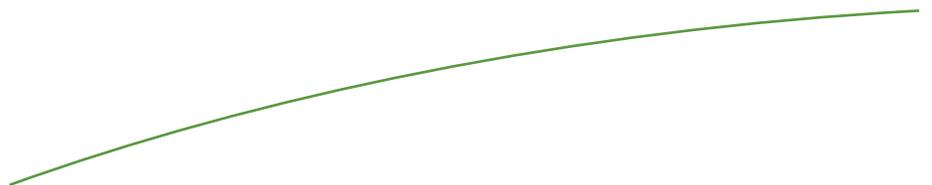




Appendix B

MASTER STORM WATER SYSTEM  
MAINTENANCE PROGRAM



# **Master Storm Water System Maintenance Program**

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## LIST OF ACRONYMS

BMP - Best Management Practice  
CCC – California Coastal Commission  
CEQA – California Environmental Quality Act  
CDFG - California Department of Fish and Game  
CDP - Coastal Development Permit  
Corps - U.S. Army Corps of Engineers  
dBA - A-weighted decibel  
DSD - Development Services Department  
HEC - Hydrologic Engineering Center  
IAA - Individual Access Assessment  
IMP - Individual Maintenance Plan  
IBA - Individual Biological Assessment  
IHA - Individual Historical Assessment  
IHHA - Individual Hydrologic and Hydraulic Assessment  
INA - Individual Noise Assessment  
IWQA - Individual Water Quality Assessment  
L<sub>eq</sub> - time-averaged one-hour equivalent level  
MAR – Maintenance Activity Report  
MC - Maintenance Contractor  
MMC - Mitigation Monitoring Coordinator  
MMRP – Mitigation, Monitoring and Reporting Program  
NPDES - National Pollutant Discharge Elimination System  
PEIR - Program Environmental Impact Report  
PWS – Public Works Supervisor  
RWQCB - Regional Water Quality Control Board  
SDP - Site Development Permit  
SCR - Substantial Conformance Review  
SWD – Storm Water Division  
T&SWD – Transportation & Storm Water Department  
USFWS - U.S. Fish and Wildlife Service

## **EXECUTIVE SUMMARY**

Today's storm water drainage systems serve multiple purposes and uses that include: conveying storm water and urban runoff downstream; protecting property from flooding during high-flow storm events; controlling stream bank erosion; protecting water quality by filtering pollutants from urban runoff; and sustaining wildlife. To that end, modern storm water facilities must integrate conventional flood control strategies for large, infrequent rain events with storm water quality control strategies and natural resource protection. Under Council Policy 800-04, the City of San Diego is responsible for maintaining adequate drainage facilities to remove storm water runoff in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life. The City's storm water system serves to convey storm water flows to protect the life and property of its citizens from potential flooding. The system also serves to convey urban runoff from development such as irrigated landscape areas, driveways, and streets that flow into drainage facilities and, ultimately, to the ocean. Additionally, the City's storm water system helps protect water quality; and open facilities, such as channels, can support natural resources including wetland habitat. The long-term performance of the entire system is dependent upon ongoing and proper maintenance.

To maintain the system's effectiveness, this Master Storm Water System Maintenance Program (Master Program) describes the specific maintenance methods and procedures to guide annual maintenance activities. This Master Program has been prepared to provide detailed methods for maintaining open flood control facilities (channels) which are the responsibility of the City's Transportation & Storm Water Department (T&SWD). In addition, the Master Program will be the T&SWD Storm Water Division's (SWD) manual to guide the performance of authorized activities under ~~master~~ permits issued by the City of San Diego, as well as state and federal agencies with regulatory authority over biological and aquatic resources. These state and federal agencies include the US Environmental Protection Agency (EPA), US Army Corps of Engineers (Corps), US Fish and Wildlife Service (USFWS), California Environmental Protection Agency (CalEPA), California Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC).

This Master Program provides a comprehensive approach to identify and regulate maintenance within open storm water facilities. It will govern future maintenance activities needed to allow the City's storm water system to effectively convey flood water, provide for public safety and the protection of property. This document also establishes an integrated approach to maintenance by outlining the specific methods and procedures to minimize impacts to water quality and natural resources. In addition, the Master Program includes a subsequent review process for annual maintenance activities which standardizes the various authorizations required by the City of San Diego and state and federal agencies in accordance with applicable state/federal regulatory permit(s) and associated Program Environmental Impact Report (PEIR).

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## 1.0 INTRODUCTION

### 1.1 History

During the early 20<sup>th</sup> century, because of its geography, climate, and low population density, the City relied on natural hydrology, allowing flood waters to flow by gravity through the City's vast network of naturally occurring gullies, canyons, rivulets, creeks, and streams. The storm water facility maintenance program began in 1933 under the Depression-era federal Works Project Administration. Storm water facilities were manually cleaned using shovels and buckets. During World War II, the City witnessed exponential growth, including the construction of new streets and housing, and vast changes to its landscape to accommodate war-related facilities. Those activities increased the amount of impervious surface, changed storm water flow patterns, and altered the natural balance between runoff and natural absorption. This, in turn, substantially increased the volume, frequency, and velocity of storm water flows. Although the City constructed storm water facilities, the pace of growth still dictated the need for improved capacity and preventative maintenance.

Mechanized maintenance was first introduced after World War II. The City acquired surplus military equipment, power shovels, and farm tractors. Maintenance consisted of grading storm water facilities and pushing the waste material to the sides in a practice called sidecasting. By the mid-1950s, the City implemented annual inspections, completed the first mapping of its storm water infrastructure, and adopted requirements for private construction of storm water infrastructure associated with new commercial and residential developments. In subsequent decades, the number of storm water structures increased with population. Likewise, the City modernized its equipment to include bulldozers, excavators, backhoes, and skid-steers to provide more efficient and flexible maintenance methods. The practice of side-casting was also replaced with disposal of waste to landfills.

In the mid-1990s, after a state-wide initiative to educate local governments about the environmental regulations associated with maintaining urban storm water infrastructure, the City embarked on its first application for a ~~master~~ storm water facility maintenance permit. In 2002, this effort was postponed after the City and regulatory agencies recognized that a programmatic approach to storm water maintenance would provide a more thorough and comprehensive analysis of the environmental impacts of the proposed program.

### 1.2 Storm Water System

The City of San Diego's storm water system conveys drainage flows from impervious surfaces to protect the life and property of its citizens from potential flooding. The storm water system also conveys urban runoff from development such as irrigated landscaped areas, driveways, and streets that can flow into the drainage system and ultimately to the ocean. Storm water facilities include, but are not limited to, a network of underground storm drain pipes, culverts, outfalls/inlets, detention basins, and open flood control channels. Open storm water facilities may protect downstream water quality by filtering pollutants via accumulated sediment and vegetation that may naturally be deposited because of the site's topography or configuration of the channel or basin. In such cases, flood control facilities can also support natural resources, such as wetlands, or provide

linkages to other habitats for wildlife. The long-term performance of the entire system is dependent upon ongoing and proper maintenance that will allow storm water runoff to be adequately conveyed, but to also remove accumulated pollutants from the system that could be carried downstream to the ocean, beaches and bays during high-flow storm events.

During rain events or wet conditions, storm water and urban runoff is typically collected via drains from impervious surfaces; such as buildings, rooftops, paved driveways, and improved streets, to be conveyed downstream through the City's storm water system. When runoff cannot infiltrate into the ground, precipitation will follow drainage patterns, typically to the lowest point, collecting contaminants, sediment or debris along the way. Storm water and urban runoff can also erode unstable soil, carrying sediment that could be conveyed downstream. Typically, urban runoff from development sources, such as irrigated landscaped areas, is the surface water collected during dry weather that also flows through the storm water system. Urban runoff results from human activities rather than the natural hydrological cycle. Common urban runoff contaminants include: oil and grease from parking lots; pesticides, herbicides, and fertilizers from lawns and landscaped areas; soapy water from carpet cleaning and vehicle washing; sediment from construction projects; trash such as cigarette butts and soda bottles; and many other sources associated with everyday activities.

Council Policy 800-04 states that the City will generally only accept responsibility for maintenance of public drainage facilities which are designed and constructed to City standards, and which are located within a public street or drainage easement dedicated to the City. This Master Program only includes storm water facilities, specifically open channels, which the SWD has the responsibility to maintain. Although this document includes the majority of storm water facilities within the public right-of-way and drainage easements dedicated to the City of San Diego; other City Departments, such as Park and Recreation or Public Utilities, may also have the responsibility and jurisdiction to maintain their own facilities within the drainage system. In addition, facilities located on private property or within another agencies' jurisdiction or easements would not be the SWD responsibility to maintain.

### **1.3 Master Program Goals and Objectives**

The purpose of the Master Program is to incorporate an integrated approach to maintenance by balancing the need to restore conveyance capacity of those with strategies to protect water quality and biological resources. The Master Program will also govern the methods by which the storm water facilities listed in Appendix A will be maintained.

This document identifies the specific drainage channels, maintenance methods and regulatory procedures required to maintain many of the storm water facilities which are the responsibility of the SWD. In addition, the Master Program serves as the maintenance manual to guide the performance of activities authorized by the ~~master~~ permits issued by the City of San Diego, as well as state and federal agencies with regulatory authority over biological and aquatic (water quality) resources that could be affected by maintenance.

This Master Program has been prepared in response to the goal of providing a comprehensive approach to storm water system maintenance. It is intended to achieve the following major objectives:

- Fulfill the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services by maintaining the storm water conveyance system for the purpose of reducing flood risk;
- Develop a comprehensive program that will govern the future maintenance of the City's storm water system in an efficient, economic, environmentally and aesthetically acceptable manner for the protection of property and life, in accordance with Council Policy 800-04;
- Ensure implementation of Best Management Practices (BMPs) and maintenance protocols during maintenance activities to avoid and/or minimize effects to environmental resources, and incorporate the analysis of the operational and pollution prevention benefits of each proposed project; and
- Create an integrated comprehensive review process for annual maintenance activities that will facilitate authorizations from local, state and federal regulatory agencies.

## 2.0 STORM WATER SYSTEM

The City's storm water system is composed of a variety of facilities which transport surface runoff to the Pacific Ocean or other receiving waters (e.g., lakes). The City's Storm Water Standards Manual defines the Storm Water Conveyance System as "private and public drainage facilities by which storm water may be conveyed to Receiving Waters, such as: natural drainages, ditches, roads, streets, constructed channels, aqueducts, storm drains, pipes, street gutters, or catch basins."

Storm water runoff is typically related to high-flow rain events that are conveyed quickly through the system in a relatively short period of time. Urban runoff is typically related to urban sources, such as landscape irrigation, that is slowly, but constantly, conveyed through the storm water conveyance system during dry weather conditions. Both storm water and urban runoff primarily originate from impervious surfaces on private and public property and roadways.

Storm water and urban runoff is collected by a series of storm water facilities which begin with street gutters which connect with storm drains which, in turn, connect with natural and constructed drainage channels which convey runoff to receiving waters. Typically, storm water and urban runoff are first collected by gutters located in the public-right-of way. Major development projects may tie directly into a public storm drain system via private drains and pipes on-site but the majority of land within the City simply drains to an adjacent gutter. Flows from gutters are carried downstream until runoff volumes warrant a curb inlet and undergrounding. At this point, runoff is collected by an inlet and enters a storm drain pipe (typically made of reinforced concrete pipe).

As the runoff moves down the storm water basin, more and more pipes connect and the system gradually gets larger to handle the additional water. Eventually, storm drain pipes and certain surface flows from the public right-of-way discharge directly into public or private open storm water channels. The discharge points within these facilities are commonly referred to as outfalls. Outfalls consist of a variety of structures designed to reduce the discharge velocities to minimize erosion. Typical erosion control features associated with outfalls include: revetments; rip rap or armored sides; headwalls and endwalls; flow/grade control and drop structures; and dissipation piles. Channels that have been modified to run underground or under roadways (via pipes or concrete structures), known as culverts eventually connect to an open channel downstream.

Most of the larger storm water channels are public while the smaller channels tend to be located on private property. Many of the public storm water channels are improved, "as-built" or engineered, and armored (trapezoidal concrete-lined bottom and sides). These facilities are specifically designed to convey flood water. However, other storm water facilities are natural drainage channels with earthen bottom and sides that also convey flood water and carry runoff. In a few areas within San Diego, natural drainages can also be improved leaving the channel bottom earthen with constructed armored sides.

The Master Program includes approximately 115 individual segments within approximately 32 miles of storm water facilities to be included in this Master Program. For tracking purposes, SWD has assigned a number to each of major storm water facility segment under its

responsibility. Table 1, in Appendix A, identifies each of these segments included in the Master Program. These segments are considered likely to require periodic maintenance to effectively convey flood water. As not all of the storm water facilities within the purview of SWD are expected to require periodic maintenance and are not included in the Master Program, the map numbering identified in Table 1 is not always consecutive. Table 1 contains a variety of pertinent information including a general description and location of the facility, construction type, applicable planning policies, and the estimated width of disturbance caused by anticipated maintenance.

Figure 1 illustrates the general location of the storm water facilities included in the Master Program within the respective Hydrologic Units (HUs), as established by the Regional Water Quality Control Board (RWQCB). Figures 2a through 2e illustrate the location of these storm water facilities on large-scale aerial photographs. Detailed maps illustrating the location of each facility including access, staging and stockpiling locations are contained in Appendix B.

### 3.0 MAINTENANCE METHODS

This section describes the methods and equipment expected to that will be utilized to maintain SWD's storm water facilities. It is anticipated that removal of accumulated sediment and vegetation that impede the flow of storm water will be the primary method used to maximize storm water conveyance and reduce flood risk. This assumption is verified in the PEIR, which concludes that alternatives to maintenance including: (1) raising the channel banks by constructing walls or berms along the top of the channels; (2) diverting storm water in pipes around constrained segments; (3) widening channels to accommodate vegetation; and/or (4) reducing off-site runoff generation through use of low impact development measure would be ineffective in substantially reducing flood risk and/or economically infeasible to implement City-wide. However, the City will consider other alternatives provided the alternatives would achieve a comparable reduction in flood risk, be cost-effective and reduce biological impacts.

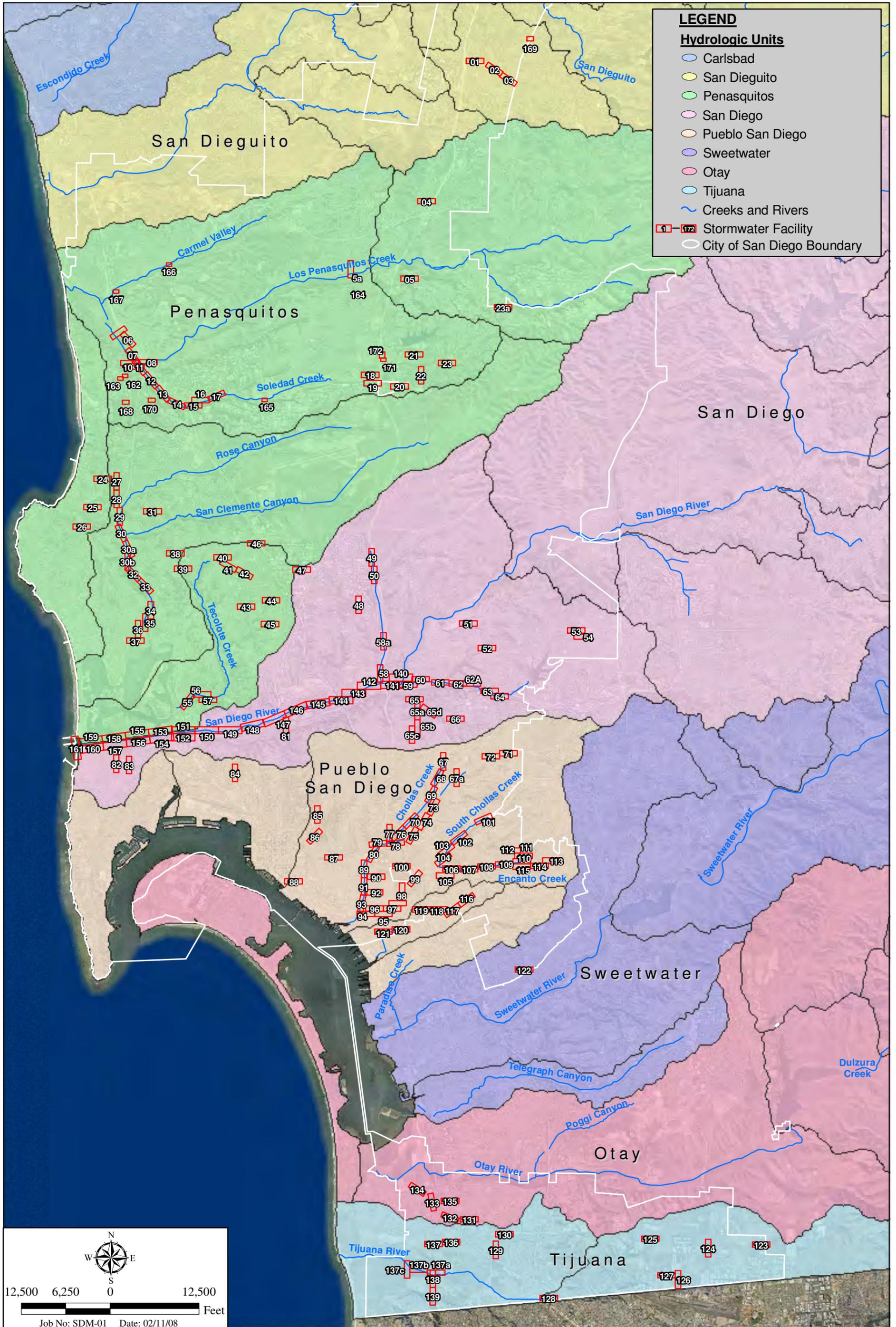
The selection from the following techniques and equipment to be employed in the course of ~~future maintenance~~ removing sediment and/or vegetation will depend on a variety of factors related to the site-specific characteristics of each storm water facility, including size (width and depth); flow characteristics; surrounding land uses and vegetation, existing access, and whether the storm water facility has concrete-lined or natural bottom. Equipment that cannot be accommodated by designated access on Appendix B will not be used. Weather, time constraints, and/or restrictions related to the rainy season and sensitive bird-breeding seasons may also play an important role in the maintenance methodology and equipment selection to reduce costs and minimize indirect impacts.

The frequency of maintenance would be based upon several factors including, but limited to, routine inspections, risk management claims, and/or past maintenance history. Maintenance frequencies typically occur at three-year intervals. In the event of an on-going or imminent emergency (e.g., an emergency flooding event), the SWD would respond immediately to minimize direct threat to human life or property.

#### 3.1 Equipment Types

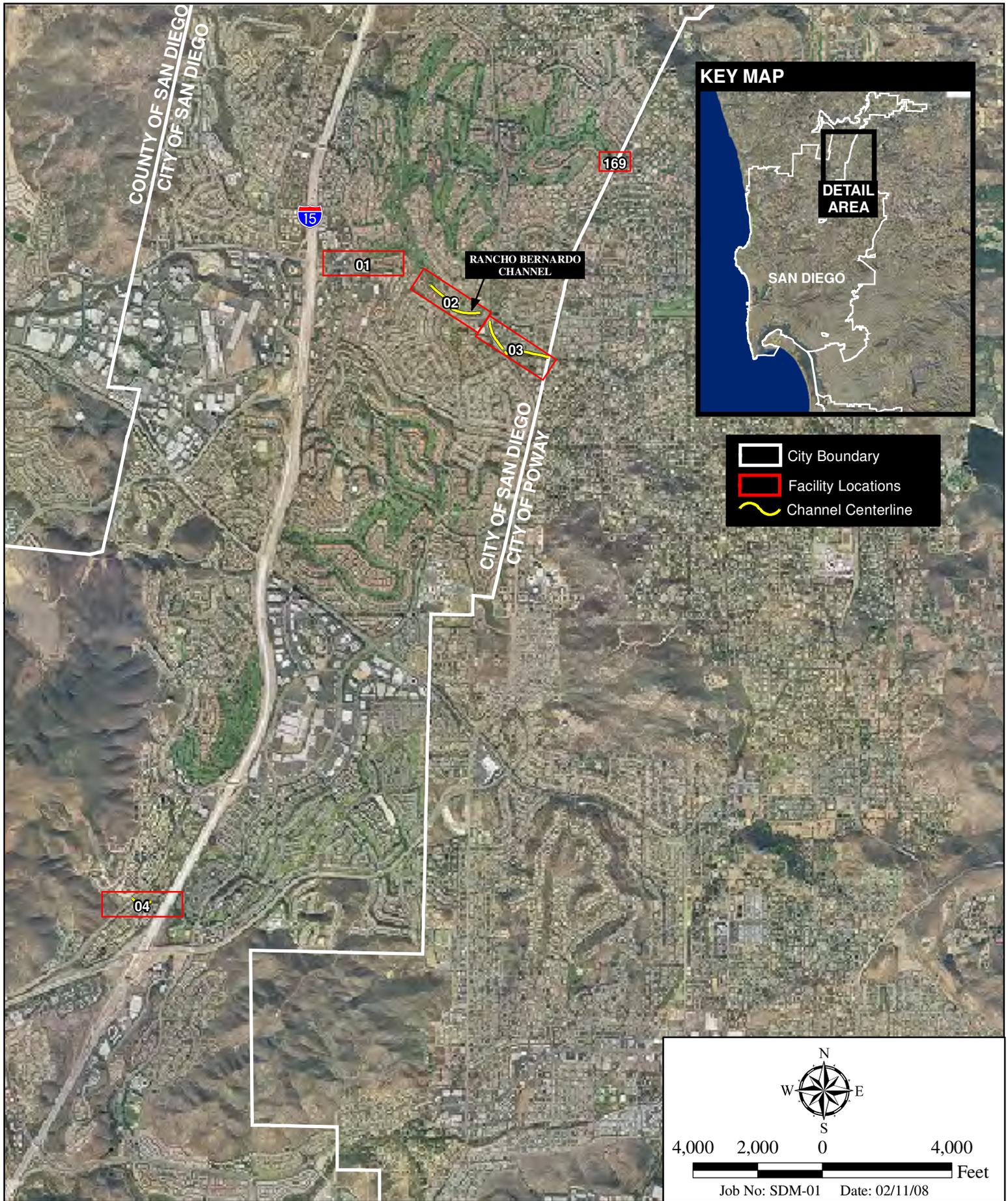
##### Heavy Equipment

The types of heavy mechanical, earth-moving equipment commonly used in the course of maintenance will include, but is not be limited to, skid-steers or bobcats, backhoes, Gradalls, excavators, loaders, dump trucks, vactors, portable pumps and bulldozers. Smaller equipment, such as skid-steers or bobcats, is typically used for narrow drainage ditches; whereas larger equipment, such as excavators and bulldozers, are used in wide storm water channels. When removal of sediment or vegetation must occur in inundated areas, maintenance will involve barges and associated dewatering equipment. Each type of equipment selected for maintenance will be based upon the amount of excavated material removed prescribed by the maintenance methodology (e.g. sediment and vegetation removal, vegetation removal only) and the facility's configuration and access.



## Major Stormwater Facility Locations

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM



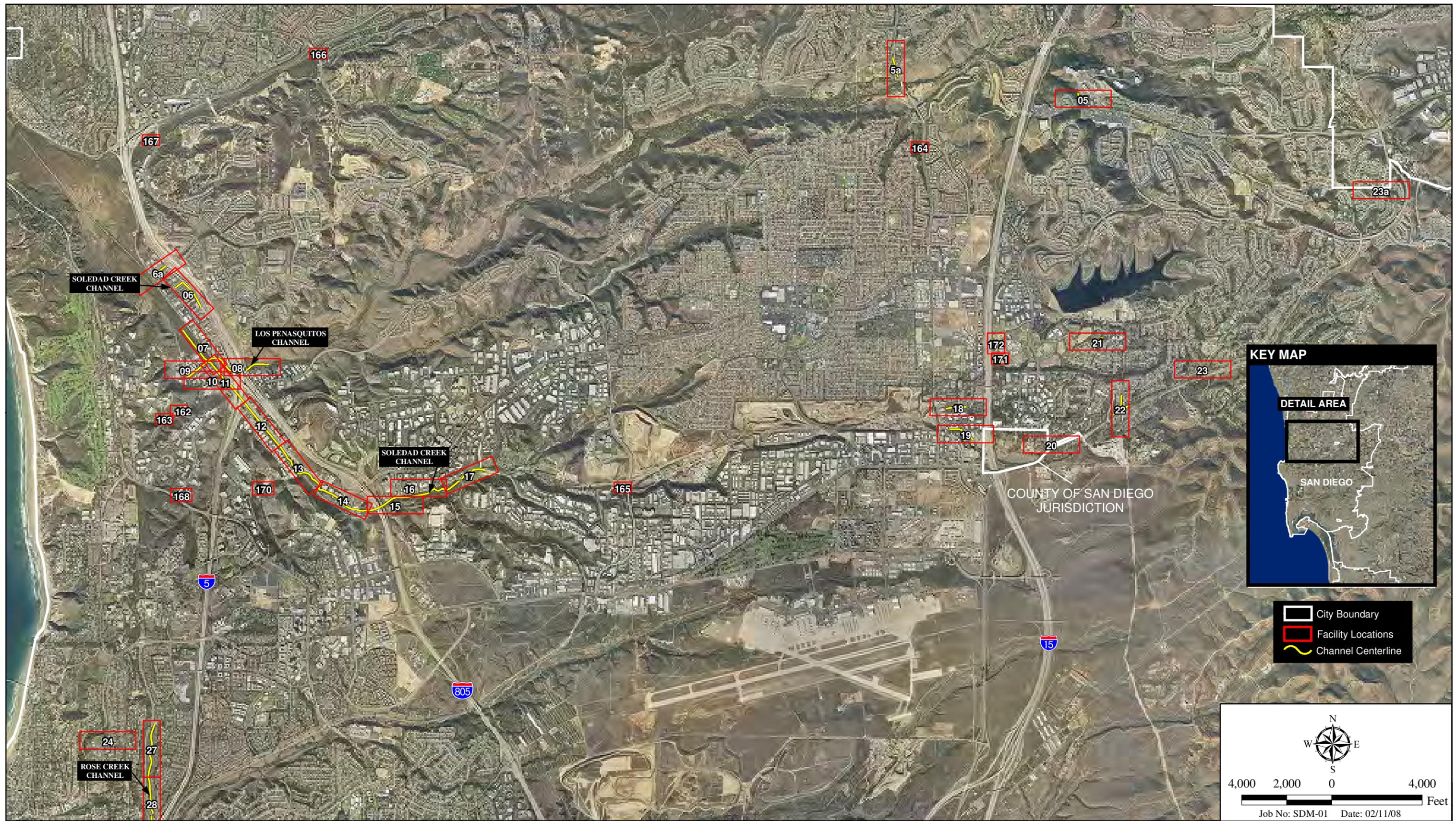
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# Stormwater Facilities - Rancho Bernardo Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM



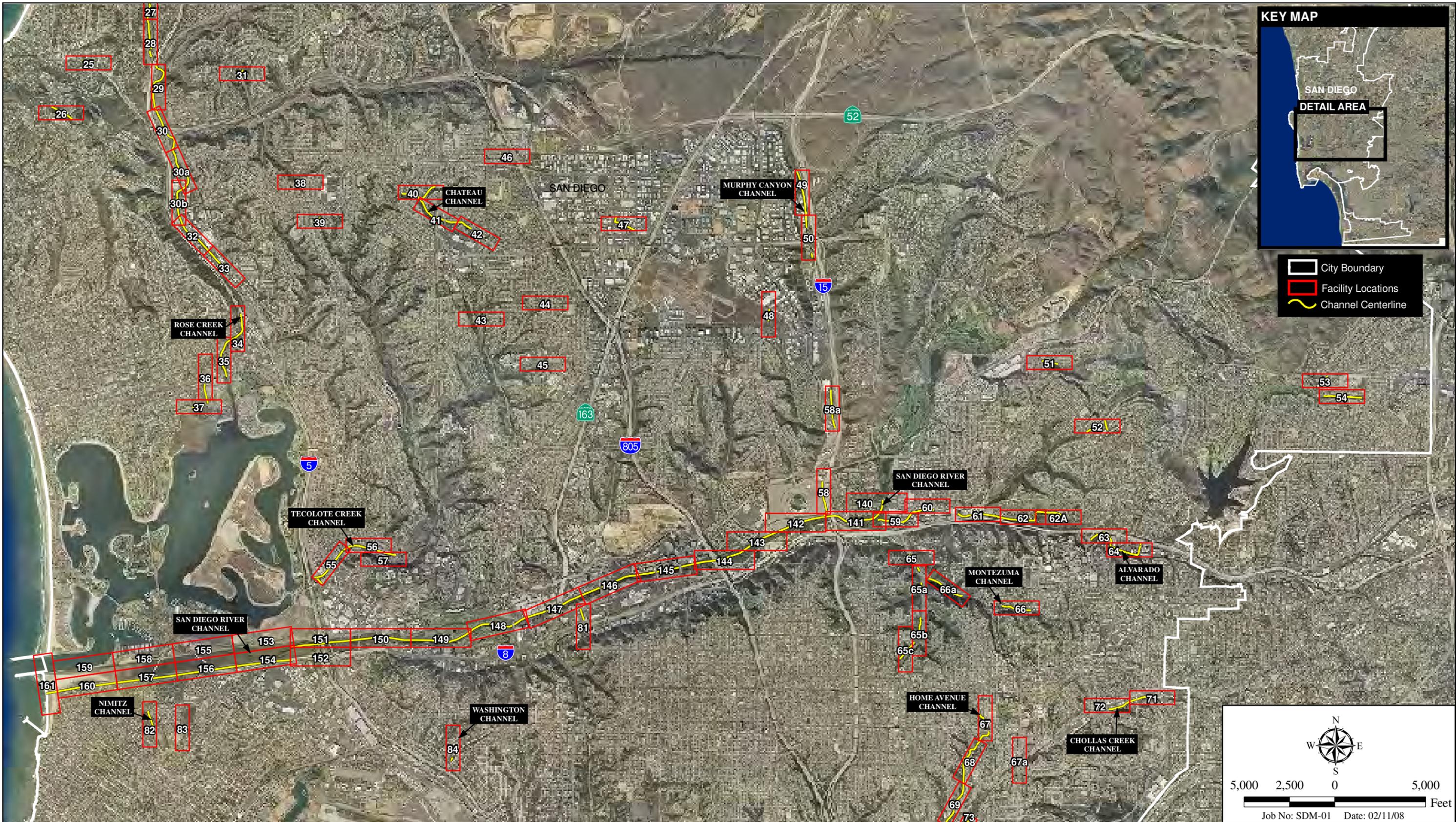
Figure 2a



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## Stormwater Facilities - Soledad Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM



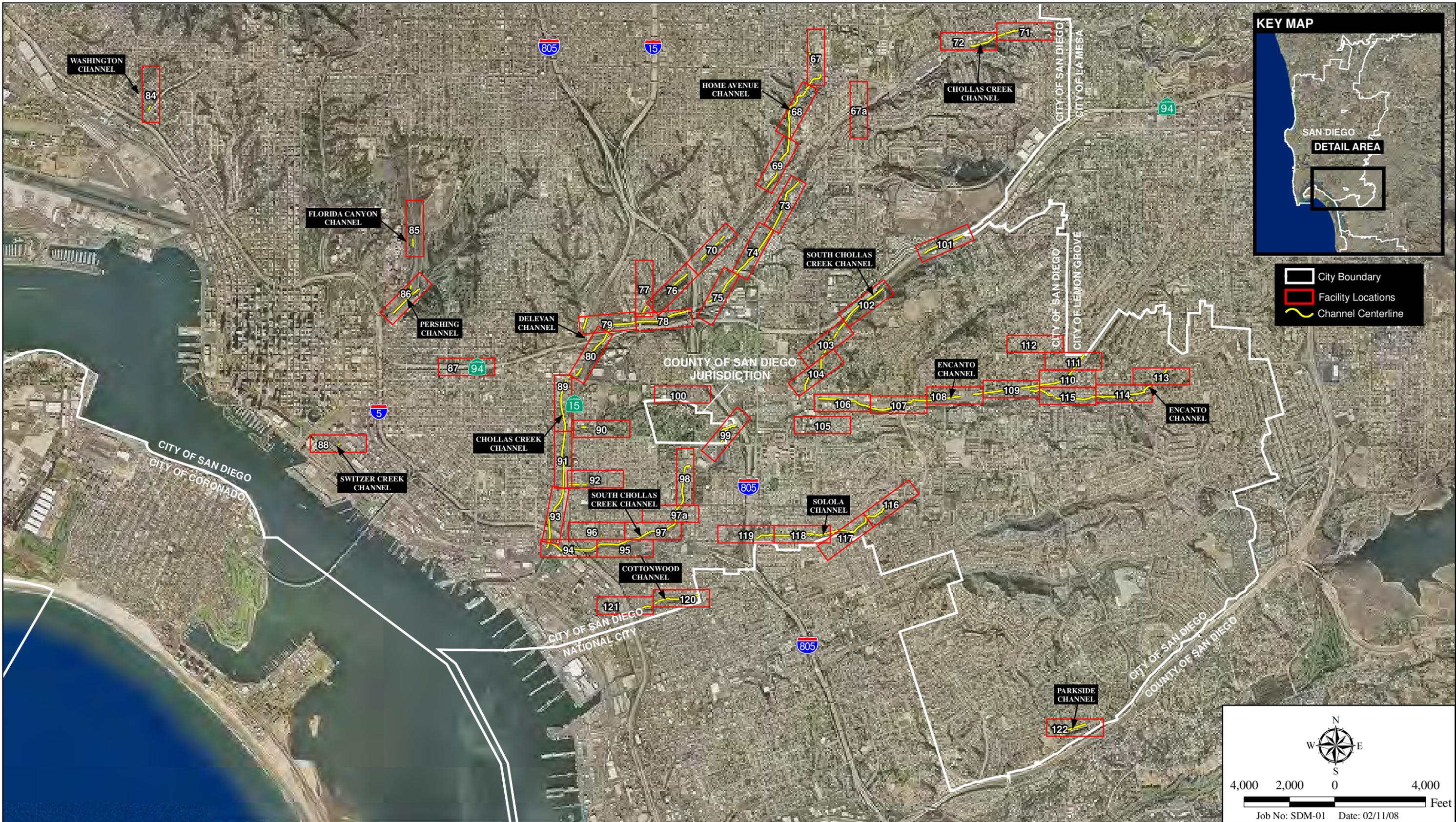
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### Stormwater Facilities - I-8 Corridor

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 2c





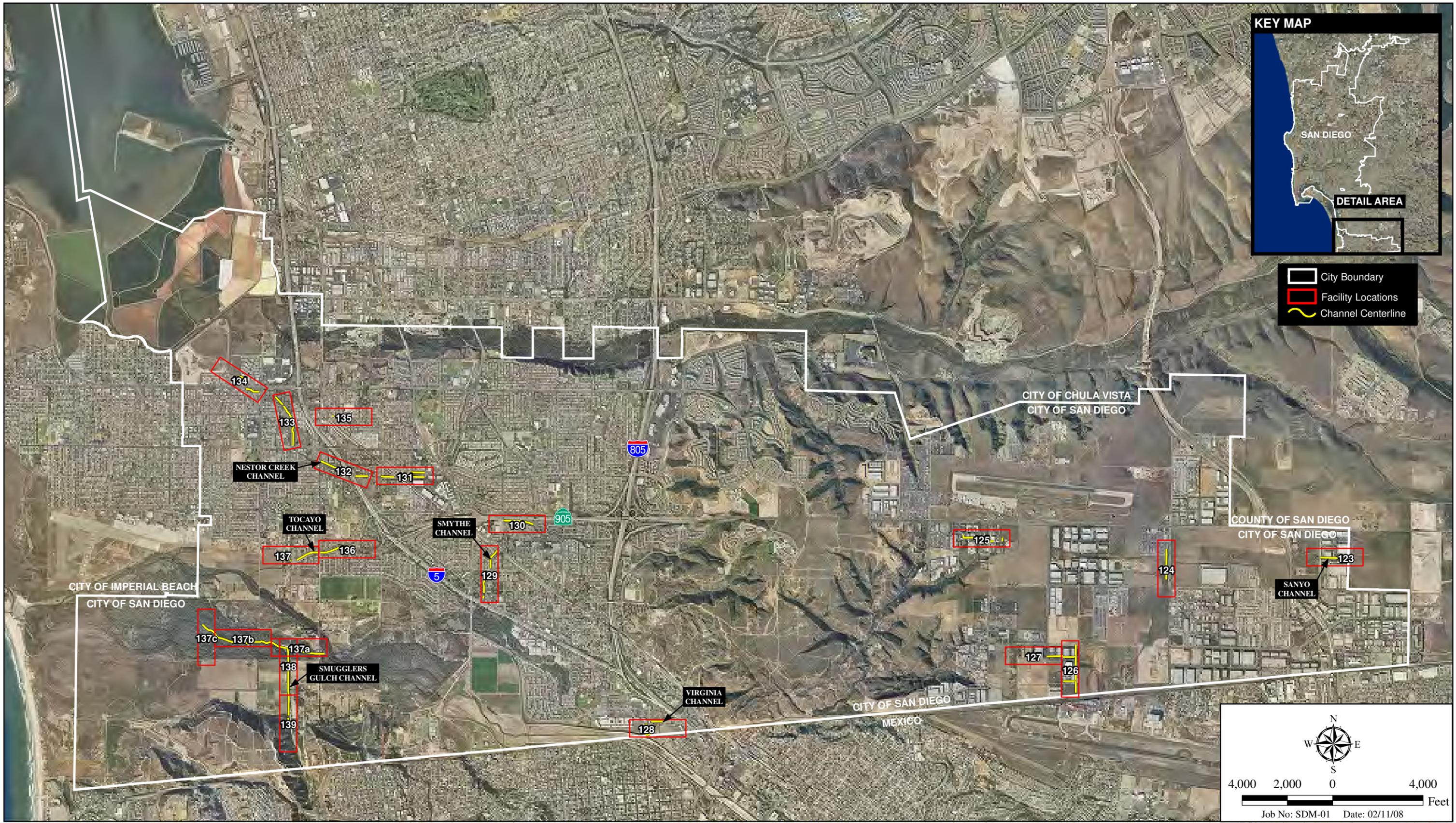
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## Stormwater Facilities - Central San Diego Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTENANCE PROGRAM

Figure 2d





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### Stormwater Facilities - Otay Mesa Area

CITY OF SAN DIEGO MASTER STORMWATER SYSTEM MAINTNANCE PROGRAM

Figure 2e



## Hand-Tools

Channel maintenance can also be performed manually by crews using hand tools such as chain saws, mowers, weed whips, clippers and hand-carried buckets/bales. This type of maintenance is limited to small-scale vegetation or trash/debris removal conducted by a workforce of one or more crew members. Access to and within the channel is limited to on-foot or other means such as a boat or barge.

### **3.2 Maintenance Methodologies And Techniques**

Depending on the site-specific characteristics of each individual facility, the maintenance methodology and techniques will be limited to the amount of vegetation and sediment removal required to allow the system to effectively convey flood water. Thus, maintenance may affect the entire facility (bank to bank) or a smaller area confined to a narrow pilot channel along the bottom of the facility. As discussed in Chapter 5.0 of this Master Program, the limits of vegetation and sediment removal will be primarily maintenance methodology will be based on site-specific hydrology and hydraulic studies conducted on each facility. The maintenance methodology will also be guided by the results of individual assessments related to biological and historical resources, noise, and water quality, as indicated in Chapter 5.0.

In most cases, maintenance techniques are expected to utilize mechanized equipment described in Section 3.1 to reduce cost and the duration of activities conducted within a channel. However, in some cases, access limitations or vegetation removal requirements may allow crews to carry and use hand tools to conduct maintenance activities, which may take more time to complete and increase labor costs. The Master Program's integrated approach to maintenance will balance the methodology recommended to effectively convey storm water runoff (e.g. vegetation removal only) with the prescribed technique (e.g. use of hand tools) to minimize impacts and budget.

## Mechanical Maintenance

Mechanical maintenance will utilize equipment often used in excavation (e.g. skid-steers, backhoes, Gradalls, excavators, loaders, dump trucks, and bulldozers) to remove sediment and vegetation from storm water facilities. Depending on the conditions associated with each facility, different types of mechanized equipment can be utilized so operations can run effectively. The decision as to which mechanized equipment will be used will be based upon the density and volume of accumulated material; vegetation growth; the size (width and depth) of the facility; access; the flow characteristics of the facility; and the need to complete maintenance activities in a timely and efficient manner. Equipment can range in size from four feet wide for the smallest skid-steer to 14.5 feet wide for a large bulldozer. Smaller equipment such as skid-steers will typically be used for narrow, shorter (in distance) channels, while larger equipment will be used for wider, longer channel segments. Small channels are typically less than five feet in width and less than 1,000 feet in length. Again, equipment that cannot be accommodated by existing access will not be used under this Master Program. Maintenance equipment will utilize existing or access which has been specifically identified in the Master Program (see maps in Appendix B). For all equipment clearing activities, the depth of material to be removed will be

based upon the design capacity of the facility which will be identified in the site-specific hydraulic and hydrology studies.

In most cases, maintenance is expected to occur along the bottom of the facilities and approximately two feet up the adjacent banks. Removal of vegetation on the slopes, beyond the lower two feet is not allowed under this Master Program, except when the overall channel width is less than 20 feet. In these narrower channels, removal of vegetation on the sides may be necessary to ensure the ability to transport floodwaters and prevent flooding. However, for wider channels, the minimal increase in flood water transport capacity resulting from removing vegetation on the side slopes would be outweighed by the additional cost of maintenance and associated biological mitigation.

The amount of vegetation and sediment removed from the bottom of the storm water facilities will be determined by hydrology and hydraulic studies before any maintenance occurs within a storm water facility. It is anticipated that these studies will specify maintenance that will range from clearing a pilot channel to removing all the vegetation covering the bottom of a facility. Whenever possible, vegetation will be cleared in a manner that allows some vegetation to remain in the facility to provide wildlife habitat and aesthetic value.

In most cases, equipment such as a skid-steer or bulldozer will operate within the storm water facility itself. Equipment will enter the storm water facility via an access point that has been identified in Appendix B. A majority of concrete channels have existing paved access ramps that allow equipment to enter and exit directly from the channel. When a ramp is not used, smaller equipment can be hitched to a crane or Gradall to be lowered into the facility from an adjacent bank or staging area. Earth-moving equipment within the facility will push the accumulated material with a bucket to a central site within the facility or directly to the access point. Material can then be scooped up with a loader, Gradall or excavator so that spoils can be deposited into a waiting dump truck. The loaded dump truck will then leave the facility and transport the material to an approved offsite disposal area, such as the landfill or stockpile area. Maintenance activities will be contained within smaller areas of the facility itself, typically working in concert with several equipment and crews operating at the same time in one location.

Occasionally, where equipment cannot directly access the channel or the conditions within the channel exist that would make it unsafe to enter (e.g. saturated earthen-bottom); heavy equipment will operate outside the channel along existing access roads or paved driveways and parking lots. In such cases, Gradalls or excavators will be stationed above the channel bank and directly reach into the channel to remove accumulated material. Each bucket of material will be loaded directly into a waiting dump truck to be transported to an approved offsite disposal area. This method will be limited by the width and depth of the facility or maintenance methodology, as well as the reach of the equipment.

### Non-mechanical Maintenance

Where equipment access is limited, site conditions prohibit the use of heavy equipment, or the methodology recommends vegetation trimming or removal, maintenance can be performed manually by crews using hand tools, as described earlier. As a result, non-mechanical

maintenance will be limited to removal of above-ground vegetation or trash and debris. Vegetation will be cut at its base or to the high-water mark, leaving the plant's roots in place. If the cut vegetation will not interfere with flood capacity, it will be left within the channel unless it is determined that the cut vegetation is invasive (e.g., arundo). In this event, the invasive vegetation will be collected, hauled out by hand, and disposed in a suitable, pre-approved off-site location. Above-ground removal will not be used when leaving the roots of invasive plants in place could promote their regrowth and downstream colonization. Determination as to the invasiveness of a plant species will be based on the most current California Invasive Plant Council's Invasive Plant Inventory.

### **3.3 Access**

The Master Program designates specific access points, routes and locations for each of the storm water facilities included in the proposed Master Program (see Appendix B). Access locations were determined by utilizing previous access routes and selected to limit disturbance to adjacent properties as well as provide safe access for maintenance crews. Thus, in most cases, access will occur directly from existing ramps, adjacent streets or paved areas due to the urban location of these facilities. In other cases, access will be taken from short, dirt or paved driveway(s) from nearby public streets. All maintenance conducted will use only designated access routes and will incorporate BMPs during and after maintenance activities.

Access into the facilities for maintenance may occur in several ways depending on the maintenance methodology and type of equipment used. Primary access for equipment will be taken from concrete or earthen ramps into the channel. When equipment is lowered into a facility from an adjacent staging area or public right-of-way (street), an access point may be used. For the public's safety, many of SWD channels are secured by a chain-linked fence with locked gates that typically lead to a ramp into a channel. When there is no gate for access, crews may cut a portion of a chain-linked fence for equipment. When maintenance is complete, SWD will repair the fence or install a new secured gate as necessary. When there is no fence or obstruction adjacent to the channel, equipment may occasionally operate outside the facility along existing access routes or paved/developed areas at the top of channel banks. All access points and routes will incorporate BMPs during and after maintenance activities.

### **3.4 Staging And Stockpiling**

If necessary, maintenance operations that will remove a large volume of soils will utilize temporary stockpile sites depicted on the maps in Appendix B. Stockpile sites will be used for dewatering and processing of spoils prior to transport. Processing will include removal of tires, large rocks, trash, and other debris. BMPs identified in Chapter 4.0 of this Master Program will be installed, inspected and maintained around the perimeter of stockpile sites. Appropriate permits from the Regional Board will be acquired for stockpile areas that could limit the duration and use of stockpile areas to a couple of days to several months.

Temporary staging areas, illustrated on the maps in Appendix B, will be used to store equipment and materials during maintenance operations. Typically, staging areas will be located in secured, paved or developed areas such as existing parking lots or the street right-of-way.

### 3.5 Runoff Control

Although maintenance activities within the channel facilities will typically occur in relatively dry conditions, a few storm water facilities, such as Sorrento Creek, carry sufficient amounts of urban runoff during the dry months to preclude or limit maintenance activities. In those few cases, temporary runoff control may be necessary to isolate a segment from upstream water flows. If storm water flows in the area of maintenance cannot be contained by simple best management practices (BMPs), temporary coffer-dams and/or diversion in a by-pass pipeline may be required. Cofferdams may consist of a combination of water bladders, sand bags, straw bales, and other materials. Depending upon the flow within the storm water facility, water may be pumped around the work area in a pipe. Temporary runoff control features implemented during maintenance will be removed upon completion of work unless removal would result in a greater environmental impact than leaving them in place.

## 4.0 MAINTENANCE GUIDELINES

The following protocols will be carried out and incorporated into individual maintenance activities to minimize the impact of storm water maintenance on the environment. These protocols shall be incorporated into individual maintenance activities and/or carried out by the City or contractor prior to, during, and after maintenance activities to protect sensitive environmental resources; in conjunction with mitigation measures required per the Master Program's Mitigation, Monitoring and Reporting Program (MMRP). Maintenance crews and key technical personnel (e.g. biologist, archaeologist, contractor) will implement the following measures when applicable (e.g. implement methods to eradicate and remove *Arundo donax* within a channel that contains this invasive exotic plant species). The appropriate protocols to be implemented will also be identified and outlined on each Individual Maintenance Plan (IMP).

### 4.1 Maintenance Protocols

Maintenance activities will incorporate the following protocols applicable to each site-specific condition, as described and analyzed in the PEIR.

#### Water Quality (WQ)

- WQ-1 Stabilize designated access roads (or other graded areas) with permeable protective surfacing (e.g., grasscrete), storm water diversion structures (e.g., brow ditches or berms), or crossing structures (e.g., culverts) to control erosion and prevent off-site sediment transport.
- WQ-2 Prevent off-site sediment transport during maintenance through the use erosion and sediment controls within storm water facilities, along access routes and around stockpile/staging areas. Install BMPs such as silt fences, fiber rolls; gravel bags; temporary sediment basins; stabilized maintenance access points (e.g., shaker plates); containment barriers (e.g., silt fence, fiber rolls and/or berms) for material stockpiles; and properly fitted covers for material transport vehicles. Remove temporary erosion or sediment control measures upon completion of maintenance unless their removal would result in greater environmental impact than leaving them in place.
- WQ-3 Store BMP materials on-site to provide complete protection of exposed areas and prevent off-site sediment transport.
- WQ-4 Provide training for personnel responsible for the proper installation, inspection, and maintenance of on-site BMPs.
- WQ-5 Revegetate spoil and staging areas within 30 days of completion of maintenance activities. Monitor and maintain revegetated areas for a period of not less than 25 months following planting.

- WQ-6 Implement sampling and analysis; monitoring and reporting; and post-maintenance management programs per National Pollutant Discharge Elimination System (NPDES) and/or City requirements.
- WQ-7 Avoid storing hazardous materials used during maintenance within 50 feet from storm water facilities. Hazardous materials shall be managed and stored in accordance with applicable local, state and federal regulations.
- WQ-8 Store maintenance-related trash in areas at least 50 feet from storm water facilities, and remove any trash receptacles regularly (at least weekly).
- WQ-9 Install a check dam or other comparable mechanism whenever the velocity of storm water during a “bank-full” storm event would be expected to exceed the velocities identified for unlined channels per Table 1-104.108 of the City’s Design Manual. ~~to slow runoff velocities at the downstream end of a maintenance area when hydrology and hydraulic studies indicate that maintenance could adversely impact downstream areas.~~ These structures may be removed when vegetation growth has reached a point where the structure is no longer required.
- WQ-10 Inspect earthen-bottom storm water facilities within 30 days of the first 2-year storm following maintenance. Implement erosion control measures recommended by the field engineer, such as fiber blankets, to remediate substantial erosion which has occurred and to minimize future erosion.

### Biological Resource Protection (BIO)

- BIO-1 Restrict vehicles to access designated in the Master Program.
- BIO-2 Flag and delineate all sensitive biological resources to remain within or adjacent to the maintenance area prior to initiation of maintenance activities in accordance with the site-specific Individual Biology Assessment (IBA), Individual Hydrology and Hydraulic Assessment (IHHA) and/or Individual Maintenance Plan (IMP).
- BIO-3 Conduct a pre-maintenance meeting on-site prior to the start of any maintenance activity that occurs within or adjacent to sensitive biological resources. The pre-maintenance meeting shall include the qualified biologist, field engineer/planner, equipment operators/superintendent and any other key personnel conducting or involved with the channel maintenance activities. The qualified biologist shall point out or identify sensitive biological resources to be avoided during maintenance, flag/delineate sensitive resources to be avoided, review specific measures to be implemented to minimize direct/indirect impacts, and direct crews or other personnel to protect sensitive biological resources as necessary. The biologist shall also review the proposed erosion control methods to confirm that they would not pose a risk to wildlife (e.g., non-biodegradable blankets which may entangle wildlife).

- BIO-4 Avoid introduction of invasive plant species with physical erosion control measures (e.g., fiber mulch, rice straw, etc.).
- BIO-5 Conduct appropriate pre-maintenance protocol surveys if maintenance is proposed during the breeding season of a sensitive animal species. If sensitive animal species covered by the PEIR are identified, then applicable measures from the MMRP shall be implemented under the direction of a qualified biologist to avoid significant direct and/or indirect impacts to identified sensitive animal species. If sensitive animal species are identified during pre-maintenance surveys that are not covered by the PEIR, SWD shall contact the appropriate wildlife agencies and additional environmental review under CEQA will be required.
- BIO-6 Remove arundo through one, or a combination of, the following methods : (1) foliar spray (spraying herbicide on leaves and stems without cutting first) when arundo occurs in monotypic stands, or (2) cut and paint (cutting stems close to the ground and spraying or painting herbicide on cut stem surface) when arundo is intermixed with native plants. When sediment supporting arundo must be removed, the sediment shall be excavated to a depth sufficient to remove the rhizomes, wherever feasible. Following removal of sediment containing rhizomes, loose rhizome material shall be removed from the channel and disposed offsite. After the initial treatment, the area of removal shall be inspected on a quarterly basis for up two years, or until no resprouting is observed during an inspection. If resprouting is observed, the cut and paint method shall be applied to all resprouts.
- BIO-7 Avoid mechanized maintenance within 300 feet of a Cooper's hawk nest, 900 feet of a northern harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

### Historical Resource Protection (HIST)

- HIST-1 Flag, cap or fence all historical resource areas prior to initiation of maintenance activities.
- HIST-2 Conduct a pre-maintenance meeting on-site prior to any activity that may occur within or adjacent to sensitive historical resources. The qualified archaeologist shall point out sensitive historical resources to be avoided during maintenance, identify any specific measures which should be implemented to minimize impacts, and direct crews or other personnel to protect sensitive historical resources as necessary.

### Waste Management (WM)

- WM-1 Dispose and transport compostable green waste material to an approved composting facility, if available.
- WM-2 Reuse excavated material, whenever possible, as fill material, aggregate, sand replenishment or other raw material uses. Re-used material (aggregates, soil, sand, or

silt) shall be documented in accordance with applicable local, state and federal regulations.

WM-3 Separate waste tires from excavated material and transport them to an appropriate disposal facility. If more than nine tires are in a vehicle or waste bin at any one time, they shall be transported under a completed Comprehensive Trip Log (CTL) to document that the tires were taken to an appropriate disposal facility.

WM-4 Log and transport any hazardous materials encountered during maintenance under a hazardous materials manifest to an approved hazardous waste storage, recycling, treatment or disposal facility. Personnel handling hazardous materials shall have the appropriate training to handle, store, transport and/or dispose. Hazardous materials (e.g., machine oil, mercury switches and refrigerant gases) shall be removed from appliances and disposed in accordance with this protocol.

## 4.2 PEIR Mitigation Measures

Appendix C lists mitigation measures from the Program Environmental Impact Report (PEIR) prepared for the Master Program which are applicable to the proposed maintenance activities. These measures shall be incorporated into individual maintenance activities and will be carried out by the City or contractor to reduce significant environmental impacts in accordance with the California Environmental Quality Act (CEQA).

## 5.0 MAINTENANCE PROGRAM

Maintenance pursuant to the Master Program will be conducted on an annual basis in accordance with the terms and conditions of the ~~master~~-permits which include: the City of San Diego Site Development Permit (SDP) and Coastal Development Permit (CDP); 401 Certification from the RWQCB; 1605 Streambed Alteration Agreement from CDFG; and 404 Permit from the Corps. As a result of biological and weather constraints, it is anticipated that maintenance will primarily occur during the summer and early fall prior to the rainy season (October 1 to April 30). Regulatory bird breeding season (typically from March to September) may also limit the time and duration which maintenance can be performed. The overall process is summarized below, followed by a more detailed description of each of the major steps.

The maintenance determination process will begin with the review of information compiled by SWD of facilities identified on an annual Maintenance Needs Assessment List (Needs List). Based on the Department's budget, SWD will then identify specific storm water facilities on a shorter annual Maintenance Priority List (Priority List) that will most likely require maintenance for the next fiscal year. Once the facilities have been identified, the SWD will undertake a number of individual technical assessments of each of the storm water facilities (e.g., biology, cultural, hydrology and water quality). Based on the results of these technical studies, SWD will develop an Individual Maintenance Plan (IMP) for each maintenance activity that illustrates and identifies the scope of work, maintenance methodology, equipment, duration and protocols to be implemented.

The proposed IMPs and accompanying technical assessments will be submitted to DSD and appropriate state and federal agencies for authorization under the various ~~master~~-permits. This authorization process is discussed in detail in Chapter 6.0.

Once the maintenance activities have been approved by the City and regulatory agencies, SWD will commence maintenance. If sensitive biological or cultural resources are present in or adjacent to the work area, a pre-maintenance meeting will be held with technical specialists and maintenance crews to review measures required to protect these resources.

Post-maintenance biological and cultural surveys will be conducted, as necessary, to confirm that the actual impacts from maintenance reflected the impact assumptions made from the IMPs. Based on the actual maintenance impacts, SWD will undertake the appropriate mitigation measures in accordance with the MMRP of the PEIR and conditions of the ~~master~~-permits.

On an annual basis, SWD will prepare a Maintenance Monitoring and Mitigation Report to document the maintenance activities and mitigation measures that took place in the preceding year(s). In accordance with Mitigation Measure 4.3.8 of the PEIR, this report will include the following information relative to biological resources:

- Tabular summary of the biological resources impacted during maintenance and the mitigation; and
- Master table containing the following information for each individual storm water facility or segment which is regularly maintained:

- Date and type of most recent maintenance;
- Description of mitigation which has occurred; and
- Description of the status of mitigation which has been implemented for past maintenance activities.

The annual report shall also include the following information:

- Results of water quality tests completed before and/or after maintenance;
- Discussion of vegetation growth and sediment accumulation since last maintenance event; and
- Estimate of the conveyance capacity resulting from the past year's maintenance.

The results of this report will be presented as an informational item on an annual basis to the Natural Resources and Culture Committee of the San Diego City Council and the Community Planners Committee. In this presentation, SWD will also outline the maintenance planned to be carried out in the coming year. This same information will be provided to the appropriate state and federal agencies.

## **5.1 Annual Maintenance Needs Determination Process**

On an annual basis, SWD will identify and prioritize its channel maintenance work for the coming year that considers each segment's ability to meet SWD's flood control objectives and water quality levels of service. The City's Storm Water Division SWD will distribute information regarding each year's Priority List to persons and organizations on the Master Program Notification List. The Master Program Notification List will consist of persons and organizations which have, in writing, requested notification, and will be maintained by SWD for the exclusive purpose of communicating about the Master Program. The information shared with those on the Master Program Notification List will also be posted to the City's website.

### Needs List

Initially, SWD would prepare an annual Needs List, based on routine inspections and public complaints.

Routine inspection and assessment activities are conducted by the SWD to identify storm water system facilities that need maintenance. These inspections include Storm Patrol Inspection (SPI), Routine Storm Water Facility Inspection (RSWFI), and Service Notification Inspection (SNI).

The SPIs occur on an infrequent basis, typically during rain events. An SPI is triggered when rainfall prevents crews from performing their regularly assigned duties. The SPIs are focused on inspecting storm water facilities that have been deemed critical and/or adversely affected as a result of recent rain events.

The RSWFIs typically are scheduled on an annual basis. These inspections note drainage conditions, including external conditions that may lead to system failures, and/or equipment

access problems. The frequency of routine inspections is normally increased if site conditions, drainage conditions, or maintenance history show that it is warranted.

The SNIs are based upon notification from the public that a specific facility may need maintenance. The primary source of public notifications is illegally dumped materials such as trash, appliances, furniture, shopping carts, and tires.

### Priority List

Based on preliminary hydrology studies and other considerations such as budget constraints, relevant water quality regulations and pollutant priorities in each watershed, an annual Priority List would be prepared. The evaluation of the need for maintenance would include quantitative and qualitative metrics regarding primarily flood risk to life and property, but also considering other factors such as, water quality priorities in the watershed, aesthetics, natural resources and community needs. Facilities that have documented flooding or maintenance issues that affect human health and public safety, such as vector problems, will rank higher on the maintenance Needs List. Prioritizing channel maintenance may also take into account the surrounding land uses (residential versus open space) as well as up- and down-stream channel characteristics.

## **5.2 Individual Technical Assessments**

Once the Priority List has been determined, the City will conduct a number of individual technical assessments of each of the facilities including:

- Individual Hydrology and Hydraulic Assessment (IHHA);
- Individual Biological Assessment (IBA);
- Individual Historical Assessment (IHA);
- Individual Water Quality Assessment (IWQA); and
- Individual Noise Assessment (INA).

The biology and historical studies will start with the identification of sensitive resources for consideration during the preparation of the maintenance plan for each facility. The noise studies will identify the potential for heavy equipment noise to disrupt the breeding behavior of nearby sensitive bird species. However, the hydrology/hydraulic study will be the most critical of all of the studies. The focus of this analysis will be on identifying the minimum amount of sediment and vegetation removal necessary to allow the facility to effectively convey flood water and prevent flooding.

### Individual Biological Assessment (IBA)

The site of each proposed maintenance activity, including access routes, temporary spoils storage and staging areas will be inspected by a qualified biologist to determine whether sensitive biological resources could be affected by the proposed maintenance. Upon completion of this inspection, the biologist will identify significant biological resources and discuss potential ways to avoid impacts in accordance with the measures identified in the MMRP in the PEIR and Master Program protocols. Once a maintenance plan has been completed, the biologist will

determine the potential impact of the proposed maintenance on significant biological resources and define mitigation in accordance with the approved MMRP needed to adequately mitigate for those impacts.

An IBA, using the form in Appendix D of the Master Program, will be prepared for each storm water facility where the biologist determines that the proposed maintenance could affect sensitive biological resources. The IBA will include: a summary of the biological resources associated with the storm water facility, quantification of impacts to sensitive biological resources, and the nature of mitigation measures required to mitigate for those impacts. The IBA will also identify which Master Program maintenance protocols and PEIR mitigation measures from the MMRP must be incorporated into the proposed maintenance activity.

The IBA will include the following components:

- Description of maintenance to be performed including length, width and depth;
- Protocol surveys, as needed;
- Scaled map of the affected storm water facility illustrating pre-maintenance vegetation including wetland boundaries based on evaluation of above-ground indicators of the resources; excavation of soil pits;
- Location of sensitive species;
- Quantification of impacts to all sensitive biological resources;
- Two, digital, date-stamped photos of the affected area;
- Specific maintenance protocols from the Master Program to be implemented as part of the IMP;
- Identification of any biological monitoring required during maintenance; and
- Specific mitigation from the adopted MMRP that will be required to mitigate impacts to biological resources (e.g., wetland creation/enhancement/restoration or off-site upland habitat acquisition).

### Individual Historical Assessment (IHA)

Before preparation of an IMP, each proposed maintenance activity, including access routes and staging areas, will be evaluated by a qualified archaeologist to determine the potential for historical resources to be impacted by maintenance. If the archaeologist concludes that there is a moderate to high potential for significant historical resources to be impacted, the archaeologist will conduct a foot survey of the maintenance area to determine whether historic or prehistoric resources could be impacted by the proposed maintenance. Upon completion of this inspection, the archaeologist will identify significant historical resources and discuss potential ways to reduce impacts to those resources with SWD staff responsible for preparing the maintenance. Once a maintenance plan has been completed, the archaeologist will determine the potential impact of the proposed maintenance on significant historical resources and identify mitigation needed to adequately mitigate for those impacts from the MMRP.

An IHA, using the form in Appendix E, will be prepared for each storm water facility that the archaeologist determines to have a moderate to high potential for significant historical resources. The IHA will include: a description of the potential historical resources and the mitigation

measures needed to reduce adverse impacts. If a moderate to high potential for significant historical resources is determined to exist, additional assessments (e.g. Phase Two) will be done which includes the following:

- Records search;
- Field reconnaissance (survey) with Native American participation;
- Description of historic resources present within the maintenance area;
- Description of potential impacts to significant historic resources from maintenance; and
- Identification of protection and/or mitigation of affected resources from the MMRP.

### Individual Hydrologic and Hydraulic Assessment (IHHA)

A qualified hydrologist will assess the ability of the affected storm water facility to convey storm water in its present state using Hydrologic Engineering Center (HEC) or comparable computer modeling software. Based on this analysis, the hydrologist will identify the minimum amount of sediment and/or vegetation that must be removed to allow effective flood conveyance and restore the channel to its as-built or natural condition. Wherever possible, the hydrologist will identify areas of native vegetation that may remain within the affected storm water facility, based on input from the biologist.

An IHHA, using the form in Appendix F, will be prepared for each facility. The IHHA will specifically determine whether vegetation within the storm water facility can be retained without substantially interfering with the conveyance of flood waters. It will also determine if any structures or actions are required to maintain water quality or control erosion during or after maintenance.

The IHHA will include the following components:

- Description of the existing conditions within the storm water facility;
- Hydrologic information including summary of flow rates and return frequencies;
- Description of hydraulic models created for analysis of the storm water facility;
- Capacity of the facility to convey varying flood events in both the current state and fully vegetated state;
- Capacity of the facility based on two maintenance scenarios (vegetation removal only and vegetation and sediment removal); and
- Recommendations to be utilized in the maintenance to maximize flood control while, whenever possible, minimizing vegetation removal.

### Individual Water Quality Assessment (IWQA)

An Individual Water Quality Assessment (IWQA) will be completed prior to finalizing the maintenance plans for each proposed maintenance activity using the form found in Appendix G. The report will be completed under the direct supervision of a professional civil engineer, with current California registration.

The primary function of the IWQA is to identify the level of pollutants within the segment proposed for maintenance. This baseline information will be used to compare the water quality benefits resulting from removal of sediments and plants, which have sequestered pollutants. If the IWQA reveals that water quality impacts may result, mitigation will be implemented in accordance with the MMRP from the PEIR. This information will also be used to develop any specific plans needed to protect workers from exposure to unsafe levels of hazardous materials. A description of the methodology developed to compare maintenance impacts and benefits is included in Subchapter 4.8 of the PEIR.

In general, the IWQA will include the following components:

- Identification of the existing geometry of the storm water facility including length, width and depth as well as surface flow and volume characteristics;
- Identification of vegetation and sediment characteristics;
- Sediment sampling;
- Water sampling;
- Benefit/impact calculations; and
- Mitigation, as warranted.

### Individual Noise Assessment (INA)

A baseline noise survey will be conducted by a qualified acoustician for any maintenance that could impact a sensitive bird species, as determined by a qualified biologist. This survey will determine the ambient noise levels and the 60 A-weighted decibel (dBA) time-averaged, one-hour equivalent level ( $L_{eq}$ ) noise contour from equipment operations in relation to sensitive bird habitat. Based on the results, the acoustician will identify the extent that noise could impact sensitive species, and identify measures from the MMRP to reduce noise impacts during the designated breeding seasons for potentially affected species. These measures will include noise attenuation barriers, equipment noise reducers and/or restrictions on the timing of maintenance.

An INA, using the form in Appendix H, will be prepared for each storm water facility where noise could impact sensitive species.

The INA will include the following components:

- Baseline noise survey to determine the ambient noise levels;
- Location of 60 dBA  $L_{eq}$  noise contour in relationship to bird habitat; and
- Mitigation measures from the MMRP for maintenance during a sensitive bird's breeding season.

### **5.3 Individual Maintenance Plan (IMP)**

Once the individual assessments have been completed, an IMP will be prepared for each maintenance activity. The IMP will be based on the findings and recommendations disclosed in the site-specific technical assessments. The IMP shall be signed by the hydrology engineer

responsible for the preparation of the IHHA to confirm that the IMP is an accurate reflection of the IHHA.

The IMP will illustrate and identify the following aspects of the proposed maintenance and scope of work, including:

- Length and width of facility;
- Maintenance method(s);
- Maintenance technique(s);
- Equipment type(s);
- Access roads/points;
- Staging area(s);
- Stockpile site(s); and
- Maintenance schedule.

The IMP will also identify the maintenance BMPs required to reduce impacts to water quality during and after maintenance, and applicable protocols defined in the Master Program. The goal of the IMP is to visually illustrate the findings and recommendations of the individual site-specific technical assessments. Maintenance crews and technical staff will use the IMPs to direct and limit maintenance activities within the appropriate work areas.

#### **5.4 Maintenance Implementation**

After securing the necessary authorizations or new or amended permits, the maintenance activities will occur based on the following guidelines.

##### **Storm Water Facility and Access Route Field Delineation**

Designated access routes will be field marked in accordance with the IMP. When mandated by the IBA or IHA, a qualified biologist or archaeologist will delineate with orange fencing, or the equivalent, sensitive resource areas to be avoided. The qualified biologist/archaeologist will check for any substantial change in site conditions from those shown on the IMP and have the authority to refine the access routes and maintenance methods, whenever possible, to avoid or reduce impacts to sensitive resources.

##### **Sensitive Biological Resource Protection**

At least 72 hours prior to initiating any clearing or grubbing activities which may adversely affect a sensitive biological resource, a qualified biologist will conduct any necessary pre-maintenance surveys, including bird nest surveys to provide for compliance with the Migratory Bird Treaty Act (16 U.S.C. §§703 *et seq.* [MBTA]) and Biological Resources Mitigation Measure 4.3.16.

### Historical Resource Mitigation

If historical resources were identified during the IHA, a qualified archaeologist will undertake any monitoring and/or mitigation measures identified in the MMRP in consultation with DSD.

### Weed/Erosion Control

Weeds will be removed from access areas to prevent introduction of invasive species. Areas will be monitored by the SWD staff during routine inspections.

### Waste Management

All debris accumulated during the maintenance process will be removed from the site within one week of the end of maintenance using the appropriate waste removal procedure (e.g., vacuum/pressure truck, dump truck, etc.), and disposed of at an appropriate off-site location.

### Site Close-out

Following completion of the maintenance activities and removal of all spoils and equipment, site close-out activities will, as appropriate, include: installation of erosion control devices such as straw wattles, geotextile blankets/nets, and/or hydroseed; implementation of on-site wetland/streambed restoration measures required by the PEIR; and/or securing site from public access.

## **5.5 Maintenance Reporting**

When maintenance in a facility is complete, SWD will prepare an Individual Maintenance Activity Report Form (see Appendix I) to be included in annual Maintenance and Monitoring Reports. This annual report will document the maintenance activities and mitigation measures which took place in the preceding year. During review of the original PEIR, the Community Planners Committee (CPC) made a recommendation that the SWD make a presentation of the previous year maintenance activities to the City Council Land Use and Housing Committee (LU&H). However, the appropriate council committee for review and oversight of this public program is the Natural Resources and Culture Committee (NR&C), which is responsible for providing policy direction to City departments on public projects that may affect clean water, endangered species, the MSCP, or open space (Permanent Rule 6.11.3 for the NR&C). Therefore, to meet the intent of the CPC recommendation, a presentation regarding the previous year of maintenance will be made on an annual basis to the NR&C and the CPC. In this presentation, SWD will also outline the maintenance planned to be carried out in the coming year. This same information will be provided to the appropriate state and federal agencies and included as an attachment to the City's MSCP Annual Report.

With respect to the past year of maintenance, the annual report will include the following:

- Tabular summary of the acreage of sensitive vegetation impacted at each facility that was maintained and the mitigation provided;
- Scaled map of each affected storm water facility illustrating pre- and post-maintenance vegetation;

- Updated master storm water facility list to reflect the facilities for which impacts have been mitigated and, for which, no additional mitigation will be required;
- Summary of the status of mitigation which has been carried out during the current and previous years to mitigate for impacts to upland and wetland vegetation, as well as sensitive species;
- Two digital, date-stamped photographs of each of the areas that were maintained in the current year; and
- Description of any remedial actions and the outcome of their implementation for each affected storm water facility.

With respect to the coming year of maintenance, the annual report will include the following:

- A list of all of the storm water facilities anticipated to be maintained; and
- A preliminary estimate of sensitive biological and/or cultural resources to be impacted with each maintenance activity and mitigation, pursuant to the MMRP, required to mitigate anticipated impacts.

## 6.0 SUBSTANTIAL CONFORMANCE REVIEW PROCESS

### 6.1 City Of San Diego

Annual maintenance needs shall be determined by the SWD on an annual basis. The need for maintenance will be identified on an annual Priority List. Proposed annual maintenance activities shall be approved through the City's Substantial Conformance Review (SCR) process. If it is determined that additional facilities need to be maintained and added to the annual Priority ~~annual~~ List once it has been submitted, an SCR may also be completed on that maintenance activity if it occurs in a storm water facility included in the Master Program. If a maintenance activity or location is determined not to be in substantial conformance, then a new or amended permit shall be processed in accordance with the San Diego Municipal Code (SDMC) Section 126.0113.

To initiate the SCR process, SWD will submit a general application (Form DS-3032) to DSD. In addition, SWD will provide copies of the individual technical assessments described in Section 5.1., as appropriate, and the SCR Checklist, included in Appendix J.

DSD will review the application, including mandatory technical assessments, as well as the ~~Master~~ SDP/CDP and the PEIR. Based on this initial review, DSD will make a determination as to whether the proposed maintenance activities are in substantial conformance with the Master Program, ~~Master~~ SDP/CDP and certified PEIR through a Process One or Two Decision, in accordance with SDMC Section 112.0502 or 112.0503, respectively. If DSD concludes that the activity is not in substantial conformance with the Master Program, ~~Master~~ SDP/CDP and the certified PEIR, a new or amended permit will be required in accordance with SDMC Section 126.0113.

#### Process One Decision

A Process One Decision will be used to authorize maintenance when the SCR review concludes that the proposed maintenance activities will occur in one of the storm water facilities identified in the Master Program, ~~Master~~ SDP/CDP and certified PEIR, and the following conditions apply:

1. The maintenance activity is located outside the Coastal Zone;
2. The biological resources which will be impacted by the proposed maintenance will not exceed the impacts assumed in the PEIR; and
3. The applicable mitigation measures identified in the MMRP contained in the certified PEIR as well as the applicable protocols identified in this Master Program have been incorporated into the IMP.

A Process One Decision shall be processed in accordance with SDMC Section 112.0502. For informational purposes, the primary steps associated with a Process One Decision are summarized below. However, any subsequent amendments to the SDMC could supersede the following summary.

1. SWD will submit an application for each proposed maintenance activity including mandatory technical assessments to DSD.
2. DSD will complete an Initial Study, in accordance with the California Environmental Quality Act (CEQA). Based on the information contained in the Initial Study and the application including the technical assessments, the City will determine the appropriate CEQA process for the proposed maintenance activities, and carry out that process in accordance with CEQA.

If the Initial Study and supporting documentation show that the impacts associated with the proposed maintenance activity have been adequately addressed in the PEIR and mitigation will be carried out, as defined in the MMRP, no further environmental review will be required, and the certified PEIR will be used to satisfy CEQA review requirements for the subsequent maintenance activity.

3. A copy of the application including mandatory technical assessments for each proposed maintenance activity will be mailed, as a courtesy, to the appropriate community planning group(s).
4. DSD staff will review the application to determine if the proposed maintenance activity is in conformance with the PEIR, Master Program and ~~Master~~-SDP/CDP Permit using the SCR Checklist.
5. City staff will use the certified PEIR, Master Program and ~~Master~~-SDP/CDP Permit, and render a decision to deny or approve SWD's request to conduct the proposed maintenance. The decision by City staff will be final and is not appealable.

### Process Two Decision

A Process Two Decision will be used to authorize maintenance when the SCR identifies that all the conditions associated with Process One Decision are met, but the maintenance will occur within the Coastal Zone. Process Two decisions shall be processed in accordance with SDMC Section 112.0503.

The following procedures will be followed in processing proposed maintenance activities under Process Two Decision. As discussed earlier, any subsequent amendments to Sections 112.0502 and 112.0503 of the SDMC could supersede the following summary.

1. SWD will submit an application including technical assessments information along with a Public Notice package for each proposed maintenance activity to DSD.
2. DSD will complete an Initial Study in accordance with the CEQA. Based on the information contained in the Initial Study and the application including supplemental information, the City will determine the appropriate CEQA process for the proposed maintenance activities, and carry out that process in accordance with CEQA.

If the Initial Study and supporting documentation show that the impacts associated with the proposed maintenance activity have been adequately addressed in the certified PEIR and mitigation will be carried out, as defined in the MMRP, no further environmental review will be required, and the PEIR will be used to satisfy CEQA review requirements for the subsequent maintenance activity.

3. A Notice of Future Decision will be posted at the storm water facility proposed to be maintained.
4. A Notice of Future Decision will be mailed to the SWD, property owners and occupants within a 300-foot radius of a proposed maintenance activity and the appropriate community planning group(s).
5. City staff will review the application and render a decision (see steps 4 and 5 of Process One Decision). This decision is appealable to the Planning Commission.
6. A ~~Public~~ Notice of Decision will be sent to interested persons, who previously requested, in writing, -such notice from DSD. The Notice shall be sent within no later than -two~~10~~ business days after the decision date the Notice of Future Decision is mailed.
7. The public or SWD will have 12 business days to file an appeal from City staff's decision date to the Planning Commission.
8. If an appeal is filed, a Planning Commission hearing will be scheduled approximately 60 calendar days after the appeal is filed.
9. DSD staff will prepare a Notice of Public Hearing and Planning Commission Report. ~~Within~~ At least 10 business days prior to the hearing, the Notice of Public Hearing will be published as well as mailed to property owners and occupants within a 300-foot radius of the proposed maintenance activity that is being appealed, the applicable community planning group(s), and persons who submitted a written request in response to the Notice of Future Decision.
10. The Planning Commission will consider the PEIR, Master Program and ~~Master~~SDP/CDP and make a decision to affirm, reverse or modify City staff's decision.

### Process Four Decision

If the SCR review determines that the proposed maintenance activities are not identified in the Master Program, ~~Master~~SDP/CDP and certified PEIR, the authorization will require a new or amended permit. New permits would likely require a Process Four Decision due to the presence of environmentally sensitive lands in accordance with SDMC Section 112.0507, but each application will be reviewed to determine the appropriate Process.

Process Four. As discussed earlier, any subsequent amendments to Section 112.0507 of the SDMC will supersede the following summary.

1. SWD will submit an application for a discretionary permit with a Public Notice package to DSD.
2. DSD will prepare an Initial Study for the proposed activities. Based on the Initial Study and after considering the information contained the individual assessments required by the Master Program, DSD will prepare a tiered Negative Declaration, Mitigated Negative Declaration, or EIR, or a Supplemental or Subsequent EIR or an addendum to the PEIR to address the proposed maintenance activities. The CEQA document will be circulated for public review in accordance with the CEQA Guidelines.
3. A Notice of Application will be posted at each storm water facility proposed to be maintained.
4. A Notice of Application will be mailed to the SWD, property owners and occupants within a 300-foot radius of a proposed maintenance activity and the appropriate community planning group(s)
5. City staff will review the application. Once all issues have been resolved, City staff will begin the hearing process.
6. DSD staff will prepare a Notice of Public Hearing and Planning Commission Report. At least ten business days before the hearing, the Public Notice will be mailed to the SWD, property owners and occupants within a 300-foot radius of the proposed maintenance activity that is being appealed and applicable community planning group(s).
7. The Planning Commission will consider the discretionary permit application and CEQA documentation, and make a decision. This decision will be appealable to the City Council.
8. The public or SWD will have 10 business days after the Planning Commission's decision to file appeal to the City Council.
9. City Council will hear any appeal and affirm, reverse or modify the Planning Commission's decision.

## 6.2 State And Federal Agencies

Concurrent with the City's SCR process, the SWD will also submit appropriate applications and supporting documentation to the California Department of Fish and Game (CDFG), California Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (Corps) for approval under the terms and conditions of their respective general wetland permits. The agencies will review the application and supporting documentation to determine whether the proposed maintenance activities are consistent with the analysis contained in the PEIR and the specific terms of any permit issued by the respective agency.

The City will not conduct any proposed maintenance without prior approval from the state or federal agency with jurisdiction over the affected resources.

Under the state and federal regulations, maintenance activities that could impact wetland habitat and/or species protected by state and federal endangered species acts would require one or more of the following permits or approvals.

#### 404 Permit

Under Section 404 of the federal Clean Water Act (CWA), a permit issued by the Corps would be required for maintenance proposals that would affect “waters of the United States”. The City is proposing to obtain an Individual 404 Permit under which it would conduct future maintenance activities pursuant to the proposed Master Program.

#### 401 Certification

A Section 401 Water Quality Certification issued by the RWQCB would be required for all maintenance proposals within waters of the U.S. The City is proposing to obtain a series of four-year 401 Certifications under which it would conduct future maintenance activities pursuant to the proposed Master Program.

#### 1605 Streambed Alteration Agreement

A Section 1605 Streambed Alteration Agreement issued by CDFG would be required for maintenance proposals that would impact streambeds. The City is proposing to obtain a ~~Master~~ 1605 Streambed Alteration Agreement under which it would conduct future maintenance activities pursuant to the proposed Master Program.

#### National Pollutant Discharge Elimination System Permit

A Section 402 NPDES Permit issued by the RWQCB, and/or compliance with the state General Permit for Construction Activities may be required to conduct maintenance when water quality impacts could occur during maintenance.

#### Wastewater Discharge Regulations

Wastewater Discharge Regulations (WDRs) could be required from the RWQCB whenever dewatering would occur as part of a maintenance activity. Dewatering is necessary when water within the storm water facility must be removed so that maintenance may be accomplished

#### Coastal Development Permit

A CDP issued by the California Coastal Commission would be required for maintenance within the Coastal Commission Permit jurisdiction and the Deferred Certification Areas of the Coastal Zone.

## 7.0 EMERGENCY MAINTENANCE

~~When a significant storm event is considered imminent and requires immediate action to avoid or minimize a threat of loss or damage to life, property or essential public services, the SWD may undertake maintenance on an emergency basis. Emergency maintenance may be authorized in accordance the SDMC Sections 143.0126 and 126.0718.~~

~~If the emergency maintenance occurs in a storm water facility included in the Master Program and Final PEIR and does not qualify for an exemption from CEQA, the Final PEIR may be used to process “after-the-fact” permits which may be required by the City, state or federal agencies for emergency maintenance. In this case, the mitigation measures identified in the PEIR will be applicable to the emergency maintenance activities.~~

In the event of an emergency, the City may need to conduct maintenance activities which are not included in an annual maintenance plan. The San Diego Municipal Code (SDMC) and California Environmental Quality Act (CEQA) provide the following definitions of emergency situations. SDMC Section 51.0102 defines an emergency as “the actual or threatened existence of conditions of disaster or of extreme peril to the public peace, health or safety of persons or property within this City caused by, but not limited to, such conditions as air pollution, fire, flood, storm, epidemic, riot, or earthquake, or other conditions, including conditions resulting from war or imminent threat of war.” The purposes of this Article are to provide for the preparation and carrying out of plans for the protection of persons and property within this City in the event of an emergency; the direction of an emergency organization; and the coordination of the emergency functions of this City with all other public agencies, corporations, organizations, and affected private persons.

For the purposes of CEQA, “Emergency” means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

As such, when a significant storm event is considered imminent and conditions within a part of a storm water conveyance system present a clear and imminent danger requiring immediate action to avoid or minimize a threat of loss or damage to life, property or essential public services, the SWD may undertake maintenance on an emergency basis. Emergency maintenance within environmentally sensitive lands may be authorized in accordance the SDMC Sections 143.0126 and 126.0718. Emergency maintenance outside of environmentally sensitive lands would be authorized pursuant to SDMC Section 51.0102.

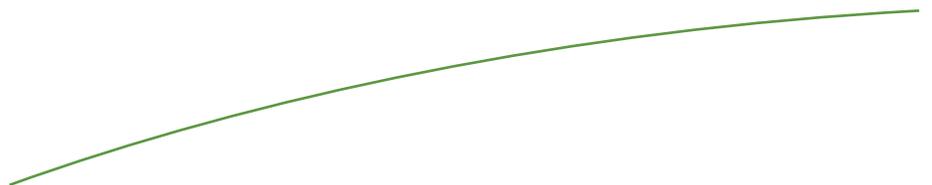
If the emergency maintenance occurs in a storm water facility included in the Master Program and Final PEIR and cannot rely on the Statutory Exemption (CEQA Section 15269, Section 21080(b)(2),(3),(4) Public Resources Code) prepared for the initial emergency activities, then the Final PEIR may be used to process “after-the-fact” permits which may be required by the City, state or federal agencies for emergency maintenance. In this case, the mitigation measures identified in the PEIR will be applicable to the emergency maintenance activities.

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Appendix A

MASTER PROGRAM STORM WATER  
FACILITIES



**Appendix A**  
**MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
1	San Dieguito	Rancho Bernardo Rd & Bernardo Center Dr	116	--	116	N	N	15
2	San Dieguito	Rancho Bernardo	1,811	1,811	--	N	N	14
3	San Dieguito	Rancho Bernardo	2,487	2,439	48	N	N	14
4	Peñasquitos	11044 Via San Marco	711	73	638	N	N	5
6	Peñasquitos	11689 Sorrento Valley Rd	1,847	1,470	378	Y	N	20
6a	Peñasquitos	3000 Industrial Court	682	417	265	Y	N	12
7	Peñasquitos	Los Peñasquitos Creek Channel	1,609	--	1,609	Y	Y	104
8	Peñasquitos	Los Peñasquitos Creek Channel	1,600	--	1,600	Y	Y	104
9	Peñasquitos	11000 Roselle St / 11100 Flinkote Ave	1,030	1,016	14	Y	N	15
10	Peñasquitos	Dunhill St & Roselle St	405	--	405	Y	N	16
11	Peñasquitos	Soledad Creek Channel	2,539	891	1,648	Y	Y	26
12	Peñasquitos	Soledad Creek Channel	1,397	1,397	--	Y	Y	59
18	Peñasquitos	Maya Linda & Via Pasar	964	--	964	N	N	22
19	Peñasquitos	Candida & Via Pasar	1,178	1,178	--	N	N	12
32	Peñasquitos	Rose Creek Channel	1,349	1,337	12	N	Y	57
33	Peñasquitos	Rose Creek Channel	1,329	1,329	--	N	N	57
34	Peñasquitos	Rose Creek Channel	1,416	376	1,040	Y	N	124
35	Peñasquitos	Rose Creek Channel	2,270	--	2,270	Y	N	104

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
36	Peñasquitos	Mission Bay High School	900	900	1	Y	N	10
37	Peñasquitos	Pacific Beach Dr & Olney St	1,078	178	900	Y	N	17
40	Peñasquitos	Chateau Creek Channel	2,242	1,387	856	N	N	18
41	Peñasquitos	Chateau Creek Channel	2,471	1,681	790	N	N	20
42	Peñasquitos	Chateau Creek Channel	874	834	41	N	N	20
47	San Diego	7969 & 7971 Engineer Rd	1,230	--	1,230	N	N	8
51	San Diego	Red River Dr & Conestoga Dr	876	876	--	N	N	10
52	San Diego	Camino del Arroyo	1,039	--	1,039	N	N	9
53	San Diego	Cowles Mtn Channel	711	378	333	N	N	8
54	San Diego	San Carlos Creek Channel	957	433	524	N	N	10
55a	Peñasquitos	West Morena Blvd	270	--	270	N	N	12
55	Peñasquitos	Tecolote Creek Channel	2,584	2,443	142	N	N	25
56	Peñasquitos	Tecolote Creek Channel	2,018	1,606	412	N	N	29
57	Peñasquitos	Tecolote Creek Channel	768	120	648	N	N	29
58	San Diego	Murphy Canyon Creek Channel	2,523	772	1,752	N	N	57
58a	San Diego	Murphy Canyon Creek Channel	2,371	633	1,738	N	N	15
59	San Diego	Alvarado Creek Channel	1,072	869	203	N	Y	46
60	San Diego	Alvarado Creek Channel	582	570	12	N	Y	29
61	San Diego	Alvarado Creek Channel	2,130	2,104	26	N	N	46
62	San Diego	Alvarado Creek Channel	2,392	2,348	45	N	N	32
64	San Diego	Alvarado Creek Channel	2,600	1,335	1,265	N	Y	40
65a	San Diego	Fairmont Creek Channel	813	749	64	N	Y	19
65b	San Diego	Fairmont Channel	848	38	811	N	Y	12

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
65c	San Diego	Fairmont Channel	1,235	1,233	2	N	Y	15
66	San Diego	Montezuma Channel	1,420	1,420	--	N	N	19
67	Pueblo San Diego	Auburn Creek Channel	635	--	635	N	N	16
68	Pueblo San Diego	Auburn Creek Channel	2,693	1,566	1,127	N	N	20
69	Pueblo San Diego	Auburn Creek Channel	2,356	2,355	1	N	N	12
70	Pueblo San Diego	Auburn Creek Channel	1,418	413	1,006	N	N	39
71	Pueblo San Diego	Chollas Creek Channel	1,199	376	823	N	N	26
72	Pueblo San Diego	Chollas Creek Channel	435	433	2	N	N	26
76	Pueblo San Diego	Auburn Creek Channel	964	--	964	N	N	27
77	Pueblo San Diego	Auburn Creek Channel	422	--	422	N	N	33
78	Pueblo San Diego	Chollas Creek Channel	2,633	2,633	--	N	N	54

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
79	Pueblo San Diego	Chollas Creek Channel	1,410	1,410	--	N	N	54
79a	Pueblo San Diego	Delevan Dr	991	--	991	N	N	30
80	Pueblo San Diego	Chollas Creek Channel	1,899	539	1,360	N	N	54
81	San Diego	Camino de la Reina & Camino del Arroyo	648	648	--	N	N	9
82	San Diego	Nimitz Channel	865	234	631	Y	N	12
83	San Diego	Famosa Blvd & Valeta St	185	66	119	Y	N	20
84	Pueblo San Diego	Washington Channel	2,515	1,026	1,489	N	N	20
86	Pueblo San Diego	Pershing Channel	2,047	1,698	349	N	N	20
89	Pueblo San Diego	Chollas Creek Channel	2,442	2,318	124	N	N	25
90	Pueblo San Diego	Imperial and Gillette Street	385	--	385	N	N	15
91	Pueblo San Diego	Chollas Creek Channel	2,498	2,498	--	N	N	32
92	Pueblo San Diego	35th St & Martin Ave	1,097	--	1,097	N	N	12 (t) 5 (b)

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
93	Pueblo San Diego	Chollas Creek Channel	2,590	1,267	1,323	Y	N	54
94	Pueblo San Diego	South Chollas Creek Channel	2,595	40	2,555	Y	N	59
95	Pueblo San Diego	South Chollas Creek Channel	1,604	--	1,604	Y	N	50
97	Pueblo San Diego	South Chollas Creek Channel	1,098	--	1,098	N	N	45
97a	Pueblo San Diego	South Chollas Creek Channel	854	292	562	N	N	55
98	Pueblo San Diego	South Chollas Creek Channel	2,800	661	2,139	N	N	49
99	Pueblo San Diego	South Chollas Creek Channel	278	--	278	N	N	34
100	Pueblo San Diego	42nd & J St	257	--	257	N	N	12
101	Pueblo San Diego	South Chollas Creek Channel	1,911	1,122	789	N	Y	34
103	Pueblo San Diego	South Chollas Creek Channel	1,237	1,046	191	N	Y	34

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
104	Pueblo San Diego	South Chollas Creek Channel	1,969	1,071	898	N	Y	34
105	Pueblo San Diego	Euclid & Castana	277	--	277	N	N	20
106	Pueblo San Diego	Encanto Channel	2,436	405	2,031	N	N	44
107	Pueblo San Diego	Encanto Channel	2,607	644	1,963	N	N	44
108	Pueblo San Diego	Encanto Channel	1,900	1,900	--	N	N	29
109	Pueblo San Diego	Encanto Channel	2,390	1,793	597	N	N	29
110	Pueblo San Diego	Encanto Channel	1,606	1,418	188	N	N	29
111	Pueblo San Diego	Encanto Channel	842	719	123	N	N	29
113	Pueblo San Diego	Jamacha Channel	815	--	815	N	N	15

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
114	Pueblo San Diego	Jamacha Channel	2,683	--	2,683	N	N	15
115	Pueblo San Diego	Jamacha Channel	1,886	--	1,886	N	N	20
117	Pueblo San Diego	Solola Channel	1,244	1,176	68	N	N	20
118	Pueblo San Diego	Solola Channel	2,416	2,084	332	N	N	18
119	Pueblo San Diego	Solola Channel	846	728	118	N	N	8
120	Pueblo San Diego	Cottonwood Channel	1,904	1,885	19	Y	N	23
121	Pueblo San Diego	Cottonwood Channel	530	522	8	Y	N	19
122	Sweetwater	Parkside Channel	1,202	1,163	40	N	N	14
123	Tijuana	Sanyo Channel	1,255	1,225	30	N	N	15
124	Tijuana	La Media & Airway	628	--	628	N	N	20
125	Tijuana	Camino Maquiladora & Cactus	1,073	822	251	N	N	10
126	Tijuana	Siempre Viva & Bristow	2,321	140	2,181	N	N	19
127	Tijuana	Britannia & Bristow	597	--	597	N	N	20
128	Tijuana	Virginia Channel	503	--	503	N	N	20

**Appendix A (cont.)  
MASTER PROGRAM STORM WATER FACILITIES**

Map No. <sup>1</sup>	Hydrologic Unit	Facility Description	Total Length (feet)	Facility Type (length in feet)		Coastal Zone?	Multiple Habitat Designation?	Estimated Disturbance Width <sup>2</sup> (feet)
				Concrete Bottom	Earthen Bottom			
129	Tijuana	Smythe Channel	1,956	1,635	321	N	N	12
130	Tijuana	Smythe Channel	1,365	--	1,365	N	N	24
131	Otay	Nestor Creek Channel	1,201	978	223	N	N	10
132	Otay	Nestor Creek Channel	968	--	968	N	N	29
133	Otay	Nestor Creek Channel	2,982	--	2,982	N	N	54
134	Otay	Nestor Creek Channel	1,309	990	320	Y	N	30
136	Tijuana	Tocayo Channel	2,637	2,485	152	Y	N	8
137	Tijuana	Tocayo Channel	1,076	1,043	33	Y	N	8
138a	Tijuana	Tijuana River Pilot Channel	2,476	--	2,476	Y	Y	25
138b	Tijuana	Tijuana River Pilot Channel	2,653	--	2,653	Y	Y	25
138c	Tijuana	Tijuana River Pilot Channel	719	--	719	Y	Y	25
138	Tijuana	Smugglers Gulch Channel	1,837	--	1,837	Y	Y	35
139	Tijuana	Smugglers Gulch Channel	1,031	--	1,031	Y	Y	35
145	San Diego	First San Diego River Improvement Project	3,325	--	3,325	N	N	250
146	San Diego	First San Diego River Improvement Project	3,231	--	3,231	N	N	250
147	San Diego	First San Diego River Improvement Project	3,370	--	3,370	N	N	250

<sup>1</sup> The Storm Water Division assigns a map number to each of the facilities which are within its jurisdiction. However, not all of these facilities are included in the Master Program. Thus, the map numbers in this table are not all sequential.

<sup>2</sup> Disturbance width for channels wider than 20 feet (top of bank to top of bank) is assumed to be the width of the bottom of the channel plus two feet up each side slope. Disturbance width for channels less than 20 feet includes bottom and all of the side slopes.