

Managed Competition Pre-competition Assessment Report

Transportation & Storm Water Department:
Storm Water Operations & Maintenance

July 18, 2012

The Pre-competition Assessment Report was prepared in accordance with the Managed Competition Guide dated July 26, 2010. The report was prepared by the Business Office with assistance from subject matter experts from the Storm Water Division.

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I. INTRODUCTION

Managed competition is a structured, transparent process that allows public sector employees to be openly and fairly compared with independent contractors for the right to deliver services. This strategy recognizes the high quality and potential of public sector employees and seeks to tap their creativity, experience and resourcefulness by giving them the opportunity to structure organizations and processes in ways similar to best practices in competitive businesses, yet still compatible with public sector realities.

The first step in managed competition is to conduct a Pre-competition Assessment (PCA) to evaluate whether a function is eligible and appropriate for competition. The purpose of this report is to document the PCA of Transportation & Storm Water Department (T&SWD), Storm Water Division, Storm Water Operations & Maintenance (SWO&M) Section (excluding Street Sweeping), and the Storm Water Pollution Prevention (SWPP) Section (Inspections only) function.

The Storm Water Operations & Maintenance functions included in this Managed Competition are:

1. SWO&M
 - a. Structures Maintenance
 - b. Channel and Pump Station Maintenance
 - c. Engineering
 - d. Regulatory Planning
2. SWPP
 - a. Commercial/Industrial & Treatment Control Best Management Practices Inspections

II. OVERVIEW OF FUNCTION

A. Background

The City of San Diego operates and maintains an extensive storm water management system to convey storm water and urban runoff for the purpose of reducing flood risk fulfilling the mandate of Section 26.1 of the San Diego City Charter to provide essential public works and public health services. That system includes nearly 700 miles of drainage pipes, 84 miles of drainage channels, over 48,000 storm drain structures, and 15 pump stations. These facilities are distributed over a 342.4 square-mile metropolitan area that is divided into seven watersheds, or drainage areas. In addition, the protection and improvement of water quality is often achieved through the performance of flood control.

The City's T&SWD SWO&M Section conducts and manages the operation and maintenance efforts for these facilities. The Section's flood control responsibilities are intended to protect life and property from potential hazards such as flooding during rain events; or sink holes and erosion caused by problematic drainage structures. The Section

is also responsible for the engineering, planning, and reporting efforts needed to fulfill federal, State, and local environmental regulatory requirements associated with the Section's operation and maintenance activities.

The City's T&SWD Pollution Prevention Inspections Section manages storm water inspections of industrial and commercial business storm and City-wide treatment control structure Best Management Practices (TCBMPs). One of the functions of this section is implementing the inspection programs for industrial and commercial facilities and TCBMPs. To meet these requirements, the City has hired a consultant to perform the required inventory and initial inspection functions.

Storm Water Pollution Prevention (SWPP) Section (Industrial/Commercial and Treatment Control BMP (TCBMP) Inspections)

Municipalities in San Diego County collect and discharge storm water and urban runoff through their storm water conveyance systems. The San Diego Regional Water Quality Control Board (Regional Board) issued the required National Pollution Discharge Elimination System permit (commonly referred to as the Municipal Permit) to local jurisdictions including the City of San Diego. This permit requires the implementation of programs to reduce pollutants in storm water and urban runoff. The Municipal Permit requires the City to inventory and inspect industrial and commercial businesses to prevent illegal discharges to the storm drain system. The current inventory of businesses subject to inspection is approximately 20,000. Every year 25% of those businesses, approximately 5,000, are to be inspected for compliance with storm water standards.

The City is also required to annually track the installation, maintenance and perform inspections of TCBMPs regardless of ownership for all TCBMPs within the City's jurisdiction.

For the past 10 years, the City has hired a consultant to meet these requirements. The current contract is due for renewal and the Pollution Prevention Section is moving forward with approval of a new contract to ensure that the City remains in compliance with required storm water inspections.¹

Storm Water Operations & Maintenance (SWO&M) Section

SWO&M receives and responds to more than 8,000 service requests (annually) to maintain, repair, clean, and investigate public storm water facilities and inspect private ones. These requests are generated by the public, non-governmental organizations (NGOs), City Council offices, the Mayor's office, other City departments, and outside agencies. As a result, the Section removes and hauls away approximately 2,000-21,000

¹ This contract contains a 'termination for convenience' clause which gives the City the right to unilaterally terminate the contract at any time without giving any reason. This clause would be exercised in the event this function's work is awarded to an outside service provider.

tons² (1,600-30,000 cubic yards) of vegetation, sediment, trash, and debris from public storm drains (outlets and inlets), open channels, pump stations, culverts, and storm drain pipes each year. Intense rain storms and inclement weather, emergency repair efforts, as well as legal and permitting restrictions will drastically change the system's maintenance needs and fluctuate the Section's workloads and priorities.

The SWO&M Section's engineers, planners, and field personnel regularly investigate and respond to inquiries regarding deferred maintenance, system failures, risk management claims, and storm water infrastructure replacement strategies. Engineering staff research, survey, design, and manage maintenance projects; planning staff obtain and ensure compliance with environmental permits and regulations; field crews schedule, plan, and conduct the maintenance and operational functions of facilities. This work also includes numerous site visits, review of detailed plans and records regarding the storm drain and adjacent municipal systems; coordination with regulatory agencies; presentations before community organizations and reports to City Council. In addition, the SWO&M Section coordinates with other City departments and the City Attorney's Office to respond to drainage concerns and resolve drainage issues.

The SWO&M Section is also responsible for mobilizing City personnel to plan and respond to storm events. During the rainy season, (typically October 1st to April 30th³), SWO&M Section personnel are charged with assessing weather reports and determining the operational procedures appropriate for storm conditions. SWO&M Section staff must coordinate with other operational divisions and sections within the T&SWD to manage City-wide storm patrol duties.

These efforts, as described above, ensure the storm water management system works to convey storm water and urban runoff in an efficient manner and to minimize flooding for the protection of life and property.

Regulatory Requirements

In the mid-1990s, a State-wide initiative was passed to educate local governments about, and enforce compliance with, environmental regulations associated with the maintenance of storm water infrastructure. As such, specific maintenance and operational activities conducted by the Section are subject to rigorous federal, state and local regulations such as the Clean Water Act (CWA), National Environmental Protection Act (NEPA), Endangered Species Act (ESA), Coastal Act, California Fish and Game Code, California Porter-Cologne Act, California Environmental Quality Act (CEQA), and the City of San Diego Municipal Code (SDMC), specifically, the Environmentally Sensitive Lands Regulations. Furthermore, specific activities such as mechanized dredging within U.S.

² The amount of tonnage removed annually is dependent upon the Department obtaining the necessary environmental permits as well as amount of material removed in order to restore the channel to its design capacity. Tonnage removed: FY2009 2,000 tons, FY2010 21,000 tons, FY2011 20,000 tons, FY2012 (estimated) 15,000 tons.

³ This timeframe is defined by the San Diego Regional Water Quality Control Board. Based on the Transportation & Storm Water Department's experience, the significant rainfall does not typically begin until November.

waters or repairs to existing infrastructure within sensitive environmental resources require discretionary permits or agreements from various federal, state, and local regulatory agencies such as the U.S. Army Corps of Engineers (ACOE), U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), California Department of Fish and Game (CDFG), California Regional Water Quality Control Board (RWQCB), California Coastal Commission, and the City of San Diego Development Services Department (DSD) who may have jurisdiction over these resources. Staff is responsible for obtaining and maintaining compliance with all environmental regulatory permits including the implementation of biological, water quality, and other conservation and mitigation measures.

In 2008, the SWO&M Section's operation and maintenance functions were aligned with the Storm Water Pollution Prevention functions to facilitate both the planning and integration of flood control as well as water quality goals and objectives.

The Municipal Permit requires each Co-permittee in San Diego County to identify and implement programs and procedures to protect and improve water quality. The effective operation and maintenance of the storm drain system is required by this permit. The Municipal Permit is updated every five years. On April 9, 2012, the RWQCB released an administrative draft of the 2012 Municipal Permit, which includes proposed new requirements affecting the Section's operation and maintenance duties. Section D.3.A of the permit requires the City to implement and maintain a minimum set of Best Management Practices (BMPs) for all municipal areas and activities. BMPs are structural control devices to treat polluted stormwater, and include operational or procedural practices. BMPs are also referenced in the Section 6.14 of the Urban Runoff Management Program approved by City Council in 2008.

In addition, the City must comply with a growing series of Total Maximum Daily Load (TMDL) requirements that set specific limits on the amount of pollution allowed to flow through and exit the City's storm drain system. The *Chollas Creek Dissolved Metals TMDL* and the *San Diego Region Beaches and Creeks Bacteria TMDL*, both developed by the RWQCB, require activities to be planned, implemented, and assessed during a 10 to 20-year TMDL compliance schedule. The City will also soon be subject to the *Los Peñasquitos Lagoon Sedimentation TMDL*. A comprehensive Load Reduction Plan for this TMDL will likely be due by the end of Fiscal Year 2013. The City will also have to comply with over 40 additional TMDL orders scheduled to be implemented over the next few years. The SWO&M Section must assist in developing, implementing, and maintaining each newly built structural "best management practice" designed to meet the load reduction levels required in these orders.

The City must also comply with recently adopted requirements associated with Areas of Special Biological Significance (ASBS). Because of these additional regulations, operation and maintenance efforts will have to be reviewed on a regular basis to ensure compliance with water quality standards. The State Water Resources Control Board approved a resolution on March 20, 2012 with stringent terms, prohibitions, and special conditions to provide special protections for marine aquatic life and natural water quality

in ASBS. Installation and maintenance of various controls and best management practices are required within six years in order to meet/maintain natural water quality standards. There are two ASBS in the San Diego region: the San Diego – Scripps (#31) ASBS off the University of California San Diego, and the La Jolla ASBS (#29) in La Jolla.

Special Projects

Storm Water System Master Maintenance Program (Master Maintenance Program)

Since the late 1990s, the maintenance of open channel facilities has become a highly regulated activity by various federal, state, and local agencies. At that time the SWO&M Section was directed to take a programmatic approach to expedite and simplify the City-wide process to routinely maintain drainage channels that may potentially impact sensitive environmental resources. In response, the SWO&M Section developed the Master Storm Water System Maintenance Program (Master Maintenance Program) to govern the comprehensive environmental regulatory permitting processes to ensure maintenance activities would avoid, mitigate, and/or minimize effects on environmental resources. The City of San Diego's Planning Commission and City Council approved the Master Maintenance Program, Site Development Permit, and certified Programmatic Environmental Impact Report (PEIR) in accordance with local and state codes and regulations. Currently, Section staff is seeking approval of the other required resource agency permits which includes a CWA Section 404 Individual Permit and a NEPA Environmental Assessment from U.S. ACOE; a CWA Section 401 Certification from RWQCB; a California Fish and Game Code Section 1605 Streambed Alteration Agreement from CDFG; and a Coastal Development Permit from the California Coastal Commission.

When all of the regulatory agencies approve and issue their associated permit/agreement(s) to the City, the planning phase of the Master Maintenance Program will require the preparation and review of site-specific individual assessments that will address hydrology/hydraulic, water quality, biological resources, cultural (historic) resources, and noise impacts that could result from anticipated annual maintenance activities. Subsequent annual authorizations from regulatory agencies will be required. During the actual maintenance efforts, the SWO&M Section will be required to comply with the conditions set forth in the various regulatory permits and agreements described above; as well as prepare and implement on-going monitoring, reporting, and mitigation efforts.

Assistance to Other City Departments

The SWO&M Section routinely assists other City departments and divisions with labor and equipment via Service Level Agreement(s) or other mechanisms. SWO&M Section crews are licensed and trained to operate heavy machinery and specialized equipment, such as bulldozers, loaders, portable pumps, and vacuums. They often assist Park & Recreation Department with their drain cleaning and swimming pool maintenance;

Street Division with storm clean-up activities, such as removal of large fallen tree limbs in the public right-of-way and use of portable pumps; and Public Utilities Department with drain maintenance after emergency water main breaks.

Public and Private Outreach, Assistance and Coordination

The SWO&M Section also manages and implements projects that improve water quality and protect habitat in support of the regulatory requirements, such as the Municipal Permit. The SWO&M Section works in partnership with various non-governmental organizations (NGOs) to maintain sedimentation basins; restore lagoon mouth openings; and remove non-native vegetation and trash within City-owned or T&SWD-managed properties and drainage facilities. This includes issuing right-of-entry (ROE) permits to NGOs, such as Groundworks and I Love a Clean San Diego, for clean-up events; providing heavy mechanical equipment and SWO&M Section crews to assist the Los Peñasquitos Lagoon Foundation in maintaining sediment-laden areas; and the Tijuana River Valley Recovery Team to find grant opportunities to implement flood control and water quality projects in the Valley. Once the grant and/or ROE permit is secured, the SWO&M Section will coordinate efforts with these public and private entities to provide them with access to the City's natural storm water conveyance systems.

Storm Water Pollution Prevention Section Assistance and Coordination

The SWO&M Section also maintains newly constructed City-owned treatment control structures best management practices (TCBMPs) and low impact development (LID) projects and infrastructure in support of water quality regulations. Many additional TCBMPs are planned for installation over the next 20 years and will become the responsibility of the SWO&M Section to maintain after construction. The number, type, and maintenance requirements are largely unknown as water quality requirements are dynamic in response to environmental conditions and an evolving regulatory framework.

Organizational Structure

Figure 1 depicts the organizational structure of the T&SWD and highlights the section(s) where SWO&M functions are performed.

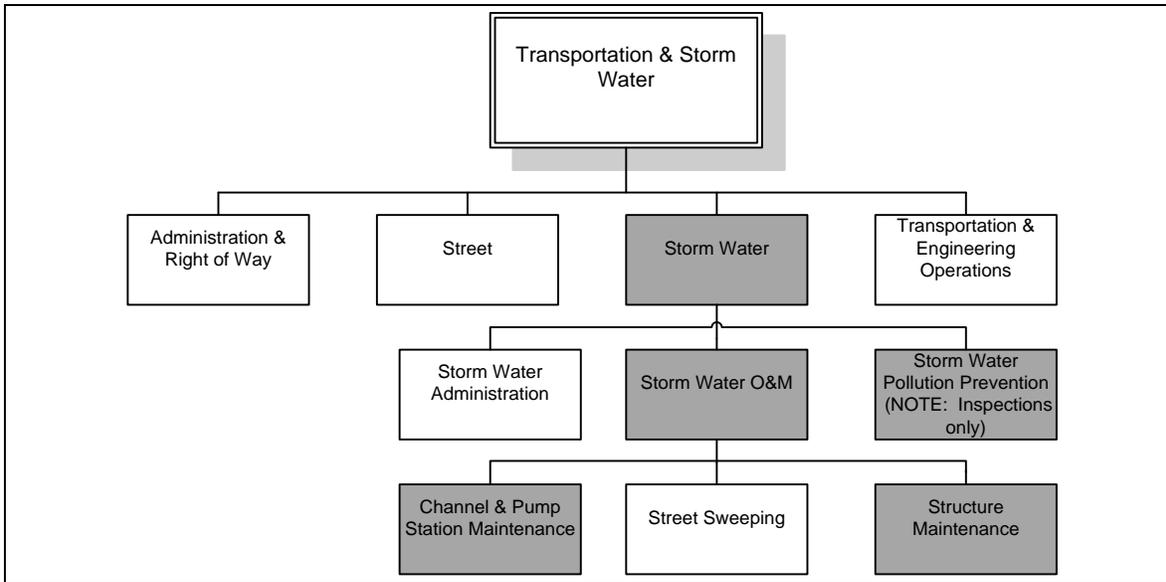


Figure 1: Organizational Chart

Maintenance functions performed by the SWO&M Section are completed by ~~REDACTED~~ full-time equivalents (FTE). The labor classifications that perform these functions are listed below.

	Job Title	Job Classification	FTE
1	Assistant Engineer - Civil		
2	Associate Engineer - Civil		
3	Cement Finisher		
4	Assistant Deputy Director		
5	Equipment Operator I		
6	Equipment Operator I		
7	Equipment Operator II		
8	Equipment Operator III		
9	Equipment Tech I		
10	Heavy Truck Driver II		
11	Plant Process Control Electrician		
12	Public Works Supervisor		
13	Utility Worker I		
14	Utility Worker II		
15	Senior Planner		
16	Program Manager		
17	Biologist III		
18	Public Works Superintendent		
	Total:		

REDACTED TO PRESERVE A LEVEL PLAYING FIELD IN COMPETITION

Table 1: Fiscal Year 2013 Storm Water Operations and Maintenance Staffing⁴

Within the Storm Water Division, there are four groups (Engineering, Planning, Channel & Pump Station Maintenance, Structure Maintenance) involved in the Storm Water

⁴ Source: City of San Diego Fiscal Year 2013 Proposed Budget

Operations and Maintenance function and one group (Monitoring & Inspections) involved in the inspection function. Of these five groups, there are ~~REDACTED~~ full-time equivalents (FTE) that perform storm water inspections, operations and maintenance related work as outlined above. The SWO&M Section are responsible for maintaining the City's extensive storm water management system which includes nearly 700 miles of drainage pipes, 84 miles of drainage channels, over 48,000 storm drain structures, and 15 pump stations distributed over a 342.4 square-mile metropolitan area divided into seven *watersheds, or* drainage areas. The SWPP Section is responsible for the inspections of industrial and commercial facilities and structural TCBMPs, which is currently done under an existing five-year contract with D-Max Engineering.⁵

B. Scope of Work and Grouping of Tasks and Activities

A critical step of the PCA process involves defining the activities and tasks that comprise a function and determining whether they are suitable for competitive procurement together, individually, or not at all. A high-level Work Breakdown Structure is provided below. A more detailed discussion of these activities follows the high-level work breakdown structure.

	Activity
1.0	Operations & Maintenance Activities
1.1	Pump Stations and Tide Gates (excludes repairing or replacement of mechanical/electrical components of storm water pump stations including tide gates)
1.2	Drain Structures (excludes repairing or replacement of storm drain structures and pipe infrastructure)
1.3	Channels (excludes repair and replacement open channel drainage facilities to restore carrying capacity)
1.4	Best Management Practices (BMPs) Structures
2.0	Spoils Management
3.0	Environmental Permitting (excludes reporting and interaction with the regulatory agencies)
4.0	Emergency and Storm Patrol Duties
5.0	Administrative/Customer Service/Coordination
6.0	Municipal Permit Inspections
6.1	Commercial/Industrial Inspections
6.2	Treatment Control Best Management Practices (TCBMP) inspections

Table 2: Work Breakdown Structure

1.0 Operations & Maintenance Activities

⁵ The Storm Water Inspection contract is valued at approximately \$1.4 million for Fiscal Year 2012. This contract expired at the end of September 2011. A Request for Proposal was issued by Purchasing and Contracting in January 2012. Costs for a new contract will be available once a final contract is in place.

The Storm Water Operations & Maintenance (SWO&M) Section is responsible for performing operation and maintenance activities for the majority of the hard assets or drainage infrastructure within the City of San Diego. These assets, which make up the storm water conveyance system include, but are not limited to, storm drain pipes, culverts under roads, storm drain inlets and outlets, open channel facilities, a few natural creeks or rivers, tide gates, and pump stations. SWO&M staff is responsible for conducting daily inspections, maintenance and repair on various types of drainage structures to determine if that asset is operating as designed. Operation and maintenance activities as described below are intended to protect the public's safety from flooding or drainage hazards and related risks as well as achieving water quality objectives. In addition to these tasks, SWO&M staff responds to emergency drainage issues, storm patrol duties during rain events, and daily administrative/customer service-related tasks.

1.1 Pump Stations and Tide Gates

The City of San Diego is responsible for the operation and maintenance of 15 storm water pump stations and six tidal flow gates (tide gates). The structural, mechanical, and electrical components of these facilities must be inspected, maintained, and repaired/replaced to ensure they are operating properly to prevent flooding in low-lying areas caused by storm water and/or high-tides. This work includes everything from exercising valves and cleaning wet-wells to the replacement of pumps, motors, and motor control centers. The City's storm water pump stations are primarily located west of Interstate-5 (I-5) with a few in Mission Valley and other low lying areas. The six tide-gates are located north and south of Mission Bay Drive along Bayside Walk.

Work on these facilities is carried out by the Pump Station crew with support from Engineering staff and the Drain Structure crew. The Pump Station crew is responsible for the operation (open and close) of tide gates and portable pumps during high-tides to prevent flooding in low-lying beach areas. They are also responsible for managing and maintaining low-flow diversion structures located within pump stations, while the SWO&M Section is responsible for the remaining low-flow diversion structures. Maintenance of these facilities is performed during standard working hours throughout the year, but increases during the rainy season (typically October 1 – April 30⁶). The rainy season is the only time of year the stations pump are at or near full capacity and any unscheduled cleaning or clogging issues must be dealt with as soon as possible to prevent future flooding during the next storm event. Pump Station cleaning and maintenance has the potential of making a non-functional station either partially or fully operational. Work can become very intense during rain events with emergency repairs and maintenance being performed at any hour.

1.2 Drain Structures

⁶ This timeframe is defined by the San Diego Regional Water Quality Control Board. Based on the Transportation & Storm Water Department's experience, the significant rainfall does not typically begin until November.

The City of San Diego is responsible for the operation and maintenance of approximately 900 miles of storm drain pipe and over 27,000 storm drain structures located within the storm water system. In general, storm drain (or drainage) pipe(s) vary in material type, size and location. While the City's inventory includes pipes as small as four-inches, the vast majority of them are at least 18-inches or larger. These pipes are typically constructed of reinforced concrete (RCP), but may also be corrugated metal (CMP), high-density polyethylene (HDPE) or polyvinyl chloride (PVC). The SWO&M Section is responsible for all storm drain pipes within the public-right-of-way, City-owned property managed by the Storm Water Division and recorded drainage easements dedicated to the City of San Diego. Drain structures maintained by SWO&M Section include, but are not limited to, curb inlets, cleanouts, culverts, headwalls, and the pipe itself. These drain structures are located throughout the City and vary in age from recently constructed to over one hundred years old. The Drain Structure crew and Engineering staff are responsible for routine cleaning, maintenance and repair on/replacement of these pipes and structures.

Work on the drain structures includes routine cleaning, removal of obstructions, repair of damaged structures, and complete replacement of failed systems. In all cases, Drain Structure crews and Engineering staff perform visual inspections of the drain pipes/structures or have them televised to determine the size, nature and limits of the problem (SWO&M Section staff must be trained and certified in confined space entry to conduct these inspections). If the cause of a drain failure is not clear, Engineering staff is tasked to determine the cause of the problem (e.g. the system is undersized or overloaded by an adjacent basin). The cleaning of drain pipes/structures involves routine removal of trash and debris and the eradication of obstructions lodged in pipes (hubcaps, 2x4's, etc). Crews typically perform cleaning and obstruction removal by hand (including the use of hand tools) or with the use of large vacuum equipment. If an obstruction cannot be removed by hand or with the use of a vacuum or jet system; the pipe/structure must be exposed, cut open, and the item removed. At that point, the pipe is repaired and the trench restored, which may involve reestablishing the street and/or sidewalk. The repair of damaged structures typically consists of concrete and steel work on curb inlets or grates, but could be on any part of the drainage system, including channels and pump stations. The Drain Structure crews also complete the removal and replacement of failed storm drain pipe. This ranges from replacing small portions of pipe (typically 8 feet) up to entire lengths between two drainage structures. Excavation related debris removal and pipe repair requires heavy mechanical equipment and must be supported by the Channel crew.

Beyond the routine maintenance, Planning staff assists the crew by obtaining the necessary regulatory permits (e.g. Coastal Development Permit) required for any work in sensitive areas such as the Coastal Zone.

Routine inspections and cleanings are typically performed throughout the dry season (May through September) while the removal of obstructions is performed on an as-needed basis. Similar to the pump stations, maintenance occurs during standard working hours throughout the year, but increases during the rainy season and can become very

intense when responding to emergencies, working extended hours, or during storm preparation efforts.

1.3 Channels

The City of San Diego is responsible for the operation and maintenance of approximately 84 miles of storm drain channels within the storm water system. Unlike storm drain pipes and structures, channels (including ditches) are typically open to environmental conditions and can be natural (earthen), partially improved (concrete or armored sides with earthen bottom), or completely improved (sides and bottom lined with concrete). They range in width from a few feet up to approximately 100 feet and are typically 5-10 feet deep. These facilities are located throughout the City and vary in age from recently constructed to existing natural creeks and rivers.

Work on the channels is primarily performed by the Channel crew but also includes support from the Drain Structure crew, Planning staff, Engineering staff, and Pump Station crews. Routine channel inspections and minor trash and debris removal are typically performed throughout the dry season (May through September). However, the removal of sediment and vegetation (including trimming) is restricted by specific regulatory agency permit conditions that will preclude impacts to state and federally listed (endangered and threatened) breeding birds (typically February 15th to September 15th) and water quality when heavy rains begin (typically by November 1st⁷). As such, channel maintenance must be performed during a few months out of the entire year, and can be stopped by environmental conditions that change year to year. SWO&M Section staff performs channel maintenance during typical working hours, but may be required to work extended hours or on weekends as necessary. During emergency situations, such as flooding, crews must perform work any time there is an imminent threat to life and property.

Channel maintenance is highly regulated by federal, state, and local agencies, including U.S. ACOE, U.S. FWS, California RWQCB, CDFG, California Coastal Commission, and the City of San Diego's DSD. Therefore, the majority of activities must be authorized and be preceded by Planning staff reviewing and obtaining all necessary permits (refer to Environmental Permitting function below). Channel maintenance, which may include dredging, vegetation removal or trimming, and/or trash and debris collection, is performed to restore the channels' storm water conveyance capacity while minimizing flood risks; and adhere to the Municipal Permit and adopted TMDLs. The majority of open channels, typically natural creeks and rivers, also contain sensitive environmental resources such as wetland vegetation.

Channel inspections are necessary to document conveyance capacities that may be impaired by accumulated sediment, vegetation, trash and/or debris. If any channel activity has the potential to impact sensitive environmental resources, Planning staff may

⁷ This timeframe is defined by the San Diego Regional Water Quality Control Board. Based on the Transportation & Storm Water Department's experience, the significant rainfall does not typically begin until November.

investigate further to determine if a regulatory permit is required or a resource agency needs to be notified before any maintenance activity is conducted. Once a regulatory permit (or permits) is issued or work is authorized by a regulatory agency, the Channel crews can remove or trim obstructions within open channels by hand, using hand tools, small mechanical equipment, or while using small to large equipment such as skid-steers, bulldozers, gradalls, etc. When conducting channel maintenance activities, Channel crews must comply with all conditions set forth in the various regulatory permits to avoid, minimize, and/or mitigate identified impacts on environmental resources. Engineering staff offers construction support throughout the process by providing design work, cost and time estimates, engineering drawings, surveying support, and the acquisition of materials, equipment, and specialty contractors.

In addition to maintenance and repair activities, Channel crews are responsible for graffiti abatement and managing transient removal efforts located within drainage facilities on City-owned property managed by Storm Water Division and/or recorded drainage easements dedicated to the City of San Diego. SWO&M staff coordinates with the City's Police Department and Environmental Services Department to protect the public's safety and restore the facilities' visual aesthetics.

1.4 Best Management Practices (BMP) Structures

The City of San Diego is responsible for the operation and maintenance of an ever increasing number of permanent post-construction TCBMPs. There are currently 26 City-owned TCBMPs that SWO&M maintains; but the number is continuing to grow due to 1) new TCBMPs installed in the City's right of way by Capital Improvement Projects (CIP) to comply with the Municipal Permit hydro-modification and treatment control requirements 2) additional watershed load reduction pilot projects are coming on line annually 3) new structural BMPs may be constructed to meet TMDLs. In the past the BMPs were mechanical (hydrodynamic separators and catch basin inserts), but in recent years they have begun shifting to Low Impact Development (LID) (bioretention and/or infiltration). These facilities are primarily located in areas of new development. However, many exist throughout the City. Their installation has been driven by regulatory requirements and they are less than 10 years old. Work on these structures is usually performed by the Drain Structure crew and Engineering staff; but as more of the LID type TCBMPs come online, Channel crews and their associated heavy equipment will be utilized. The TCBMPs are typically cleaned once per year prior to the rainy season, with additional maintenance performed, depending on the TCBMP and its pollutant loading.

During maintenance activities, SWO&M staff is also required to install and manage temporary BMP structures, such as straw wattles, sandbags, etc., intended to protect water quality and environmental resources in conformance with the City's Storm Water Standards and Municipal Permit.

2.0 Spoils Management

The SWO&M Section must also manage, transport and dispose of each activity's collected spoils and material, which includes, but is not limited to, accumulated sediment, vegetation, trash, and debris to an appropriate disposal facility. The SWO&M Section manages spoils in various ways. Dry material that has been excavated or removed from a facility or structure can be hauled directly to an approved legal disposal site and wet material may require interim handling. Temporary stockpile areas can also be used to separate materials, which can be recycled or transported to a greenery. Hazardous materials, such as tires, that crews have sorted and separated must be handled, hauled and disposed of in accordance with federal, state and local requirements. Heavy periods of work are often the by-product of channel clearing during the fall and winter. However, debris is generated from drain cleaning year round. This function can be very intense if permit regulations require work to be completed within restricted or limited timeframes. SWO&M staff is also responsible for weekly maintenance of Chollas Operations Yard wash rack.

3.0 Environmental Permitting

As stated above, the majority of operation and maintenance activities are regulated by various federal, state, and local laws intended to protect and/or minimize impacts to environmental resources. These regulations include, but are not limited to, CWA, NEPA, ESA, Coastal Act, California Fish and Game Code, California Porter-Cologne Act, CEQA, and the SDMC. As part of the environmental permitting process, the SWO&M Section must work with the public; various stakeholders; NGOs; environmental groups; and several regulatory agencies⁸ that are responsible to enforce those laws and may require a specific permit/agreement and associated environmental document to condition an activity to avoid, minimize and/or mitigate impacts.

The SWO&M Planning and Engineering staff is responsible for the interpretation and compliance with any applicable environmental permitting regulations and engineering conditions that SWO&M Channel & Drain Structure crews are subject to when performing any operational repair, construction and/or maintenance activity on or within City drainage facilities. Planning staff provides technical support to crews to determine if proposed activities would require regulatory or environmental permits and the associated NEPA/CEQA document/determination. Once Planning staff determines the proposed work is a regulated activity, they may assign specific technical work to their contracted consultants who are qualified to prepare reports or site-specific studies that may address a specific environmental resource, such as biology, hydrology, water quality, air quality, noise, archaeology, paleontology, waste management, geology, visual and/or land use issues such as coastal resources. Engineering staff assists with the development of

⁸ Regulatory agencies can include but are not limited to the US Army Corps of Engineers (ACOE), US Fish and Wildlife Service (FWS), US Environmental Protection Agency (EPA), California Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), California Coastal Commission, and the City of San Diego's Development Services Department (DSD).

maintenance plans, which conform to environmental regulations and permit conditions. As subject matter experts, Engineering staff can also advise on hydrology and water quality issues. Both Planning and Engineering staff will review these technical reports to ensure they are prepared in accordance with specific standards and guides acceptable and approved by each regulatory agency. Planning staff will then package all necessary supporting information and process those permit applications (which include any technical reports) with each applicable federal, state, and local regulatory agency. Depending on the complexity of the proposed work, completion of the permit planning process may take a few months to several years.

When the necessary regulatory permit/agreement(s) are issued, Planning and Engineering staff is then responsible to implement and ensure compliance with all conditions set forth in each permit/agreement. Planning staff may coordinate efforts with the Channel/Drain Structure crews and regulatory agencies to ensure environmental resources are protected. This may require staff or a qualified contracted consultant to monitor the work performed to ensure permits and regulations are followed and impacts to sensitive resources are avoided, minimized or mitigated appropriately.

The majority of channel maintenance is typically restricted to a specific time of year to avoid and/or minimize impacts to sensitive animal species, usually birds. Each permit will specifically identify those restricted dates (typically between February 15th to September 15th) to avoid and/or mitigate any potential impacts to threatened or endangered state/federally listed species or their habitat. In addition, proposed work can also be prohibited during and after significant storm events, which may cause hazardous conditions for crews and/or exacerbate impacts to water quality or other environmental resources. These restrictions must be complied with and incorporated into the project schedule.

Furthermore, Planning and Engineering staff is also responsible for the mitigation and reporting requirements set forth in the permit/agreement(s) issued by the regulatory agencies. Mitigation strategies and requirements vary based on the environmental resource. For example, biological mitigation may require the creation/installation of a specific habitat type off-site; whereas, water quality mitigation may require the installation of BMPs (e.g. straw wattles, sandbags, etc.) during construction to offset impacts downstream. Reporting requirements may also vary based on what information needs to be tracked by each regulatory agency. One agency may require weekly reports and status of updates; whereas another agency may require engineered (as-built) drawings documenting the work that was performed and completed. The regulatory agencies coordinate with Planning and Engineering staff to ensure these conditions are met and impacts to the environment are avoided or minimized appropriately.

In support of the City's need to conduct routine channel maintenance, which alleviates flooding risks; the Planning and Engineering staff manage the development, review, and approval of the City's Master Storm Water System Maintenance Program (Master Maintenance Program) and its associated Program Environmental Impact Report (PEIR) with the U.S. ACOE; U.S. EPA; U.S. FWS; California RWQCB; CDFG; California

Coastal Commission; and City of San Diego's DSD, Planning Commission and City Council. The Master Maintenance Program is a programmatic project that outlines the requirements to conduct channel maintenance activities on an annual basis.

Under the Master Maintenance Program, the SWO&M Section will manage a master maintenance list based on priority criteria. This list will be compiled from various sources of data (notifications, route-slips, public input, risk management claims, and site inspections). Each fiscal year, the SWO&M Section will prioritize channel maintenance activities (priority channels) from this list, taking in consideration the Department's budget and resources. Each priority channel slated for maintenance will require the preparation of site-specific technical studies (individual assessments). Engineering staff will review each priority channel's Individual Hydraulic and Hydrological Assessment(s) to develop Individual Maintenance Plan(s) (IMPs). The IMPs will include, but are not limited to: the facility's dimensions, maintenance methodology, access, staging, storage, type of equipment, manpower, spoil management, BMPs, and any other measures intended to minimize and protect environmental resources. Planning staff will review technical studies, provide input on policy decisions, determine BMPs, and develop the scope(s) of work to ensure compliance with the Master Maintenance Program, PEIR, as well as any other regulatory and environmental permit requirements. These technical studies, IMPs, and proposed project scope(s) will be packaged together and submitted to the regulatory agencies for approval. If the regulatory agencies authorize work, the SWO&M Section staff and crews are then responsible to carry out the maintenance work prescribed, including the implementation of specific maintenance protocols and mitigation measures prior to, during and after maintenance activities are conducted. Planning staff is responsible for documenting and reporting the actual maintenance work that was completed to regulatory agencies, interested parties, and designated committees.

As part of the environmental permitting function, Planning staff is also responsible for reviewing and commenting on public or private projects and their associated NEPA/CEQA documents which may affect infrastructure that SWO&M manages and maintains. They must also coordinate with other City departments (e.g. Public Utilities, Park & Recreation, DSD, Local Enforcement Agency); other federal, state and local agencies; and NGOs associated with environmental resource protection, establishing flood control agreements, and the protection of the City's/public's best interest. In coordination with the City Attorney's Office, Planning staff reviews projects proposed by private citizens and other public entities to authorize work within City-owned drainage facilities. These projects, which require a ROE permit from the T&SWD, typically include special clean-up events held by NGOs and environmental groups.

4.0 Emergency and Storm Patrol Duties

The SWO&M Section has designated staff on-call during and after normal business hours to respond, assist, and manage emergency or storm patrol workflows. The primary purpose of this function is to protect the public's safety. During stand-by emergency and/or storm patrol duties, SWO&M staff monitors and responds to all drainage and flood-related emergencies, including those caused by inclement weather (e.g. rainfall),

man-made events (e.g. pipe failures, sink holes), or natural disasters (e.g. high tides). There are typically four to ten storms throughout the rainy season that require emergency and storm patrol responses, but intensity, duration, and number of storms varies from year to year. In addition to rain storms, drainage system-related emergencies occur throughout the year, which often threatens life and property.

During a typical emergency, such as flooding or a sinkhole opening in the public right-of-way, SWO&M crews secure the area by placing barricades and/or establishing traffic patterns directing traffic away from the hazard. The responsible Public Works Supervisor (PWS) will respond to the site and develop a plan to immediately relieve the flooding or temporarily address the problem to protect life and property.

During Storm Patrol periods, the responsible PWS will proactively dispatch SWO&M crews to patrol flood-prone areas within the City, such as Mission Valley. SWO&M crews are responsible to close streets, remove obstructions that may be blocking drain inlets and could cause flooding. Pump Station crews patrol and monitor the 15 pump stations to make sure the pumps are functioning as designed. They also monitor tide gates and, if necessary, set up temporary pumps in low-lying alleys in Ocean Beach, Mission Beach, Pacific Beach, and/or any other problem areas that may flood during a storm event.

Engineering staff is responsible for providing construction and design support when an emergency drainage issue (e.g. sink holes or mudslides caused by damaged pipes) is identified. During Storm Patrol, Engineering staff uses the opportunity to witness drainage systems conveying storm water. These events often uncover issues that would be cost prohibitive for technical analysis to uncover. Engineering staff is called upon during prolonged, intense storm events to man pump stations or portable pumps when available working hours for primary staff have been depleted.

During emergency or storm patrol duties, Planning staff is on-call to conduct site investigations, determine if resource or regulatory agencies need to be notified, and obtain the necessary authorizations from the federal, state, local agencies that may have jurisdiction over those resources to mitigate the risks associated with flooding when there is an imminent threat or loss of life and property. Staff is also responsible to assist and direct SWO&M crews in the field when emergency work is conducted to avoid and/or lessen impacts on environmental resources.

5.0 Administrative Tasks/Customer Service

The SWO&M Section is responsible for performing administrative and customer-service related tasks such as determining drainage system ownership, contract management, prioritizing work, reporting, plan checking public storm water facility designs, as well as recording and documenting work performed by crews. Staff must respond to drainage related inquiries, such as Service Notifications (SNs) and Route Slips from public or private entities (e.g. residents, regulatory agencies, environmental groups, or NGOs). They also assist and coordinate with other City departments and divisions; other federal,

state and local agencies; and NGOs to address drainage issues. Staff provides support to Department Management, as well as the City Attorney's Office; while investigating and responding to issues related to Risk Management claims, SNs, lawsuits, and Public Record Act requests.

Administrative tasks include preparing vendor specifications, procurement of parts, supplies and equipment through the City's purchasing system, and project management functions associated with managing contracts and consultants. Staff negotiates consultant scopes of work and budget for environmental consultant support related to environmental permitting and construction/maintenance work that requires specialized or qualified technical support.

The SWO&M Section must coordinate with the Storm Water Pollution Prevention Section staff to ensure compliance with RWQCB's Municipal Permit requirements, water quality regulations and related policies. To meet the Storm Water Division's mission statement, SWO&M supervisory staff has been assigned to specific watersheds to serve as co-Watershed Asset Managers and subject matter experts.

6.0 Industrial/Commercial and Treatment Control BMPs Inspections

One component of the Municipal Permit is the Industrial and Commercial Inspection Program. This program is meant to prevent the discharge of pollutants from industrial and commercial facilities to the creeks, streams, lakes, bays and the ocean in the San Diego region. Under this program, the City is required to annually inventory, inspect, document, and report on all designated industrial and commercial facilities within its jurisdiction.

An additional requirement of the Municipal Permit is to implement the City's program for tracking the installation, maintenance, and performing inspections of treatment control best management practices (TCBMPs). The City is required to annually update the inventory and condition of TCBMPs regardless of ownership.

6.1 Commercial/Industrial Inspections

The Municipal Permit requires the City to inspect industrial and commercial businesses within its jurisdiction to prevent discharges of pollutant to the Municipal Separate Storm Sewer (MS4) in accordance with the Municipal Permit and the SDMC (§43.03). The City hired an engineering firm . to perform the tasks required to meet the City's industrial and commercial inspection requirements.

An annual inventory and prioritization of all businesses within categories defined by the Municipal Permit is conducted. The City is then required to annually inspect all high priority businesses or 25% of the inventory, whichever is higher, approximately 5,000 currently. The City maintains a database to track this information.

Inspections that meet the minimum requirements of the Municipal Permit are conducted throughout the year. Businesses that require enforcement are referred to City staff.

Reporting to the City is conducted on a monthly basis with an annual report that includes Jurisdictional Urban Runoff Management Plan (JURMP) reporting text.

A full description of the Industrial and Commercial Inspection Program requirements will be provided in the Statement of Work.

6.2 Treatment Control Best Management Practices (TCBMP) Inspections

The City is required to inventory and verify operation and maintenance of approved TCBMPs within the City regardless of ownership. These TCBMPs were installed to meet the City's Standard Urban Storm Water Mitigation Plan (SUSUMP) requirements. The City hired an engineering firm to conduct inspections of sites with TCBMPs.

The City's TCBMP inspection program consists of three major components: inventory maintenance, site inspection, and project maintenance self-verification by each responsible party. The City maintains a TCBMP database to collectively track this information.

Each project included in the City's TCBMP inventory is assigned a threat to water quality priority of high, medium, or low. The Municipal Permit requires inspection of all high threat to water quality sites and 50 percent of projects that have at least one drainage insert each year. Other sites are inspected on an as needed basis. Non-compliant sites are referred to the City for enforcement as necessary.

A full description of the TCBMP inspection program requirements will be provided in the Statement of Work.

II. ANALYSIS OF ELIGIBILITY AND APPROPRIATENESS FOR COMPETITION

The PCA report should evaluate the eligibility and appropriateness for competition according to the following criteria:

- Inherently Governmental Determination – Is the function inherently governmental or is the task “so intimately related to the exercise of the public interest as to mandate performance by City personnel”?;
- Legal Limitations – Are there legal restrictions regarding a function, activity or task being competitively procured?;
- Availability of Alternatives – Does a sufficient market exist and would the City be likely to receive at least two proposals?;
- Efficiency & Economic Gain – Could savings be achieved through competitive procurement?;
- Risks to Competition – Are there risks to competition (including service interruption, financial liability and damage to public trust or welfare) and how could the risks be mitigated (e.g., in the event of default)?; and

- Workload, Performance and Property Data – Do we currently have the information required to conduct a competition?

These criteria provide the framework for assessing the eligibility and appropriateness for the Storm Water Operations and Maintenance function to proceed to competitive procurement immediately or at a later date.

A. Inherently Governmental Determination

According to the Managed Competition Guide, inherently governmental functions are defined as “those services so intimately related to the exercise of the public interest as to mandate their performance by City employees.”

Using this definition, the Mayor does not determine storm water operations and maintenance services to be inherently governmental functions due to the following factors: portions of the overall function are outsourced by the City itself and other governments, including the federal government; it is not a policy-setting function; and, competing the function does not pose an inherent threat to public welfare. However, the following items were found to fall under Charter § 94, as discussed in the Legal Limitations section, thereby excluding them from Managed Competition:

- Repairing mechanical/electrical components of storm water pump stations
- Repairing/reconstructing open channel drainage facilities to restore carrying capacity
- Installing permanent/structural BMPs (these are generally CIP projects)
- Replacement of storm drain pipe infrastructure

Additional Out-of-Scope Tasks

In addition to the Charter § 94 items, all of the reporting to the regulatory agencies is out of scope and will continue to be performed by City employees. Because the City is ultimately responsible for ensuring compliance with all of the permit requirements, it is important that the City maintain its reputation and relationship with regulatory agencies.

Also, any instances where an external service provider is in a position to perform operations planning (e.g. be involved in preliminary discussions, defining the scope of work to be done, negotiations, compromises, and solicitation of bids for government contracts), and the implementation of those same planning efforts is prohibited (and considered to be out-of-scope of this competition) since a consultant’s participation in operations planning and then implementing those programs, could potentially involve that consultant acting in his or her own interests, rather than the best interests of the City. More information is provided in the ‘Legal Limitations’ section of this document.

B. Legal Limitations

The City Attorney's Office has identified some legal limitations that preclude an outside entity from performing some of the Storm Water Operations and Maintenance functions on its behalf.

Services Currently Contracted Out

Some of the Storm Water Operations and Maintenance duties are already performed by private contractors under existing contracts. Managed competition may result in the early termination of these existing contracts. The City may be liable to contractors for early termination costs under the terms of the existing contracts.⁹

Repair and Public Works Projects

While maintenance of public facilities is eligible for managed competition, repair of public facilities is not. 2011 City Attorney Report to Rules Committee (2011-35; Sept. 26, 2011). The Charter requires that contracts for the repair of public facilities be awarded to the lowest responsible and reliable bidder. Charter § 94. The City cannot consider the relative qualifications of bidders when awarding a contract based on low bid. The managed competition provision in the San Diego Charter - Charter § 117(c) - allows the City to hire private firms to provide "City services" under certain circumstances. The managed competition process involves the consideration of factors other than price, including efficiency, service quality, and the public interest. *Id.* Storm Water Operations and Maintenance performs both repair work and maintenance work. Frequent small tasks, such as cleaning storm drains and catch basins and routine upkeep of City-operated BMPs is maintenance work. Larger, less frequent work such as replacing major components of pump stations, reconstructing open channel drainage facilities to restore carrying capacity, and installing permanent BMPs is repair (or construction) work. The different award criteria for repair work and maintenance work in the City Charter precludes the City from bundling all the work performed by Storm Water Operations and Maintenance into one contract. If repair work is awarded through managed competition to a contractor that did not bid the lowest price, the award would violate Charter § 94. Therefore, repair and maintenance must be awarded through separate contracts, and repair duties should not be included in the scope of work for managed competition.

Consultant Services

There are two potential issues with including consultant services in the scope of work for managed competition. First, as is the case with public works contracts, there are specific requirements for awarding consultant contracts that are potentially at odds with the managed competition award criteria. Council Policy 300-07 requires that consultant contracts for performing work requiring professional licensing must be awarded to the "highest qualified" consultant. The managed competition process based upon Charter §

⁹ Though the Department's recent contracts contain a 'termination for convenience clause', the City is liable for the contractor's wind-down costs in the event of early termination of a contract.

117(c). involves the consideration of factors other than the qualifications of the bidders, including price, efficiency, service quality, and the public interest. Thus, City Council would have to waive Council Policy 300-07 to include consultant services in the scope of work for managed competition that requires professional licensing.¹⁰ Council Policy 300-07 does allow for costs and other factors to be considered for consultant work that does not require professional licensing. State and federal law also include requirements for awarding consultant contracts that apply in cases where the City is using State or federal funding. If consultant services were awarded using the managed competition criteria, then state or federal funding that would otherwise be available could be precluded.

Second, a conflict of interest would arise under California Government Code section 1090 and the City's Code of Ethics if a consultant were to perform all of the tasks listed in this Pre-Competition Assessment. The problem arises where the same consultant is in both a program manager-type position, such as serving as a watershed asset manager or performing many of the tasks under "Operations Planning," and also implements that program.

Consultants who are hired to perform public functions are covered by Section 1090, which precludes a public officer or employee from participating in the making of a contract in which he or she is financially interested. A consultant would be considered to be participating in the making of a contract for purposes of Section 1090 when he or she is involved in preliminary discussions, planning, negotiations, compromises, and solicitation of bids for government contracts. The application of Section 1090 is extremely broad, and is not limited to situations in which actual fraud or dishonesty is involved.

A consultant's participation in operations planning or acting as a watershed asset manager, and then implementing those programs, could potentially involve that consultant acting in his or her own interests, rather than the best interests of the City. It is the opinion of the City Attorney's Office that a consultant who is involved in defining his or her own scope of work -- such as planning how much or which maintenance projects should be completed, or developing plans to comply with regulatory orders where there is a significant degree of discretion involved -- creates a conflict of interest under Section 1090. The City Attorney's Office is preparing a memorandum on this issue.

C. Availability of Alternatives

Another important element of the competition criteria is identifying whether a potential market exists for the function under review. The Ordinance requires that at least two independent service providers submit proposals to a Request for Proposals (RFP) or the Managed Competition Independent Review Board shall not recommend to the Mayor that the contract be awarded to the independent contractor.

¹⁰ For Council Policy 300-07 to be waived, the Council would have to vote to waive it at a public meeting.

The City identified private sector companies that may be interested in participating in a competitive procurement process; although most, if not all, may need to subcontract elements of the work to be able to complete the full range of Storm Water Operations and Maintenance tasks. These companies are identified in Table 3. The City's Purchasing & Contracting Department also provided names of vendors that have done or are currently doing Storm Water Operations and Maintenance related business with the City, as well as companies who have expressed interest in bidding on work advertised by the City. This list can be found as an appendix to this report.

Also, the City of San Diego's Regional Consolidation of Services Survey issued in November 2010 identified three local jurisdictions that were interested in providing Storm Water Operations and Maintenance services. They include the cities of Chula Vista, Imperial Beach, and Oceanside.

	Service provider	Description	Provided/es services to governmental entities?
1	AMEC (formerly Mactec)	Provides environmental consulting services	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ U.S. Navy ▪ Barnes Air National Guard Base ▪ F.E. Warren AFB and Headquarters Air Force Space Command ▪ Fort Dix (New Jersey)
2	APT Water	Provides storm water operations and maintenance services which include debris removal, inspections to reduce the pollutant discharge, illicit discharge detection and elimination, and public education outreach	Yes: <ul style="list-style-type: none"> ▪ City of Burbank ▪ City of San Simeon ▪ County of Riverside
3	Christian Wheeler Engineering	Provides structural engineering review and special inspection of installation process	Yes. City of San Diego.
4	Chula Vista Electric	Provides electrician services on medium voltage electrical systems	Yes. City of San Diego.
5	D-Max Engineering, Inc.	<ul style="list-style-type: none"> ▪ Provides consulting services in water quality and environmental sciences to local municipalities and private corporations throughout Southern California. ▪ Specializes in the field of storm water management, analysis, and regulatory compliance ▪ Assists clients in complying with regulations associated with Municipal Permits and with general, statewide permits 	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ Unified Port District ▪ City of National City ▪ City of San Marcos ▪ City of Vista ▪ City of La Habra ▪ City of Poway ▪ City of La Mesa ▪ City of Lemon Grove ▪ City of Santee ▪ City of El Cajon ▪ City of Encinitas ▪ City of Carlsbad ▪ City of Mission Viejo
6	Dudek, Inc.	Provides as-needed environmental consulting services	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ City of Carlsbad ▪ City of Mission Viejo ▪ City of Vista
7	EDAW (now AECOM)	Provides environmental consulting services	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ FEMA ▪ Andrews Air Force Base (Maryland)
8	Helix Environmental Planning	<ul style="list-style-type: none"> ▪ Provides as-needed environmental consulting services ▪ Helix also prepared and managed the Master Storm Water System Maintenance Program and associated Program Environmental Impact Report 	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ County of San Diego ▪ City of Escondido ▪ San Diego County Water Authority
9	Ron's Maintenance	Specializes in catch basin and storm drain clean-outs	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ County of Los Angeles

	Service provider	Description	Provided/es services to governmental entities?
			<ul style="list-style-type: none"> ▪ City of Laguna Niguel ▪ City of Palos Verdes ▪ City of Compton ▪ City of Buena Park
10	San Diego Pump Inc.	Rebuilds pumps and motors	Yes. City of San Diego.
11	Sloan Electric, Inc.	<ul style="list-style-type: none"> ▪ Performs emergency work for Pump station N &G ▪ Maintain the pump motors to ensure operability during future storm events ▪ Provide temporary above ground motor control center (MCC) that will bypass existing damaged MCC ▪ Install pumps and check valves at Pump Station G 	Yes. City of San Diego.
12	Stormwater Services Group, LLC (NC)	<ul style="list-style-type: none"> ▪ Specializes in writing Stormwater Pollution Prevention Plans (SWPPP) 	Yes: <ul style="list-style-type: none"> ▪ City of Greensboro ▪ City of Durham ▪ City of Fayetteville ▪ County of Cumberland County ▪ City of Charlotte ▪ City of Louisville ▪ City of Carrboro ▪ County of Anson ▪ City of Winston-Salem ▪ City of Asheville
13	Storm Water Solutions, LP (TX)	Provides professional storm water consulting to municipalities which include: <ul style="list-style-type: none"> ▪ Inspections testing and reporting ▪ Regulatory inspections ▪ Inlet Protection 	Yes: <ul style="list-style-type: none"> ▪ County of Harris ▪ County of Fort Bend ▪ County of Brazoria ▪ County of Montgomery
14	URS Corporation	Provides as-needed environmental consulting services	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ Department of Defense ▪ Department of Homeland Security ▪ Department of Energy ▪ NASA
15	Whillock Contracting	Services include asbestos abatement, excavating, grading, demolition and structural moving	Yes: <ul style="list-style-type: none"> ▪ City of San Diego ▪ County of San Diego ▪ Mathar Air Force Base (Sacramento, CA) ▪ San Diego Unified School District ▪ Port of San Diego

Table 3: External Service Providers

D. Efficiency & Economic Gain

Efficiency Gains/Industry Standards

There are no comprehensive Storm Water Operations and Maintenance industry standards from which to form the basis for further efficiency gain analysis. However, efficiencies can be determined by undergoing a competitive procurement process.

Though there are no comprehensive industry standards available, the current service level goal is to maintain existing storm water facilities (inlets, pipes, pump stations, channels, and TCBMPs) by ensuring they are capable of carrying or treating to their original design capacity.

Current Service Levels

While the Storm Water Division's budget has remained relative stable over the past three years, the amount of storm channel maintenance has been highly variable. This is a direct result of environmental regulations that greatly increase the amount of time it takes to do this maintenance work as well as the amount of mitigation that is required.¹¹ As a result, the amount of channel maintenance has been limited mainly to emergency work, and not the proactive process that had been done in the past. The Division is currently awaiting approval of a Master Permit which will allow for this proactive maintenance. This will, however, have greater reporting and mitigation requirements than have been required in the past, which will require a greater level of effort and funding to perform the same type of maintenance that has been done in past years.

Currently, SWO&M Section personnel perform both maintenance and repair/replace functions. Because of this, the transition from one to the other is currently seamless, efficient and cost effective. Having separate groups (e.g. Most Efficient Governmental Organization (MEGO) and non-MEGO City staff -or- outside vendor and non-MEGO City staff) perform these functions may potentially increase cost and response time while reducing efficiency.¹²

The current performance measures displayed in Table 4 are derived from a variety of sources: the Fiscal Year 2013 Proposed Budget document, the T&SWD Tactical Plan, the Storm Water Division's set of internal performance measures, the TCBMP Annual Verification Program requirements, and different Requests for Proposal (RFPs).

¹¹ Prior to the recent environmental regulations, crews were able to go in and dredge the channels with very limited environmental review and much fewer mitigation requirements, so the funding was adequate. Today, due to the increase cost of acquiring permits and mitigation, it will take more funding to do the same amount of dredging that was done in the past.

¹² Splitting functions will essentially require two employees instead of one (i.e. a service provider performing the maintenance function and a City worker performing the repair/replace function separately). Splitting FTE positions between two processes due to Charter requirements has the potential to add cost and decrease efficiency. Having one City employee capable of performing both jobs may potentially save time and money.

	Storm Water Current Measures¹³	Current Service Level	Timeliness/ Response Time
1	Lineal feet of storm drain pipes cleaned annually	16,000	Urgent (within 1 business day)
2	Percent of storm drain structures cleaned annually ¹⁴	100%	Routine (as scheduled/directed)
3	Percent of storm water permit required monitoring and reporting activities completed annually	100%	Routine (as scheduled/directed)
4	Amount of gunite and concrete placed to repair storm drain infrastructure (in square feet)	800	Urgent (within 1 business day)
5	Number of storm drain structures cleaned by in-house staff	5,500	Urgent 20% ¹⁵ (within 1 business day); Routine 80% (as scheduled/directed) (critical drains need to be cleaned between July and October)
6	Number of storm drain structures inspected (not cleaned) by in-house staff	5,000	Routine (as scheduled/directed)
7	Number of permanent BMPs inspected and maintained by in-house staff	26	Routine (as scheduled/directed) (must be completed between July and October)
8	Number of headwalls cleaned by in-house staff	200	Routine 90%(as scheduled/directed); Urgent 10% (within 1 business day) ¹⁶
9	Number of tide-gates operated by in-house staff	150	Urgent (within 1 business day)
10	Channels cleaned by in-house staff (in square feet) ¹⁷	102,002 (FY2011) 113,858 (FY2012)	Urgent 50% (within 1 business day); Emergency 10%(within 1-2 hours); Routine 40% (routine maintenance will increase upon issuance of environmental

¹³ These performance measures are taken from the T&SWD's Fiscal Year 2013 Proposed Budget narrative.

¹⁴ This is work performed by contract and is tasked with cleaning 100% of all of the drains annually per the City's permit.

¹⁵ Variability based on rainfall.

¹⁶ Variability based on rainfall.

¹⁷ This work is performed by staff and does not include graffiti.

	Storm Water Current Measures ¹³	Current Service Level	Timeliness/Response Time
			permits) (as scheduled/directed) (vegetation and sediment removal may be limited by bird breeding season from September 15 th through February 15 th Additionally rainy season delays may occur between October 1 st and April 30 th)
11	Amount of channel material hauled (in cubic yards) ¹⁸	6,374 (FY2011) 750 (FY2012)	Routine 95% (as scheduled/directed); Urgent 5% (within 1 business day)
12	Number of Storm Patrol responses (by each job)	202 (FY2011) 124(FY2012)	Urgent 85% (within 1 business day); Emergency 15% (within 1-2 hours)
13	Number of hours of Storm Water Pump Station work done ¹⁹	1,243 (FY2011) 1,913 (FY2012)	Routine 60%(as scheduled/directed); Urgent 25%(within 1 business day) Emergency 15% (within 1-2 hours) (wetwell cleaning must be completed between July and October)
14	Number of Notices of Violation Received	0 (FY2011) 0 (FY2012)	N/A
15	Number of industrial inspections done	600	Routine (as scheduled/directed)
16	Number of commercial inspections done	1,900	Routine (as scheduled/directed)
17	Number of Treatment Control BMP (TCBMP)	290	Routine (as

¹⁸ This work is performed primarily by staff and does not include asphalt repair, tree trimming, equipment operation, traffic patterns, installation, construction of construction BMPs, and assistance to concrete finisher. These activities are performed in conjunction with the hauling channel material.

¹⁹ The pump station crews also assist in channel clearing and perform the tide gate operation. Additionally, 25% of their work is replacement and repair (not eligible for Managed Competition).

	Storm Water Current Measures ¹³	Current Service Level	Timeliness/ Response Time
	inspections done		scheduled/directed)
18	Number of Treatment Control BMP (TCBMP) follow-up inspections done	100	Routine (as scheduled/directed)
19	Number of annual inventories of industrial and commercial facilities performed	2	Routine (as scheduled/directed)
20	Number of Treatment Control BMP maintenance verifications done	800	Routine (as scheduled/directed)

Table 4: Current Service Levels (based on FY2012 estimates)

Economic Gain Analysis

The economic gain analysis determines whether there is a possibility that economic gains could be realized through a competitive procurement process, recognizing that actual information cannot be known until competitive procurement is undertaken.

The baseline cost estimate from the Budget Summary Reports for Fiscal Years (FYs) 2011-2012 served as a foundation for this assessment. Included in the baseline cost estimate are both budget and actual expenditures for each fiscal year. Table 5 details the baseline costs estimate for Storm Water Operations & Maintenance and Commercial/Industrial/TCBMP inspections.

	Fiscal Year 2011		Fiscal Year 2012		Fiscal Year 2013	
	Budget	Actual Expenditures	Budget	Projected Expenditures ²⁰	Budget	Projected Expenditures
Total Personnel Expenses (PE)						
Salary						
Fringe						
Overtime						
Other Pay						
Non-Personnel						
Supplies and materials costs						
Services						
Equipment						
Rental costs						

REDACTED TO PRESERVE A LEVEL PLAYING FIELD IN COMPETITION

²⁰ FY2012 Projected Expenditures represent expenses incurred and projected as of June 14, 2012.

	Fiscal Year 2011		Fiscal Year 2012		Fiscal Year 2013	
	Budget	Actual Expenditures	Budget	Projected Expenditures ²⁰	Budget	Projected Expenditures
Travel costs						
Energy Resources/Utility costs						
Property and Capital						
Other						
TOTAL:						
Revenue (Actual/Projected)						

Table 5: Operations & Maintenance and Commercial/Industrial/TCBMP Inspections Baseline Cost Estimate

There is limited market information available to conclude whether economic gains can be expected from this specific competition. There is general research on managed competitions conducted by the Reason Foundation, which found that savings of from 10% to 25% are typical results when public entities compete functions.

Numerous government entities (including the City of San Diego) currently contract for some storm water operations and maintenance services; savings may be realized through a competitive process.

E. Risks to Competition

Risk analysis considers the degree to which retaining or contracting out a function would expose the City to risk or liability, including service interruption, health and safety issues, financial liability, and damage to public trust.

The SWO&M PCA team identified concerns that present potential risks to competition and should be considered:

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
1	Service interruption. There is a high cost of re-entry into the market should an external provider experience a significant service interruption, such as a strike, that might cause drainage system maintenance, repair, and	Service interruption/ Health and safety/ Litigation/ Financial liability	Low	High	The City or the vendor may be able to secure alternative providers to perform the duties. A RFP provision could finance those costs by deductions from compensation

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
	<p>inspections to be interrupted. The level of risk for this can span from low to high depending upon whether a service interruption occurs during the rainy season (October 1 – April 30) when work volume is higher and flood risk is greater.</p>				<p>otherwise owed the originally selected provided. If the City is securing those services, that could be done via emergency procurement provisions if during the rainy season. Assign additional manpower and equipment from other City departments. Adequate oversight of the contract and inspections/verification of work would ensure poor performance would be identified quickly and potentially rectified in a manner preventing NOVs.</p>
2	<p>Performance. Poor vendor performance (whether by City or external entity) in areas such as response to regular service and emergency requests and customer service could delay maintenance or repair requests.</p>	<p>Service interruption/ Health and safety/ Litigation/ Financial Liability/ Damage to public trust</p>	Low	High	<p>The City can contract the inadequate or neglected service out to other providers, if the selected provider is unwilling or unable to perform. The City's Quality Assurance Surveillance Plan (QASP) would assist in identifying possible quality control issues on a timely basis.</p> <p>The City can also hire a third-party service provider on an as-needed basis. Assign additional manpower and equipment from other City departments. Adequate oversight of the contract and inspections/verification of work would ensure poor performance would</p>

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
					be caught quickly and potentially rectified in a manner preventing NOVs.
3	Compliance. Failure to adhere to environmental regulations and regulatory permit conditions by City employees or independent contractors could expose the City to liability in the form of violations resulting in monetary fines/penalties.	Litigation/ Financial liability/ Damage to public trust	High	High	<p>The City's bidding process could include technical requirements to adhere to all applicable regulations and permit requirements and the evaluation board can identify a qualified vendor that meets the City's standards.</p> <p>The City would designate contract manager(s) to inspect/monitor work to ensure work performed is in strict compliance with environmental and water quality regulations. If new regulations or laws are enforced that are not identified in the existing contract, the City should provide adequate budgetary reserves for anticipated changes in the contract's scope of work, whether performed by City employees or contractors. The City's general contract terms and conditions also require independent contractors to indemnify the City, provide insurance, and can also provide for financial penalties being deducted from contractual payments.</p>
4	Errors/Omissions. Risk with errors and omissions (damage to property, misuse	Financial liability/	Low/Medium	Medium	The City's bidding process could describe

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
	of City vehicles, etc) by City employees or independent contractors may expose the City to higher levels of claims.	Damage to public trust			responsibilities for damaged property or equipment. and the evaluation board can identify a qualified vendor that meets the City's standards related to errors and omissions. Proposers should be required to provide insurance as required by the City, and to indemnify the City and hold it harmless for the acts of the contractor.
5	Additional, unnecessary work. When the service provider makes a commitment to working groups and/or committees, the service provider may negotiate additional, but unnecessary, work and/or mitigation to be approved that would benefit the company financially, resulting in a waste of public resources and money.	Damage to public trust/ Financial liability	Medium	High	Require City employees to approve all assignments before a commitment is made within the working group/committee meetings. Delegate City management positions (Director, Deputy Director, and Assistant Deputy Director) to working groups and/or committees as a SWO&M Section representative.
6	Expected levels of service. Whether the work is performed by City employees or independent contractors, in any given year, during a storm or rain event, workload and response times can vary dramatically depending on the following: a) The requirements of the Municipal Permit applicable during that year b) The time and intensity of rainfall events c) Location and geography of rainfall events	Service interruption/ Health and safety/ Litigation/ Financial liability/ Damage to public trust	Medium-High	High	Provisions for additional work can be included in the contract, and fixed unit cost pricing for work beyond expected levels can also be sought. Or a third-party service provider can be procured on an as-needed basis. Assign additional manpower and equipment from other City departments. Adequate oversight of the contract and

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
	d) Impaired storm water system infrastructure. e) Ability to mobilize resources.				inspections/verification of work would ensure poor performance would be caught quickly and potentially rectified in a manner preventing NOVs.
7	Response time to emergencies. The service provider must respond to storm drain-related incidents or emergencies in a timely fashion. The City is responsible for repairing the functional components of a storm drain conveyance system that that have been impaired through acts of vandalism (stolen storm drain grates or electrical wiring) or emergencies caused by disrepair (e.g. sink holes). A company/contractor that is not responsive and prepared to mobilize resources, deploy equipment and employees, and monitor infrastructure capacities threatens the loss of life, property, and the public's safety due to flooding. The risk of failure to respond to emergencies related to the functional components of storm drain conveyance system is high and may threaten life, property damage and the public's safety.	Service interruption/ Health and safety/ Litigation/ Financial liability	Medium	High	Include within the statement of work a level of emergency response that is historically experienced. Have provisions in the SOW for negotiations of additional services that may be required for unpredictable scenarios to ensure the contractor adequate responds to emergency in a timely manner. Reserve the right to engage other contractors as needed. Include in the contract a response plan to replace all missing drain cover/grate, repair sink holes, and install missing electrical wiring, etc., once it is reported.
8	Required inspections. Commercial/Industrial and TCBMP inspections are required under the Municipal permit, and any failure to complete and report these inspections by City employees or independent contractors may result in a Notice of Violation from the Regional	Service interruption/ Health and safety/ Litigation/ Financial liability/ Damage to public trust	Low	High	The City is responsible for complying with the Municipal Permit. Include within the statement of work the current inspection and response requirements, and include a provision for meeting different

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
	Water Quality Control Board. Additionally, these inspections serve to alert Storm Water staff to situations that may be causing or have the potential to cause water quality violations, and serve as an important mechanism to meet compliance standards established in TMDL and ASBS regulations.				requirements that may occur within the contract term. These inspections are currently contracted.
9	Tide gates. A tide gate is left open during a high tide or is not operated properly to avoid flooding.	Service interruption/ Health and safety/ Litigation/ Financial liability/ Damage to public trust	Low	High	Include in the statement of work that the contractor is responsible for any errors and omissions. Independent contractors can also be required to provide insurance and indemnify and hold the City harmless. Any related fines can be deducted from compensation due the contractor. Longer term, upgrade mechanical components to automated system (SCADA). Cite requirements for emergency stand-by to maintain, inspect, or verify tide gates are open on an as-needed basis.
10	Institutional knowledge. A contractor will not have the institutional knowledge required to manage the City of San Diego's storm water conveyance system to minimize flooding. The contractor will not know how or where to deploy resources to avoid flooding. Locations can be specified in bid documents, but impacts based on storm water runoff vary greatly	Service interruption/ Health and safety/ Litigation/ Financial liability	Medium	High	Ensure a proper orientation period is included in the required Transition Plan. Provide available historical data. Require failure analysis in the City's Quality Assurance Surveillance Plan to mitigate against reoccurrences. Retain the right to engage other

	Risk Description	Risk Type	Risk Level	Magnitude of Impact	Possible Mitigation
	depending on rainfall intensity, soil saturation, upstream impacts, etc., which cannot be specified in contractual documents.				contractors if the selected contractor is unable to perform, and reduce from their compensation the costs of the other contractors. . Assign additional manpower and equipment from other City departments, if needed.
11	Violations/Fines. Receive a Notice of Violation and fines of up to \$10K/day	Financial	Low	High	Include in the contract a provision to allow the City to recover any fines associated with a failure to perform by the contractor. Require indemnification of the City, if the work is done by independent contractors.
12	Toxic waste release. Release of toxic waste into streams possibly resulting in ecological damage, defect, injury, and/or death	Environment/ Health and safety /Financial Liability	Low	High	Establish appropriate contract monitoring provisions in the Quality Assurance Surveillance Plan. If the work is performed by independent contractors, require indemnification of the City, insurance, and deductions from compensation for any fines. Continue public outreach, public complaint response, and enforcement to mitigate for this.

F. Workload, Performance, and Property Data Assessment

Workload, performance, and property data are critical to developing a Statement of Work (SOW), should a function move to competitive procurement. The range and depth of workload/performance/property data that are available (or not) are also important factors in determining a future competition schedule. In conducting this assessment, the following criteria were evaluated to establish the current level of data available.

Question	Explanation	Status
Does workload data exist for the function for the last fiscal year?	Indicates whether or not the annual workload for the function is available or easily obtainable. For some functions, there may not currently be a formal collection process for workload information. For those functions, a data collection mechanism and process will need to be defined and developed.	Partially ²¹
Is workload tracked using an automated system?	Identifies any records, spreadsheets, logs, or other tracking mechanisms that are currently used to collect workload data.	Partially ²²
Has workload been tracked for at least the last three years?	Indicates whether workload is changing or is relatively consistent from year to year. Workload that is increasing, decreasing, or fluctuating from year to year might affect the amount of data and level of effort that will be required to estimate workload.	Partially ²³
Is workload tracked consistently?	Identifies whether tracking systems are collecting workload output data in a timely and accurate fashion. A determination must be made regarding the overall reliability of the data tracked in the existing systems.	Yes
Can workload be accurately projected into the future?	Examines whether collected data is sufficient to ensure the future statement of work accurately addresses the function's true requirements and limits the potential for modifications.	No
Has the Function anticipated change in workload (either an increase or decrease)?	Identifies workload capacity requirements for current and future services to ensure sufficient capacity exists to support existing and new services.	No

²¹ Only partial data (e.g. hours, Station 38 Service Notifications, disposal tonnages) is collected for the following functions: Pump Station/Tide Gates, Drain Structures, Channels, and Engineering activities. Planning activities, Storm Patrol, customer service and general administrative duties are not tracked.

²² The SWO&M Section uses multiple databases such as SAP and Excel spreadsheets to track partial workload data related to Pump Station/Tide Gates, Drain Structures and Channels job functions.

²³ Partial data (e.g. hours, Station 38 Service Notifications, disposal tonnages) has been tracked for three years. The SWO&M Section workload has fluctuated (increased and decreased) variably based on unpredictable factors such as weather (dry or wet weather conditions), intensity of storm events, tidal flows, failing infrastructure, changing environmental regulations, unforeseen man-made disasters/events, number of inquiries from elected officials, outside/public scrutiny, litigation, and Risk Management claims.

Question	Explanation	Status
Is the performance level of the City workforce actively tracked?	Identifies whether adequate performance information is available to determining the level of performance in a future competition.	Partially ²⁴
Is there a property tracking system?	Identifies whether government property is properly tracked in order to maintain proper inventory control and determine its disposition in a potential competitive procurement.	Yes

Table 5: Workload, performance, and property data assessment

The areas of concern the assessment revealed includes the following: the City’s inability to accurately project future Storm Water Operations and Maintenance workload and track the performance level of the Storm Water Operations and Maintenance workforce.

It is difficult to accurately project the SWO&M function’s workload and track workforce performance due to a variety of factors: the volatility of the storm water industry, dry versus wet weather, the rainy season (October 1 – April 30), high/low tides, intensity of storm events, infrastructure that is at or beyond its useful life, new/changing environmental regulations (e.g. storm water requirements such as the forthcoming Municipal Permit, the adopted TMDL regulations requiring reductions in dissolved metals and bacteria in urban runoff, bird breeding season, etc.), unforeseen man-made disasters/events (e.g. water main breaks, storm drain failures), deferred maintenance, TCBMPs coming online at variable rate due to increasing regulatory requirements, public scrutiny, City Council inquiries, SNs received, lawsuits, risk management claims, budget, and availability of resources. However, these variables are operational issues, whether the work is performed by City employees or independent contractors. The Statement of Work will need to specify that variations in workload may occur, historical data demonstrating these patterns should be provided, and the pricing of services beyond reasonably foreseeable levels should be sought while in the competitive process.

The result of this assessment for the storm water operations and management function is that a system exists to collect workload for some of its activities. The system will require validation because of the potential for data entry errors, but the accuracy of the system is considered relatively sound. However, tracking of work for some activities and predictability of workload over time are potential issues as described above, and are City operational issues, whether the work is performed by City employees or independent contractors.

²⁴ Only partial data (e.g. hours, Station 38 Service Notifications, disposal tonnages) is collected for the following functions: Pump Station/Tide Gates, Drain Structures, Channels, and Engineering activities, which can be used to determine an adequate level of performance. Planning activities, Storm Patrol, customer service and general administrative duties are not tracked.

III. CONCLUSION

As determined through this pre-competition assessment, the Storm Water Operations and Maintenance function is deemed to be partially eligible and appropriate for competitive procurement. The Mayor determined that:

- This function is not inherently governmental;
- Portions of the functions are not limited legally from being procured from an outside source;
- This function can be procured from an established competitive market;
- This function does not face significant risks that cannot be mitigated through the contracting process; and
- This function does have the potential for efficiency and economic gains.

Vendors who perform Storm Water Operations and Maintenance-related work – provided by P&C

1. A2Z Sales
2. AbTech Industries Inc
3. Airtox, Inc., dba Air Toxics, Ltd
4. Americast
5. Aqua Shield, Inc
6. Bay Saver Technologies, Inc
7. Bio-Clean Environmental Services, Inc
8. Brown and Caldwell
9. Bureau Veritas / Berryman & Henigar
10. California Water Technologies, Inc
11. Clearwater Solutions Inc
12. Columbia Analytical Services, Inc
13. Contech Enterprises Inc
14. Crystal Stream Technologies
15. Dominion Environmental Management
16. Downstream Services, Inc
17. EcoSave Technologies, LLC
18. Environment 21 Global Stormwater Solutions
19. Fabco Industries, Inc
20. Forensic Analytical Consulting Services, Inc
21. Frontier Analytical Laboratory
22. GreenVision Partners
23. Hydro International
24. Hydroworks, LLC
25. Imbrium Systems Corp
26. Interstate Products
27. KriStar Enterprises, Inc
28. Modular Wetland Systems, Inc
29. MTGL Testing Laboratories
30. Nelson Environmental Remediation, Ltd
31. Nolte Associates
32. Onvia, Inc
33. Paul Davis Restoration of San Diego
34. Recon Recycling, LLC
35. REM
36. Revel Environmental Manufacturing, Inc
37. Rinker
38. Secutrac Engineering
39. Siemens Industry, Inc
40. StormTech
41. StormTreat Systems, Inc
42. Summit Security Services, Inc
43. SunTree Technologies, Inc
44. Terre Hill Stormwater Systems
45. Tetra Tech EM, Inc
46. Tierra data, Inc
47. UltraTech International, Inc
48. United Storm Water

49. Vista Flood & Mold Restoration, Inc
50. Waterway Solutions
51. WaterWise Consulting, Inc
52. West Coast Storm, Inc