal Program, certified by the California Coastal Commission, which requires all projects in the Coastal Zone to be approved by the City. The City currently has a Storm Water Utility Program to fund flood control and storm water programs.

A map of the City including the city boundaries, waterways, and storm drain outfalls is included in Attachment 31.

Watersheds

San Lorenzo River Watershed

Much of the City of Santa Cruz lies within an alluvial fan that drains into the San Lorenzo River watershed basin. The San Lorenzo River flows from the summit elevations of the local Santa Cruz Mountains, through the City of Santa Cruz and the Coastal Zone, and out into the Monterey Bay National Marine Sanctuary and the Pacific Ocean. The entire city lies within the river's watershed and receives runoff from areas outside of its jurisdiction. Additional agencies responsible for water quality within the watershed including in and outside of the City boundaries include: County of Santa Cruz, California Department of Parks, California Department of Fish and Game, California Coastal Commission, California Regional Water Quality Control Board, California Environmental Protection Agency, National Oceanic Atmospheric Administration, and the Environmental Protection Agency.

Sub-Watersheds In the San Lorenzo River Watershed

Five sub-watersheds (watersheds) were identified within the San Lorenzo River watershed basin and within the City limits. These watersheds were determined by using natural boundaries such as geographic areas, topography, and water bodies. The five watersheds are the following:

- ◆ Moore Creek,
- ◆ Westside,
- ◆ Neary Lagoon,
- ◆ San Lorenzo River, and
- ◆ Arana Gulch.

The watersheds and the land uses within each watershed were mapped in order to provide a detailed layout and overview to facilitate analysis of urban runoff issues. The map is entitled the “City of Santa Cruz Watershed Boundary and Land Use Study” and is available for review, due to its large size, at the Public Works Department.

Land Use and Primary Resources

The City identified land uses within each watershed and compiled a list of the local resources that require protection from urban runoff. Land use was categorized into one of the following categories: churches/schools, commercial, industrial, open space, parking lots, Port District, residential, paved roads, and the University of California/Santa Cruz (UCSC). The primary resources within the City watersheds include creeks, the San Lorenzo River, lagoons, ponds, riparian corridors, parks, marshes, coastal beaches, and Monterey Bay. The land use and primary resources within each of the five watersheds are detailed below.

Moore Creek Watershed:

The Moore Creek watershed is located on the western side of Santa Cruz and drains directly into the Pacific Ocean at Natural Bridges State Park. The watershed is comprised primarily of open space (50%) and the UCSC campus (23%). Also within the watershed are residential areas, general industrial businesses, and parks. The primary resources located within this watershed are as follows: Younger Lagoon, Moore Creek, Antonelli Pond, Natural Bridges State Park, and Monterey Bay.

Westside Watershed:

The Westside Watershed is also located on the western side of the city, between the Moore Creek Watershed and the Neary Lagoon Watershed. The southern boundary of the Westside Watershed is the Pacific Ocean. A significant portion of the watershed is comprised of residential areas (53%) and paved roads (21%). Other land uses include open space, churches and schools, and industrial facilities. The primary resources are: Bethany Creek, Arroyo Seco Corridor, Lighthouse Field State Park, and Monterey Bay.

Neary Lagoon Watershed:

The Neary Lagoon Watershed is located in between the Moore Creek, Westside, and San Lorenzo River Watersheds. The watershed drains into Monterey Bay and the Pacific Ocean at Cowell Beach. The watershed drains the majority of the UCSC campus (44%) and residential neighborhoods (33%). Other land uses include roads, open spaces, churches and schools, and commercial businesses. Neary Lagoon is centrally located in the city’s urban core and is comprised of approximately 44 acres of wetland, riparian and woodland habitats. The lagoon collects runoff and groundwater from approximately one half of the west side of the City, most of which is residential. A weir controls the lagoon water level. The lagoon outlets to Monterey Bay at Cowell Beach during the wet weather season via a gravity storm drain and one forced main storm drain. During the dry weather season, the lagoon’s discharge is diverted to the Wastewater Treatment Facility. The primary resources are as follows: Donero Creek, Westlake Pond, Laurel Creek, Bay Creek, Neary Lagoon, Cowell Beach, and Monterey Bay.

San Lorenzo River Watershed:

The San Lorenzo River Watershed is the largest watershed in the City, with the San Lorenzo River flowing adjacent to the center of the city's shopping district. The San Lorenzo River flows into Monterey Bay, creating San Lorenzo Lagoon where the river water meets the tidal waters of the bay. The watershed is comprised predominantly of open space (41%), in the northern portion, and residential neighborhoods (26%) and paved roads (13%) as the river flows south through the City. Other land uses include commercial businesses and the UCSC campus. The primary resources are as follows: Glen Canyon Creek; Carbonera Creek, Branciforte Creek, Pogonip, San Lorenzo Lagoon, Jessie Street Marsh, Buena Vista Creek; the San Lorenzo River, Seabright State Beach, Cowell Beach, and Monterey Bay.

Arana Gulch Watershed:

The Arana Gulch Watershed is located on the City's eastern border and is partially within the unincorporated residential areas of the County. The watershed drains into Monterey Bay at the Santa Cruz Yacht Harbor. The watershed, within City limits, is comprised predominantly of residential neighborhoods (34%) and open space (34%). Other land uses include paved roads, churches and schools, and the Santa Cruz Port District (Yacht Harbor). The primary resources include the following: Arana Creek, West Branch Creek, Hagemann Gulch, Woods Lagoon, the Santa Cruz Yacht Harbor, and Monterey Bay.

Sources of Urban Runoff Pollution

Urban runoff pollution is widely regarded as the nation's leading threat to water quality. Urban development often results in the degradation of water quality due to the alteration of the watershed hydrology and the introduction of pollutants. Urban development alters the natural hydrology in a watershed in several ways. For example, natural drainage systems are replaced with pipes and ditches. The grading of land, creation of impervious surfaces, and the creation of manmade channels for surface waters reduce percolation and increases surface runoff. Floodplain encroachment reduces channel capacity. Removal of vegetation increases erosion potential. All of these changes can result in increased runoff and higher velocities in creeks and streams. These changes can, in turn, cause erosion and damage aquatic habitat.

Urban pollutants are also introduced as a result of development and intensified population growth that typically accompanies development. Pollutants may include toxic metals, hydrocarbons, nutrients, suspended solids, and many other chemicals. Land use is an important factor in determining the potential sources of urban runoff pollution and in considering the potential effects on both land and water resources.

In the City, many different sources of urban runoff pollution were identified due to the variety of land uses within each watershed. The significant sources and examples of activities that may generate pollutants are listed below:

- ❖ Industrial facilities: industrial chemical processes; chemical and waste storage; fleet maintenance and vehicle washing; and landscaping.
- ❖ Commercial businesses including food and vehicle service facilities: vehicle and equipment maintenance; food processing; vehicle washing; landscaping; and chemical and waste storage.

- ❖ Residential dwellings: vehicle washing; home vehicle repair; home painting and construction projects; chemical and waste storage; pet waste; and landscaping.
- ❖ Construction and remodeling projects: grading; vegetation removal; concrete washout; vehicle and equipment fluids; landscaping; and material and waste storage.
- ❖ Municipal sewer system and private sewer laterals: exfiltration from leaking, cracked, and debilitated pipelines; and overflows from blocked pipelines.

Pollutants of Concern

Storm water pollutants generated by the sources described above are numerous and quite varied. These pollutants include: metals, solvents, paint, concrete, masonry products, detergents, vehicle fuels and fluids, oil and grease, pesticides and fertilizers (organic compounds and nutrients), debris and litter, bacteria, pathogens and oxygen demanding compounds, and sediment and silt.

In general, all five of the City's watersheds contain most or all of these pollutants. This is because the various types of land uses are distributed through out the City rather than certain types being concentrated in specific watersheds. One watershed though, the San Lorenzo River watershed, does have a higher level of commercial and tourist activity, and will require more focus than the other watersheds. Also it should be noted that the Moore Creek watershed has very little commercial land use and the Neary Lagoon watershed has practically no industrial land use.

Of the pollutants mentioned above, as indicated by the RWQCB, the primary pollutants of concern in the City watersheds are the following:

- ◆ Sediment and silt
- ◆ Fecal Indicator Bacteria

The City is targeting these primary pollutants of concern in the SWMP because certain water bodies within the City are listed on the Section 303(3) list as impaired for these specific pollutants as described in the paragraphs below. In addition, in some water bodies TMDLs have been adopted for these primary pollutants of concern. For example, the San Lorenzo River and Carbonera Creek were identified as impaired by sediment on the 1998 Clean Water Act Section 303 (d) list of impaired water bodies. Subsequently, on May 16, 2003, the RWQCB adopted a sediment Total Maximum Daily Load (TMDL) for these water bodies. In some cases such as for Branciforte Creek, there is a TMDL for a specific pollutant, i.e. Fecal Indicator Bacteria in this case, although this creek was not listed for such on the 303(d) list.

The other pollutants of concern will also be addressed in the SWMP program through the measures and BMPs detailed in the six required and two optional control programs, which are further described in Section V below and in the individual program chapters. As mentioned in Section I above, it is important to the City to implement a well rounded SWMP so that healthy watersheds are maintained and that Monterey Bay is protected from degradation by pollutants.

Primary Watershed Issues

Section 303(d) List and Total Maximum Daily Loads (TMDLs)

Section 303(d) of the Clean Water Act requires states to identify and prepare a list of water bodies that do not meet water quality objectives, and then to establish load and waste load allocations (collectively known as TMDLs) for each water body, in order to ensure attainment of water quality objectives. The City of Santa Cruz storm drain system (MS4) discharges into four water bodies that are currently on the 303(d) list. These water bodies are:

- ◆ San Lorenzo River
- ◆ Carbonera Creek
- ◆ Branciforte Creek
- ◆ San Lorenzo River Lagoon

Section 303(d) List

Within the City, the following water bodies and impairments are listed on the 303(d) list:

1. The San Lorenzo River is listed for sedimentation/siltation. The potential sources are construction/land development, urban runoff, non-point sources, and silviculture (not applicable in the City). There is an adopted TMDL for this impairment as discussed below.
2. The San Lorenzo River is listed for pathogens, with the potential sources being urban runoff/storm sewers and septage disposal. (Septage sources are attributed to sources outside City limits since w/in the City properties discharge to the sanitary sewer)
3. The San Lorenzo River is listed for nutrients, with the potential sources being non-point sources and septage disposal, and pathogens. The potential sources of these are septage disposal and urban runoff/storm sewers.
4. The San Lorenzo River Lagoon is listed for pathogens, with the potential sources being natural sources and urban runoff/storm sewers.
5. Carbonera Creek is listed for sedimentation/siltation. The potential sources are construction/land development and non-point sources. There is an adopted TMDL for this impairment as discussed below.
6. Carbonera Creek is listed for nutrients, with the potential sources being non-point sources. The potential sources are septage disposal and urban runoff/storm sewers.
7. Carbonera Creek is listed for pathogens, with the potential sources being urban runoff/storm sewers and non-point sources.
8. Branciforte Creek is listed for sedimentation/siltation. The potential sources are non-point source, road construction, and silviculture (not applicable in the City). The City is currently addressing these issues under the Implementation Plan for the San Lorenzo River Sediment TMDL.

For these water bodies and impairments, the City's SWMP addresses the primary pollutants of concern through City measures and BMPs to the Maximum Extent Practicable. In addition, where there is an adopted TMDL, the SWMP targets these primary pollutants of concern due to their high priority.

To date, TMDLs for all of the 303(d) listed water bodies/impairments mentioned above have not been established although they are under development. Upon the RWQCB adoption of future TMDLs, the City will determine whether the existing SWMP meets the TMDL implementation requirements within its jurisdiction and revise the SWMP accordingly. In addition, for some water bodies, a TMDL has been adopted for a specific pollutant although the water body wasn't listed on the 303(d) list for that impairment. A discussion of the adopted TMDLs for water bodies within the City of Santa Cruz is included in the following section.

TMDLs for Sediment

The San Lorenzo River and Carbonera Creek (along with Lompico Creek and Shingle Mill Creek which are outside of the City's jurisdiction) were identified as impaired by sediment on the 1998 Clean Water Act Section 303 (d) list of impaired water bodies. On May 16, 2003, the RWQCB adopted a sediment TMDL (Resolution No. R3-2002-0063) for these water bodies and, thereby, incorporated the TMDL and associated Implementation Plan into the Basin Plan. Again, the sources of impairment are attributed to the following: land development, urban runoff, roads, non-point sources, and silviculture. In 2006, the State Board added additional water bodies that were on the 303(d) as impaired by sediment. Of these additions, Branciforte Creek is located within the City. Thus, the water bodies within the City included in the implementation plan are the San Lorenzo River, Carbonera Creek, and Branciforte Creek.

The *Implementation Plan for the San Lorenzo River Sediment TMDL* identifies the Cities of Santa Cruz and Scotts Valley, the County of Santa Cruz, and the owners and operators of construction sites of one acre and greater as Responsible Dischargers. Therefore, the City has and will take the following implementation actions within its jurisdiction:

- a) Develop and implement the SWMP and Storm Water Pollution Plans (SWPPPs) consistent with NPDES Phase II Storm Water regulations.
- b) Identify the San Lorenzo River Watershed as a priority for site inspection and enforcement of control measures in the SWMP and SWPPPs.
- c) Incorporate sediment control programs/projects into the SWMP.

The first San Lorenzo River Sediment TMDL Tri-Annual Report was submitted to the RWQCB in 2007. This Tri-Annual Report identified the City's implementation actions and efforts, and included a progress evaluation.

TMDLs for Fecal Indicator Bacteria

A TMDL for Fecal Indicator Bacteria has also been adopted for the San Lorenzo River, San Lorenzo River Lagoon, Branciforte Creek, and Carbonera Creek. However, an implementation plan for this TMDL has not yet been finalized.

RWQCB Water Quality Assessment

On May 16, 2008, a Watershed Assessment meeting was held in Santa Cruz for the municipalities within the County of Santa Cruz, stakeholders, and interested parties. These municipalities included the City of Santa Cruz, the County of Santa Cruz, the cities of Watsonville, Capitola, and Scotts Valley, and the University of California at Santa Cruz. The meeting included a Watershed Assessment presentation by RWQCB staff. This presentation was subsequently revised and updated by RWQCB staff, based on the comments received at the meeting.

One of the purposes of the meeting was to ensure that the Storm Water Management Plan for each of the municipalities, including the City of Santa Cruz, specifically targets the water quality issues identified during the water quality assessment in the manner outlined in the updated presentation.

The highlights of the meeting include a list of adopted TMDLs and 202(d) list of impaired water bodies within the City as the primary water quality issues. Other water quality issues presented included:

- *Central Coast Ambient Monitoring Program*
Toxicity: 1) sublethal effects observed in San Lorenzo River
2) one lethal effect observed in Arana Gulch
- *Monterey Bay Sanctuary Citizen Watershed Monitoring Network*
Copper and Zinc:
1) observed at elevated levels in storm water discharges during First Flush events
- *Fecal Indicator Bacteria from transients and homeless people*

Please refer to Chapter 9, “Addressing TMDLs in the SWMP,” for a more complete description of the City’s current measures and future plans to address TMDL issues in the SWMP.

Storm Drain System

The City’s storm drain system is comprised of a wide variety of conveyance systems such as underground pipes, small open drainage channels, creeks, and the San Lorenzo River. There are also numerous storm drain inlets and catch basins (approximately 1,450) throughout the City, and five pump stations that discharge storm water directly into the San Lorenzo River. In addition, along both the east and west sides of the City, there are storm water outfalls that discharge onto the beaches or cliffs, and into Monterey Bay.

There is approximately 50 miles of underground storm drain system pipeline in the City. The majority of pipes are comprised of concrete. Old pipelines still remain that are comprised of clay, while new pipelines installed by the City are either made of PVC or high-density polyethylene (HDPE). The typical pipeline diameter is 12-15 inches although both smaller and larger pipelines, up to 72 inches, exist. Maintenance and repair of the City’s storm drain system is

conducted by the Public Works Department and is described in greater detail in the Municipal Operations Program-Pollution Prevention and Good Housekeeping.

In general, the City's downtown area drains to the San Lorenzo River. Although some storm water reaches the river by absorption and gravity, the five pump stations along the river were installed in order to transfer the majority of the storm water over (actually through) the river levees. There are three pump stations located on the west side of the river and two on the east side. The west side pump stations are located at Broadway (1) and in Beach Flats (2). The east side locations pump stations are located at lower Ocean Street and at Water Street. A map of the pump stations/wet wells along the lower San Lorenzo River is included in Attachment # 29.

In addition to the San Lorenzo River, there are numerous creeks traversing the City. These include the following: Branciforte Creek, Moore Creek, Donero Creek, Laurel Creek, Bay Creek, Glen Canyon Creek, Carbonera Creek, Arana Creek, West Branch Creek, and Hageman Creek.

In certain areas of the City, natural spring water and storm water flows through a network of conveyance systems, such as small creeks and underground piping. This is especially the case in the west side of Santa Cruz, particularly the upper west side. The upper west side is dotted by natural springs, which feed the small creeks that run through residential yards and cross streets via underground piping. These creeks drain either into Neary Lagoon or run through the storm drains system discharge from West Cliff Drive into Monterey Bay. As expected, the flow from some of these smaller creeks is seasonal or intermittent with the greatest flows occurring during the rainy season.

Review of Existing Programs, Plans, and Policies

There are many existing regional and local programs, plans, and policies that address urban runoff issues in the City. Some of the programs directly address urban runoff issues, while others indirectly result in a reduction of urban pollution and an improvement of water quality. City staff conducted a review of these programs, plans, and policies in order to ensure that the SWMP is coordinated with the existing programs. The local programs, plans, and policies are listed in Table 1 below and summarized in the paragraphs that follow.

Table 1

City and County Programs, Plans, and Policies

Program, Plan, or Policy	Responsible Agency	Focus or Issues
General Plan/Local Coastal Plan/Zoning	City of Santa Cruz Planning Department	Land use
CEQA review process	City of Santa Cruz Planning Department	Water quality degradation
Citywide Creek Study and Management Plan	City of Santa Cruz Planning Department	Management plan for watercourses and wetlands located in the City
Integrated Pest Management Program	City of Santa Cruz	Elimination or reduction of pesticide use on City property wherever possible
Storm Water Utility Program	City of Santa Cruz Public Works Department	Funds flood control and habitat restoration projects, SWMP development and implementation
Nearby Lagoon Management Plan	City of Santa Cruz Parks and Recreation Department	Management of the lagoon to ensure its viability as an ecosystem and as a unique resource for the community
San Lorenzo Urban River Project & Lower San Lorenzo River and Lagoon Management Plan	City of Santa Cruz and The San Lorenzo Urban River Task Force	Development of a long-term management plan for restoring the San Lorenzo River and developing a river parkway for residents of Santa Cruz
San Lorenzo River Watershed Management Plan	County of Santa Cruz Environmental Health Services	Addresses pollutants, sedimentation, and erosion due to various sources including urban development
San Lorenzo River Caretakers	Santa Cruz County Resource Conservation District	Committee of land users and residents working with public agencies on watershed planning, restoration, and public education
Arana Gulch Enhancement Plan	Arana Gulch Watershed Alliance/Santa Cruz County Resource Conservation District	Enhancement plan for Arana Gulch Watershed enhancement and restoration

City of Santa Cruz General Plan/Local Coastal Plan:

The General Plan does not contain a completely separate Urban Runoff element, but it does contain key subsections that relate to urban runoff water quality. The City also has a Local Coastal Plan that includes sections for each of the City's watersheds. The Local Coastal Plan addresses water quality issues through both California Coastal Act provisions and policies relating to those provisions. The City of Santa Cruz Planning Department is responsible for the implementation of policies and programs found in the General Plan as well as the Local Coastal/Land Use Plans. All projects conducted within the Coastal Zone areas are subject to approval by the City unless appealed to the Coastal Commission.

City of Santa Cruz CEQA Review Process:

The California Environmental Quality Act (CEQA) Review Process focuses on the environmental impacts of new development, redevelopment and public capital improvement projects within the City of Santa Cruz. Utilization of the CEQA checklist is a means of upholding elements of the General Plan and Local Coastal Programs overall, and more specifically those related to water quality goals and objectives. The City is responsible for going through the CEQA process provisions for projects within their jurisdiction. This process uses the CEQA checklist as an initial step in determining whether a project is categorically exempt, requires a Negative Declaration, or whether it needs an Environmental Impact Report.

City-wide Creeks and Wetlands Management Plan:

The City recently prepared a management plan for watercourses and wetlands found within the City under the lead of the Planning Department. Previous City policy limited development within 100 feet of any watercourse or wetland without an adopted management plan. The management plan identifies under what circumstances development might be allowed to occur in proximity to such resources, based upon the value of the resource, the biological setting of the watercourse, and the type of use proposed on a particular site.

In 2002 a draft City-wide Creeks and Wetlands Management Plan prepared by a consultant team was made available for public review and comments. Joint Planning Commission/City Council Workshops were held to allow interested parties to find out more about the draft creek classification system, management plan recommendations, and mapping. In 2002 and 2003 after several Public Workshops, Planning Commission meetings, and City Council meetings, City Council directed staff to refine the study by using a combination of aerial photos with greater resolution and scale than before, and by conducting direct field evaluations of all the watercourses city-wide. The Draft Management Plan was released on November 1, 2005 with an Initial Study and Negative Declaration. The City Council approved the City-Wide Creeks and Wetlands Management Plan and adopted the Creeks and Wetlands Ordinance, designed to carry out the goals of the Management Plan, on February 28, 2006.

The City-Wide Creeks and Wetlands Management Plan identifies and categorizes all watercourses in the city and establishes a riparian corridor, development setback area, and management area for each watercourse. Specific setback requirements were determined based on an evaluation of biological, hydrological, and land use characteristics. For each section of a watercourse, the recommended setbacks include a management area, which is the area where watercourse regulations apply, and a riparian corridor and a development setback area, which are

located within the management area. These setbacks are applied to all watercourse segments. However, setbacks for wetland areas would be subject to site-specific review. For wetlands and other unique areas of ponding water, the *Management Plan* recommends further site-specific biotic review since detailed analysis or wetland delineations were not conducted as part of the *Management Plan* preparation. Known parcels that may require site-specific biotic reviews are parcels near ponds or wetlands where appropriate setbacks would be determined through site-specific studies. Lastly, lands that are within the boundary of an adopted management plan are subject to the requirements set in those plans.

All projects must comply with the watercourse development standards and a watercourse development permit is required unless specifically exempted or approval of a watercourse variance is obtained.

The primary long-term goals of this Management Plan are to:

- Reduce and/or eliminate pollutants discharged to aquatic bodies;
- Improve water quality;
- Improve and restore natural habitat;
- Increase biodiversity;
- Lower water temperatures; and
- Increase public awareness of the value of watershed quality.

The City-Wide Creeks and Wetlands Management Plan is described in more detail in Chapter 6: Post Construction Storm Water Management Program. In addition, a copy of the Management Plan's "Watercourse Development Permit Procedures" Chapter is included in Attachment # 26 for easy reference. This chapter includes the watercourse summary tables which list each of the watercourses, their watercourse categories, and the recommended setbacks. The chapter also outlines the watercourse permit process and variances, and details the development and activity types subject to permits and the uses permitted within the designated setback areas. Development standards to protect and/or enhance habitat conditions and water quality are also presented.

In addition, the entire City-wide Creeks and Wetlands Management Plan, creeks maps, and other related information may be viewed on the City's website at <http://www.ci.santa-cruz.ca.us/>.

Integrated Pest Management Program:

The goal of the City's Integrated Pest Management (IPM) Program is to reduce or eliminate the use of chemicals by the evaluation and selection of the least disruptive alternative control strategy for the elimination of pests and plant diseases. City departments are instructed to give first priority to available non-pesticide alternatives when considering the use of pesticides on City property. The goal is to eliminate the application of all Toxicity Category I and II pesticides products wherever possible. This pesticide use policy was approved by the City Council in October 1998.

Currently, there is an IPM Technical Advisory Committee that advises the City Council and staff on all matters concerning pest management on City properties. The emphasis is on alternative pest control techniques consistent with the goals of Integrated Pest Management. The committee

guides the creation and implementation of IPM programs within City departments and works with staff and members of the public on public outreach and education.

City of Santa Cruz Storm Water Management Utility:

The Storm Water Management Utility is primarily a financing mechanism for flood control and storm water programs. The City established a storm water utility fee, in May 1994, to fund the local share of the Army Corps of Engineers San Lorenzo River Levee Flood Control Improvement and Habitat Restoration Project. This project raised the river levees and rehabilitated the three downtown bridges (over the San Lorenzo River) to increase flood flow capacity. The storm water utility also provides funds towards development and implementation of the SWMP including staffing to promote departmental and interagency coordination, Best Management Practice compliance, permitting and enforcement, and educational efforts. Lastly, funds are used to maintain and retrofit surface water, storm water, and flood control facilities.

The City Council set the Storm Water Utility Fee based on Basic Assessment Units (BAU), which represents the proportionate storm water runoff from the average single-family residential parcel, based on parcel size and runoff factor. The Public Works Director acts as director of the Utility and is responsible for administering and managing the operations of the storm and surface water management system. The fee is included on the County Property Tax statements and is payable on a biannual basis. The City bills owners of parcels who do not pay property taxes.

City of Santa Cruz Neary Lagoon Management Plan:

The Neary Lagoon Management Plan was developed as a comprehensive guide and directive for managing the lagoon area to ensure its viability as an ecosystem and its value as a unique resource for the community. Goals, objectives, and actions are designed with the purpose of preserving and enhancing the lagoon's environmental integrity and quality while satisfying other purposes for public use, flood protection, water quality, mosquito control and aesthetics. Many aspects of the management plan have been implemented. The Parks and Recreation Department is primarily responsible for the implementation of the management plan.

The San Lorenzo Urban River Project/Lower San Lorenzo River and Lagoon Management Plan:

The San Lorenzo Urban River Project is a planning process initiated by the City Council in 1999 to develop a long-range plan for restoring the San Lorenzo River and developing a river parkway for residents of Santa Cruz. The San Lorenzo Urban River Plan Task Force is the Council appointed body facilitating the process. The *Lower San Lorenzo River and Lagoon Management Plan* is a new management plan that was developed by consultants and City staff, with funding provided by the State Coastal Conservancy and the City. The project area covers the lower 2.2 miles of the San Lorenzo River, from Highway 1 to the mouth of the river at Monterey Bay.

County of Santa Cruz San Lorenzo River Watershed Management Plan Update:

The Management Plan was completed in December 1979 and is the first plan written under the Protected Waterways Program. The plan focuses on restoration and protection of natural areas experiencing a heavy level of suburban development. The planning process included a preliminary assessment of watershed resources, detailed problem assessment and development of plan recommendations some of which have been implemented. The Management Plan Update is in progress and will coordinate and prioritize efforts to improve water quality of the San Lorenzo

River and receiving waters in the Monterey Bay National Marine Sanctuary. The Management Plan Update will incorporate work already accomplished in the management of nitrates, wastewater, and ground water and specifically address microbiological contamination from urban areas and erosion and sedimentation.

The County of Santa Cruz was primarily responsible for the development and implementation of the original management plan and is currently developing the update. The City of Santa Cruz assisted with development, review and implementation.

San Lorenzo River Caretakers:

This Coordinated Resource Management and Planning (CRMP) group was established in 1995 and encompasses the entire 90,000 acres of the San Lorenzo River Watershed. A steering committee of land users and residents works closely with public agencies and other technical advisors on watershed education programs. A CRMP Plan has been developed and several public education workshops have been held. Funding has also been approved for erosion control work. The Santa Cruz County Resource Conservation District (SCCRD) assists the San Lorenzo River Caretakers in planning and implementing projects.

Arana Gulch Enhancement Plan:

The Arana Gulch Enhancement Plan was developed to further the enhancement and restoration of the Arana Gulch Watershed. As previously mentioned, the Arana Gulch Watershed is a “sub-watershed” within the San Lorenzo River watershed. The watershed drains into Monterey Bay at the Santa Cruz Yacht Harbor. The Santa Cruz Port District and the Santa Cruz County Resource Conservation District cosponsored the initial public information meeting to discuss development of an enhancement plan. The Arana Gulch task force subcommittee was created to oversee the development of this plan. The lead agency was the Santa Cruz County Resource Conservation District.

III. Establishment of Legal Authority

Storm Water Ordinance

On April 28, 1998, the City adopted a Storm Water Ordinance, which became effective on May 28, 1998. The ordinance, entitled “Storm Water and Urban Runoff Pollution Control,” is Chapter 16.19 of the City’s Municipal Code. The ordinance established the legal authority to prohibit illicit connections and pollutant discharges to the City storm drain system. The ordinance also provides the City with the legal authority to conduct inspections and sampling. In addition, the ordinance contains a provision requiring the implementation of BMPs, as published by the Public Works Department, by certain types of facilities. The City also has the authority to terminate illicit connections and discharges, and to initiate enforcement actions for violations of the code. Potential enforcement actions include written notices, citations, termination of discharge, and monetary penalties.

The Storm Water Ordinance prohibits non-storm water discharges to the storm drain system with a few exceptions. The permissible discharges include discharges authorized by a NPDES permit or resulting from one of the following: fire fighting activities; landscape irrigation; water line

breaks and other releases from potable water systems; foundation/footing drains; individual residential car washing; and unpolluted groundwater.

The City revised the Storm Water Ordinance in July 2003 in order to update the ordinance and incorporate new Phase II storm water regulations. For example, a provision was added that prohibits the discharge of wastewater to the storm drain system from pressure washing, steam cleaning, and hand scrubbing of sidewalks and other outdoor areas adjacent to retail and commercial businesses and industrial facilities. A section was also added stating that, if a private storm drain system is not operating properly and causes the improper discharge of storm water to the street, sidewalk or storm drain system, the City may declare this condition to be a public nuisance and proceed to abate that nuisance accordingly.

The ordinance was also revised to keep it comparable with the City's Sanitary Sewer Ordinance, which was revised in June 2002. The revisions include an increase in monetary penalties to equivalent amounts specified in the Sewer Use Ordinance for violations of the Municipal Code. For example, civil penalties were increased from a maximum of \$1,000 per day to a maximum of \$2,500 per day for each violation of the ordinance. The Storm Water Ordinance is included in Attachment 2.

Grading Ordinance

The Grading Ordinance is a subset of Title 18, Buildings and Construction, of the City's Municipal Code. The Grading Ordinance, officially titled "Chapter 18.45 Excavation and Grading Regulations," provides technical regulations of grading and excavation, in conjunction with the Environmental Resource Management provisions (Municipal Code, Title 24, Chapter 24.14), in order to safeguard life, health, safety and the public welfare; protect fish and wildlife, riparian corridors and habitats, water supplies, and private and public property, and to protect the environment from the effects of flooding, accelerated erosion and/or deposition of silt. The ordinance accomplishes this by providing guidelines, regulations, and minimum standards for clearing, excavation, cuts, fills, earth moving, grading operations (including cumulative grading), water runoff and sediment control. In addition, the ordinance includes provisions regarding administrative procedures for issuance of permits and approval of plans and inspections during construction and subsequent maintenance.

The City revised the Grading Ordinance in April 2004 in order to strengthen the ordinance regarding implementation of BMPs, including those for erosion and sediment control. Modification of the Grading Ordinance included a requirement that all construction projects abide by the City's mandatory BMPs. In addition, the City included a provision that erosion and sediment control BMPs be in place and implemented, as appropriate, prior to commencing construction activity including grading or vegetation removal.

The City also added the most important BMPs from the City's mandatory BMPs for Construction Work to the "Excavation and Grading Regulations" section of the Grading Ordinance. The Grading Ordinance was also modified to include a requirement that Post-Construction BMPs, in accordance with the City's mandatory BMPs for Development and Remodeling Projects, be in place upon completion of a construction project. The Grading Ordinance is included in Attachment 3.

Zoning Ordinance

The Zoning Ordinance, Title 24 of the Municipal Code, currently contains provisions to ensure that new developments or remodeled sites are designed and constructed in a manner that limits alteration of drainage patterns, prevents erosion, and minimizes long-term impacts on water quality. For example, Chapter 24.14 of the ordinance, entitled Environmental Resource Management, contains a section on Conservation Regulations that includes general provisions for drainage and erosion controls. These provisions include requirements that a drainage plan be submitted for projects, both large and small, when existing drainage patterns would be altered by new construction. A drainage plan must be submitted and reviewed as part of the project approval. In addition, if a proposed project includes the discharge of runoff into a natural watercourse, the drainage plan shall include methods to safeguard or enhance the existing water quality. In addition, the ordinance requires that storm water runoff resulting from project development be minimized. Devices such as detention basins, percolation ponds, or sediment traps may be required by the City, where appropriate or as specified in an adopted plan or wetlands management plan.

Provisions pertaining to erosion control include requirements that a site development be fitted to the topography and soil so as to create the least potential for erosion. Vegetation removal is limited to the amount necessary and according to the project's approved erosion control plans.

The Zoning Ordinance also includes regulations for development in areas characterized by combustible vegetation and steep and/or unstable slopes. Such areas include canyons, arroyos, and slopes over thirty percent. The ordinance also addresses developments near or adjacent to intermittent or perennial streams, wetlands, marshes, and seasonally flooded grasslands. For example, construction of main or accessory structures, grading or vegetation removal is not permitted in any designated riparian area or within one hundred feet of a watercourse or a wetlands. Exceptions are allowed in certain circumstances, as specified in the Zoning Ordinance, such as when necessary for protection against erosion, scouring, and for maintenance of flow. For wetlands, marshes and seasonally flooded grasslands, exceptions are also granted if a restoration and management plan has been submitted and approved, and any construction or use is consistent with the approved plan. The ordinance also requires that landscaping, grading, and building design ensure the ongoing viability of the remaining vegetation and, if any vegetation is removed, that it is replaced by vegetation of an equivalent kind, quality, and quantity.

The Zoning Ordinance also includes a section, Chapter 24.08 entitled Land Use Permits and Findings, pertaining to Coastal Permits. Coastal Permits are required for development projects in the Coastal Zone Overlay District to ensure consistency with the Local Coastal Use Plan and the Local Coastal Implementation Program.

Due to its large size, the complete Zoning Code, Title 24, is not attached. However, the ordinance may be viewed or downloaded from the City's website at <http://www.ci.santa-cruz.ca.us>. The Zoning Ordinance Table of Contents has been included, as a reference to the various chapters and sections within the code, in Attachment 4.

Title 4 of the Municipal Code

Title 4 is entitled “General Municipal Code Enforcement.” It is the chapter of the Municipal Code that was established in 2000 to provide a comprehensive code enforcement system for the City. Briefly, Title 4 provides definitions, details, and specific procedures for a variety of code enforcement measures. For example, Title 4 provides for the issuance and recordation of Notices of Violation; the authority to inspect; the authority to issue a Notice to Appear and Release Citations, and the power to arrest. Title 4 also details the procedures regarding Judicial Remedies and Administrative Remedies available to the City for violations of the Municipal Code and applicable state codes. In addition, Title 4 details Summary Abatement and Administrative Abatement procedures for public nuisances and code violations. Lastly, Title 4 provides for the recovery of civil penalties and abatement costs. Please refer to Attachment 5 for a copy of Title 4.

IV. Implementation of the Storm Water Management Program

Program Focus

Upon review of the watersheds and the potential sources of pollutants, the City determined that although. One watershed, the San Lorenzo River watershed, does have a higher level of commercial and tourist activity and will require more focus than the other watersheds. The Storm Water Management Program will include practices for reducing pollutants from significant sources throughout the entire city. This is primarily because there are multiple land uses within each of the City’s watersheds and because no single watershed is significantly more impaired than another. In addition, the City is effectively “built out” so reliance solely on construction and post-construction BMPs is not the answer. Also, the City concluded that an overall approach, aimed at reducing urban runoff pollution from each and all of the identified significant sources, would result in a more thorough and effective Storm Water Management Program.

Thus, the City is implementing the six required control programs and the two optional programs. Implementation will involve outreach and education efforts, conducting site visits, and ensuring the implementation of BMPs by City departments, industrial and commercial facilities, and residents. BMPs will include both preventative measures, such as good housekeeping practices, and structural controls. BMPs that reduce pollutants in storm water runoff will be implemented to the technology-based standard of Maximum Extent Practicable (MEP). In particular, educating City staff, businesses, and the general public about BMP implementation is a critical factor in ensuring the success of the SWMP.

Program Funding

Funding for the SWMP will be obtained from the City Storm Water Utility fees charged to each property within City of Santa Cruz limits. As previously mentioned, the Storm Water Utility fee was initiated in May 1994. The storm water utility fees are included on the property tax bills from the Santa Cruz County Tax Collector. While most of these monies are allocated to pay for the San Lorenzo River Flood Control Project, approximately \$200,000-300,000 per year is designated for storm water related pollution abatement programs including the SWMP. The City will allocate funds for each of the control programs within the SWMP according to priorities.

City Departments

In addition to coordination with existing regional and local programs, implementation of the SWMP will require participation by multiple City departments. The Public Works Department is primarily responsible for implementation of the SWMP and coordination with the other City department. As previously mentioned, the other departments that have a major role in implementation of the SWMP are Planning, Parks and Recreation, and the Water Department. The table below summarizes the City departments and the divisions that currently conduct activities related to urban runoff issues or that are directly involved in the SWMP.

Table 2

City Departments and the SWMP

Department/ Division or Section	Activities	SWMP Programs
Fire		
	Responds to fires and emergencies including hazmat spills; inspects facilities for hazardous materials storage.	Municipal Operations
Parks and Recreation		
Facility Services	Maintains downtown sidewalks and parks; maintains City vehicle fleet.	Municipal Operations
Regional Parks	Maintains downtown sidewalks and parks; implements City's IPM program.	Municipal Operations
Golf Course	Maintains municipal golf course and equipment; implements City's IPM program.	Municipal Operations
Planning		
Current Planning/ Zoning	Reviews new development and redevelopment projects (under CEQA).	Construction, Post-Construction
Future Planning	Prepares General Plan revisions and amendments.	Construction, Post-Construction
Inspection	Conducts site development, construction, new building and remodeling inspections; reviews erosion control plans for developments.	Construction, Post-Construction
Code Compliance	Conducts inspections and issues enforcement action for violations of City Municipal Code, particularly the Zoning Ordinance. Focus is on promoting health and safety in neighborhoods.	Construction, Post-Construction
Public Works		
Environmental Compliance	Conducts inspections at industrial and commercial facilities; training and information to businesses on BMPs; responds to reports of illegal discharges to the storm drain system; implements Pretreatment program.	Municipal Operations, Illicit Discharge, Public Education, Public Participation
Operations/	Maintains sewer lines; cleans of catch basins;	Municipal

Department/ Division or Section	Activities	SWMP Programs
Wastewater Mains	investigates complaints of illegal dumping and illicit connections.	Operations, Illicit Discharge
Operations/ Refuse and Recycling Collection	Conducts street sweeping; provides refuse and recycling services including curb-side pickup of used motor oil and GreenCycle wastes; Household Hazardous Waste drop-off site; conducts public education.	Municipal Operations, Public Education
Operations/ Streets and Flood Control	Maintains storm drain system and flood control facilities; assists with detection of illicit connections.	Municipal Operations, Illicit Discharge
Traffic Engineering/ Traffic Maintenance	Conducts storm drain stenciling; conducts planning re traffic flows; promotes alternative transportation; maintains parking lots and public parking garages.	Municipal Operations
Engineering/ Design and Development	Develops and coordinate SWMP; designs and constructs storm drain system improvements; creates digitized map of the storm drain system including all city streets, pipelines, large and small storm drain outfalls; coordinates storm water quality planning efforts locally and regionally.	All
Redevelop- ment		
	Provides City assistance towards eliminating blight from designated areas and towards achieving desired development, reconstruction, and rehabilitation in residential, commercial, industrial, and retail land uses.	Post-Construction
Water		
Water Engineering	Provides engineering, planning and project design for construction of necessary water facilities and installation of water saving technologies.	Municipal Operations
Water Distribution	Maintains and operates all transmission and distribution mains throughout the water piping network; maintains and operates all service lines, hydrants and valves.	Municipal Operations
Water Production	Produces, operates and maintains water storage, diversion, collection, pumping, and treatment facilities.	Municipal Operations
Water Conservation	Plans, develops and implements conservation programs; reviews landscape plans for compliance with water efficient design requirements.	Post Construction

Department/ Division or Section	Activities	SWMP Programs
Water Resources Management	Responsible for drinking water source and natural protection work for delivery of potable water; provides environmental review support; conducts biological surveys including San Lorenzo River Salmonid habitat typing and population assessments; works on the Habitat Conservation Plan; conducts outreach and education to watershed stakeholders.	Municipal Operations, Public Education

V. SWMP Control Programs

The City’s Storm Water Management Program consists of the six required and two optional control programs. The eight control programs are as follows:

- ❖ Municipal Operations Program-Pollution Prevention and Good Housekeeping
- ❖ Illicit Discharge Detection and Elimination Program
- ❖ Public Participation Program
- ❖ Public Education Program
- ❖ Construction Site Storm Water Runoff Control
- ❖ Post-Construction Storm Water Management Program
- ❖ Industrial Facilities Program
- ❖ Commercial Facilities Program

As previously mentioned, the City is including the two recommended programs, Industrial Facilities and Commercial Facilities, in the SWMP because certain industrial and commercial facilities within the City were determined to be significant or potentially significant pollutant sources within the local watersheds. By implementation and coordination of these eight programs, the City’s goal is to create a well-rounded and effective SWMP. For example, the Post-Construction Storm Water Management Program, the Construction Site Storm Water Runoff Control Program, and Public Education Program will, in combination, help to ensure that the impacts on storm water is reduce during the design, construction, and long term use of an urban area or site.

A brief summary of each of the eight control programs is included below. The individual control programs are described in greater detail in their respective chapters. These chapters include specific information on program design, implementation, and evaluation. Each chapter also identifies and describes the BMPs selected to reduce the pollutants of concern. The division or department responsible for implementing each BMP is also included. In addition, a detailed BMP summary table, that includes measurable goals and an implementation schedule, is also

provided. It should be noted that the City's accomplished many of its original goals or had pollution prevention programs in place by 2003 because of the City's intent to be proactive and in compliance with the new storm water regulations as soon as the General Permit was adopted.

Municipal Operations Program-Pollution Prevention and Good Housekeeping

This program focuses on reducing ensuring that municipal activities are conducted in a manner that does not cause the discharge of pollutants to the storm drain system. The City will accomplish this by training staff and ensuring Best Management Practices are followed when appropriate. 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. For example, 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. Cleaning of sidewalks and buildings can introduce soap and particulates, including paint chips, to the storm drain system if precautions are not taken. In addition, vegetation management and herbicide use are concerns associated with maintenance of street medians, parks, and other landscaped areas.

Municipal operations and activities of concern include the following: street sweeping and cleaning; sidewalk, plaza, and municipal parking lot cleaning; maintenance of landscaped area; and repair and maintenance of City streets and sidewalks. Other related issues include storm drain inlet/catch basin and pipeline cleaning and the structural retrofit of storm drain facilities. Activities at the corporation yard, such as vehicle repair and washing, and other municipal operation areas will also be addressed. Therefore, there are many different municipal operations of concern for which Best Management Practices are necessary.

Illicit Discharge Detection and Elimination Program

This program is designed to detect and eliminate illicit connections and illegal discharges. Inspections of urban storm drain systems in municipalities throughout the country have shown that there are many improper or illegal connections plumbed to the storm drain system from industrial and commercial facilities. Also, because both the storm drain and sanitary sewer system piping develop cracks and leaks with age, and because these lines are often in proximity to one another, problems of infiltration are not uncommon. Infiltration may result in sanitary sewage seeping into the storm water system and visa versa. The program is aimed at detecting both illicit connections and deteriorating piping. The program is also aimed at detecting illegal discharges, via runoff or direct discharge, to the storm sewer system by industrial facilities, commercial businesses, and residents. For example, illegal discharges may include the dumping of motor oil in the gutter, the discharge of mat wash water from restaurants to a parking lot or street, and chemical spills which flow into the storm drain.

Public Participation Program

The main objective of the Public Participation Program is to involve the public in the SWMP development and implementation processes. Other objectives are to raise public awareness about storm water pollution and urban runoff issues, and to generate support for citywide storm water pollution prevention efforts. Elements of the Public Participation Program include public

meetings and presentations, communication with business groups and associations, City staff involvement, and public education and outreach.

Public involvement and participation are important components of the SWMP. The term “public” refers to various sectors of the community including residents; commercial and retail business owners; industry representatives; developers; construction contractors; City staff; elected officials; and government bodies. The program success is largely dependent upon on acceptance and support from these sectors. Therefore, the City is not only informing the public about urban runoff concerns, but is also encouraging participation in the program’s development.

Public Education Program

The focus of this program is on public education and outreach to residents regarding urban runoff pollution issues. In addition to increasing public awareness, the objective of the Public Education Program is to educate the community about specific sources of pollutants and what people can do in their “day to day” activities to prevent urban runoff pollution. The goal is to decrease the amount of urban runoff that is discharged into the storm drain system from our homes, businesses, and by our every day activities. The program utilizes advertising, distribution of brochures, media articles, and special events to get pollution prevention messages out to the public. In addition, the program encourages community participation by sponsoring a volunteer monitoring program and a school education program. The Public Education program is a vital part of the SWMP and critical to reducing urban runoff pollution within the city.

Construction Site Runoff Control Program

This control program is designed to reduce pollutant discharges from construction sites. Activities conducted at construction sites can release significant amounts of sediment into the streets, gutters, and storm drain system. Other pollutants, such as construction materials and debris, equipment and vehicle oils and fluids, and hazardous materials, may also reach the storm drain system during construction activities. Construction activities may also result in surface compaction or the creation of impervious surfaces, which can lead to increased surface runoff during periods of rain. This, in turn, may cause erosion and other changes in topography and/or stream hydrology and morphology.

The current Municipal Code, in particular the Grading Ordinance, includes numerous provisions designed to prevent or minimize the impacts of construction on water quality. As previously mentioned, in 2004, the Grading Ordinance was modified in order to strengthen the ordinance regarding implementation of BMPs including those for erosion and sediment control. The revisions also included the requirement that all permitted construction projects abide by mandatory Best Management Practices. In addition, the City is providing outreach materials to the construction community.

Post-Construction Storm Water Management Program

The goal of this program is to ensure that new developments or remodeled sites are designed and constructed in a manner that minimizes the long-term impacts on storm water quality. This includes requiring proper site design in order to minimize the alteration of natural watercourses and drainage patterns that can cause increased storm water runoff rates and erosion. In addition,

the program will ensure that long-term BMPs, including both source control and treatment BMPs, are incorporated into the design of a project where appropriate to prevent or minimize urban runoff pollution and the impact on water quality.

The intent is for new developments or redevelopments to be designed and managed so that site runoff volume, flow rate, and pollutant loadings resemble pre-construction levels. Elements of this program include the following: land use planning, designing the development or redeveloped site to minimize runoff, and restrictions to protect areas susceptible to erosion and sediment loss. The current Municipal Code, in particular the Zoning Ordinance, already includes numerous provisions designed to prevent or minimize the impacts of development on water quality. The City requires implementation of mandatory BMPs based on the Design Standards specified in Attachment 4 of the General Permit.

Industrial Facilities Program

The objective of this program is to reduce the potential discharge of pollutants from industrial facilities that might occur by processes conducted outdoors, chemical storage leaks, accidental spills, and transfer of materials at loading docks. The program will consist of obtaining a list of industrial facilities that have filed a Notice of Intent with the Regional Water Quality Control Board (RWQCB), conducting site visits at regulated facilities, and distributing educational materials. Violators will be immediately reported to the RWQCB. The program will also be coordinated with the current Pretreatment Program regulating the discharge of industrial wastes to the sanitary sewer. For example, when the City conducts an inspection at any of its permitted industrial facilities, the site will be reviewed for compliance with storm water regulations.

Commercial Facilities Program

This program focuses on reducing pollutant discharges to the storm drain system from commercial facilities, such as vehicle service facilities, restaurants, and retail shopping areas. Pollutants from these types of facilities include the following: vehicle fluids, solvents, soapy wash water, oil and grease, and litter. In addition to conducting outreach and education efforts, implementing BMPs, and conducting site visits, elements of this program include identifying targeted facilities and establishing incentive programs where appropriate.

The Commercial Facilities Program is designed to have a positive approach by combining outreach, education, and incentives with the more traditional methods of regulation. This type of approach generally results in a more successful program for commercial businesses for several reasons. For example, outreach and education help business owners and employees become aware of storm water issues and the fact that urban runoff flows untreated to local creeks, rivers, and Monterey Bay. This approach is also helpful because many commercial businesses are not accustomed to being “regulated” and are unfamiliar with or suspicious of regulations. In addition, business owners and employees will become more educated on pollution prevention methods and will better understand why they are being asked to implement Best Management Practices (BMPs). Within certain business sectors, recognition for pollution prevention efforts will also be used as additional motivation for a facility to achieve compliance.

VI. Best Management Practices

The City selected and developed the appropriate Best Management Practices for each of the eight control programs after first identifying the pollutants of concern and the target audiences associated with those pollutants for each of the control programs. Also taken into consideration were the best means to communicate with these audiences, what specific storm water pollution prevention information should be conveyed, and how to conduct enforcement actions when necessary. Lastly, BMPs were also selected and developed based on the most appropriate and effective methods to achieve program goals and compliance with the General Permit requirements. The most appropriate Best Management Practices (BMPs) were selected in order to reduce the pollutants of concern to the maximum extent practicable

Each of the control programs includes a list and description of the selected BMPs, along with the contact information of the person and division or department responsible for implementing them. A detailed BMP summary table, that includes measurable goals and an implementation schedule, is also provided for each of the control programs.

The City has strived to be in compliance with the new storm water regulations and the General Permit requirements prior to the March 10, 2003 Phase II NPDES compliance date. Thus, in advance of the regulations, the City began implementation of many of the selected BMPs and has already accomplished some “one time” BMPs such as establishment and revisions to the Storm Water Ordinance.

The City has developed BMPs for certain types of businesses that the City identified as having the potential to discharge pollutants of concern to the storm drain system. For example, the City has developed and published BMP brochures for vehicle service, food service, retail and commercial facilities, construction work, and development/redevelopment projects. These BMPs are, in general, pollution prevention practices designed to reduce or eliminate pollutant discharges. The BMPs typically emphasize good housekeeping methods, chemical handling procedures, spill prevention, and proper waste storage and disposal, and the information in each of the brochures is tailored to the typical work practices. For example, the BMPs for vehicle service facilities emphasize the proper disposal of vehicle fluids, while BMPs for restaurants emphasize the proper practices for oil and grease disposal and floor mat cleaning. Some of the City’s BMP brochures include both mandatory and recommended practices. The City decided to include recommended BMPs as guidance to help businesses comply or go “the extra mile” towards being environmentally proactive.

The BMP brochures for vehicle service facilities, food service facilities, and construction work were also translated into Spanish. A complete set of the City’s BMP brochures and one page handouts are included in the Attachments.

Three brochures for residents on pollution prevention tips have also been published and distributed. The three brochures for residents are entitled *Home Maintenance, Painting and Repair; Garden, Pool and Spa Maintenance;* and *Vehicle Repair and Washing*. The brochures are included in Attachments 13-15.

Distribution of BMP brochures and proper implementation of BMPs by the various business sectors and the general public is a critical portion of the SWMP.

VII. Summary

In summary, the Storm Water Management Program is a comprehensive program focused on reducing the discharge of pollutants to the storm drain system, which flows to local water bodies and Monterey Bay. As summarized in the preceding sections, polluted urban runoff is a widespread threat to water quality and clean water is critical to the continued vitality of the City of Santa Cruz, the San Lorenzo River, Monterey Bay, and the Monterey Bay National Marine Sanctuary. The City is dedicated to implementing the Storm Water Management Program, in compliance with the General Permit requirements, in order to protect water quality and preserve our environment.