CITY OF NEWPORT BEACH

SEWER SYSTEM MANAGEMENT PLAN (SSMP)

July 2009

SEWER SYSTEM MANAGEMENT PLAN

Introduction

The State Water Quality Control Board ("State Board"), oversees water quality in California, including the shoreline and Upper and Lower Newport Bay. The beaches along the coast have been closed numerous times due to contaminated surface water runoff and wastewater spills (also known as sanitary sewer overflows or "SSOs") and the closures have impacted the economy associated with summer beach activity.

In response to the beach closures, the State Board recently adopted new General Waste Discharge Requirements (GWDRs) for the operation of sewage collection systems. The GWDRs were adopted on May 2, 2006, and apply to all the sewer system owners or operators in California who operate a sanitary sewer system greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California. Therefore, these regulations apply directly to the City of Newport Beach and its collection system.

One of the requirements of the GWDR is preparation and implementation of a Sewer System Management Plan (SSMP). By preparing and practicing the procedures in the plan, SSOs should decrease or stop entirely. The City believes that it is currently adhering to all of the SSMP requirements due to the City's history of taking a proactive approach to sewer system management. The City has completed the update of its Sewer Master Plan.

The Utilities Department recommended that the City Council formally adopt the SSMP, directing the Department to continually update the plan and bring it back to Council at appropriate intervals for additional consideration and approval.

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(i) Goal: The main goal of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

The City of Newport Beach recognizes the importance of protecting ocean water quality by preventing sewer spills and is supplementing its existing sewer system management program with the requirements of the GWDR.

(ii) Organization: The SSMP must identify:

(a) The name of the responsible or authorized representative as described in Section J of the Order.

Ed Burt, Utilities Operations Manager is listed as the City's authorized representative.

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and

Below is the Organizational Chart showing the lines of authority for all the administrative and field staff and their respective responsibilities for the Wastewater Division of the Utilities Department (Attachment A), as well as a response flow chart for the entire Utilities Department (Attachment B) for the City of Newport Beach when responding to any SSO or emergency.

ORGANIZATIONAL CHART FOR WASTEWATER DIVISION

SEE ATTACHMENT "A"

ORGANIZATIONAL CHART FOR UTILITIES DEPARTMENT

SEE ATTACHMENT "B"

EMERGENCY RESPONSE PROGRAM RESPONSIBILITIES

Utilities Director -	Ensure that line-response personnel have all funding and authority needed to effectively pursue their obligations under the SSMP. Provide policy guidance where needed.
Operations Manager -	Provides feedback to Wastewater Supervisor regarding operational needs and requirements. Supports Wastewater Supervisor, Field Crews, Analyst and Inspectors.
Wastewater Supervisor -	Directs field crews with the day-to-day operations of the Wastewater Division and structures emergency response operations based on his experience and utilization of field staff available.
Field Crews -	Implement emergency response plan. Mobilize sewer cleaning trucks, by-pass equipment, generators and maintain the City's sewer infrastructure.
Inspector -	The Public Works Department inspectors provide inspection services for all public projects within the City's sphere of influence. And the City's Code and Water Quality Enforcement Officers investigate and enforce issues dealing with run-off. The Utilities Department also contracts with an outside contractor for FSE, BMP and all food service related inspections.

(c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as California Department of Public Health and State Office of Emergency Services (OES)).

The Utilities Operations Manager is responsible for overseeing the reporting process. The Wastewater staff enters information on spills in the State's CIWQ's database, a copy of the spill report is given to Administrative staff, who in turn adds the spill to the required reports. The

operations manager reviews the draft with the Wastewater Supervisor. Consideration is given to volume calculations and vacuum operations, cause of spill, timeliness of response, and any other appropriate or required data. After review and revisions are completed, the report is certified on the database and copies are transmitted to the appropriate agencies. Normal procedure has always been for the City to report all spills regardless of size and whether or not the spill reaches waters of the State. The City believes in keeping the reporting agencies and the public fully informed.

Prior to the State Board's preparation of new reporting requirements, the City utilized its own reporting form. As a first priority during a sewer spill, City staff (typically the Wastewater Supervisor) notifies the appropriate agencies by phone of an SSO instead of depending on the report as a means of notification.

(iii) Legal Authority: Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

(a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

The City Attorney has examined City codes to ensure that the City has the power to install sewers and enact regulations related thereto, including the prohibition of private sewer systems and requiring all inhabited property to be connected to the City's sewer system.

By ordinance, the City has established a long-range financial plan to ensure capital replacement. (City Operations Code Sections 4.40.060 and 4.40.070)

The current Title 7 of the Operations Code regulates sewer construction. All sewer construction must be in accordance with City standards (Section 7.01.010). The type of materials and inspection requirements by City staff are provided in Chapter 7.01.

The City is continuing its video inspection of all sewer mains in the system. The results of the video inspection will show sources of infiltration into the lines, if there are any.

Legally controlling inflow encompasses controlling the two major sources of inflow: illegal connections and submerged or flooded streets causing water to enter the "pick" holes in manhole covers. Illegal connections are usually connections to the sewer system by property owners who have drainage problems due to flat areas and low spots and who solve those problems by draining those areas to an inlet that is connected to the sewer system. When instances of these illegal connections are found, the homeowner is required to immediately remove the connection. The City's sewer permit issuance procedure is supported by ordinance and any illegal connections are subject to citations.

The other source of inflow is from submerged intersections during heavy storms where the covers are subject to local flooding. The option of using watertight manhole covers was considered but then dismissed because watertight manhole covers are bolted down and become hard to remove during nighttime emergencies and prevent the discharge of concrete damaging gasses.

(b) Require that sewers and connections be properly designed and constructed;

The City has its Standard Plans and Specifications for the Construction of Sanitary Sewers, which insures the sewer lines and connections are properly designed and constructed. The City's Specifications by reference incorporate the Standard Plans and Specifications for Public Works Construction (the "Green Book"), which helps insure proper design and construction of sewer facilities.

(c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

The City employs four full time Public Works Inspectors each with numerous years of experience working for the City. All of the City's inspectors are trained and experienced in pipeline and pumping station construction. They all attend training classes and educational seminars to stay familiar with advancements in the industry. The inspectors maintain copies of the City's Design Criteria Standard Provisions and Standard Drawings for Public Works Construction, the Standard Specifications for Public Works Construction Inspection Manual, the Work Area Traffic Control Manual (WATCH), and the CALTRANS Manual for Work Upon Highways, on the job at all times.

The City has one full-time and one part-time staff members assigned to the City's CCTV unit, which provides video inspection services of the City's 200 miles of sewer mains and laterals. Continuous inspection of all utilities being installed in the vicinity of sewer lines insures proper protection methods are provided for the sewer lines and lengthens the life expectancy of those lines.

Besides the use of video inspection, the City has adopted a policy to root cut every linear foot of sewer pipe within the City boundaries annually (with the exception of new areas that contain PVC - these areas are cleaned with high velocity cleaning trucks.) The more vigilant the City is in taking a proactive stance to maintain its infrastructure, the more apt staff is to find problems or areas of concern that need attention.

(d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and

The City adopted a revised Fats, Oils and Grease (FOG) Ordinance that will better help to reduce and control FOG in the City's sewer system. Grease has been identified as a major cause of sewer line stoppages and spills by the City and by the Orange County Grand Jury who conducted a countywide study. Because of this finding, FOG has been identified as the most important first step in improving sewer system reliability.

Pursuant to Chapter 14, Section 24 of the City of Newport Beach Municipal Code, the City has the legal authority to control discharges to the sewer system for all sewer facilities located on private property that are outside any structures located on the property. This authority allows the City to require grease control devices for certain food preparation facilities.

The legal authority for plumbing fixtures inside a building rests with the City's Building Department and County Health Care Authority. The City continuously works with City staff to modify and adopt policies, which will be consistent with the goal of reducing or removing FOG from the City's sewer system.

(e) Enforce any violation of its sewer ordinances.

The City supports pretreatment as a means of improving the efficiency of the sewer collection system and treatment plant operation. Because OCSD has a comprehensive pretreatment program, the City supports the program and reminds all applicants they must comply with the recommendations of the OCED program to receive a sewer permit from the City.

The City Attorney has comprehensively reviewed aspects of the City's regulatory authority and ensures that the City of Newport Beach's municipal code meets the requirements of the WDR.

(iv) Operation and Maintenance Program. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;

The City has a Sewer Atlas that is continuously updated as new facilities are constructed and pipelines are replaced. The Atlas shows the location of all sewer mains, manholes, laterals, pumping stations and pressurized sewer lines (force mains). The Atlas also has reference numbers to the particular construction plans that were used to build each portion of the system. In addition to the Sewer Atlas, plans of the sewer system are included in the Sewer Master Plan. The maps in the Master Plan are also updated as new facilities are constructed and are used in conjunction with the sewer line capacity calculations as a planning tool for the yearly Capital Improvement Program.

The City also maintains a complete and updated copy of all sewer and storm drain infrastructure on the City's G.I.S., which is maintained by Utilities and MIS staff.

The locations of all the storm water conveyance facilities are shown on separate plans, copies of these plans in reduced size format are on file with the Wastewater Supervisor, Operations Manager, Public Works Department and most of the crew vehicles, where applicable. The City recognizes the link between an SSO and its path of travel in a storm drain facility to the receiving waters. The City has educated its Staff to understand the storm drain network and utilize the network to capture a spill if it has entered the storm drain system.

The City understands the National Pollutant Discharge Elimination System (NPDES) regulations for storm drain system owners, including the provisions of the new MS4 Permit. The MS4 Permit contains requirements prohibiting SSOs into the storm drains. The MS4 Permit requires the storm drain system owners to adopt measures that will decrease the possibility of SSOs. The City attends the many meetings of the MS4 Permit Co-Permittees in order to coordinate the effort of the storm drain and sewer system owners. Many of the MS4 Permit's municipal obligations (including storm drain system maintenance) are assigned in Newport Beach to the Storm Drain Division of the General Services Department.

(b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem

areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

The City has historically cleaned the sewer system on a regular basis and continues to do so today. Once a year is the industry standard for agencies with comprehensive sewer maintenance programs. Presently, Newport Beach is on a one-year program of sewer cleaning. Areas needing more frequent cleaning – known as "hot spots" – are cleaned as frequently as monthly and quarterly. These include inverted siphons that run under flood control channels and bay crossings or commercial areas with multiple restaurants.

The City has three sewer cleaning trucks and a four-wheel drive vacuum truck specifically for spill cleanup, each with a two-person crew. In addition to these six workers, the City's Wastewater Supervisor is responsible for the performance of the crews plus maintenance of the City's 20 pump stations. The City sends out two crews daily, sometimes three -- staff permitting. Again, the City has areas of monthly and quarterly cleaning, taking this proactive approach helps the City stay abreast of all areas of the City, especially the "hot spots."

In addition to the daily cleaning of the gravity sewer lines by crews, the City has a pump station maintenance program. The City knows the recommended pump maintenance schedule from the pump manufacturer and for the piping, valves, and other equipment in the station and valve vault, the City uses the recommended maintenance schedule provided by the City's consultant Engineers Sales and Service Company (ESSCO). ESSCO operates as a primary contact for the City during emergencies.

They have provided this type of service to the City for the past 40 years as it relates to the equipment at the City's sewer facilities.

The City also has three additional Wastewater crews that help maintain the City's sewer infrastructure. These include:

- a two-person dig-out crew that primarily installs, repairs or replaces sewer laterals and cleanouts (the City of Newport Beach owns and maintains all sewer laterals); and
- a two-person pump crew that maintains the pumps and motors for all 20 sewer pump stations.
- a two-person CCTV crew that is responsible for televising the City's sewer system, including emergency services for SSO's and point repairs

These crews are also available to assist on the additional vacuum truck, as needed.

(c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

Studies by the City have identified the main causes of SSOs within the City and efforts have been prioritized to eliminate the causes. The Utilities Department keeps a running spreadsheet of sewer spills that includes the causes of the spill and staff uses the causes to plan activities, programs and policies that eliminate the causes. For instance, the City identified tree roots in conjunction with grease as the primary cause of spills in the City. Restaurant grease is also a major cause of sewer line blockages and spills. The City has an ordinance requiring grease control devices for new restaurants and restaurants undertaking a major remodel.

Frequency and volume studies of sewer spills do not disclose any new identifiable trends. A trend of either frequency or volume indicates a chronic problem that can be specifically identified. The City has identified all the areas prone to problems – known as "hot spots" – and services these areas on a regular basis.

(d) Provide training on a regular basis for staff in sanitary system operations and maintenance, and require contractors to be appropriately trained; and

The City requires all Wastewater personnel to have, at a minimum, Grade 1 certification provided by the California Water Environment Agency (CWEA). The City requires all staff that cross trains within our Maintenance & Repair (M&R) division or chooses to take the after hours duty to maintain a California Department of Health Services ("DOHS") Grade D1 (WDO Certificate.) The pump crew chief and several other staff have formalized training in the repair and maintenance of the pumps. City staff is fully trained and capable of making any repairs and responding to any and all emergencies due to the cross training between the Utilities Divisions. Currently the majority of the Wastewater Division employees are certified at Grade I Collections or higher.

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

For the City, keeping critical replacement parts available encompasses stocking spare pumps that can be used as replacements while pumps are serviced or replaced. The City attempts to use the same model pumps in as many stations as possible to simplify maintenance and replacement. Twice yearly, staff inventories all piping supplies (VCP, & PVC pipe, fittings & couplings), all main line sewer cleaning supplies (degreasers, root cutters & saws, high pressure hoses, etc.), and pump station replacement parts (glands, check valves & plug valves.)

The City has all the necessary equipment to work on sewer line maintenance and repairs or pump station maintenance and repairs. In addition to small tools, the City has a full fleet of equipment (see attachment A) at its disposal.

(v) Design and Performance Provisions

(a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

The City's standards for the proper installation and inspection of sewer lines are discussed in Section (iii) (b) above. Additionally, the City has standardized its use of equipment in the pumping stations for ease of maintenance and replacement. This includes the pumps, liquid level indicators, remote terminal units (RTU's), valves, piping and radios.

The City is monitoring the field of "no-dig" pipeline rehabilitation as advancements are continually being made. The City considers no-dig technology to be the future answer to pipeline rehabilitation as systems reach their life expectancy. The City still utilizes the method of pipeline removal and replacement in conjunction with new pipeline re-lining technologies as they emerge and are tested.

(b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

The City's standard public works contract provides that work is not placed into service and accepted by the City until inspection and testing is completed. The City provides continuous inspection during the construction of sewer facilities and believes that proper installation is the key element to insure proper operation and maximum life expectancy. The City Inspectors use the Green Book Inspection Manual for reference if needed although their years of experience and training allow them to provide excellent observation of contractors' work. With regard to testing sewer lines, the City uses the Green Book recommended air-testing procedures on all new main lines.

(vi) Overflow Emergency Response Plan – Each Enrollee shall develop and implement an overflow emergency response plan that identifies measurers to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

We have and will continue to inform all staff that, during regular business hours, Utilities staff can be reached and the general number of (949) 644-3011, or by contacting the Police Department's Dispatcher desk at (949) 644-3717. After hours the emergency standby duty personnel can be reached through dispatch at (949) 644-3717. The emergency stand-by duty personnel carry a pager and cell phone for ease of access by the Police Department after hours.

(b) A program to ensure an appropriate response to all overflows;

City policy is to respond to all spills within the City – and even provide mutual aid outside the City – whether on public or private property and to take all steps possible to prevent the spills from reaching the storm drains, flood control channels, or waters of the State, all in accordance with the waste discharge requirements. Section (ii) Organization of this document details the lines of authority and responsibilities of City personnel during an emergency. Since Utilities Department staff cross-train between Wastewater and Water Maintenance & Repair, there is plenty of trained and qualified staff to assist at any time with SSOs.

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification:

The City's policy has always been to report all spills, regardless of size, to the Regional Board, the Department of Public Health, and the State OES, whether on public or private property, even if the spill is completely contained. The City believes in full disclosure of its operations and performance. The City adopted and uses the State's spill reporting program.

(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

The role of each person during an emergency has been established and is clear and concise. The City has pre-established responsibilities for administrative staff members (EOC, DOC) that work concurrently with the field crews to provide an efficient response. Field crewmembers are required to keep copies of the Sewer System Management Plan and the spill reporting form in their vehicle.

If the emergency is during normal working hours, both field crews and the supervisor are working as appropriate to handle the emergency. At the same time, City Staff is positioned as follows:

The Wastewater Supervisor is in the field, documenting the situation with pictures and verbal reports back to the administrative staff in the office. The Wastewater Supervisor will verbally report any sewer spills to the required agencies and as soon as possible file the written report.

The Operations Manager is in the field and while providing direction to the field crew's reports continuously to the Assistant City Manager to insure the best possible actions are taken.

(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary emergency activities; and

The City's field crews respond to all emergencies, and if needed, any other City Department like the Police Department for crowd and traffic control, the General Services Department for additional signage, delineators, barricades, or extra equipment, and the Traffic Division of the Public Works Department who can develop and supervise the implementation of traffic control plans.

(f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The City crews are required to use mats, sandbags, dirt berms or any other necessary means to block the catch basin inlets to the storm drains and use the vacuum trucks or a trailer-mounted vacuum unit to vacuum up spills and wash down water.

The City has minimized the impact of sewer spills, by washing the area down with water, capturing the wash water, and removing the captured wash water with a vacuum truck. The Orange County Health Care Agency has requested that only fresh water be used because disinfectants pose their own problems.

The City relies on the Department of Public Health (DPH) for monitoring water quality and posting beach closures. All spills are reported immediately to the DPH office and the Regional Board.

Routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the collection system with more frequent cleaning and maintenance targeted at known problem areas. The preventative Maintenance (PM) program should have a system of tracking work orders and assessing the success of the PM program.

The City uses work orders and verbal requests, followed up by a work order, which field crews respond with a written response on the work order, which is then entered into the database for easy retrieval and reports. All of the departments programs are discussed at the monthly Utilities Department "All Hands" meetings and weekly supervisor's meetings, which incorporate safety, program and project updates, and new policy or mandates. All staff members are urged to discuss ideas to improve programs or daily work tasks.

The City cleans approximately 30,000 feet of high maintenance areas on monthly runs and approximately 20,000 feet on the quarterly runs. Plus the City cleans all of its wet wells quarterly to complete the annual cleaning of the City's sewer infrastructure.

(vii) FOG Control Program: Each Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to

reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

The City has already adopted a grease control ordinance and finds it does have the authority to adopt and implement certain grease control regulations on public and private property. The City worked in conjunction with the three agencies inside the City's boundary that have building departments - the City of Costa Mesa, the City of Newport Beach, and the County of Orange - to adopt common grease control regulations. Inspection and enforcement activities are recognized as key components to a successful program.

(b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;

The City disposes of all of its waste at the Orange County Sanitation District.

(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

The City's Municipal Code, Chapter 14, Section 28 gives the City the authority to prohibit discharges to the City's sewer system.

(d) Requirements to install grease removal devices (such as interceptors), design standards for removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

The City's FOG Ordinance gives the authority to require the installation of grease removal devices, per the Plumbing Code which is enforced by the City's Plan Checkers and Inspectors we have the ability to implement design standards and the City has a contract inspector who inspects all FSE's on a regular basis for maintenance and BMP requirements and provides the City with a spreadsheet of his findings.

(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG Ordinance;

The City's FOG Ordinance gives City staff the authority to inspect grease producing facilities. Working with our Code Enforcement staff the City has the enforcement authority to write Notices of Violation and citations.

(f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

The City has a list of high maintenance areas that it cleans and monitors on a monthly basis, in addition to the regular cleaning schedules utilized by staff.

(g) **Development and implementation of source control measures for all sources of FOG discharges to the sanitary sewer system for each section identified in (f) above.**

Staff has worked with the City's FSE Inspector to reduce the grease levels within FSE's through the use of BMPs. Staff also uses CCTV to look at the source of these problems to make the necessary repairs to eliminate them from the list. This is an on-going process that staff works diligently on.So that areas of high maintenance can be moved to regular cleaning schedules or be removed from the list all together.

(viii) **System Evaluation and Capacity Assurance Plan: The enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum the plan must include:**

(a) **Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.**

The City has completed its Sewer Master Plan which incorporates a hydraulic analysis of every line in the system and plans for increasing capacity for those lines found unable to handle future master planned flows. The current system capacity is able to handle, without problem, the

current dry weather and wet weather peak sewer flows were reviewed by AKM Consulting Engineers.

The Sewer Master Plan contains a list of each project identified as necessary to increase the capacity of portions of the system. No improvements are required in the short term and long-term improvements will be planned according to development and metered sewer flows. During the design of each project, alternative designs are considered.

(b) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and

The City will hire a professional engineer if the need arises to develop additional design criteria outside of what is in the CIP or part of the City's Standard Specifications.

(c) Capacity Enhancement Measures: The steps needed to establish a short-term and long-term CIP to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases in redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

The City just completed its new Sewer Master Plan which includes CIP and funding sources.

(d) **Schedule: The enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D.14.**

The City's Sewer Master Plan includes a schedule for CIP. But staff will review the document as required.

(ix) **Monitoring, Measurement and Program Modifications: the Enrollee shall:**

(a) **Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;**

Staff maintains logs and CCTV documentation of areas that need prioritizing into a future CIP, point repair or regular cleaning or service change.

(b) **Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;**

The SSMP will be reviewed on a regular basis to insure all the provisions are implemented and the effectiveness discussed at the monthly Safety and Training meetings as needed. All monthly staff meetings include field crews, administrative staff, and management staff.

(c) **Assess the success of the preventative maintenance program;**

The success of the preventative maintenance program is regularly reviewed by the reduction in spills and the elimination of high maintenance

areas. But staff continually looks for ways to improve the efficiency of maintaining the City's sewer system

(d) Update program elements, as appropriate, based on monitoring or performance evaluations; and

The SSMP and its elements will be updated in accordance with the results of monitoring and staff recommendations. For instance, if the study of enzymes and bacteria progresses and the effectiveness determined successful enough to be used with BMP's and in-lieu of or in-conjunction with a grease control device for grease mitigation and control. The Sewer System Management Plan and City policies will be revised as needed to facilitate the results of the study and the needs of the City's infrastructure. Performance evaluations are on-going because the daily operations of the City, includes all the elements of the program.

(e) Identify and illustrate SSO trends, including: frequency, location, and volume.

The Wastewater Supervisor keeps a report of all spills and maintains a spreadsheet so he can see the trends of spills based on location and type of spill. The report includes location and volume.

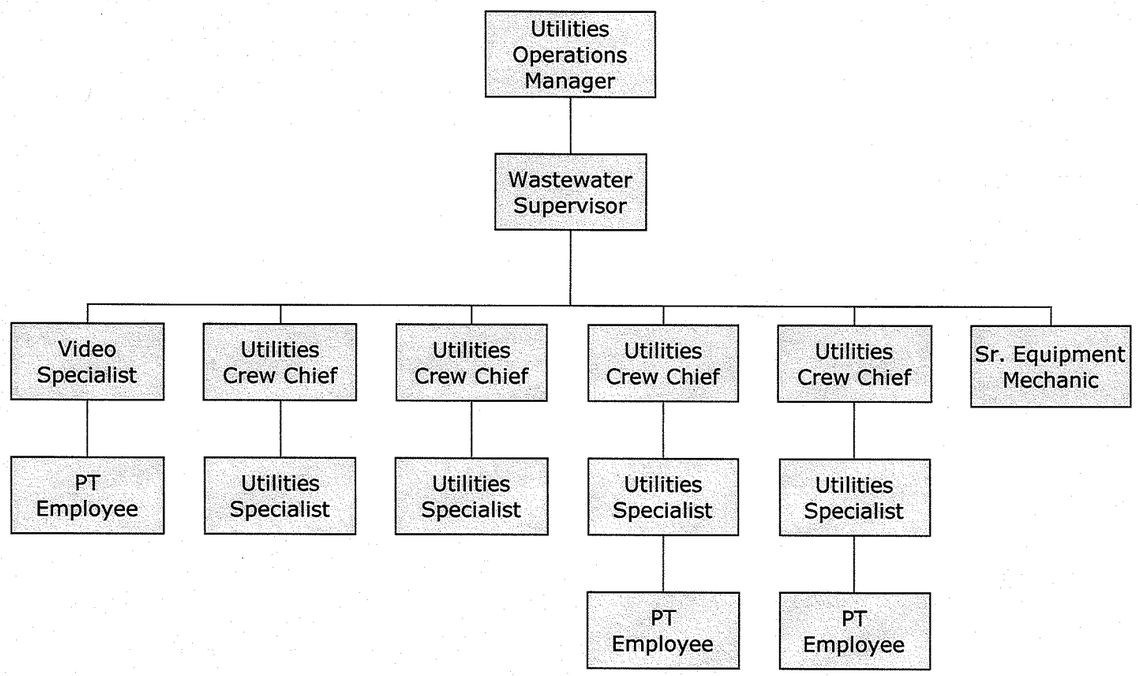
(x) SSMP Program Audits – As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

The City will perform the required internal audits evaluating its SSMP and its compliance with the GWDR as required. The City Council has directed staff to update this SSMP document continuously and bring the changes back for Council approval as required or needed.

(xi) Communication Program – The Enrollee shall communicate on a regular basis with the public on the development, implementation and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The City will provide interested parties with status updates on the implementation of the components of the SSMP and will also consider comments made by interested parties.

City of Newport Beach Utilities Department
Wastewater Division

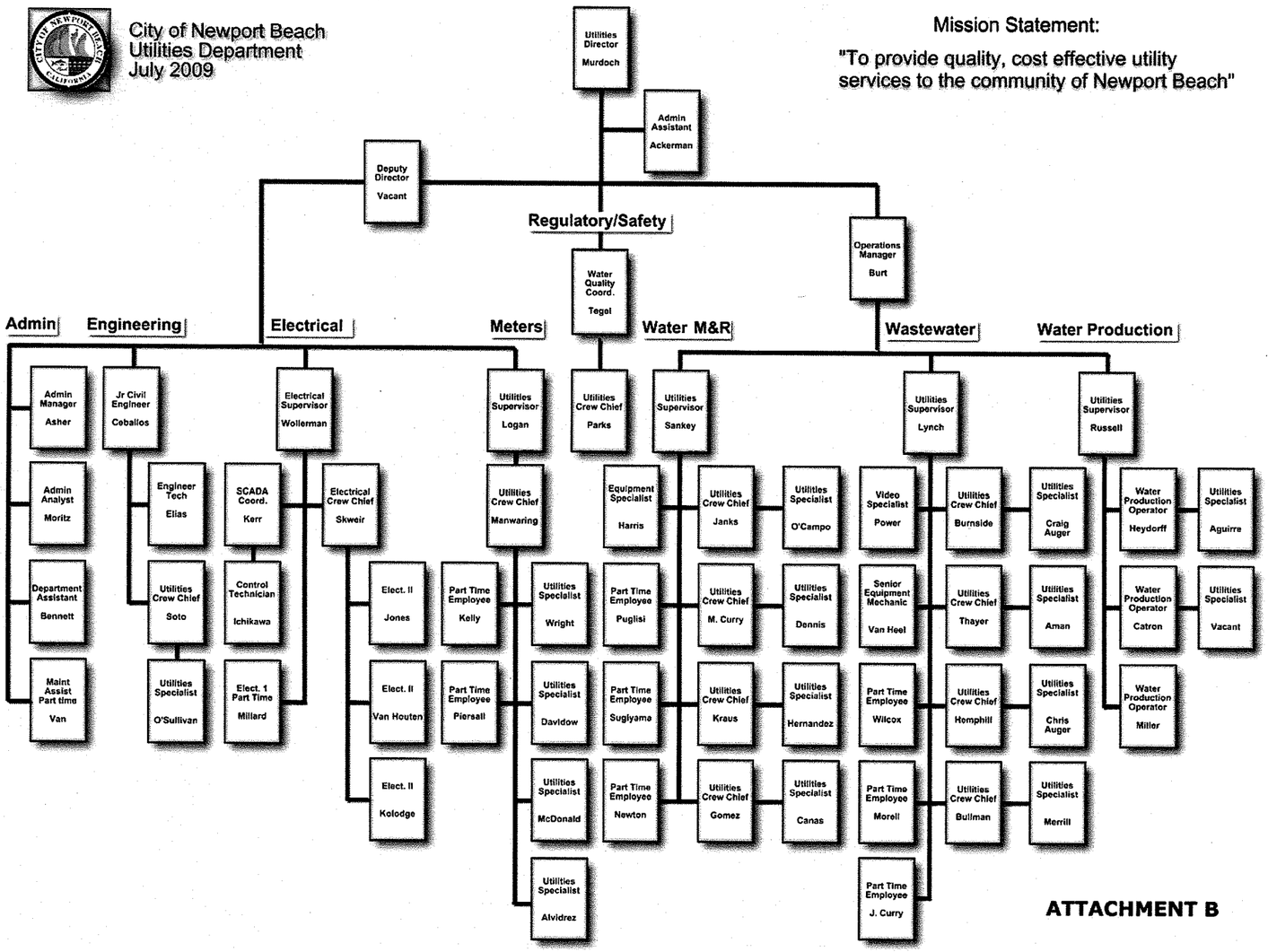


Attachment A

City of Newport Beach
Utilities Department
July 2009

Mission Statement:

"To provide quality, cost effective utility services to the community of Newport Beach"



ATTACHMENT B