

**FINAL COMPLIANCE PLAN
LA JOLLA AREA OF SPECIAL BIOLOGICAL SIGNIFICANCE**

**Submitted to:
San Diego Regional Water Quality Control Board**



**Submitted by:
City of San Diego**

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ACRONYMS AND ABBREVIATIONS

ASBS	area of special biological significance
ASBS 29	La Jolla ASBS
ASBS 31	San Diego—Scripps ASBS
Bacteria TMDL	<i>Revised Total Maximum Daily Loads for Indicator Bacteria</i> (SDRWQCB, 2010)
Bight '08	<i>Southern California Bight 2008 Regional Monitoring Survey</i> (SCCWRP, 2003)
Bight '13	<i>Southern California Bight 2013 Regional Monitoring Survey</i> (SCCWRP, 2013)
BMP	best management practice
City	City of San Diego
CLRP	comprehensive load reduction plan
CSDM	coastal storm drain monitoring
FY	(City) fiscal year
General Exception	Resolution Number 2012-0012 (SWRCB, 2012b), a general exception to the Ocean Plan
HA	hydrologic area
HOA	homeowners' association
IC	illegal connection
ID	illicit discharge
JURMP	jurisdictional urban runoff management program
La Jolla ASBS Dilution Study	La Jolla ASBS Site-Specific Dilution and Dispersion Model (City, 2013c)
La Jolla Watershed	La Jolla Shores Coastal Watershed
LID	low-impact development
MLS	mass loading station
MS4	municipal separate storm sewer system
new NPDES MS4 Permit	Order Number R9-2013-0001 (SDRWQCB, 2013b)
NPDES	National Pollutant Discharge Elimination System
Ocean Plan	Water Quality Control Plan for Ocean Waters of California (SWRCB, 2012e)
PFEIR	Program Final Environmental Impact Report (SWRCB, 2012a)
PGA	pollutant-generating activities
previous NPDES MS4 Permit	Order Number R9-2007-0001 (SDRWQCB, 2007)

ACRONYMS AND ABBREVIATIONS (Continued)

Project SWELL	Project Stewardship: Water Education for Lifelong Leadership
RWQCB	(California) Regional Water Quality Control Board
SCCWRP	Southern California Coastal Water Research Project
Scripps Watershed	Scripps Hydrologic Area (HA 906.30)
SDRWQCB	California Regional Water Quality Control Board San Diego Region
SIO	Scripps Institution of Oceanography
SMC	Storm Water Monitoring Coalition
SUSMP	standard urban storm water mitigation plan
SWMP	storm water management plan
SWPPP	storm water pollution prevention plan
SWRCB	(California) State Water Resources Control Board
TCBMP	treatment control best management practice
TWAS	temporary watershed assessment station
UC IPM	University of California (Agriculture and Natural Resources Statewide) Integrated Pest Management Program
UCSD	University of California San Diego
USEPA	United States Environmental Protection Agency
WQIP	water quality improvement plan
WQO	water quality objective
WURMP	watershed urban runoff management program

1.0 INTRODUCTION AND BACKGROUND

This compliance plan applies to the La Jolla Area of Special Biological Significance (La Jolla ASBS; also ASBS 29) and how it is impacted by storm water discharges and associated potential contaminants. Specifically, the plan describes the approach of the City of San Diego (City) to comply with the requirements of Resolution Number 2012-0012¹ of the State Water Resources Control Board (SWRCB), *Approving Exceptions to the California Ocean Plan for Selected Discharges into Areas of Special Biological Significance, Including Special Protections for Beneficial Uses, and Certifying a Program Environmental Impact Report (2012b)* (General Exception).

Based on data collected in ASBS 29, the La Jolla ASBS Site-Specific Dilution and Dispersion Model (La Jolla ASBS Dilution Study) (City, 2013c) (discussed in Section 3.2) and analysis provided in the Scripps Watershed Comprehensive Load Reduction Plan (CLRP) (City, 2013d) (discussed in Section 4.0), the City's current implementation of non-structural and structural best management practices (BMPs) complies with the General Exception requirement to protect natural water quality during wet and dry weather conditions. Low-flow diversions currently installed at nine locations are intended to eliminate non-storm water discharges to the ASBS during dry weather. Furthermore, the City's implementation of BMPs is in accordance with the schedule required in the General Exception (discussed in Section 5.1). The City plans to continue to maintain and implement existing BMPs and to continue monitoring in the ASBS per the General Exception to protect and assess maintenance of natural water quality.

The following sections describe the regulatory framework for this La Jolla ASBS Compliance Plan.

1.1 Storm Water Regulation

The Clean Water Act (CWA) was adopted in 1972 and prohibits point sources of discharges, such as storm water, into waters of the United States (U.S.) unless the discharge complies with the National Pollutant Discharge Elimination System (NPDES) program. The U.S. Environmental Protection Agency (USEPA) authorizes the SWRCB to administer the NPDES program under CWA Section 402. Similarly, the SWRCB authorizes the Regional Water Quality Control Boards (RWQCBs) to issue NPDES permits for storm water discharges.

Storm water runoff is commonly transported through municipal separate storm sewer system (MS4s), which typically discharge water (and any potential pollutants) directly into streams, bays, and/or an ocean. The San Diego RWQCB (SDRWQCB) adopted a revised NPDES MS4 Permit (SDRWQCB, 2013b) that regulates MS4 discharges from municipalities such as the City. Therefore, based on Section I.A.2.d of the General Exception, this Compliance Plan is subject to approval from the Executive Officer of the SDRWQCB.

¹ Resolution 2012-0012 was subsequently revised by Resolution 2012-0031 (SWRCB, 2012d). The only change was a correction of the compliance timeframe from four years to six years.

The new NPDES MS4 Permit requires the City to conduct multiple activities, including:

- Identify major outfalls and pollutant loadings;
- Detect and eliminate all non-storm water discharges to the MS4, except as specifically and legally exempted;
- Prevent and reduce pollutants in runoff from industrial, commercial, and residential areas by implementing best management practices (BMPs);
- Control storm water discharges from new development and redevelopment;
- Inspect industrial, commercial, and construction activities;
- Provide pertinent education about and promote public reporting of pollution; and
- Monitor discharges and impacts on receiving waters.

In 1974, the SWRCB designated 34 regions along the coast of California as ASBS under Resolution Number 74-28 (SWRCB, 1974). These ASBS are “areas designated by the SWRCB as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable” (SWRCB, 2012b).

Section 13170.2 of the California Water Code requires the SWRCB to prepare and adopt a *Water Quality Control Plan for Ocean Waters of California* (last revised, 2012e) (Ocean Plan). The Ocean Plan establishes water quality objectives (WQOs) that are the basis of regulating point source and non-point source waste discharges into coastal waters. The Ocean Plan prohibits all discharges to an ASBS and requires discharge points to be located far enough away from an ASBS to maintain natural water quality conditions; however, the SWRCB can issue permits that exempt certain discharges to an ASBS.

In March 2012, the SWRCB adopted the General Exception (SWRCB, 2012b), which exempts certain listed dischargers. The conditions in the General Exception are designed to protect beneficial uses of the receiving water, yet allow continuation of essential public services, such as flood control, slope stabilization, erosion prevention, maintenance of the natural hydrologic relationship between terrestrial and marine ecosystems, public health and safety, public recreation and coastal access, commercial and recreational fishing, navigation, and essential military operations (national security) (SWRCB, 2012b).

The General Exception designates the City as the sole discharger to ASBS 29. The General Exception authorizes the City to discharge into ASBS 29, provided that it:

- Complies with the NPDES MS4 Permit; and
- Includes an ASBS Compliance Plan in the Mission Bay Watershed Management Area (WMA) Water Quality Improvement Plan (WQIP)²; the Mission Bay WMA includes the La Jolla ASBS.

² The new NPDES MS4 Permit (Order Number R9-2013-0001) (SDRWQCB, 2013b) requires the City to develop a WQIP, which is equivalent to a storm water management plan (SWMP) or storm water pollution prevention plan (SWPPP).

1.2 Document Organization

1.2.1 General Compliance

In general, the ASBS Compliance Plan:

- Addresses the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to ASBS 29, according to Section I.A.2 of the General Exception;
- Serves as the ASBS Pollution Prevention Plan required for non-point source discharges, according to Section I.B.2 of the General Exception;
- Describes the City's strategy to comply with the General Exception; and
- Will be updated according to Sections I.A.2.h and I.B.2.c of the General Exception.

1.2.2 Specific Compliance

Specifically, this ASBS Compliance Plan:

- Describes the measures by which non-authorized, non-storm water runoff has been eliminated by the City, and how these measures will be maintained, monitored, and documented;
- Includes minimum frequencies for inspection of MS4s;
- Addresses storm water discharges and, in particular, describes how pollutant reductions in storm water runoff are achieved by implementing BMPs;
- Addresses erosion control and the reduction and/or prevention of anthropogenic sedimentation in the ASBS; and
- Describes the City's non-structural and structural BMPs currently employed and its plan to continue implementation in the future, including a schedule for the City's WQIP.

1.2.3 General Exception Requirements

The requirements for this ASBS Compliance Plan per the General Exception are addressed in sections of this report, as noted below:

Section 1—Introduction: Describes California discharge regulations, ASBS-specific requirements, compliance actions, and the organization of this ASBS Compliance Plan.

Section 2—Discharges to the La Jolla ASBS: Describes the ASBS 29 drainage area, identifies discharges to ASBS 29, and specifically addresses the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS; describes measures by which all non-authorized, non-storm water runoff has been eliminated, states how these measures will be maintained over time, and states how these measures are monitored and documented; and identifies storm water runoff and pollutant sources from the City's parks and recreation facilities and areas of erosion potential. (Addresses Sections I.A.2.a, Section I.A.2.e, I.B.2.b, and II of the General Exception.)

Section 3—Prioritization of Discharges: Identifies municipal and industrial storm water discharges, prioritizes them based on risk to water quality, and incorporates data from storm water runoff and ocean receiving water monitoring. (Addresses Section I.A.2.a of the General Exception.)

Section 4—Implemented BMPs: Describes existing nonstructural BMPs, including an education and outreach program; and describes existing structural BMPs and their role. Describes the planned continuation of currently implemented non-structural and structural BMPs, and the role of BMPs in maintaining natural water quality. (Addresses Sections I.A.2.b, I.A.2.c, I.A.2.d, I.A.2.e, I.A.2.f, I.A.2.g, I.B.2.b, and II of the General Exception.)

Section 5—Compliance and Implementation Schedule: Provides the compliance schedule and the BMP implementation schedule; mandates submitting a report if receiving water monitoring indicates that discharges are altering natural conditions; and describes the procedures for revising the ASBS Compliance Plan to maintain compliance with the General Exception. (Addresses Sections I.A.2.g, I.A.2.h, I.A.3, I.B.2.c, and I.B.3 of the General Exception.)

Section 6—References: Presents the documents referenced in the development of this ASBS Compliance Plan.

2.0 Discharges to the La Jolla Area of Special Biological Significance

2.1 La Jolla Watershed

ASBS 29 is located off the northern coast of the Scripps Hydrologic Area (HA) (HA 906.30; also Scripps Watershed) in the La Jolla Shores Coastal Watershed (La Jolla Watershed). The ASBS 29 drainage area is approximately 1,600 acres and extends from the Pacific Ocean shoreline to an elevation of approximately 243 meters (800 feet) at Mount Soledad. Drainage into the ASBS flows from MS4 storm water outfalls, overland sheet flow (directly from non-MS4 discharges), and natural drainage features (La Jolla Shores Watershed Management Group, 2008). The primary land use is residential with some commercial and institutional (i.e., the University of California San Diego Scripps Institute of Oceanography [UCSD-SIO] campus) areas.

The MS4 storm water outfalls are point sources of storm water runoff into receiving water bodies, regulated by the NPDES MS4 Permit. The location and density of these outfalls generally indicate the significance of storm-water-based sources in the drainage area. The degree of urbanization and the imperviousness of a drainage area dictate the amount of storm water that is conveyed directly to the MS4 and into receiving waters. Contributing land use activities include, but are not limited to, landscaping, car washing, pet waste, and vehicle wear (City, 2012c).

2.2 Dry Weather Flows

Non-storm water discharges are prohibited under the General Exception. The only discharges allowed are those that are essential for emergency response purposes, structural stability, slope stability, or those that occur naturally. Landscape irrigation in the La Jolla Watershed is a high-water-use activity. Over-irrigation often results in dry weather urban runoff that transports pollutants from impervious surfaces (such as roadways and parking lots) and discharges them into the ASBS. The primary pollutants from urban runoff are sediment, bacteria, nutrients, and metals.

The City's BMPs to reduce or eliminate non-storm water discharges include constructing low-flow diversions, education and outreach targeted on reducing irrigation runoff, incentivizing smart gardening and water conservation measures (such as rebates to incentivize grass removal), and promoting rain barrels and downspout disconnections. The City also investigates illegal connections and illicit discharges (IC/ID) in response to flows that exceed the water quality criteria during routine dry weather monitoring.

The City's programs to eliminate non-storm water discharges and reduce or control pollutant sources that drain into the ASBS are discussed further in Section 4.

2.3 Storm Water Discharges (Wet Weather Flows)

Under the General Exception, the only permitted point source discharges of storm water are those authorized by the General Exception or by an NPDES permit issued by the SWRCB or SDRWQCB. Per the General Exception, the only allowed discharges to the ASBS are those from existing storm water outfalls and those discharges must comply with all of the applicable terms, prohibitions, and special conditions in the General Exception.

Because of urbanization, steep slopes and a highly developed storm drain network in the upper reaches of its drainage system, the La Jolla Watershed responds quickly to rainfall events when fast-moving storm water surges downstream. Most of the runoff from the ASBS 29 drainage area is conveyed through a network of storm drains before it is discharged at several locations along the shoreline into the ASBS. Most of the runoff enters the City's NPDES-permitted MS4 through curb inlets in public streets or through catch basins at the lower (western) ends of open space and undeveloped areas. Runoff is then discharged into the ASBS via outfalls along the shoreline. The Avenida de la Playa and El Paseo Grande storm drains are the largest of these outfalls; together, they drain more than 50 percent of the ASBS 29 drainage area to the Pacific Ocean.

Sheet flow is minimal and is limited to the western end of Avenida de la Playa, the bluffs of the Devil's Slide area, and small portions of the boardwalk. Although no streams flow directly into the ASBS, natural drainage features discharge some urban runoff from cliffs or directly onto beaches (La Jolla Shores Watershed Management Group, 2008). Other discharges to the ASBS originate from private homes that discharge directly to the ocean via pipes, outfalls and weep holes embedded in the sea walls.

Figure 2-1 shows the locations of storm water outfalls to the ASBS and the City's MS4 in the La Jolla Watershed.

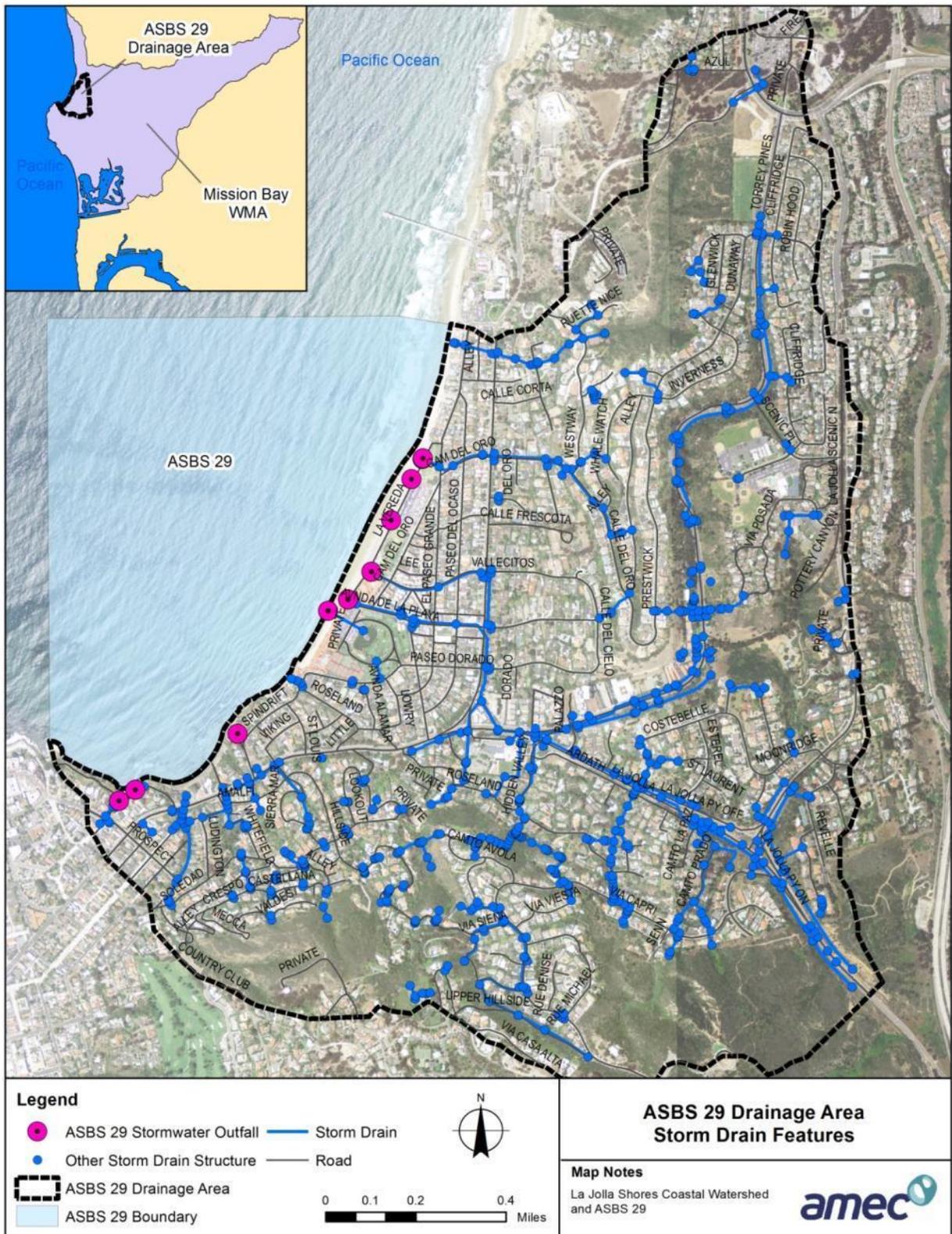


Figure 2-1: La Jolla Shores Coastal Watershed and ASBS 29 with MS4 Outfall Locations

2.4 Parks and Recreation Facilities Discharges

The General Exception requires the City to address storm water runoff from parks and recreation facilities and to identify all pollutant sources (including sediment sources) that may cause waste to enter storm water runoff. Over-watering landscaped areas increases the potential for fertilizer, herbicides and pesticides to be conveyed into the City's MS4. Parking lots in parks and recreation facilities are potential sources of heavy metals, oil and sediment. In addition, pet waste that is not properly disposed of in parks is a major source of pathogenic bacteria and other parasites. As a result, storm water pollutant mitigation measures must address parks and recreation facilities and their associated potential pollutant sources.

To meet the requirements of the General Exception, the City has implemented a number of non-structural and structural BMPs throughout the La Jolla Watershed, including BMPs at City Park and Recreation Department facilities (Section 4). The BMPs are effective at controlling soil erosion, preventing pesticide discharges, limiting trash, and reducing runoff from parking areas (discussed further in Section 4). The City plans to continue maintaining and implementing these BMPs to protect natural water quality.

The City's Park and Recreation Department oversees nearly 40,000 acres of developed and undeveloped open space and more than 340 parks (City, 2013c). Five of these parks are in the ASBS 29 drainage area (Figure 2-2) and are briefly described below.

- **Kellogg Park and La Jolla Shores Beach Park** (at 2112 Vallecitos and 8200 Camino del Oro, respectively, and totaling 13.42 acres) are, given their proximity and overlapping public use, discussed herein as one large park. Kellogg Park is a long, grassy area that parallels La Jolla Shores Beach Park; the two are separated by a palm-tree-lined, concrete boardwalk. Amenities include a children's playground, picnic tables, grills, restrooms, showers, and a free parking lot. La Jolla Shores is adjacent to the San Diego La Jolla Underwater Park Ecological Reserve.
- **Cliffridge Park** (10.90 acres at 8311 Cliffridge Avenue) is located amidst a residential neighborhood, the La Jolla YMCA and Torrey Pines Elementary School. To the west is a natural hillside that descends to Torrey Pines Road. The park features athletic fields, including four baseball diamonds, one tee-ball field, and two lined soccer fields within the baseball outfields. Other amenities are a food concession stand, picnic tables and restrooms.
- **Laureate Mini Park** is a small (0.81-acre) neighborhood park at the intersection of Avenida de la Playa and El Paseo del Ocaso. Mini parks generally are open spaces with 0.5 to 1.5 acres of play area and serve a neighborhood.
- **La Jolla Athletic Area (Allen Field)** (6.41 acres on Torrey Pines Road, south of Expedition Way) is a grass athletic field, primarily dedicated to soccer fields used by the La Jolla Youth Soccer League. This park is leased to La Jolla Youth, Inc., which is responsible for park maintenance. An office building in the park is the soccer league's offices and clubhouse; three portable toilets are located behind the building.

Potential sources of pollutants are identified and discussed in subsequent sections.

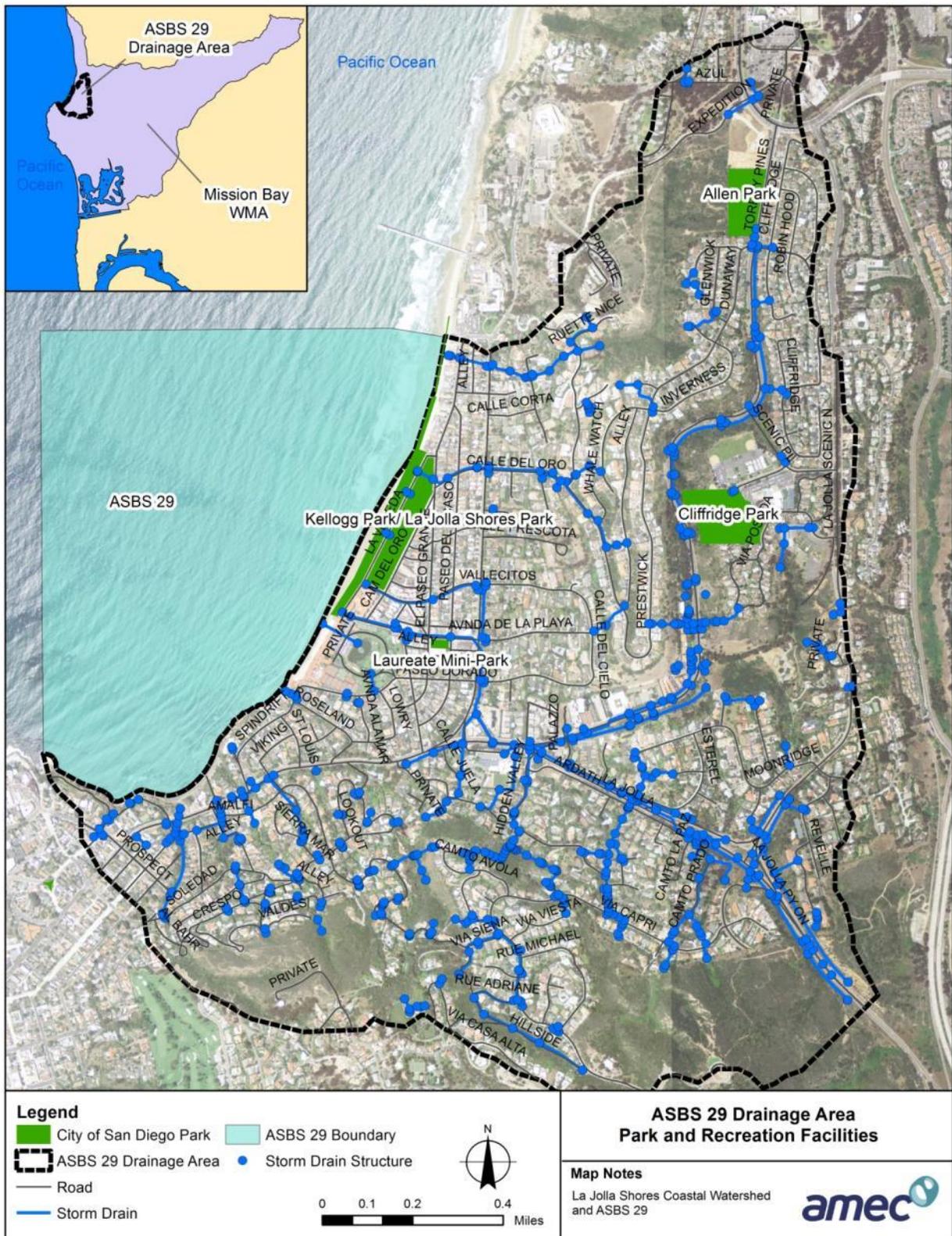


Figure 2-2: Park and Recreation Facilities Within ASBS Drainage Area

2.4.1 La Jolla Shores Small Vessel Boat Launch

La Jolla Shores has the only drive-on beach access to the ocean within City limits. It is located on the 2000 Block of Avenida de la Playa, four blocks west of La Jolla Shores Drive and approximately 300 yards south of the lifeguard station. Access consists of a break (of about 35 feet) in the seawall that permits vehicles to drive onto the beach to unload and load small vessels close to the surf. Discharges of storm water from impervious surfaces on the land side of the sea wall consist of sheet flow to the beach.

This is an unimproved boat launch (sand launch for small vessels and personal watercraft only); vehicles are allowed to drive on the sand only in a very limited area and no faster than 5 miles per hour. There is no ramp structure at this location and trailered boats cannot be launched by backing into water as at traditional boat launch ramps. Given these conditions this area was determined to not be considered as a waterfront and marine operations area as defined in Section III of the General Exception.

2.4.2 Trash Receptacles

The City provides numerous trash receptacles to properly manage trash and reduce the amount of trash that could enter the ASBS.

An overview of the trash receptacles at the parks in the ASBS drainage area is presented below

- Kellogg Park and La Jolla Shores Beach Park have 91 waste receptacles:
 - Eight solar-powered trash compactors (which are emptied as needed);
 - Thirty-six covered trash cans (in the park), 24 around the southern grassy area and 12 in the northern grassy area and picnic areas, all of which are emptied daily;
 - Forty-one uncovered trash cans (placed on the beach sand), which are emptied daily in the summer (Memorial Day through Labor Day) and three times a week during the rest of the year; and
 - Six covered dumpsters (at the northeastern end of the Kellogg Park parking lot).
- Cliffridge Park has 18 waste receptacles:
 - Nine covered trash cans (six around the picnic tables and three dispersed in other high-use areas, all of which are emptied daily);
 - Eight uncovered trash cans (two around the picnic tables and six dispersed in other high-use areas, all of which are emptied daily); and
 - One covered dumpster.
- Laureate Mini Park has two trash cans on the sidewalk adjacent to the park that are maintained by the City.

- Allen Field has 10 waste receptacles, maintained by La Jolla Youth, Inc.:
 - Nine covered trash cans (in its three soccer fields); and
 - One covered dumpster.

2.4.3 Roadways and Parking Lots

Impervious surfaces in urban landscapes increase runoff volume and contribute pollutants. Roadways and parking lots collect pollutants from tailpipe emissions and brake linings that are associated with a number of pollutants, including copper, lead, zinc, and polycyclic aromatic hydrocarbons (City, 2010b).

Parking lots and roadways associated with the parks in the ASBS watershed are:

- Kellogg Park and La Jolla Shores Beach Park—a parking lot that is available to the public from 4:00 a.m. to 10:00 p.m. (City, 2013c);
- Cliffridge Park—a small City-maintained parking area, with additional public parking on the neighboring City streets and no City-maintained roads;
- Laureate Mini Park—no parking lots, with City street parking available; and
- Allen Field—a small one-way parking lot accessible from Torrey Pines Road with parking on the adjacent grass and dirt areas.

At Kellogg Park the City has implemented the Kellogg Park Green Lot Retrofit Project (discussed in Section 4.2) to allow infiltration of urban runoff by replacing conventional asphalt in the parking lot with porous pavement. This pavement addresses potential water quality problems by reducing and treating runoff flows and discharges to the ASBS via infiltration and retention.

2.4.4 Picnic Areas

Picnic areas are often sources of litter. Waste generated from recreational picnic area use (such as carelessly discarded trash, paper wrappers and plastic bottles) has the potential to enter the storm drain system and ASBS.

Picnic facilities are available at City parks, as follows:

- At Kellogg Park and La Jolla Shores Beach Park there are 19 picnic tables and 7 barbecue grills in the north end of the park. The picnic areas are well maintained and have covered trash cans and hot coal receptacles. Other amenities include 37 benches along the boardwalk facing the beach, seven fire pits on the beach, two restroom facilities, four sinks, nine showers, and three water fountains.
- Cliffridge Park has five picnic tables and three benches. There is a food concession area on the north end of the park with four tables, along with covered trash cans. A fifth table is in the grassy area and has a covered trash can at each end of the table (see Figure 2-3).

Laureate Mini Park has no picnic facilities.

- Allen Field has no picnic facilities, but it has five benches and one three-tiered set of bleachers for spectators.



Figure 2-3: Picnic Area at Cliffridge Park

2.4.5 Soil Erosion

Park areas have the potential to deliver sediment into the storm drain system and/or ASBS. Unpaved areas, non-vegetated areas and parking lots are potential sources of non-point sediment.

Potential soil erosion and sediment delivery from park and recreation facilities in the ASBS drainage area are as follows:

- Kellogg Park has a low potential to contribute sediment to the ASBS because it consists of two well-established grassy areas, a concrete boardwalk and walkways, a developed parking lot, and a sand playground. In addition, the City's Kellogg Park Green Lot Retrofit Project allows infiltration of urban runoff and reduces sediment from being discharged to the ASBS from the parking lot.

- Cliffridge Park has a low potential to contribute sediment as most of the park is grass sports fields and its landscaped areas are generally within curbing or are vegetated and mulched.
- Laureate Mini Park has a contiguous grassy area without exposed soil; therefore, the potential for soil erosion is very low.
- Allen Field has a low potential to contribute sediment to the ASBS because most of it is well-established grass fields. However, the adjacent parking lot is a potential sediment source because street dirt accumulates on roads and parking lots and has the potential to run off in response to precipitation.

2.5 Erosion Potential and Control

The General Exception identifies sediment as a targeted pollutant. The most likely source of sediment in the ASBS 29 is erosion of canyon and open space areas within the drainage area. Development around open space areas has increased storm water flow volumes and velocities and has led to higher rates of erosion. Sediment in storm water runoff may result from land-disturbing activities at residences, such as landscaping, construction, and exposed non-vegetated soils. Other potential sources of sediment are urban and residential land uses, transportation uses (such as roads, highways, and parking lots), and coastal bluffs. Of these potential sources, construction activities would likely generate the largest sediment load. Road grit and finer particles not collected through street sweeping also contribute sediment to storm water runoff.

La Jolla is underlain primarily by sedimentary rock and has occasional outcrops of plutonic and metamorphic rocks. Small surficial landslides associated with expansible clay deposits of the Friars and Delmar Formations in the area are abundant. The shoreline along the ASBS is approximately 1.6 miles long. The northern 1.0 mile consists of fine sandy beaches; the southern 0.6 mile is composed of rocky boulders or ledges at the base of the cliffs, with one pebble beach in the Devil's Slide area. This area is bisected by a strand of the active Rose Canyon fault system. The northern three-fourths of the shoreline faces westward; the southernmost one-fourth faces northward (SWRCB, 1979).

The City's Development Services Department has conducted a seismic safety study (City, 2008) that contains a series of maps that identify likely geological hazards throughout the City. Based on these maps, Figure 2-4 shows unstable coastal bluffs, known landslide areas and areas with slide-prone geology in the La Jolla Watershed. BMPs currently implemented and planned to be continued to address the erosion control requirements of the General Exception are discussed in Section 4.

2.5.1 Construction Activities

Runoff from construction sites can transport pollutants including sediment, debris and chemicals to the storm drain system or directly to a river, lake or coastal water. Polluted storm water runoff can harm aquatic wildlife. Sedimentation can destroy aquatic habitat and high volumes of runoff can cause stream bank erosion. Debris can clog waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat (USEPA, 2013).

2.5.2 Coastal Bluffs and Open Space Areas

Natural open spaces, ravines and canyons can generate sediment from erosion. As shown in Figure 2-4, unstable coastal bluffs, which have the potential to deliver sediment to the ASBS, form much of the shoreline. At the bluff tops are private homes, other structures and open space. Portions of undeveloped hillsides and bluffs further up in the La Jolla Watershed are exposed to wind and rain erosion, potentially contributing to sediment transported to the ASBS via roadways and the MS4.

Areas such as Pottery Canyon and La Jolla Heights Open Space have been designated as open space within La Jolla. Areas such as the slopes of Mount Soledad and Pottery Canyon are being preserved to protect the environmentally sensitive resources of La Jolla, including its coastal bluffs, steep hillside slopes, canyons, native plant life, and wildlife habitat linkages.

Because the beach is narrow and lacks a wide sand buffer, the bluffs along the shoreline are subjected to erosion from wave action, particularly during the winter.

Sediment, road grit and finer particles that accumulate on streets and parking lots from erosion, residential landscaping and atmospheric deposition are minimized through street sweeping. The City's Street Sweeping Program is discussed in more detail in Section 4.

Areas of open space designated as parks and recreation facilities under the management of the City, such as Cliffridge Park, are discussed in Section 2.4.

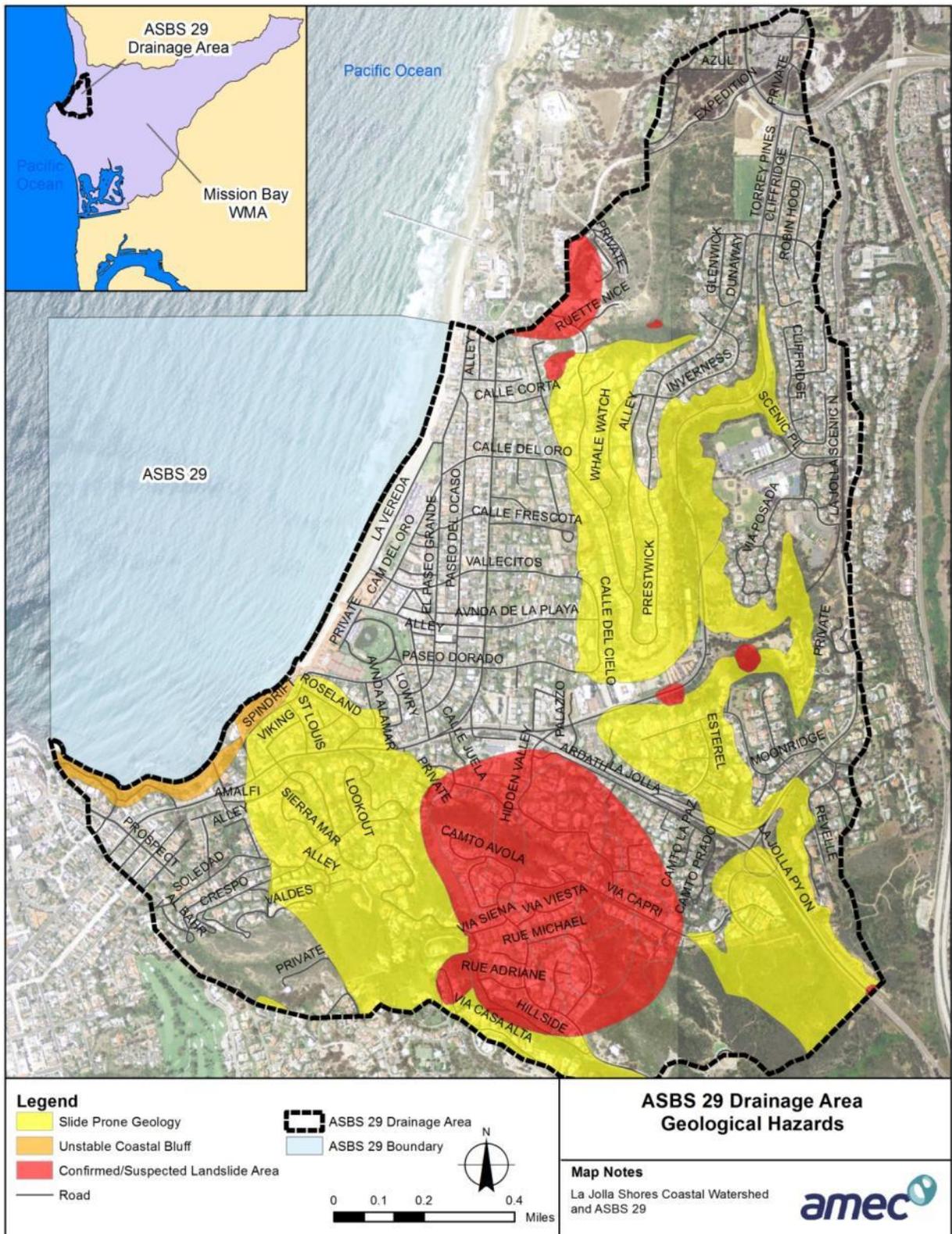


Figure 2-4: ASBS 29 Drainage Area Erosion Potential Map

3.0 Priority Discharges

The General Exception requires the ASBS Compliance Plan to include a map indicating the priority of discharges. High-priority discharges are those that pose the greatest threat to water quality and that have been identified as potentially requiring the installation of structural BMPs.

The City evaluated the discharges within ASBS 29 to determine the high-priority discharges based on the following factors:

- Available monitoring data;
- The La Jolla ASBS Dilution Study;
- Appendix 5 of the SWRCB Program Final Environmental Impact Report (PFEIR) (SWRCB, 2012a);
- Size of outfall or discharge;
- Drainage area size and land use; and
- Practicality and safety of structural BMP placement and monitoring (e.g., bluff access limitations).

Based on these factors, three high-priority discharges have been identified within ASBS 29 (see Table 3-1) and are detailed in the following subsections.

3.1 Historical and Current Monitoring

The City has participated extensively in monitoring storm water runoff and receiving waters in order to:

- Provide a means of evaluating the environmental risks of storm water discharges by identifying types and amounts of pollutants present;
- Determine the relative potential for storm water discharges to affect water quality;
- Identify potential sources of pollutants;
- Eliminate or control identified sources through management actions; and
- Assess the effectiveness of permit conditions and storm water management plans.

Monitoring through these programs, although not always regulation-driven, assesses the effectiveness of measures implemented to protect the water quality and ASBS beneficial uses.

3.1.1 Regulatory Monitoring Programs

Water quality monitoring conducted under several regulatory monitoring programs includes:

- Coastal Storm Drain Monitoring (CSDM) Program,
- Storm Water Monitoring Coalition (SMC) Regional Bioassessment,

- Dry Weather Monitoring Program under the Jurisdictional Urban Runoff Management Program (JURMP),
- Mass Loading Station (MLS) and Temporary Watershed Assessment Stations (TWAS) Ambient and Storm Monitoring Program ,
- AB 411 Beach Sanitation Posting, and
- Revised Total Maximum Daily Loads for Indicator Bacteria, Project 1–Twenty Beaches and Creeks in the San Diego Region (Bacteria TMDL) (SDRWQCB, 2010).

The results of these programs are presented in the *San Diego County Co-permittees Annual Urban Runoff Monitoring Report* and the *2005–2010 San Diego Storm Water Co-permittees Long-Term Effectiveness Assessment Report* (San Diego County Co-permittees, 2011).

No MLS or TWAS sites are in the Scripps Watershed, which limits water quality analysis to a review of the special studies in the La Jolla Watershed area (which are often associated with ASBS compliance and characterization).

3.1.2 La Jolla Shores Coastal Watershed Management Plan

The La Jolla Shores Coastal Watershed Management Plan was developed by the La Jolla Shores Watershed Management Group under Proposition 84 grant funding. Development of this plan included initial water quality monitoring of outfall discharges and receiving water conditions during storm events within the La Jolla Watershed and ASBS 29 (La Jolla Shores Watershed Management Group, 2008).

3.1.3 Core Discharge Monitoring Program

To comply with the Core Discharge Monitoring Program aspect of the General Exception, the City (because it discharges to the ASBS) is required to monitor storm water at its outfalls that are at least 18 inches in diameter and discharge to the ASBS. Five storm drains in the City's jurisdiction that drain to ASBS 29 have been voluntarily monitored by the City for multiple wet weather seasons prior to and in accordance with the monitoring requirements of the General Exception. The City's voluntary and required monitoring in ASBS 29 has created a multi-year data set, particularly with respect to its largest outfall at Avenida de la Playa. Under the new NPDES MS4 Permit, the CSDM and Dry Weather Monitoring programs will be discontinued. However, the City will continue to monitor in accordance with Section IV of the General Exception.

3.1.4 Bight '08 and '13 ASBS Regional Monitoring Programs

The City has participated in two ASBS regional monitoring programs: The 2008 and 2013 Southern California Bight Regional Monitoring Programs (Bight '08 and Bight '13, respectively). These programs comprise a region-wide comprehensive assessment of receiving water conditions by assessing reference locations and locations influenced by urban runoff for water quality during storm events; bioaccumulation of potential pollutants, rocky intertidal habitat surveys, and a variety of focused special studies.

Preliminary draft results for receiving water monitoring under the Bight '13 ASBS Regional Monitoring Program were released by SCCWRP on August 21, 2014 (SCCWRP, 2014). These program results include storm water monitoring results from reference site and receiving water sites, as well as the findings from the rocky intertidal habitat surveys, bioaccumulation sampling and plume studies. Water quality data collected from reference sites were used to determine the 85th percentile benchmark. By definition of the 85th percentile, the reference sites have an exceedance rate of 15 percent; the exceedance rate in the La Jolla ASBS (12 percent) was less than that. Results from the Bight '08 ASBS Regional Monitoring Program also showed an exceedance rate less than 15 percent (5 percent). These analytical results indicate that the condition of water quality in the La Jolla ASBS is consistent with that of reference conditions, which represent natural water quality, and demonstrates consistency across program years. These findings also support those of the La Jolla ASBS Dilution Study, which indicated a high level of dilution in the receiving water. The collective results of water chemistry data, toxicity data, and biological assessments during this study showed consistency with natural water quality conditions in reference sites. This suggests that the City's current management measures (i.e., BMPs) are achieving the targeted receiving water quality conditions.

Although a few constituents showed inconsistent and minor exceedances of the 85th percentile, these exceedances did not persist across monitored storms. Toxicity was not observed in the receiving water mixing zone, except for a sub-lethal response observed for kelp growth in a single sample.

The biological surveys that were part of the Bight '13 program indicate that reference and receiving water quality conditions were similar. The rocky intertidal habitat survey concluded that there was no discernible difference in species richness and community composition for mobile and sessile species among selected discharge and reference ASBS in southern California, including the Devil's Slide area in the southern portion of the La Jolla ASBS. Bioaccumulation monitoring results as a part of the Bight 13 Program also found median concentrations of a suite of trace metals and organic compounds to be similar among selected discharge and reference ASBS in southern California, including Scripps Reef (the site representing the La Jolla ASBS for this particular assessment).

The goal of the General Exception (and of the ASBS program as a whole) is to protect natural water quality to support the sensitive and valued native biological communities in these special areas. The results from the overall Bight '13 program and, in particular, the biological components of the latest rocky intertidal habitat survey show that natural water quality conditions are being maintained in the La Jolla ASBS. The few exceedances in the analytical samples are anticipated to be managed by the City's existing BMPs in the watershed, which it plans to continue. Despite any observed minor and transient exceedances of individual constituents in the receiving water during storm events, multiple supporting lines of evidence indicate that the overall health of the biota in the La Jolla ASBS is in good condition and that its natural water quality is being maintained. These conclusions are based on information collected not only during the Bight 13 Program but also through the past several years of compliance monitoring and a variety of other recent ecosystem assessment special studies in the La Jolla ASBS. A more thorough summary of these efforts and the resulting supporting conclusions is currently in preparation and will be available soon for review under a separate report to be submitted to the City.

3.2 La Jolla ASBS Dilution Study

In 2012, the City conducted the La Jolla ASBS Dilution Study to provide a quantitative, site-specific dilution and dispersion model to help determine appropriate dilution factors per guidance provided in the Ocean Plan (2012a) (City, 2013c). The effluents from three permitted outfalls (SDL-186, SDL-062, and SDL-157) within ASBS 29 were studied using the SEDXPORT hydrodynamic modeling system. The model is designed to numerically simulate dry weather and wet weather scenarios. The dilution study incorporated historical site-specific outfall data on water mass boundary properties (bathymetry, salinity, temperature, ocean levels and tides) and ocean forcing functions (waves, currents and winds). This modeling approach has been conducted for UCSD SIO's discharges, reviewed by the Natural Water Quality Committee (SCCWRP, 2010), and accepted by the SDRWQCB in 2008 when it was incorporated into a revision of UCSD SIO's NPDES Permit (SIO, 2008).

Results of the La Jolla ASBS Dilution Study (City, 2013c) indicated that storm water discharges from monitored outfalls into ASBS 29 generated dilution factors ranging from 10^2 in the near shore to 10^7 in the seaward boundary during wet weather. Further resolution of the model at the zone of initial dilution produced a worst-case dilution factor of 15 to 1 for 90 percent of the possible outcomes for the greatest-discharge outfall, SDL-062. The extreme worst case (0.13 percent probability in conditions of high discharge and a calm sea state) generated a 12.6:1 dilution factor for this outfall.

The dilution factor of 12.6:1 has been accepted by the SDRWQCB for the City to incorporate into its Mission Bay WMA WQIP. This factor has been included in pollutant-reduction analyses of outfall discharges to ASBS 29 and the results indicate that currently implemented non-structural BMPs provide the pollutant reductions necessary to protect natural water quality.

3.3 SWRCB Program Final Environmental Impact Report

SWRCB staff issued a PFEIR (SWRCB, 2012a) that evaluated the potential environmental effects of the adoption and implementation of the proposed statewide General Exception to the Ocean Plan waste discharge prohibition. Appendix 5 of the PFEIR includes the results of an assessment of discharges to ASBS conducted by the Southern California Coastal Water Research Project (SCCWRP, 2003) between March 2001 and February 2003. Discharges were documented within 100 meters (328 feet) of the high tide lines. The PFEIR Appendix 5 also includes the water quality threat levels designated for the surveyed discharges.

3.4 Evaluation of Discharges

Three outfalls are designated as high threats to water quality and are potentially subject to additional management measures: SDL062, SDL063 and SDL157 (see Figure 3-1).

Table 3-1: High-Priority Discharges in ASBS 29

Outfall	Latitude	Longitude	Upstream Source	Shape	Diameter/ Width (meters)	Discharges Onto
SDL062	32.8546	-117.2589	Urban watershed	Rectangular	5.00	Beach
SDL063	32.8556	-117.2582	Urban watershed	Rectangular	1.00	Beach
SDL157	32.8628	-117.25485	Urban watershed	Round	1.00	Beach

4.0 Implemented Best Management Measures and Practices

To meet the requirements of the General Exception, the City conducted receiving water and outfall discharge monitoring as a participant in the Bight '08 and Bight '13 Regional Monitoring Programs and implemented a number of non-structural and structural BMPs throughout the La Jolla Watershed. The City plans to continue implementation of these BMPs, which control soil erosion, prevent pesticide discharges, enhance public education and outreach, limit trash, and reduce storm water runoff from parking areas.

The combined use of non-structural and structural BMPs makes pollutant reduction more practical and effective. Non-structural BMPs are designed to reduce pollutant loads before they enter the storm drain system. Source reduction strategies, such as addressing the discharge of trash and the disposal of animal waste, often reduce multiple pollutants including nutrients, sediment and bacteria. Structural BMPs, including storm water infiltration systems and low-flow diversions, are designed to reduce pollutant loading by treatment and by reducing runoff volume via capture, retention and infiltration.

City services include activities to maintain and improve City infrastructure and to reduce the amount of pollution that enters the storm drain system. The City has several special projects and pilot studies to assess the most efficient way to prevent pollution at local beaches, bays and creeks. These projects include both non-structural and structural BMPs, such as outreach programs designed to educate and change existing behaviors and attitudes of residents and business operators. Design and construction of low-impact development (LID) and capital improvement projects, such as detention basins and porous (pervious) pavement, provide long-term benefits to the storm drain system. The City also offers inspection services for businesses to determine how best to reduce their impact on the storm drain system.

Table 4-1 summarizes the City's BMPs that are currently implemented in the ASBS 29 drainage area and the benefits of each type of BMP.

4.1 Implemented Non-Structural BMPs

Consistent with the Scripps Watershed CLRP, non-structural BMP reduction strategies are actions and activities to reduce storm water pollution that do not involve construction of a physical component or structure to filter and treat storm water (City, 2012c). Non-structural BMPs also include landscape-based measures, but whose functions are not exclusively limited to storm water filtration or treatment.

This section describes currently implemented non-structural BMPs and/or management activities in the La Jolla Watershed³. Some of these non-structural BMPs have been implemented citywide and are not exclusive to the ASBS 29 drainage area.

The new NPDES MS4 Permit (Order Number R9-2013-0001) (SDRWQCB, 2013) requires the development of WQIPs. The WQIPs are intended to guide responsible parties towards improving water quality in receiving waters by controlling pollutants from MS4 discharges. Future water quality improvement goals, strategies and monitoring and assessment programs will be included in the WQIP for the Mission Bay WMA, which includes ASBS 29.

Table 4-1: Summary of City-Implemented BMPs in ASBS 29 and Potential Benefits

Best Management Practice	Pollutant Reduction & Prevention	Runoff Reduction & Elimination	Runoff Treatment	Erosion Control
Non-Structural BMPs				
Inspections	✓	✓	—	✓
Trash Management	✓	—	—	—
Animal Waste Management	✓	—	—	—
MS4 Cleaning	✓	—	—	—
Street Sweeping	✓	—	—	—
Channel and Slope Stabilization	✓	—	—	✓
Sanitary Sewer Management	✓	✓	—	—
Smart Gardening and Water Conservation	✓	✓	—	✓
Education and Outreach	✓	✓	—	✓
Pesticides and Other Chemical Management	✓	—	—	—
Land Development Code Amendments	✓	✓	✓	✓
Updated Minimum BMPs	✓	✓	✓	✓
Structural BMPs				
Low-Flow Diversions	✓	✓	✓	—
Low-Impact Development (LID)	✓	✓	✓	✓

BMP = best management practice; MS4 = municipal separate storm sewer system

4.1.1 Facility and Construction Site Inspections

Storm water inspections occur under multiple types of permits, including the General Exception, NPDES permits, a statewide Construction General Permit, Phase I and Phase II MS4 Permits, and a statewide Industrial Activities Storm Water Permit.

Inspections of operations or activities within the ASBS 29 drainage area are an effective way to quickly assess potential impacts on water quality and to correct deficiencies and/or change

³ The City described and summarized water quality improvement activities annually in its Watershed Urban Runoff Management Program (WURMP) reports required under the previous NPDES MS4 Permit (Order Number R9-2007-0001) (SDRWQCB, 2007). Details specific to the La Jolla Watershed are in the Mission Bay and La Jolla WURMP (City, 2012a). Water quality improvement activities were also identified in the CLRP for the Scripps HA, which was developed in response to the Bacteria TMDL and submitted to the RWQCB in 2012.

behaviors. These evaluations increase efficiencies in addressing discharges, correcting behaviors and abating sources of targeted pollutants at a variety of residential, commercial, and industrial areas.

In accordance with the General Exception, the City inspects facilities and/or sites in the ASBS 29 drainage area at the following frequencies:

- Municipal facilities: Once prior to and once during the rainy season;
- Construction sites: Weekly during the rainy season;
- Industrial facilities: Monthly during the rainy season;
- Commercial Facilities: Twice during the rainy season; and
- Outfalls greater than or equal to 18 inches in diameter: Once prior to the beginning of rainy season (October 1) and once during the rainy season; outfalls are routinely maintained to remove trash and other anthropogenic debris.

The City has multiple inspection programs that are described in the following subsections.

4.1.1.1 Treatment Control BMP Inspection and Maintenance Verification Program

Treatment control BMPs (TCBMPs) are permanent storm water treatment features that are incorporated into the design of newly developed or redeveloped properties to meet the requirements of the City's Model Standard Urban Storm Water Mitigation Plan (SUSMP) (San Diego Co-permittees, 2002). The City is required by the JURMP to annually verify via inspection that TCBMPs on properties within its jurisdiction are being effectively operated and maintained. Owners and operators of these properties are required to conduct regular maintenance activities per agreements signed with the City and filed with the County of San Diego.

The City's TCBMP program (City, 2013e) has three main components:

- Inventory maintenance
- An annual maintenance verification form
- Periodic TCBMP maintenance site inspections

There are currently 10 private TCBMP projects in the ASBS 29 drainage area that the City inspects to verify proper maintenance; these are described in Section 4.2 (Implemented Structural BMPs).

4.1.1.2 Industrial and Commercial Facilities Inspection Program

The NPDES MS4 Permit (SDRWQCB, 2013) requires the City to inventory and inspect industrial and commercial businesses to prevent illegal discharges to the storm drain system. The City implemented an inspection program to evaluate these sites and sources, inspect businesses, and answer the following management questions:

- What areas and activities should be targeted?

- Does the City's industrial and commercial inventory need to be re-evaluated?
- Can specific pollutant source types within the inventory be feasibly prioritized, based on site-specific characteristics?

The City continuously re-evaluates the inventory to include all businesses required to be on the inventory. Businesses are inspected to verify that the City's minimum BMPs are being implemented and are effective at preventing non-storm water discharges. Inspections assess the staff's knowledge of storm water and BMPs, and evaluate pollutant-generating activities of the businesses. A "pollutant potential" is calculated to help gauge the likelihood of an illegal discharge from every business. Enforcement actions are taken against businesses that have not implemented effective BMPs.

During fiscal year 2014 (FY14), 24 commercial facilities within the ASBS 29 drainage area were inspected (SWRCB, 2012c). (No industrial facilities were in the ASBS 29 drainage area.) Based on assigned codes, five new commercial and two new industrial businesses were added to the ASBS 29 drainage area business inventory during the FY15 update to be confirmed and inspected.

4.1.1.3 Construction Inspections

The City issues construction permits with inherent inspection requirements for private construction in the ASBS 29 drainage area. The City Engineer oversees construction inspection for public capital improvement projects. Repair and replacement of existing public infrastructures is occasionally performed as an operational activity rather than a capital improvement project, and in those cases the operational department performing the work has standard procedures addressing inspection. All construction sites inspected by the City are inspected for construction BMP compliance in accordance with the JURMP, which identifies the frequency and scope of inspections. Additionally, if the construction site exceeds thresholds that make it subject to the Construction General Permit, the City verifies that projects are enrolled.

Per the Construction General Permit, dischargers are required to conduct weekly BMP visual inspection and quarterly non-storm water visual inspections at each drainage area for the presence of unauthorized and authorized non-storm water discharges and their sources. Storm-related inspections for qualifying storm events ($\frac{1}{2}$ inch or more of rainfall) must include visual inspections of BMPs and observations of storm water discharges at all discharge locations prior to the storm, during the storm (every 24 hours), and after the storm. Inspection and potential sampling requirements could increase, based on site risk level, as determined by the site SWPPP.

4.1.1.4 Municipal Facility Inspection Program

The City requires two self-inspections of municipal facilities in the ASBS 29 drainage area each year (once prior to and once during the rainy season). The purpose of these inspections is to determine whether proper BMPs and good housekeeping measures are being implemented to eliminate non-storm water discharges and reduce pollutants in storm water runoff. If deficiencies or ineffective procedures are identified, City staff develops and implements plans for corrective action(s) to address the deficiency. If City staff determine that no corrective action(s) can be

implemented immediately (such as construction of a structural control), the City establishes a schedule for implementing the corrective action(s).

4.1.1.5 Inspections Based on Property and Pollutant-Generating Activities (PGA)

The City has evaluated and recommended changes to its inspection program to focus on land uses, pollutant-generating activities (PGAs) and high-priority areas that are most likely to be contributing to pollutant loading, and areas where the greatest pollutant load reductions are likely to be achieved by inspection and enforcement.

For example, the City has transitioned to property-based inspections, as opposed to tenant-based, as part of its business (industrial and commercial) inspection program in the ASBS 29 drainage area. Property-based inspections are an important inspection strategy because dumpsters, landscaping and parking areas are typically managed by a general property management company or contractor rather than by a specific business. Under the previous inspection program, these common areas were often not covered during an inspection. Adding property-based inspections provides significant opportunities to increase the effectiveness and reach of the City's ongoing conservation strategies related to outreach and education, enforcement and inspection.

The City has incorporated the new property-based inspection protocols into its industrial and commercial inspection program and is currently conducting property-based inspections citywide, including in the ASBS 29 drainage area.

4.1.2 Trash Management

The General Exception prohibits discharging trash to ASBS 29. To comply with this prohibition, the City has multiple measures to address trash discharges. The City promotes recycling of solid waste to reduce the amount entering landfills, which helps the City comply with the California Integrated Waste Management Act of 1989 (Assembly Bill 939), and helps meet the recycling goals established by the City and mandated by the State of California. Routine trash collection services within the ASBS 29 drainage area minimize trash and debris discharges to ASBS 29.

The City maintains the following trash management measures:

- Residential Collection of Refuse—Weekly trash service, including collection, transportation and disposal of residential refuse;
- Recycling—Curbside collection of recyclable materials every-other-week, required as part of the City's Recycling Ordinance (City, 2007);
- Green Material and Yard Waste—Curbside collection of green material and yard waste every other week, which is used to generate compost, wood chips and mulch that are made available to residents;
- Composting—Access by residents to composting resources and education with a voucher program that discounts compost bins for residents;

- Household Hazardous Wastes—Recycling of residential household hazardous wastes at the City’s household hazardous waste transfer facility;
- Environmentally Preferable Purchasing—Use by City departments of products with a lesser effect on human health and the environment, as much as practical;
- The City’s Storm Water Division “Think Blue” Hotline, on which residents may report illegal dumping; and
- Trash clean-up sponsorships, including through community-based organizations (which are detailed in the WURMP activity sheets).

At park and recreation facilities, the City provides numerous trash receptacles to properly manage trash and reduce the amount of trash that could enter ASBS 29. In addition to regularly scheduled trash service (as described in Section 2.4.2), during major holidays or planned events, the City places temporary trash and recycle receptacles on beaches to facilitate proper disposal of the increased volume of trash (San Diego Clean Beach Coalition, 2012).

Additionally, maintained picnic areas reduce the “spillover” caused by visitors taking food, trash and party decorations into more sensitive beach areas. Picnic areas provide designated areas for cooking and are near receptacles for trash and hot coals. Signs encouraging users to keep the picnic areas clean are posted.

4.1.3 Animal Waste Management

Dogs are allowed at City beaches and bay locations within the ASBS 29 drainage area while on a leash. There are two off-leash dog beaches within the City that are not located in the ASBS 29 drainage area. Some general guidelines for dog owners are (City, 2013c):

- Leashed dogs are allowed on beaches from 6:00 p.m. to 9:00 a.m. from April 1 to October 31, and from at 4:00 p.m. to 9:00 a.m. from November 1 to March 31.
- Pet owners must be prepared to pick up pet waste in all areas, whether the pet is leashed or unleashed. It is unlawful to allow a dog (or other pet) to defecate on public property without immediately removing the waste and disposing of it properly.

The City also dispenses pet waste bags in some areas frequented by pet owners. During the City’s two-year Pet Waste Bag Dispenser pilot study, the number of pet waste bags dispensed was recorded and the effectiveness of the overall program at reducing pollutants was assessed (City, 2012a). Animal waste management is also a large part of the City’s “Think Blue” campaign, which is discussed in greater detail in Section 4.1.8.

4.1.4 MS4 Cleaning

The City Storm Water Division inspects, maintains and repairs the City’s MS4 including the unblocking of drains, the removal of debris from storm drain structures and channels, the cleaning and repairing of damaged drainpipes, and the sweeping of City streets throughout the City including within the ASBS 29 drainage area (City, 2013e).

The San Diego region's weather pattern is typified by a long dry season from roughly May through October. During this time, materials are expected to accumulate in catch basins without discharging. This dry season is typically followed by a wet weather season, with sporadic but occasionally significant rain events that can transport these materials to the receiving waters.

Catch basin cleaning programs provide direct, additional reduction of pollutants. The City conducted a Catch Basin Cleaning pilot study that characterized the physical dimensions, conditions and functions of catch basins in the City's drainage network (City, 2013d). The City assessed the effectiveness of both manual and Vactor™ (vacuum eductor trucks) cleaning methods in different land use settings, and characterized the sediments removed, accumulation rates and pollutants. Catch basins in four pilot area networks were cleaned four times between December 2011 and March 2012 and one time in September 2012. The study also included the development and implementation of record-keeping protocols for the City and its contracted crews, and thus enabled the City to identify catch basins that consistently accumulate the greatest amount of debris. Using these data, the City identified areas where more frequent catch basin cleanings would reduce clogging and other maintenance issues. This study provided considerations to optimize the City's catch basin cleaning methods to remove the most debris and pollutants for the level of effort (i.e., cost) expended. These optimization techniques may be applied to catch basins in the ASBS 29 if funding becomes available.

4.1.5 Street Sweeping

The City's Street Sweeping Program uses mechanical and enhanced pavement cleaning practices to minimize transport of pollutants, primarily those associated with sediment (e.g., metals) within the ASBS 29 drainage area. Street sweeping also helps prevent pipes and outlet structures in storm water detention facilities from becoming clogged with debris and trash. The City sweeps streets and parks and recreation facilities regularly for general road maintenance.

Results from effectiveness monitoring and operational assessments of the City's sweeping program are documented in several City street sweeping pilot studies: *Targeted Aggressive Street Sweeping Pilot Study Effectiveness Assessment* (City, 2010a), *City of San Diego Street Sweeper Literature Review Final Technical Memorandum* (URS, 2010a), *City of San Diego Targeted Aggressive Street Sweeping Pilot Program Phase III Median Sweeping Study* (URS, 2010b), and *City of San Diego Targeted Aggressive Street Sweeping Pilot Program Phase IV Speed Efficiency Study* (URS, 2011).

Based on City street sweeping pilot studies, improved street and median sweeping technology has been shown to reduce wet weather pollutant loads for bacteria, metals, non-metal toxics, and nutrients (City, 2012c). Increasing the sweeping frequency, increasing the area of impervious cover swept, and upgrading sweeping equipment were found to potentially remove more pollutants.

The City has replaced some of its mechanical broom street sweepers with high-efficiency, regenerative air- and vacuum-assisted sweepers that are expected to improve pollutant load removal. The City has converted some of its routes in the ASBS 29 drainage area from mechanical to vacuum sweeping and begun sweeping selected median areas within the ASBS drainage area.

4.1.6 Sanitary Sewer Management

In 2001, the City initiated a sewer spill reduction program within the ASBS 29 drainage area, which included cleaning all 3,000 miles of the municipal sewerage system by 2004; developing a system-wide cleaning schedule; televising and assessing the condition of more than 1,200 miles of the oldest and most problematic sewer lines in the system; and increasing the number of miles of sewer lines that are replaced or rehabilitated from 15 to 45 miles per year. Between 2000 and 2007, the program reduced the number of spills by 79 percent (City, 2013g). The program's success has also reduced beach closures from sewer spills (City, 2013g) and associated bacteria entering ASBS 29. The City has a sewer overflow tracking and response plan to ensure that all sanitary sewer overflows are identified, responded to, investigated, and reported promptly and effectively.

The City has developed two residential and commercial programs targeted at reducing the introduction of materials that may impede or damage the sewer system:

- Residential Grease Disposal Program—The City provides residents with a cooking oil and grease recycling program at the Miramar Landfill Recycling Center and with educational materials on how to keep grease out of the drain; and
- Food Establishment Wastewater Discharge Program—This program controls the discharge of grease from food establishments into the wastewater collection system and requires a permit to do so; the permitting process requires that the facilities install the appropriate grease-removal equipment to trap cooking grease before it enters the wastewater system.

4.1.7 Smart Gardening and Water Conservation

To reduce runoff entering the MS4, the City provides various resources to promote smart gardening and to educate and inspire residents through exhibits and programs featuring water conservation and the sustainable use of related natural resources. The resources are available to residents and businesses in the ASBS 29 drainage area.

Specifically, these smart gardening and water conservation methods include:

- Vegetated Swales—Biofiltration BMPs reduce runoff velocities, which allows sediment and other pollutants to settle out (SDRWQCB, 2013a); biofiltration also absorbs nutrients and reduces peak runoff velocities;
- Bioretention Systems (Rain Gardens)—These landscaping features are adapted to treat storm water runoff on-site, and are typically applied to small sites; they function as soil- and plant-based filters that remove pollutants through a variety of physical, biological, and chemical treatment processes;
- Revegetation—Ornamental vegetation is replaced with native, drought-resistant vegetation, providing soil cover to reduce erosion, water use, and runoff; and

- Water Conservation—Expanded conservation programs aim to conserve water and prevent pollution by reducing the runoff entering the storm drain system; these include residential rainwater harvesting rebates, greywater information, resources for California-friendly landscape plants, residential water survey, and water conservation rebates and incentives, such as turf conversion and rebates for smart-irrigation controllers.

4.1.8 Education and Outreach

The City has multiple approaches to educating its residents, visitors and industry on ways to prevent pollution and protect local waterways within the ASBS 29 drainage area. Following are some elements and examples of how these programs are implemented.

Think Blue—The "Think Blue" outreach program works to educate residents, business owners, and industry leaders about the effects of storm water pollution and steps everyone can take to protect the environment. Think Blue works with community-based organizations and other government agencies to promote storm water pollution prevention. Information on general practices and impacts on water quality are available through guidebooks on the following topics:

- Wash water and irrigation runoff
- Construction activities
- Trash storage and disposal
- Vehicle maintenance
- Pet waste disposal
- Integrated pest management
- Landscaping (green waste, pesticide use, and erosion prevention)

Project SWELL (Stewardship: Water Education for Lifelong Leadership)—This program is a school-based science curriculum that teaches children (through classroom presentations) about the importance of the region's waterways and how to understand and improve their condition (City, 2013f). It is administered through a partnership of the City, the San Diego Unified School District, and San Diego Coastkeeper (Coastkeeper).

Partnership with Coastkeeper—The City, in a partnership with Coastkeeper and SIO, developed full-color trifold brochures about the La Jolla ASBS with general information on ASBS issues, marine protected areas information, and pollution prevention practices for local businesses and residents. Approximately 2,000 brochures were distributed in 2006 to the community, and the brochure continues to be available to the public. (La Jolla Shores Watershed Management Group, 2008). At the City's Kellogg Park, Coastkeeper worked with The Friends of Kellogg Park to develop ASBS content for a permanent lithocrete (crushed glass in concrete) map installed in the concrete boardwalk. The map is an educational tool for the visitors of La Jolla Shores; provides information on the area's ecological, cultural, and conservation aspects; and easily and accessibly raises ASBS awareness.

Publicly Available Data—Historical and current data are available to the public through the Southern California Coastal Ocean Observing System, which maintains a website with user-friendly interfaces and products (such as Google maps) to display coastal data interactively.

Enhance Education and Outreach—Based on results of an effectiveness survey and changing regulatory requirements, the City distributed information about minimum BMPs (including LID descriptions) through the public information processes of the City’s Development Services Department, including BMP and LID descriptions. This information is available to anyone seeking development permits or information about development opportunities in the City. The Storm Water Division actively distributes fact sheets about BMP requirements as part of its code compliance and inspection functions, and makes this information available on the Division’s Website and, as communication needs are refined, via other outlets.

4.1.8.1 Posted Requirements, Public Signage and Notifications

Signs or other appropriate measures are placed throughout the parks, beaches and visitor centers that inform and educate the public of any applicable requirements of the General Exception and identify the ASBS boundaries.

City of San Diego regulation signs that prohibit alcohol use, glass containers, smoking, littering, disturbing noises, and overnight sleeping, camping, or parking are placed at beaches, cliffs, walkways, park areas, and adjacent parking lots within the ASBS 29 drainage area. These regulation signs also explain restrictions on beach fires and pets.

At Kellogg Park, 22 regulations are posted at the corners of the park that have access to the grassy areas, at picnic areas, at all but one beach entrance (behind Lifeguard Tower 32), and at the small vessel boat launch at the end of Avenida de La Playa. Additionally, “No Littering” and “Clean up After Your Pet” signs are posted at Cliffridge Park. At Allen Field, all organized activities must be coordinated through La Jolla Youth, Inc., which conveys to users, along with signage at the park, the prohibition of litter. Dogs are also prohibited at Allen Field.

4.1.8.2 Posted ASBS Boundaries

A large lithocrete map depicting the coastal waters of the ASBS is featured at Kellogg Park/La Jolla Shores Beach Park, between the playground and the bathrooms, at the southern end. It depicts the intertidal, nearshore, and offshore species of the ASBS, as well as ASBS boundaries, coastal geologic features, and geographic coordinates of the area, all designed for pedestrian access.

Species found in the ASBS are represented on the lithocrete map by their physical features, as shown in Figure 4-1, and are numbered to correspond with photographs on a board near the water fountains at the restroom facilities. This numbering system is also used in the children’s play structure to promote further ASBS education.



Figure 4-1: Portion of the Lithocrete Map at La Jolla Shores Beach

Preservation of the marine environment is encouraged through placards within and around the lithocrete map that inform visitors of the locations of the preserves and of the regulation that “nothing may be disturbed or taken without a permit; plant and invertebrate, water quality, archeological and cultural resources protected by law.”

The southern end of Kellogg Park has a children's playground with swings and a play structure on the sand. The structure incorporates aspects of environmental education and stewardship of the ASBS, and also teaches ocean safety through interactive informational displays of the ASBS and local marine life.

At the La Jolla Shores small vessel boat launch (see Section 2), signs provide notice of the La Jolla Underwater Park and Ecological Preserve and the La Jolla State Marine Conservation Area, and specify the state restrictions for the area. The lifeguard station at La Jolla Shores Beach has a large sign on its eastern wall that describes in detail the La Jolla Underwater Park and a map of that shows the ASBS boundaries (Figure 4-2).



Figure 4-2: Sign Posted at La Jolla Shores Beach Lifeguard Station

4.1.9 Management of Pesticides and Other Chemicals

The City's integrated pest management program provides resources and educational information on pest control and proper lawn care to reduce the use of pesticides throughout the City. The City encourages using native plants in landscaping to reduce pesticide, fertilizer and water usage within the ASBS 29 drainage area. The City promotes the following tips to maintain a healthy yard with minimal fertilizers, herbicides, insecticides, or other chemicals:

- When fertilizing, use no more than 3–6 pounds of nitrogen per 1,000 square feet per year;
- Routinely inspect and repair sprinkler heads;
- Aerate lawns annually and remove thatch if it exceeds ½ inch;
- Plant grass species that do well in the area;
- Irrigate deeply and infrequently; and
- Cut only one-third to one-half of grass height at each mowing and keep lawnmower blades sharp.

The City collaborates with the University of California's Agriculture and Natural Resources Statewide Integrated Pest Management Program (UC IPM). This program provides extensive online resources about home and landscape pests, weeds and pesticides. The program also provides online training, events and workshops on pesticide safety. UC IPM offers interactive tools (such as weather models) to help plan and to base pest management decisions on site conditions.

The City also works with the County of San Diego to promote the safe use of pesticides at their parks and recreation facilities and to promote the use of effective biocontrol measures. If pesticides must be used, the City offers these tips to reduce their effects on local waterways (City, 2013a):

- Choose an insecticide based on the targeted pest, preferably the least toxic option;
- Don't apply pesticides indoors to areas that will be washed with water or where food is prepared or stored;
- Determine the right amount of pesticide to purchase and use;
- Don't over-water after applying outdoor pesticides;
- Never let pesticide runoff flow into storm drains;
- Don't apply indoor pesticide into or near floor drains or sinks;
- Use spot treatments whenever possible;
- Don't apply pesticides outdoors when rain is forecast or when it is windy; and
- Don't apply pesticides on paved areas.

4.1.10 Enhanced Implementation of Low-Impact Development Through Land Development Code Amendments

SUSMP and Land Development Code ordinances outline low-impact development (LID) requirements that minimize impervious surfaces and promote infiltration and evaporation of runoff using natural filters, which mimic the natural hydrologic functions. Retained water can also be used for reuse. In some cases, existing City Land Development Codes and policies create barriers to LID. Updating City development codes, in this instance, has been a multiple-year process that began with a pilot study that assessed opportunities to implement LID measures.

The City's Storm Water Division undertook a review of the City's Municipal Code, ordinances and policies to identify opportunities to facilitate using LID storm water management measures. The review identified and prioritized opportunities for storm water LID site planning and design implementation within the ASBS 29 drainage area, and recommended amendments to the City's current policies and codes. Amending these policies and the Land Development Code will enhance LID implementation for both new development and redevelopment by amending zoning, which is expected to better control pollutant sources. The next step is to proceed with the City's discretionary review process to codify the accepted recommended changes.

In FY 14–15, the City gathered input from the following City and stakeholder groups:

- Code Monitoring Team.
- Technical Advisory Committee.
- Community Planners Committee.
- Planning Commission. and
- City Council (final City approval).

Once the City process has been completed, the California Coastal Commission will review the proposed code changes for approval and application within the Coastal Zone, which is anticipated to take 15–18 months.

4.1.11 Land Development Code and Enforcement

This BMP is a catch-all category for updating required minimum BMPs as standards based on the requirements of the new MS4 Permit. The City is currently updating its minimum BMPs and prohibitions for residential, commercial and industrial uses.

4.1.11.1 Construction Activities

The Construction General Permit applies to any construction project in the ASBS 29 drainage area that disturbs one or more acres of soil, or disturbs less than one acre but is part of a larger common plan of development that in total disturbs one or more acres. Such projects are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ (SWRCB, 2009) (Construction General Permit).. This permit requires developing and implementing a SWPPP that contains a plan to prevent erosion and control sediment delivery to the MS4. The SWPPP must list BMPs that the discharger will use to treat or minimize storm water runoff and specify the placement of those BMPs. These regulations help control sediment discharge from construction activities.

The City's *Storm Water Standards Manual* (City, 2012b) specifies permanent and construction-phase storm water quality requirements for the following project types and phases:

- Private projects processed through the City's Development Services Department, and
- Capital improvement projects processed through the City's Engineering and Capital Projects Department.

The *Storm Water Standards Manual* further guides developers in selecting, designing and incorporating BMPs that help address construction erosion and sediment control.

The JURMP specifies construction-related BMPs that are required for activities associated with operations and maintenance.

4.1.11.2 Coastal Bluffs and Open Space Areas

Development on coastal bluffs is subject to the environmentally sensitive land regulations in the City Municipal Code, which are intended to “assure that development occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along the shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities” (City, 2012d). Private property owners in the ASBS 29 drainage area are responsible for assessing their property’s erosion problems and taking appropriate protection.

4.2 Implemented Structural BMPs

This section describes the structural BMPs, including LID measures that are currently in use by the City. To control storm water discharge to the MS4 during a design storm⁴, dischargers must first consider using on-site LID practices to infiltrate, use or evapotranspire storm water runoff.

LID emphasizes conservation and use of on-site natural features to protect water quality. LID can significantly increase the protection of water quality by using engineered, small-scale controls that replicate the pre-development hydrologic regime of watersheds by infiltrating, storing, evaporating, and detaining runoff close to its source. The City developed the *LID Design Manual* (City, 2011) to provide guidance for planning, designing and implementing LID BMPs for street improvement, new public streets and development and redevelopment of city parks and recreation facilities. The Design Manual provides clear guidance to planners, design engineers, plan reviewers, inspectors, and maintenance staff for designing and implementing LID practices and for tailoring design standards and recommendations to the unique climate and geography of the San Diego area, including the ASBS 29 drainage area.

Structural BMPs are built into the development at the site scale, and large-scale structural BMPs receive flows from neighborhoods or regions and often serve the dual purpose of both flood control and groundwater recharge. These BMPs are often in public spaces and can be co-located in parks or green spaces.

Figure 4-3 provides an overview of all implemented structural BMPs in the ASBS 29 drainage area. Structural BMPs are described in Sections 4.2.1 through 4.2.3.

4.2.1 Low-Flow Diversions

In 1997, storm drain outfalls along the coastline were inventoried and prioritized by their potential for human contact with flow from the drain (i.e., flow crossing the beach). Outfalls were labeled by street name location, and those with high or medium contact potential were studied to determine the feasibility and cost of diverting low flows to the wastewater collection system.

⁴ A design storm is a storm event of a specified size that is used to determine the required treatment capability of a BMP based on calculated runoff volumes and peak discharge rates.

Low-flow diversions are structures that redirect dry weather urban runoff into the sanitary sewer system, where the runoff then receives the same treatment as sewer water. The City has installed low-flow storm drain diversion systems in phases to serve the coastlines of the La Jolla, Pacific Beach and Ocean Beach areas. Installation of dry weather flow diversions is a BMP implementation strategy to meet the General Exception's prohibition of dry weather flows and reduces loading of pollutants by capturing and treating runoff.

The City has nine low-flow diversions installed within the ASBS 29 drainage area, as shown in Figure 4-3. The locations of installed low-flow diversions are:

- Corner of Spindrift Avenue and Roseland,
- Avenida de la Playa and Paseo del Ocaso,
- Vallecitos and Camino del Oro,
- Along Camino del Oro near La Jolla Shores Drive,
- 8555½ El Paseo Grande,
- 7920 Princess Street,
- 1624 Torrey Pines Road,
- Corner of Torrey Pines Road and Charlotte, and
- Corner of Camino del Oro and El Paseo.

The City will monitor low-flow diversion measures on the downstream side of the diversion to verify zero flow beyond the diversion and into ASBS 29.

4.2.2 Low Impact Development “Green Lot” Project at Kellogg Park

At Kellogg Park, the City has implemented the Green Lot Retrofit Project to allow infiltration of urban runoff by replacing a portion of the conventional asphalt in the parking lot with porous pavement and other infiltration areas. The northern and southern ends of the parking lot were replaced with porous pavement, and the western perimeter was upgraded with a decomposed granite planter area that runoff can flow into and infiltrate. The parking lot is also planter-bed-landscaped with native, drought-tolerant vegetation. This retrofit project addresses potential water quality problems by reducing and treating runoff flows and discharges to ASBS 29 via infiltration and retention.

4.2.3 Treatment Control Best Management Practices

TCBMPs are permanent storm water treatment features that are incorporated into the design of newly developed or redeveloped properties, and are installed to meet the City's SUSMP requirements. Currently, there are 10 private TCBMP projects in the ASBS 29 drainage area, each with varying numbers and types of BMPs (see Figure 4-3 and Table 4-2). The types of TCBMPs within the ASBS 29 drainage area include vegetated swales, drainage inserts, filtration systems, and infiltrations basins/trenches.

A vegetated swale is a broad, shallow channel with a dense stand of vegetation covering the side slopes and bottom (USEPA, 1999). They are designed to trap particulate pollutants (suspended solids and trace metals), promote infiltration and reduce the flow velocity of storm water runoff (USEPA, 1999). Drainage inserts are manufactured filters or fabric placed in a drop

inlet to remove sediment and debris (CASQA, 2003). Filtration systems treat storm water runoff by using various types of filtration media including sand, vegetation, and/or some other absorptive filtering media. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives storm water runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix (CASQA, 2003). An infiltration basin is a shallow impoundment that is designed to infiltrate storm water. Infiltration basins use the natural filtering ability of the soil to remove pollutants in storm water runoff (CASQA, 2003).

Table 4-2: Treatment Control Best Management Practices in ASBS 29 Drainage Area

Project Name	Number of BMPs by Type			
	Drainage Insert	Filtration Systems	Grass/Vegetated Swale	Infiltration Basin or Trench
Arellano Grading/Paul Residence	—	1	—	—
Bondy Residence	3	—	—	—
Chenango Residence	1	—	—	—
Hawley Residence	7	—	—	—
Hazard Residence	—	—	—	1
Liu Residence	1	—	—	—
Mashayekan Residence	1	—	—	—
Rosen Residence	1	—	—	—
Schroeder Residence	1	—	—	—
Spindrift Drive Residence (04)	—	—	1	—

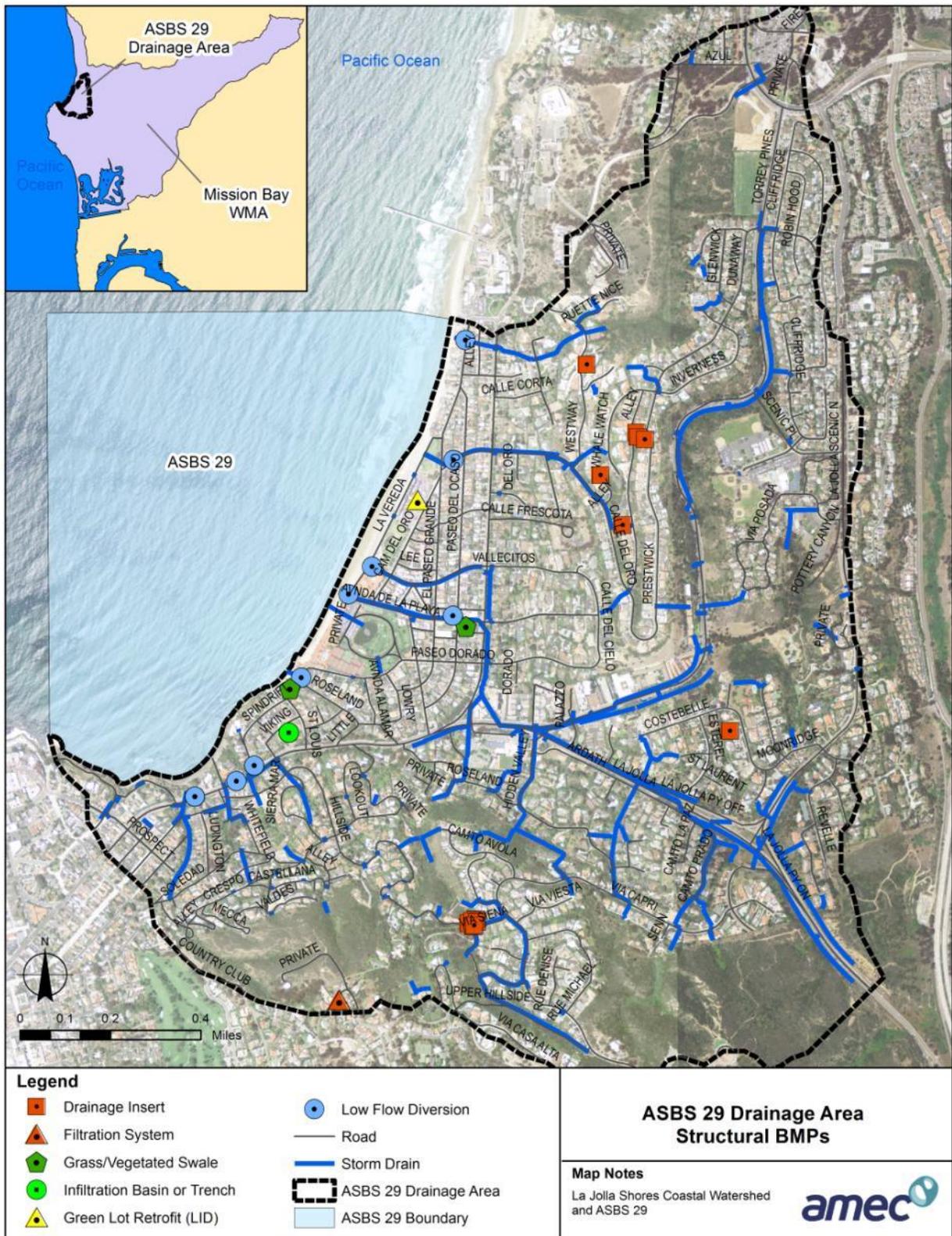


Figure 4-3: Structural Best Management Practices Implemented in ASBS 29

4.3 Planned Continuation of Existing Best Management Practices

The Scripps Watershed CLRP was prepared and submitted to the SDRWQCB in 2012 and updated in 2013 (City, 2013d). The CLRP was developed as an integrated water quality plan that combines multiple permit-based and voluntary strategies and BMPs into a comprehensive approach to compliance with the Bacteria TMDL (SDRWQCB, 2010). The CLRP also integrates considerations for addressing General Exception regulations for the Scripps Watershed (a portion of the Mission Bay WMA) and the adjacent ASBS 29.

The City, as the sole responsible party in the Scripps Watershed (except for UCSD), will use the CLRP to develop watershed implementation programs, evaluate their effectiveness, and make adjustments over the anticipated 20-year implementation period of the Bacteria TMDL. The prioritization process for implementing BMPs carefully considers many factors, including feasibility, cost-effectiveness, social and other impacts, and the potential to reduce pollutant loads. These factors have been considered and analyzed as part of the CLRP development process for each individual management practice. Prioritization allows earlier implementation of the BMPs that have the highest feasibility, highest cost-effectiveness and greatest potential to reduce loads. The forthcoming Mission Bay Watershed WQIP (due in June 2015) will incorporate the CLRP, and will supersede and serve as the CLRP upon its adoption by the SDRWQCB.

Water quality target levels for BMP design in the General Exception are (a) Table B, Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan, or (b) a 90 percent reduction in pollutant loading during storm events for the City's total discharges.

The Scripps Watershed CLRP made recommendations regarding non-structural and structural BMPs for load reductions in the watershed, a subset of which are applicable to BMP recommendations for the La Jolla Watershed required by the General Exception. However, when the dilution factor of 12.6:1 (see Section 3.2) is incorporated into the CLRP analysis, the results indicate that the necessary pollutant load reductions required by the General Exception are being achieved by the non-structural and structural BMPs currently implemented by the City. Based on these results, no further non-structural or structural BMPs are necessary. However, currently implemented BMPs are planned to continue at their current level. Furthermore, based on the requirement of the General Exception to cease all dry weather discharges, the currently installed low-flow diversions and non-structural BMPs were implemented by the compliance date of September 20, 2013.

5.0 Compliance and BMP Implementation Schedule

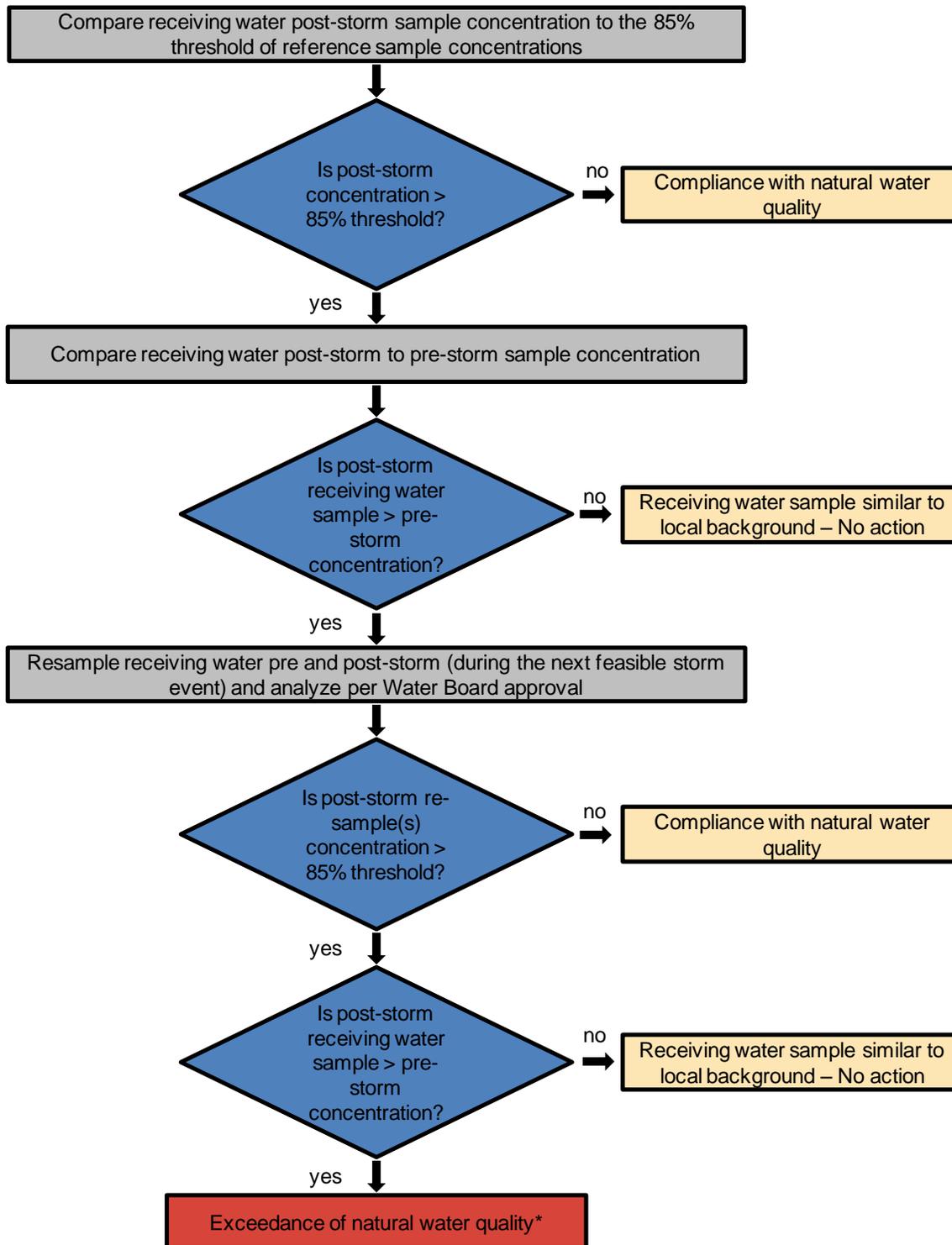
5.1 Compliance and Implementation Schedule

Based on data collected under the Bight '08 and Bight '13 Regional Monitoring Surveys, the *La Jolla ASBS Dilution Study* (discussed in Section 3.2), and analysis provided in the Scripps Watershed CLRP (discussed in Section 4.0), the City's current level of non-structural and structural BMP implementation complies with the General Exception requirement to protect natural water quality. Low-flow diversions currently installed at nine locations are intended to eliminate non-storm water discharges to ASBS 29. The implementation schedule deadlines for the City, in accordance with the General Exception, are as follows:

- **March 20, 2012:**
 - Non-authorized discharges to ASBS 29 were effectively prohibited. **(complete)**
- **September 20, 2013:**
 - The City submitted a Draft ASBS Compliance Plan for ASBS 29 to the SWRCB Executive Director and the SDRWQCB Executive Officer. **(complete)**
 - Non-structural controls were implemented. **(complete)**
- **September 20, 2014:**
 - The City shall submit the Final ASBS Compliance Plan for ASBS 29 with a schedule for structural controls based on the results of monitoring runoff and receiving water. **(on schedule)**
- **March 20, 2018:**
 - Dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality (within the 85th percentile threshold of reference water quality data and pre-storm levels). If results exceed this threshold, see the flowchart in Figure 5-1 for appropriate actions. **(on schedule)**

The City has met the compliance dates for prohibiting non-authorized discharges to ASBS 29 and implementing non-structural controls. To continue compliance with the General Exception, the City plans to maintain and implement existing BMPs as described in Section 4, and to continue monitoring in the ASBS per the General Exception.

According to Section I.A.2 of the General Exception, the Compliance Plan is to be included in the discharger's WQIP (equivalent to a SWMP or SWPPP). The City shall submit the Final WQIP for the Mission Bay WMA on June 27, 2015, which will include this Compliance Plan.



*Note: When an exceedance of natural water quality occurs, the discharger must comply with Section I.A.2.h (for permitted storm water) or Section I.B.2.C (for non-point sources). Note, when sampling data are available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.

Source: General Exception, Attachment 1

Figure 5-1: Flowchart to Determine Compliance with Natural Water Quality

5.2 Required Reporting of Water Quality Exceedances

If the results of receiving water monitoring (described in Section IV.B of the General Exception) indicate that wet weather discharges that include storm water are causing or contributing to an alteration of natural water quality in the ASBS, the City must submit a report to the SDRWQCB within 30 days of receiving the analytical results. (See Figure 5-1 for determining compliance.)

The report must:

- Identify the constituents in storm water that alter natural water quality and the potential sources of those constituents;
- Describe BMPs that are currently being implemented, BMPs that are identified in the ASBS Compliance Plan for future implementation, and any additional BMPs that may be added to the ASBS Compliance Plan to address the alteration of natural water quality; and
- Include a new or modified implementation schedule.

Within 30 days of approval of the report by the SDRWQCB, the City must revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required. Non-structural BMPs must be implemented within one year of the approval (by the SWRCB or SDRWQCB) of the revised ASBS Compliance Plan. Structural BMPs must be implemented as soon as practicable.

As long as the City has complied with the procedures described above and is implementing the revised ASBS Compliance Plan, the City is not required to repeat the same reporting procedure for continuing or recurring exceedances of natural ocean water quality conditions that are due to the same constituent.

5.3 Modifications of This Compliance Plan

The ASBS Compliance Plan is a dynamic document that may be edited or updated as needed. Any updates, alterations, modifications, or amendments to the document must be submitted to the SDRWQCB for its approval. The plan will be modified when changes occur that directly affect the purpose (Section 1.2), receiving water quality conditions (Section 5.2), or activities of this ASBS Compliance Plan.

This section provides the procedure for notifying the SDRWQCB of any technical changes that the City seeks to make and for seeking a formal modification. This section is not intended to be an exhaustive review of all aspects of modification, but is meant to provide a basis for updating or modifying this plan in a manner that recognizes the plan's objective of protecting natural water quality in ASBS 29. A modification to this document is intended to be an efficient mechanism for notifying the SDRWQCB of a proposed change to the plan set forth in this document and for providing data to support the change.

A proposed modification shall include:

- A narrative justification that describes in detail all changes and the reasons they are necessary; and
- A form that includes, at a minimum, a summary of or an excerpt from the modified (new) text and information, and the previous text and information, with their location(s) in the document.

With the narrative justification, the City shall:

- Submit a cover letter on the agency's letterhead, signed by a City representative;
- Describe the changes;
- Discuss and justify the necessity for the change(s); and
- Identify and explain how the implications of the modification will affect components of the ASBS Compliance Plan.

The City must submit one signed original copy of the modification documents to the SDRWQCB Executive Officer to maintain its compliance status.

5.3.1 Non-Substantive Revisions

Non-substantive revisions are changes that do not affect the purpose of the ASBS Compliance Plan but relate to matters addressed in the requirements of Section 1.A.2 of the General Exception. Examples of such non-substantive changes include, but are not limited to:

- Typographical errors in the ASBS Compliance Plan or underlying documentation; and
- Change in department name, where there is no change in ownership or responsibility.

The City shall give the SDRWQCB notice of such non-substantive changes promptly in writing whenever the need for a non-substantive revision is recognized. An addendum sheet to the document shall summarize all updates to the ASBS Compliance Plan and shall be provided to the SDRWQCB. Although non-substantive revisions do not require approval of the SDRWQCB, it may reply, indicating agreement or disagreement that the change is non-substantive. All non-substantive modifications will be included as part of the modification summary for the next following formal modification.

5.3.2 Alteration of Natural Water Quality and Non-Storm Water Flows

As discussed in Section 5.2, monitoring results that indicate that wet weather MS4 discharges cause or contribute to an alteration of natural water quality shall be reported to the SDRWQCB within 30 days. Within 30 days of approval of the report by the SDRWQCB, the City shall revise its ASBS Compliance Plan, as described in Section 5.3.

If applicable, the revised ASBS Compliance Plan shall describe the measures by which non-storm water discharges will be eliminated and any interim measures that will be employed to reduce non-storm water flows until the final measures have been implemented.

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