

SEWER SYSTEM MANAGEMENT PLAN (SSMP) for the



OTAYWATERDISTRICT



2554 SWEETWATER SPRINGS BOULEVARD
SPRING VALLEY, CALIFORNIA 91978-2004
www.otaywater.gov



June 2009

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SECTION I - GOALS

The Requirement¹

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

Goals

1. Properly manage, operate, and maintain all parts of the wastewater collection system to provide reliable and uninterrupted service 99% of the time.
2. Provide adequate capacity for the Otay Water District (District) to convey peak flows and reduce annual inflow and infiltration in the collection system.
3. Take all feasible steps to eliminate or reduce SSOs to less than two (2) per year, declining over time to zero.
4. Mitigate the impact of SSOs utilizing safe, practical, proven, and effective methods.
5. Set up Overflow Emergency Response Program and provide Operations and Maintenance (O & M) training for all personnel who are involved in responding to Sewer System Overflows.

The District took formal board action on November 7, 2007 to approve their Plan and Schedule to implement their District-wide Sewer System Management Plan (SSMP). The District's board-approved and certified Plan and Schedule is included on the following page.

In addition, the District will follow the requirements of the San Diego Region's supplements to the "Statewide General Discharge Requirements" pursuant to their letter of March 2007. Both of these documents are included in Appendix B.

¹ State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ § D.13 (i)

SSMP DEVELOPMENT PLAN AND SCHEDULE for the OTAY WATER DISTRICT

SSMP Component	Due Date	Work Element
	1/2/2007	Implement the Electronic Spill Reporting Program - COMPLETED.
	11/2/2007	Develop & Approve SSMP Development Plan and Schedule - 11/7/07 BOARD ACTION
(i) Goal	11/2/2007	Define Goals of SSMP
(ii) Organization	11/2/2007	(a) Authorized Representative (b) Management and Organization Chart (c) SSO Reporting Chain of Communication
(iii) Legal Authority	5/2/2009	(a) To Prevent Illicit Discharges into the System (b) To Require Proper Design and Construction of Sewers (c) To Ensure Access to Publicly Owned Portion of Lateral (d) To Limit the Discharge of FOG and other Debris (e) To Enforce Violations of Sewer Ordinances
(iv) Operation and Maintenance Program	5/2/2009	(a) Up-to-Date Map of Sanitary Sewer System (b) Preventative Maintenance Program (c) Rehabilitation and Replacement Plan (d) Training for Sanitary Sewer System Staff and Contractors (e) Equipment and Replacement Part Inventory
(v) Design and Performance Provisions	8/2/2009	(a) Design and Construction Standards and Specifications (b) Procedures and Standards for Installation, Rehabilitation, and Repair Projects
(vi) Overflow Emergency Response Program	5/2/2009	(a) Proper Notification Procedures for SSOs (b) Appropriate Response Program for SSOs (c) Prompt Notification to Regulatory Agencies (d) Emergency Response Plan and Appropriate Staff Training (e) Emergency Operation Procedures such as Traffic and Crowd Control (f) Containment and Prevention Program for SSO Discharge into U.S. waters
(vii) FOG Control Program	5/2/2009	(a) Implementation Plan and Schedule for Public Outreach (b) Plan and Schedule for Disposal of FOG within the Service Area (c) Legal authority to prohibit FOG discharges and prevent related SSOs and blockages (d) Requirement to install grease removal devices, and provision of design standards and requirements for such devices (e) Authority to inspect grease producing facilities, enforcement authorities, and evidence of sufficient enforcement staff for FOG ordinance (f) Identification and maintenance scheduling of sewer sections prone to FOG blockages (g) Development and Implementation of source control measures for FOG sources in above identified sections
(viii) System Evaluation and Capacity Assurance Plan	8/2/2009	(a) Sanitary Sewer System Evaluation (b) Design Criteria (c) Capacity Enhancement Measures (d) Completion Schedule
(ix) Monitoring, Measurement, and Plan Modifications	8/2/2009	(a) Maintenance of information to prioritize SSMP activities (b) Monitoring of implementation and effectiveness of SSMP elements (c) Assessment of Preventative Maintenance Program (d) Update of program elements based on evaluation (e) Identification and illustration of SSO trends
(x) Program Audits	8/2/2009	(a) Identify key result areas and performance measures within SSMP (b) Develop criteria and procedures for measuring system performance and Plan compliance (c) Develop criteria and procedure for measuring the effectiveness of the Plan (d) Develop procedures for periodic Plan updates to address deficiencies and needed improvements (e) Develop procedures for preparing and filing bi-annual Audit Reports
(xi) Communication Program	8/2/2009	Community Outreach / Feedback Communication with Satellite Agencies

DISTRICT BACKGROUND

Sanitary Sewage Collection, Treatment, and Disposal

The District provides sewer service to approximately 15,200 customers through 4,630 accounts located in the northern section of the District. The District operates and maintains the sewage collection system serving Rancho San Diego, Singing Hills, and portions of Mount Helix within the Upper Sweetwater River Basin, also known as the Jamacha Basin. Residential customers comprise 98.5% of the customer base. Commercial accounts, including restaurants, comprise 1.5% of the sewer customer base.

Modest growth of less than one half percent (0.005) is anticipated in Fiscal Year 2009. Wastewater collection within the Jamacha Basin is provided by two agencies: the Otay Water District and the Spring Valley Sanitation District. Customers in the basin, not served by either agency, dispose of their sewage through septic tanks.

After the sewage has been collected by the District, it is sent to the District's Ralph W. Chapman Water Recycling Facility (RWCWRF) treatment plant where the District produces recycled water. The solid by-product of this treatment process is called sludge and it is discharged by the District to the San Diego Metropolitan Wastewater (Metro) and the Spring Valley Sanitation District systems.

Sanitary Sewage Overflow Reduction

The District is fully committed to reducing SSOs in order to decrease the risk to both human health and the environment. The number and size of SSOs generally can be reduced, if not prevented, through the application of sound and appropriate operation, infrastructure maintenance, and management principles to wastewater collection systems.

In accordance with SWRCB, Order No. 2006-0003 of May 2006 entitled, and associated supplements and regional requirements to, "Statewide General Discharge Requirements for Sanitary Sewer Systems," all sanitary sewer systems over one mile in length are required to implement a Sanitary Sewer System Management Plan (SSMP).

The District has developed and will implement this District-wide SSMP. It includes the applicable elements that provide for the proper and cost effective management, operation, and maintenance of its collection systems, while taking into consideration risk management and cost benefit analysis. The District has already implemented measures to reduce SSOs and utilizes a statewide electronic reporting system for SSOs.

SECTION II - ORGANIZATION

Requirement¹

The referenced State Order requires the following:

- (a) The name of the responsible or authorized representatives, as described in Section J of the May 2006 Order.
- (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
- (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 County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

Supporting Documents

A narrative of the organizational responsibilities, a list of the key staff members, and an organizational chart is included in this section.

a. List of responsible staff members in the District and the Operations Department.	List of Management and Responsible District Staff. District Organizational Chart of Operations Department.
b. Phone list of responsible staff members.	Phone List of Responsible District Staff and Management.
c. The chain of communication for reporting SSOs.	Otay Water District. Sanitary Sewer Overflow Response and Reporting Work Flow Plan.

¹ SWRCB Order No. 2006-0003-DWQ § D.13 (ii)

Otay Water District

Operations Department

List of Management and Responsible District Staff:

General Manager. Responsible for the overall operation of the District and all of its employees, finances, functions, and operations. Reports directly to the District's Board of Directors.

Assistant General Manager, Engineering, and Operations. Oversees all aspects of the operations and engineering departments within the District, including water, sewer, recycled water, treatment, design, construction, inspection, development, inspection operations, engineering, and capital projects.

Chief, Water Operations. Will ensure that new and rehabilitated assets meet required standards, will assure that staff is trained as required by SSMP standards, will prepare for working with District field crews to handle emergencies when contractors are involved, and provide verbal reports to the Board and General Manager's office.

Systems Operations Manager. Oversees all work needed to complete the operations training required by the SSMP, compile and include the updated operations information into the SSMP, coordinate with the assigned Engineering Staff, oversee all field operations, responses, activities, and report to the Chief, Water Operations.

Reclamation Plant Supervisor. Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

Lead Reclamation Plant Operator. Will staff preventive maintenance activities, mobilize, and respond to notification of stoppages, and SSOs (mobilize sewer cleaning equipment, bypass pumping equipment, and portable generators).

Reclamation Plant Operator. The Reclamation Plant Operator(s) responding to the spill will be responsible for applying best management practices for spill containment until the Utility Workers arrive with collection system maintenance equipment. The Reclamation Plant Operator provides the Utility Workers with any additional information on the spill obtained after they arrive on site. The plant operator also operates/troubleshoots lift station equipment and/or uses blockage-removal hand tools to remove the cause or lessen the severity of the spill.

Additionally, the plant operator captures all field data used for reporting and forwards it to the Lead Operator and/or Plant Supervisor.

Utility Crew Workers. The Utility Workers assigned to the collection system on a long-term basis are responsible for responding to the spill when notified, removing blockages, and determining the cause of the spill.

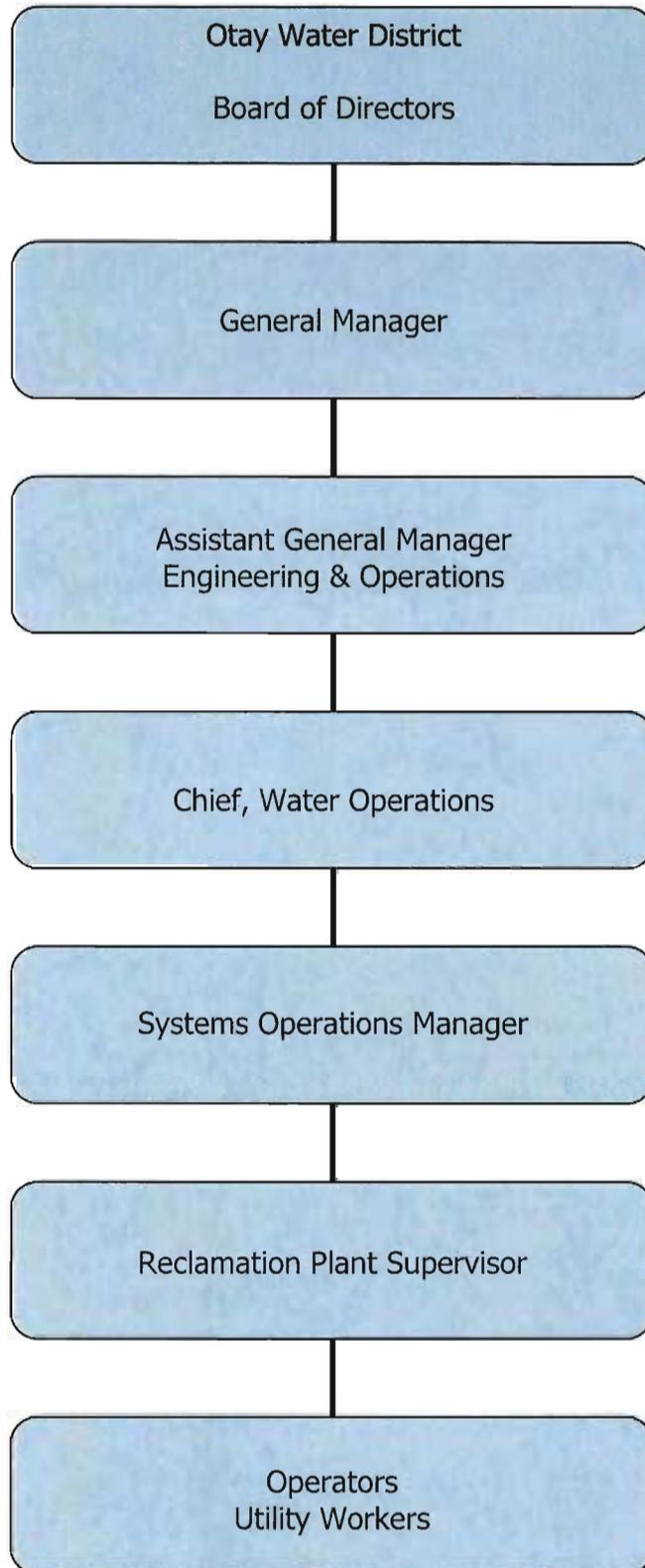
After normal working hours, the standby Reclamation Plant Operator directly notifies the standby duty Utility Crew Leader who will then call their standby Utility Worker crew to respond to the overflow site.

Operations Secretary. During normal working hours the Operations Secretary receives a call from an outside or inside source and creates an IMS work request to the Reclamation Plant Supervisor, then makes contact with the supervisor or Lead Reclamation Plant Operator, or any available Reclamation Plant Operator.

After normal business hours the answering service receives a call from an outside source and notifies the standby duty Reclamation Plant Operator.

The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program are listed below, followed by an organization chart which identifies lines of authority.

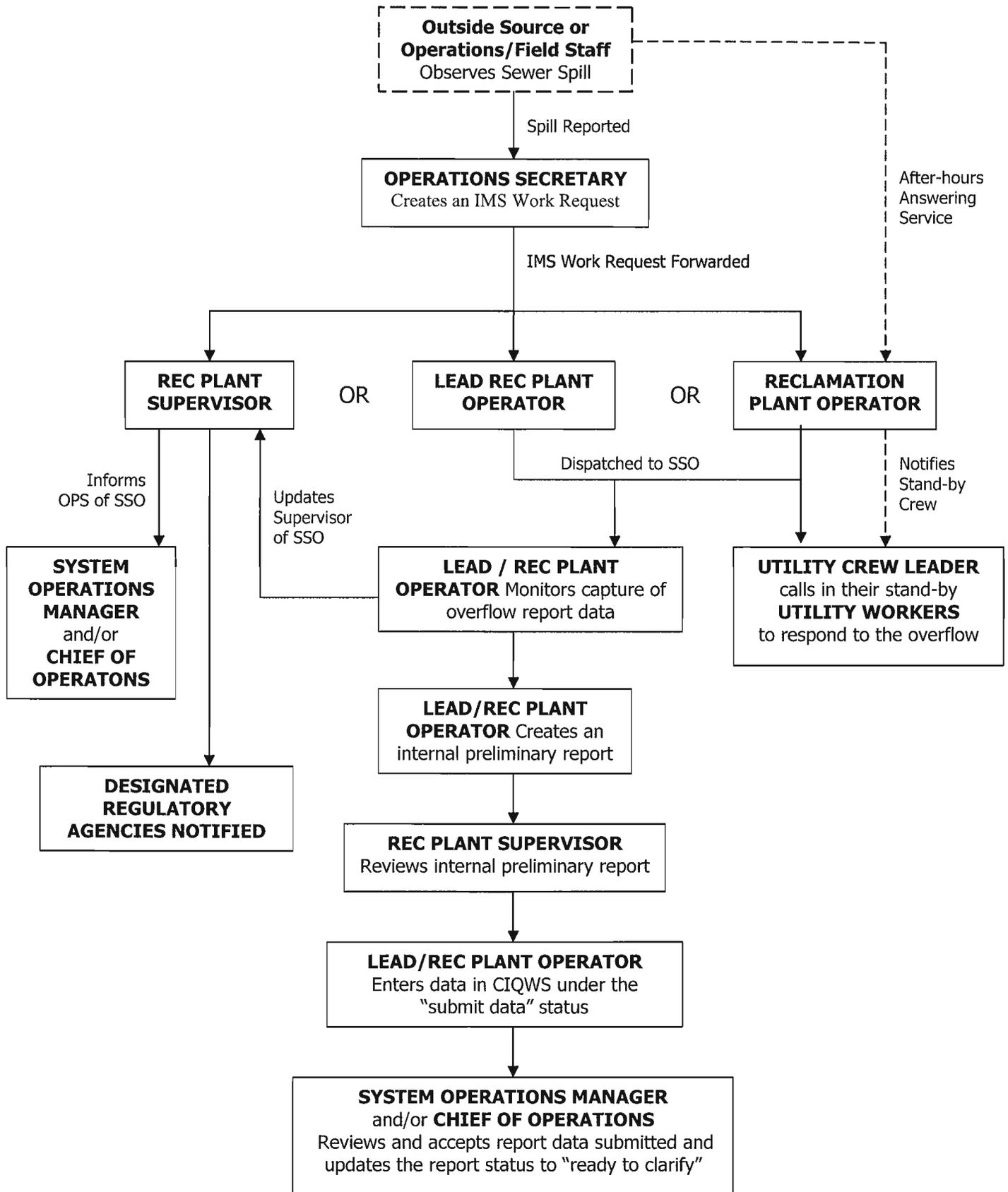
EXHIBIT II-A
District Organizational Chart of Operations Department



Phone List of Responsible District Staff and Management

General Manager -	Mark Watton	619-670-2210
Assistant General Manager -	Manny Magaña	619-670-2257
Chief, Water Operations -	Pedro Porras	619-670-2224
Systems Operations Manager -	Gary Stalker	619-670-2228
Reclamation Plant Supervisor –	Dale Kreinbring	619-670-2271
Lead Reclamation Plant Operator –	Damon Newman	619-670-2272
All Reclamation Plant Operators -		619-670-2272
Utility Service Manager -	Frank Anderson	619-670-2235

**EXHIBIT II-B
Sanitary Sewer Overflow Response and Reporting Work Flow Plan**



SECTION III – LEGAL AUTHORITY

Requirement¹

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;
- (b) Require that sewers and connections be properly designed and constructed;
- (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
- (d) Limit the discharge of fats, oils, grease, and other debris that may cause blockages, and
- (e) Enforce any violation of its sewer ordinance.

Existing Legal Authority

The District possesses the necessary legal authority to prevent, require, ensure, limit, and enforce specific features and operations required by the State Order. A summary of the relevant sections of the District Code of Ordinances and other adopted documents is shown in Table III-1.

A copy of each document follows the table.

¹ SWRCB Order No. 2006-0003-DWQ § D.13 (iii)

TABLE III-1 - SUMMARY OF LEGAL AUTHORITY

Legal Authority to:	Existing Authority:
a. Prevent illicit discharges into sanitary sewer system	CO ² : § 52.04 CO: § 52.05
b. Requires that sewers and connections be properly designed and constructed	CO: § 60.08
c. Ensures access for maintenance, inspection or repairs for all portions served by the District, and to determine if they are complying with the rules of the District concerning sewer services	CO: § 51.03
d. Limit the discharge of fats, oils, grease, and other debris that may cause blockages	CO: § 52.06
e. Enforce any violation of District sewer policies	CO: § 52.03

² Otay Water District "Code of Ordinances" sections that regulate District operations.

OTAY WATER DISTRICT CODE OF ORDINANCE

52.04 PROHIBITIONS AGAINST DISCHARGE OF OBJECTIONABLE WASTES

It shall be unlawful for any person to discharge or permit the discharge of any substance into the District sewer system that could cause a public nuisance or hazard to life, or that could be harmful to the District sewer system or its wastewater reclamation facilities or processes. Discharge of the following into the District sewer system is expressly prohibited:

- gasoline, cleaning solvent, fuel, oil;
- ashes, sand, cinders, rocks;
- tar, plastics, other water insoluble viscous materials;
- mineral oils, lubricating oils;
- feathers, hair;
- rags, sanitary napkins, disposable diapers;
- broken glass, metal, wood and plastic shavings;
- unground garbage;
- swimming pool drainwater;
- wastes which contain or result in the production of toxic, corrosive, and explosive gases;
- animal or dairy waste;
- cesspool and septic tank wastes;
- or any other substance, material, or liquid that could be harmful to the District sewer system.

52.05 GUIDELINES TO DETERMINE ACCEPTABILITY OF WASTES

The following provisions and the values set forth herein are not to be regarded or construed as regulating or limiting the quantity or characteristics of any specific wastes which may be received into the sewer system, but such shall serve as a guide in implementing this Section for regulation of the use of the District sewer system and for determination of acceptability of waste into the sewer system. In considering the following sewage characteristics, the dilution effect of the sewage at the point of discharge or any affected part of the system, and whether or not unusual attention or expenses would be required to handle such material in the sewer system, shall be taken into consideration:

A. The discharge into the District sewer system of any water or waste having an average daily flow greater than one percent (1%) of the average daily flow at the sewage treatment plan shall be subject to review.

B. The temperature of industrial waste discharged into the sewer system should not exceed 140 degrees Fahrenheit.

60.08 REQUIREMENT FOR APPROVED PLANS AND CONSTRUCTION AGREEMENT

A. Developer shall prepare detailed engineering drawings for construction of the proposed system shown on the tentative map and submit such drawings to the District for review and approval. Each system shall provide for water service and/or sewer service, where applicable, to each lot in a subdivision and to each parcel in a parcel map development. The utility system proposed shall not be detrimental in any way to operation of the District utility system and shall conform to the requirements of the approved SAMP.

B. The General Manager shall review the construction drawings and either accept, reject, or revise them for compliance with District standards and specifications. Upon approval of the drawings, the General Manager shall return them to the Developer with the following: (i) District estimates for construction costs and the amount of additional District deposit; (ii) the required standard District agreement for installation of water or sewer facilities; and (iii) the amount of security required to guarantee performance of the agreement.

C. Developer shall return to the District the revised drawings, if required, the executed subdivision construction agreement, together with the required deposits and security, either cash, surety bond, or letter of credit, acceptable to the General Manager, and the grant of easements or rights-of-way that may be required. If such are complete, and the proposed subdivision has been annexed into an Improvement District, the Construction Agreement for the project will be authorized by the General Manager.

D. Upon approval of the construction agreement by the General Manager, the Developer shall submit the mylar construction plans for signature by the General Manager.

51.03 INSPECTION OF CUSTOMER PREMISES

Authorized District personnel shall have unrestricted access at reasonable hours to all premises served by District sewers for inspection and testing purposes, and to determine whether the customer is complying with the rules, regulations and ordinances of the District concerning sewer services.

52.06 DISCHARGE OF INDUSTRIAL WASTE

Any person or governmental agency desiring to discharge industrial wastes into the District sewer system shall obtain a permit from the District for the discharge of said wastes. The District may require installation of on-site facilities by the discharger for purposes of pretreatment of sewage before industrial waste can be discharged into the District sewer system.

52.03 ENFORCEMENT OF DISTRICT RULES AND REGULATIONS

The General Manager shall enforce rules and regulations set forth in this Code relating to District sewer service. The General Manager shall be authorized to take such action as he deems necessary for preservation of public health or safety, or for the protection of public or private property. The General Manager may suspend sewer service to any customer using the District sewer system in a manner that would endanger the public health or safety, or public or private property. In suspending such service, the Customer's connection to the District sewer system may be severed. If danger is imminent, the General Manager may act immediately to suspend sewer service coincident with giving notice or warning to the customer.

SECTION IV – OPERATIONS AND MAINTENANCE PROGRAM

Requirement¹

- (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;
- (b) Describe routine preventative operation and maintenance activities by staff and contractors, including a system for regular maintenance and cleaning of sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance program should have a system to document scheduled and conducted activities, such as work orders;
- (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 plans 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;
- (d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be properly trained; and
- (e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

¹ SWRCB Order No. 2006-0003-DWQ § D.13 (iv)

Supporting Documents

A summary of the District's measures and activities related to this section and the supporting official documents are shown in Table IV.1.

A sample copy of each document follows the table.

Items Required	Supporting Documents
a. Maintain an up-to-date map of the sanitary sewer system	<p>Water and Sanitary Sewer Facility Maps Created via GIS Maintained by In-House Engineering Department.</p> <p>Note: These documents are updated as necessary to reflect modifications and additions to the utility system.</p>
b. Describe routine preventative operation and maintenance activities by staff and contractors	<p>Otay Water District Operation and Maintenance Procedures—Preventative Maintenance Schedule set up to address wastewater conveyance facilities requiring more maintenance than normal based upon past District records.</p>
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	<p>The District's yearly Capital Improvement Program includes planned short term and long term rehabilitation and replacement wastewater facilities improvements that reflect the prioritized needs of the District over the planning horizon.</p>
d. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be properly trained	<p>Otay Water District Operation and Maintenance Procedures—Training per Collection System Procedures Manual. Conduct regular training of contractors/vendors.</p>
e. Provide equipment and replacement part inventories, including identification of critical replacement parts.	<p>Otay Water District Operation and Maintenance Procedures - Equipment and Parts Inventory. March 2009</p>

(a) The District's Sanitary Sewer System is maintained on a modern Geographic Information (G.I.S.) System, capable of providing a wireless link from the District's computer server to operations crews located throughout the District's service area. In addition, each crew has the District's sewer system loaded on their laptop computers in rare event they are out of range of the wireless connections.

Exhibit IV-A includes the District's Sanitary Sewer System. The exhibit includes the District's primary collection mains, lift stations, force mains and its 1.3 mgd water reclamation plant.

Exhibit IV-B is a typical 400 scale Facility Map sheet that has been completed for the entire District Sewer System. These sheets provide a hard copy of the District's sewer system to assist Operations staff in servicing the wastewater collection system's and the District's customers' needs.

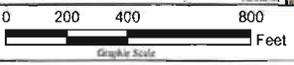
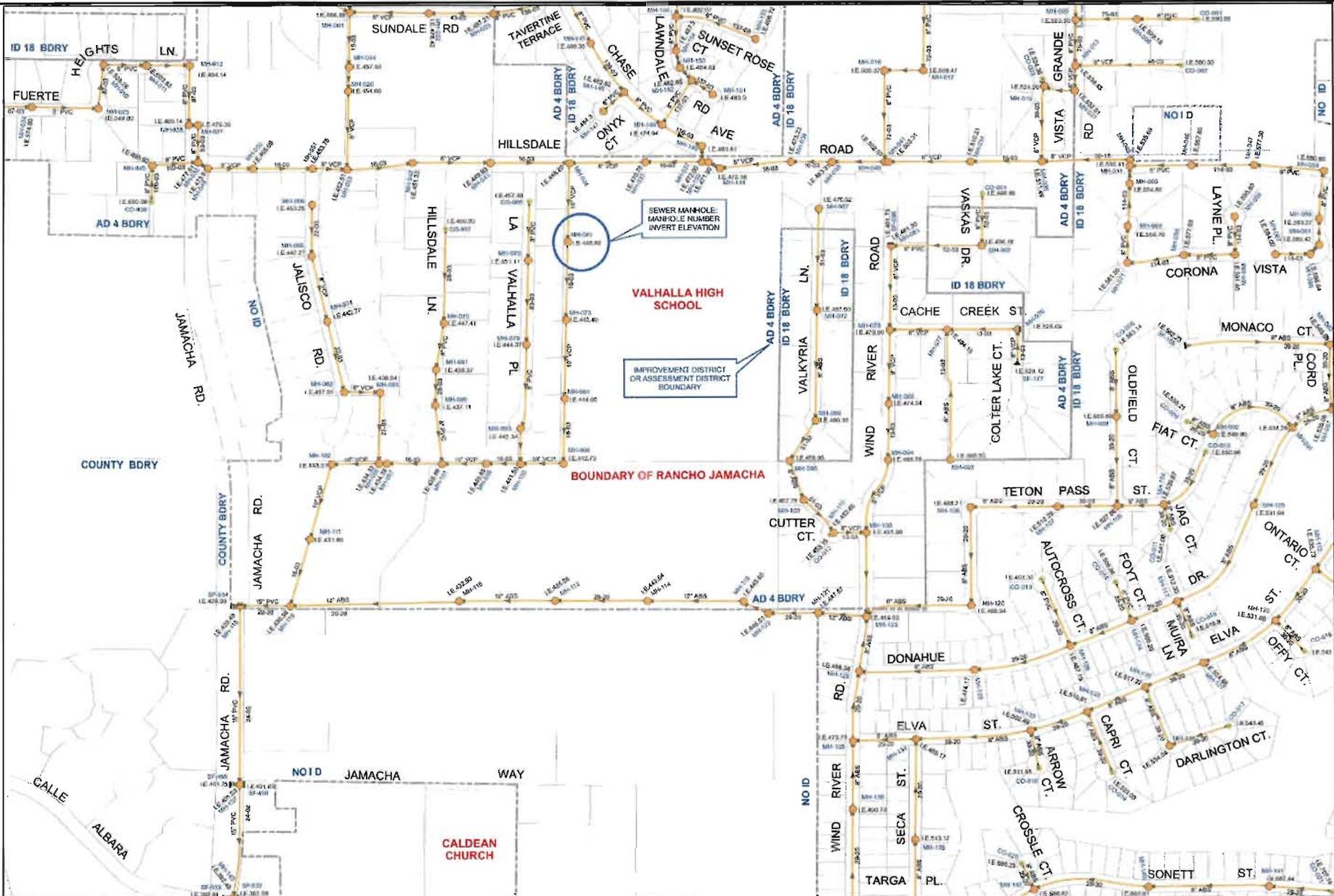
(b) In order to proactively reduce repairs and the chance for SSO events within the District's service area, the Operations Department staff has developed a detailed list of preventative maintenance procedures for each of the elements of their wastewater collection and treatment system:

The objective of the sewer main cleaning program is to clean the entire system once every two years using a Vactor brand high-velocity combination truck. Each appurtenance in the sewer collection system is assigned a unique asset number. All preventative and corrective maintenance of the collection system is captured at the asset level by utilizing Infrastructure Maintenance System (IMS) work orders.

Regular high-velocity cleaning of gravity sewer mains and inspections of manholes is scheduled by utilizing IMS work order templates that have been created for the entire system. These work order templates are organized into groups in the order in which cleaning should take place throughout the three sections of the system, Calavo Gardens, Hidden Mountain, and Rancho San Diego. All manholes are inspected as the sewer main is cleaned. Work orders are manually created by the operators as maintenance is completed.

Preventative maintenance and inspection of manholes in remote easements and environmentally sensitive areas as well as the five lift stations have been scheduled with a higher frequency. Work orders are automatically generated for these assets by the IMS. Maintenance activities for lift station include valve and pump component replacements, oil and belt changes, and wet well cleaning. Maintenance for manholes includes overall condition assessment, debris removal, herbicide application, and minor structural repairs.

OTAY WATER SERVICES



- Sewer Gravity Main
- Sewer Manhole
- Sewer Cleanout

367	368	369
355	356	357
343	344	345

Print Date: Feb 24, 2009

EXHIBIT IV-B

A few examples of these work orders are listed below:

06-01303	SCCSEQPU	Pumps	SSMA062	Lift Station Maintenance
06-01942	SCCS--LS	Lift Station	SSMA062	Lift Station Maintenance
08-02053	SPCS--MH	Manholes	SSPM023	Manhole PM
08-01483	SCCS--P3	Pipes	SSPM023	Manhole PM

Regular cleaning of enhanced maintenance areas is scheduled and determined by conditions observed during past inspections and preventative and corrective maintenance conducted in the field. Work orders for these areas are automatically generated by the IMS on a weekly, monthly, semi-annual, and annual basis. A list of these sewer mains and manholes is continuously updated and evaluated by the operators as maintenance is performed throughout the system.

A few examples of these work orders are listed below:

CSPM006	6 Month Pipe - Root
CSPM005	6 Month MH - Root
CSPM013	6 Month MH - Shadow Ranch Outfall
CSPM007	12 Month MH - Root
CSPM015	12 Month Pipe - Root
CSPM016	12 Month Pipe - Grease
CSPM008	12 Month Pipe - Design
CSPM014	12 Month Pipe - General Inspection

Conditions of force mains are determined by routine lift station calibration on a yearly basis to identify changes in capacity and discharge head pressure. Work orders for these activities are automatically generated by the IMS.

The preventative maintenance program for the Sewage Treatment (Reclamation) Plant is documented through automatically generated IMS work orders scheduled on a weekly, bi-weekly, monthly, semi-annual, and yearly basis. A few examples of these work orders are listed below:

08-02453	RPT3EQT3	Tertiary Equipment	TPPM146	Tertiary Filter Weekly PM Aeration Tank Monthly
08-00576	SPT2EQT2	Secondary Equipment	TPPM034	PM
09-00792	SPT2EQT2	Secondary Equipment	TPPM040	Clarifier Quarterly PM
09-00786	SPT2EQT2	Secondary Equipment	TPPM037	Blower Semi-Annual PM
08-01913	SPTPEQ	Equipment	TPPM210	Annual Safety Inspection

(c) Define prioritizing system. The District's yearly Capital Improvement Program (CIP) includes detailed planned short term and long term rehabilitation and replacement of wastewater facilities improvements that reflect the prioritized needs of the District over the planning horizon. Projects are described and funded each year so that they can be designed in-house or out-sourced for design and constructed prior to a sewer facility failure occurring and resulting in an SSO event. CIP projects are prioritized upon immediate need and the consequences of failure, on a scale of 1 to 10, with a score of 10 reflects the highest priority and the most immediate need of replacement.

Short term and long term rehabilitation and replacement plans are reflected in the CIP effort as a wide range of projects, ranging from immediate and high priority projects to low priority, long range projects. The process to determine whether to rehabilitate versus replace is included within each project's Preliminary Design Report phase (30% complete phase). The primary decision is the impact of a facility failure and threat of an SSO event if the facility is not rehabilitated or replaced within a certain period of time.

Manholes are inspected and cleaned along with the gravity sewer mains during regular day-to-day maintenance activities. Manholes identified as needing minor repairs such as grade elevation, cover/ring and exterior re-grouting, cover replacement, minor bench and channel repairs, and inflow issues are performed by the collection system and utility maintenance section staff. Manhole repair work with factors such as high traffic areas, deep manholes, and accessibility issues are considered for contracting to an outside service. Manholes with more critical conditions are identified and placed on a list for outsourced rehabilitation by a contracted service. Condition defects such as internal grouting needs, concrete degradation, infiltration, and manholes which need to be replaced fall into this category. All work is documented at the asset level in the IMS. Funds are budgeted on a yearly basis to cover the costs of both manhole rehabilitation options.

Gravity sewer pipeline and manhole conditions are also observed and documented during the course of the District's outsourced CCTV inspection program. Televised sewer main and manhole inspection records provided by a consulting firm are downloaded into the District's GIS and IMS applications. The engineering department evaluates the consultant's rehabilitation and replacement recommendations and determines which appurtenances will be addressed in-house or entered into a replacement CIP program the following year and contracted out.

(d) Regular Training for Sanitary Sewer System Staff. Collection System and Reclamation Plant section staff responsible for maintaining the sewer mains and lift stations are regularly trained in general safety policies and procedures such

as the examples listed below. Training is provided by the District Safety and Risk Administrator, section supervisors and leads and other designated employees, and by outsourced training facilities. More training is also required through a District-contracted online training firm.

- Qualified Applicator Training
- Confined Space Entry General Safety (Initial before entry) [Refresher every 2 years]
- AC Pipe & Annual Refresher - (Annual refresher course)
- Trenching & Shoring - Competent Person - (Initial seminar before working in trenches < 4') [Refresher every 3 years + periodic on-line refresher]
- Vehicle Incident Reporting Procedure, Report Form, and Fleet-Vehicle Driving & Parking - (Annual Review - Supervisor's call)

Utility Worker II positions assigned to the collection system section on a long-term basis are required to maintain a Collection System Maintenance Grade I certification administered by the California Water Environment Association (CWEA). All collection system and reclamation plant section staff is trained in all written procedures related to the collection system as appropriate for their job responsibilities. Staff also utilizes industry standard training manuals, vendor and CWEA training events, and manufacturer equipment manuals. Routine safety training for maintenance-related activities is scheduled by the Safety and Risk Administrator and the Reclamation Plant and Utility Maintenance section supervisors according to regulatory and District requirements. Additional on-the-job maintenance and operation training is provided to a new section member by a more experienced operator. Additionally, details describing methods and techniques needed for specific recurring maintenance activities in the collection system are listed in the IMS work order templates for sections in which they will need to be applied.

Vendors are required to adhere to all Cal-OSHA safety standards when contracted for work by the District. In some circumstances, such as confined space entries and working within the reclamation plant, District policy requires that vendors receive additional documented safety training prior beginning their work.

Additionally staff is trained in collection system-specific activities using procedures located electronically on the Otay Information System (OIS) and as hardcopy in the Collection System Procedures Manual. See Table of Contents on the following page.

Collection System Procedures Manual

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 - 1. Vactor Truck Safety
 - 2. Treatment Plant Entry and Exit
 - 3. Directions to Cottonwood Lift Station
 - 4. Directions to Hidden Mountain Lift Station
 - 5. Directions to Russell Square Lift Station

- B. SPILL NOTIFICATION
 - 1. Collection System Sewer Spill Response & Notification
 - 2. Spills and Overflows
 - 3. Initial Reporting Criteria for Recycled Water Spill
 - 4. Sewer Spill Prevention Plan

- C. COLLECTION SYSTEM & T-PLANT ALARM SYSTEMS
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 - 2. Acknowledging Alarms from RACO Guard-It Dialers
 - 3. Lift Station Acknowledging Alarms
 - 4. Lift Station Acknowledging Dialer Alarms
 - 5. Lift Station Communications Failures
 - 6. T-Plant apparent Computer Freeze
 - 7. Alarm Systems Phone Number Configuration

- D. COLLECTIONS & EQUIPMENT OPERATIONS
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 - 2. Vactor Lubrication & Maintenance
 - 3. Rainy Day Activities
 - 4. Steele Canyon P/S Inspection
 - 5. Cottonwood Meadows P/S Inspection
 - 6. Cottonwood Meadows Emergency Contingency Plan
 - 7. Cottonwood Meadows Emergency Operation Guide
 - 8. Hidden Mountain P/S Inspection
 - 9. Russell Square P/S Inspection
 - 10. Calavo Gardens P/S Weekly Inspection
 - 11. Silverado Emergency Sewer Lift Station Activation
 - 12. Pump Station Level Set Points
 - 13. Refilling Bioxide Tanks
 - 14. Root Spraying

(e) Equipment and Replacement Part Inventories. Materials used for emergency response and repairs are available at the Sewage Treatment (Reclamation) Plant, the Operations Warehouse, and the Operations Main Storage Yard. Materials are routinely inventoried to verify adequate supplies. Equipment used for emergency response is in use or stored at the District's Reclamation Plant and Operations Main Yard. Routine preventative maintenance is performed for all equipment and is documented in the Infrastructure Management System.

Other resources which can be used to respond to a sewage spill include contractors to provide repairs and services and suppliers to provide repair supplies. The District also has entered into a Shared Services Agreement with surrounding agencies to provide equipment and personnel in the event of an emergency. Agency and vendor contact information is included in approved response procedures where appropriate.

Below is a list of equipment, materials, and supplies, used for preventative and corrective maintenance in the collection system. The sewer pipeline and lift station inventory items are considered critical replacement parts.

Equipment Inventory List

- Vactor Truck
- ¾-Ton Utility Truck
- 2 inch Trailer Trash pump
- CCTV Camera, Monitor and Generator
- Smoke Test Blower
- Four Clam Hand Grabbers
- Root Cutter, Sling Blade
- 1 Set Hand Rods
- Digital Camera
- Sand Bags
- Public Notification Signs
- Caution Tape
- PPE: Hard Hat, Safety Vest, Gloves, Rubber Boots, Wader, Tyvex Suit, Safety Glasses, 10-Minute Emergency Escape Air Pack, Gas Monitor

Traffic Equipment Inventory

- 3-Road Construction Signs
- 1- Narrow Lane Sign
- 2- Merge Signs
- 3- Bike Lane Signs
- 5- Safety Sign Stands
- 23- Traffic Cones
- Slow/Stop paddle
- Delineators
- Signboards
- Barricades/lighted

Vector Truck Inventory List

- Vector Tube Clamps
- Vector Tubes
- Leader Hose
- Tiger Tail
- Fittings for High Pressure Water Gun
- Screens for Water Tank
- Hand Clam Grabber
- Hand Claw Grabber
- Hand Catch Basket
- Assorted Nozzles for Hydrojet Hose
- Wort Hog Nozzle
- Spinner Nozzle
- Hand-Held Spotlight
- Square Point Shovel
- Spade Shovel
- Digging Bar
- Metal Probe
- Spaner Wrench
- Manhole Hook
- Wash Down Gun

Sewer Plugs

- 2- 8 inch flow thru plugs
- 2- 10 inch flow thru plugs
- 1- 12 inch flow thru plug
- 2- 18 inch flow thru plugs
- 2- 6 to 12 inch flow thru plugs
- 2- 6 inch standard plugs
- 2- 8 inch standard plugs
- 6- 6 to 8 inch standard plugs
- 3- 8 to 12 inch J- plugs
- 1- Lateral Test plug
- 1- 12 inch wane ball
- 1- 6 inch mandrel
- 1- 11 inch mandrel
- 1- 13 inch mandrel
- 1- 15 inch mandrel
- 2- Wash balls

Manhole Lids and Grade Rings

- 4- 3 inch Grade Rings
- 2- 6 inch Grade Rings
- 2- 12 inch Grade Rings
- 6- 24 inch Grade Rings
- 8- 24 inch Manhole Lids
- 2- 24 inch Manhole Lids and Rings
- 1- 36 inch Manhole Lid and Ring
- 7- 24 inch Lockable Manhole Lids and rings

Sewer Main Materials: Critical Replacement Parts

- 4 Inch Dia Green Bell Pipe
- 4 Inch Dia Green Bell Pipe, Bend, 22 1/2 and 45
- 4 Inch Dia Green Bell Pipe Coupling
- 4 Inch Dia Green Bell Plug
- 6 Inch Dia PVC Pipe
- 8 Inch Dia Green-Bell Pipe SDR35
- 6 and 8 Inch Couplers
- 8 x 4 Inch Dia Saddle Wye

Lift Station Replacement Equipment: Critical Replacement Parts

- Remote Alarm Dialer
- Modems
- Fuses
- Level Transducers
- Float Ball Level Sensors
- Drive Belts
- Flapper Valves
- Motor Temperature Sensors
- Pipe Couplings
- Sump Pumps
- 30 HP motor, Steele Canyon SLS
- 20 HP motor, Cottonwood SLS
- 7-1/2 HP motor, Hidden Mountain SLS
- 5 HP motor, Russell Square SLS
- 40 HP motor, Calavo Gardens SLS

SECTION V - DESIGN AND CONSTRUCTION STANDARDS

Requirement¹

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

Supporting Documents

The District has adopted the Water Agency Standards Design Guidelines (WASDG) and the Water Agency Standards (WAS) as the District's design and construction standards, specifications construction details to install, rehabilitate, repair, test and inspect new and existing sewers and pump stations constructed within the District's service area.

A copy of each design guideline document and a table of contents for the standard design drawings and standard specifications are included in Appendix C as follows:

Appendix C

- C-1 Section 6.1 - Gravity Sewer Pipeline Design Guidelines
- C-2 Section 6.2 - Sewer Manholes and Cleanouts Design Guidelines
- C-3 Section 6.3 - Sewer Laterals Design Guidelines
- C-4 Section 6.4 - Pressure Systems (Force Mains) Design Guidelines
- C-5 Standard Specifications for Potable Water, Recycled Water and Sewer Facilities
- C-6 Standard Drawings for Potable Water, Recycled Water and Sewer Facilities.

¹ SWRCB Order No. 2006-0003-DWQ § D.13 (v)

SECTION VI - EMERGENCY RESPONSE PLAN

Requirement¹

Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and 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;
- (b) A program to ensure an appropriate response to all overflows;
- (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;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (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.

¹ SWRCB Order No. 2006-0003-DWQ § D.13 (vi)

Supporting Documents

The Otay Water District has developed the enclosed narrative entitled "Exhibit VI-A Sanitary Sewer Overflow Response and Reporting Work Flow Description" describing the roles and duties of each staff member during a SSO event.

In addition the District developed their own "Sanitary Sewer Overflow Response and Reporting Work Flow Plan", included herewith as Exhibit VI-B. District Operations staff was instrumental in the development of the plan since its inception in 2004 through its initial October 2007 revision and up to the May 2009 revision. The plan contains all the elements required by the SSMP.

The policy requires that District employees report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The District's goal is to respond to sewer system overflows during the regularly scheduled workday within 30 minutes.

After hours response time is dependant on the location of the assigned stand-by personnel and the typical response time is less than one hour.

Exhibit VI—A
Sanitary Sewer Overflow Response and Reporting
Work Flow Description

Operations Secretary: During normal working hours the Operations Secretary receives a call from an outside or inside source and creates an IMS work request to the Reclamation Plant Supervisor, then makes contact with the Supervisor or Lead Reclamation Plant Operator, or any available Reclamation Plant Operator.

After normal business hours the answering service receives a call from an outside source and notifies the standby duty Reclamation Plant Operator.

Reclamation Plant Supervisor: The Supervisor dispatches the Lead/Reclamation Plant Operator and two Utility Workers assigned to the collection system section to the site and informs the System Operations Manager and/or the Chief of Operations. The Lead/Reclamation Operators on site inform the Supervisor of the spill status for the assessment of additional District resources or outside services needed.

The Reclamation Plant Supervisor monitors the capture of overflow report data and supervises the compilation of a draft report. The Supervisor notifies the designated regulatory agencies as required by the waste discharge permit reporting program's classification of spills. The Supervisor reviews the preliminary report data with the Lead Operator prior to online reporting via the State Water Resources Control Board's online California Integrated Water Quality System (CIWQS). The Reclamation Plant Supervisor and the Lead Reclamation Plant Operator are authorized CIWQS data-submitters.

Lead Rec. Plant Operator: The Lead Reclamation Plant Operator monitors the capture of overflow report data in the field and updates the Supervisor with the status of the spill to

assess the need for additional District resources and/or outside services.

The Lead Reclamation Plant Operator creates an internal preliminary report and enters the data into the CIQWS under the "submit data" status after review with the supervisor. Additionally the Lead Operator is responsible for performing all the spill response activities of the Reclamation Plant Supervisor in his/her absence or as directed.

Reclamation Plant Operator: The Reclamation Plant Operator(s) responding to the spill is responsible for applying best management practices for spill containment until the Utility Workers arrive with collection system maintenance equipment. The Reclamation Plant Operator provides the Utility Workers with any additional information on the spill obtained after they arrive on site. The Plant Operator also operates/troubleshoots lift station equipment and/or uses blockage-removal hand tools to remove the cause or lessen the severity of the spill. Additionally, the Plant Operator captures all field data used for reporting and forwards it to the Lead Operator and/or Plant Supervisor.

Utility Worker: The Utility Workers assigned to the collection system on a long-term basis are responsible for responding to the spill when notified, removing blockages, and determining the cause of the spill.

After normal working hours the standby Reclamation Plant Operator directly notifies the standby-duty Utility Crew Leader who will then call their standby Utility Worker crew to respond to the overflow site.

System Operations Manager: The System Operations Manager reviews report data submitted by the Lead Reclamation Plant Operator and/or the Reclamation Plant Supervisor prior to updating the report status to "ready to certify." The System Operations Manager is a Legally Responsible Official for the District and certifies all sanitary sewer overflow reports in the CIWQS after the report has been submitted for certification by the

Reclamation Plant Supervisor or the Lead Reclamation Plant Operator.

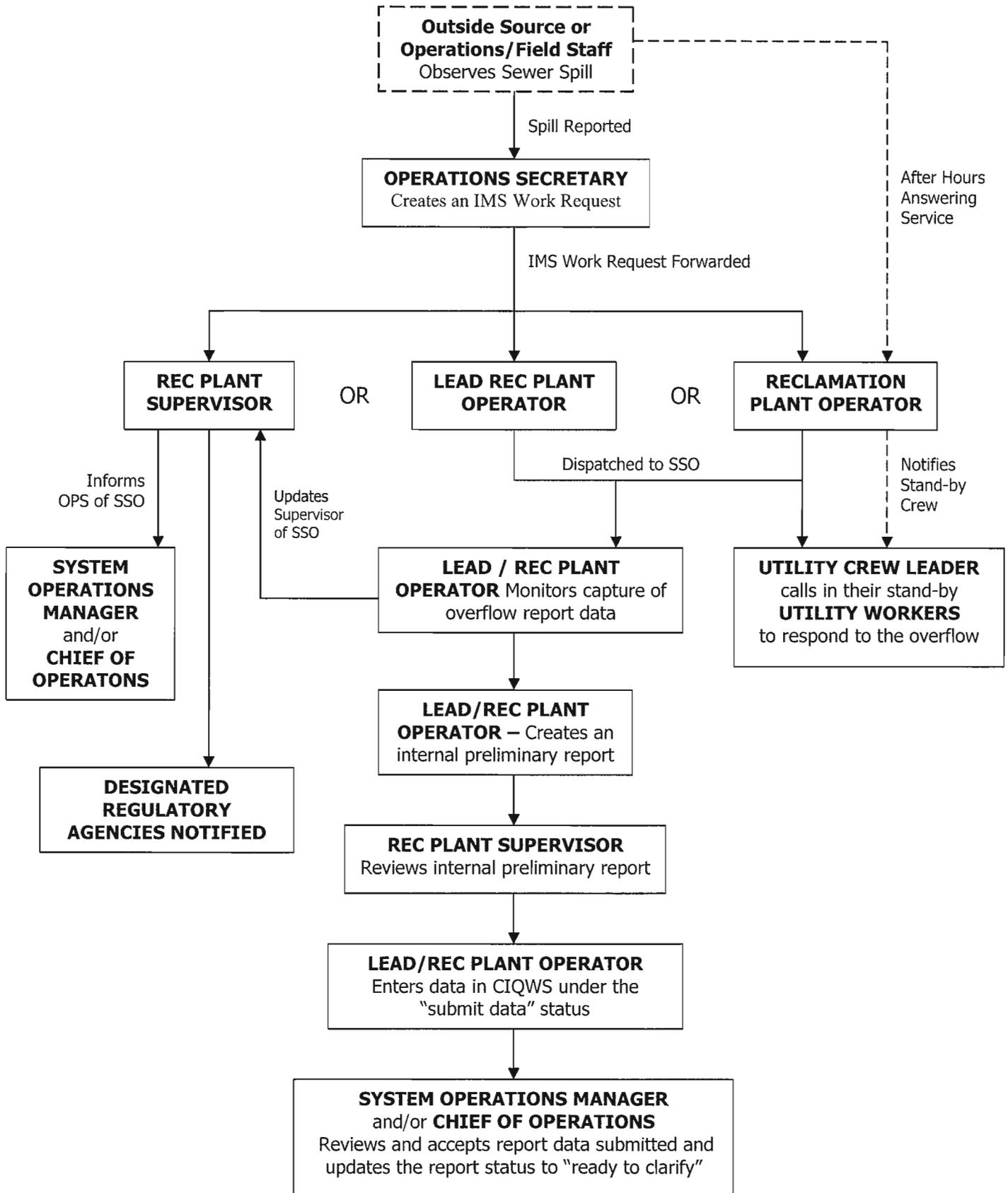
Chief of Operations:

The Chief of Operations is also a Legally Responsible Official for the District and may certify final reports in the CIWQS in the absence of the System Operations Manager.

General Manager:

The General Manager is a Legally Responsible Official. The Chief of Operations and System Operations Manager are duly authorized representatives of the General Manager.

Exhibit VI—B Sanitary Sewer Overflow Response and Reporting Work Flow Plan



(a) Emergency Response Plan Training for Staff: Training for sanitary sewer overflow response is provided regularly to prepare participants for the conditions of an emergency, to visualize and practice response rolls and to address procedural conflict and difficulties. Ways to train include these three simulation techniques:

- Tabletop Exercise: After review and discussion of established spill response procedures, a sewage spill event is simulated without the use of equipment or deployment of resources. A facilitator verbally explains the steps taken. Exercise effectiveness is determined by feedback from participants and impact on revisions to plans, procedures, and systems.
- Emergency Response Drills: A sewage spill event is simulated with the use of equipment and deployment of resources. Controllers monitor and record actions. This type of exercise not only allows for the re-evaluation of response procedures, but it also tests equipment, response time, training, resource and staff capabilities. All drills have follow-up meetings to critique strength and weaknesses and to recommend improvements.

(b) Procedures to Address Traffic and Crowd Control During SSO Events: Traffic control equipment will be employed whenever there is a need to divert traffic around a sewer spill. Traffic control equipment is stored at the reclamation plant and operations main yard. Equipment includes barricades, delineators, lighted sign-boards, traffic cones, lighted signs, flashers, and utility vehicles. Assistance with traffic control has been set up in advance with contracts with vendors to be used during responses to spills such as televised inspection contractors, pumping service vendors, and nearby agencies that participate in the District's Shared Services Agreement.

Crowd control can be handled similar to traffic control with the additional use of sewer spill notification signs, caution tape, and materials to rope-off an area affected by the spill until cleanup is completed.

(c) Program to Contain and Prevent the Discharge of Wastewater to Waters of the United States: The District's primary objective in sewer spill response is to protect the public health and the environment. Materials and equipment used for sewer spill response for the prevention of wastewater reaching Waters of the United States are stored at the reclamation plant in a designated area for sewer system maintenance and emergencies. Methods used to divert, contain and recover sewer flow from storm drains and bodies of water are listed in the Collection System Sewer Spill & Response procedure. Some of these methods and material include:

1. Use sandbags, fiber rolls and/or straw waddles to reduce spill volume to storm drains and bodies of water.
2. Dig diversion trenches and/or install silt fences to direct flow away from storm drains and bodies of water.
3. Build earth dams and detention ponds to contain wastewater flow until it can be recovered.
4. Use vactor truck to recover spill volume where possible.
5. Use pumps to transfer flow away from storm drains and bodies of water.

The operation and maintenance training program ensures that these best management practices are reviewed, rehearsed, and updated during table-top exercises and emergency drills, and any time there is a significant change in equipment or operation of the collection system. Additionally, an IMS-generated work order has been created for the annual review of spill-response procedures.

SECTION VII—FOG CONTROL PLAN

Requirement¹

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;
- (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;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

¹SWRCB Order No. 2006-0003-DWQ § D.13 (vii)

FOG Control Program

The Fats Oil and Grease (FOG) Program is normally a component of a SSMP for a wastewater collection agency with a large number of commercial customers and/or a history of FOG SSO events. The Otay Water District has carefully evaluated its service area and has determined that a FOG Control Program is not necessary for the District at this time based upon its SSO history and customer profile. The County of San Diego requires holders to follow the California Retail Food Code regarding water generating retail establishments within the District. In addition the Department of Environmental Health, Food and Housing Division assures that all facilities include the appropriate grease trap and grease interceptor through the plan check process. Appendix A-4 includes a sample of these County Plan Check Forms.

The Otay Water District hereby requests that a FOG Program not be included in this SSMP at this time until more evidence of SSO events and increased maintenance due to FOG are experienced by the District. If that happens the District will draft, adopt and implement a FOG Program as part of their SSMP.

District Operations staff have reviewed its customer base and available resources and allocated time to certain locations suspected to be in need of increased maintenance so as to better avoid the chance of a SSO event. The following identifies those locations and maintenance schedules or frequencies:

Identification of "Warm Spots" and Schedule of Maintenance:

- The District only has 70 non-residential sewer customers;
- Of those 70 customers only 26 are related to the food business;
- Those 26 sewer customers comprise a range of commercial customers from small convenience stores to a Vons shopping center. The following "wastewater locations" and maintenance frequencies have been established by the District to proactively identify the potential for SSO events and set up a responsible maintenance schedule to help avoid spills in the future.

The District Operations staff has set up a maintenance schedule to address these suspected wastewater conveyance locations that have needed additional (more frequent) maintenance in the past based upon recent District experiences.

It is important to note that none of these locations pose SSO serious threats due to excessive FOG creation, but have been identified by the District as a

few locations that can easily be visited more frequently in order to assure that lift station wet wells do not accumulate deeper levels of solids and a few sewer lines are checked more frequently just to be safe.

Staff prepared a list of the following 36 locations with the currently assigned maintenance frequencies and determined a list of 9 "warm spots" requiring higher maintenance frequencies:

- 4 locations, 12/Year
- 3 locations, 4/year
- 19 locations, 2/Year
- 10 locations, 1/Year

The following four (4) locations within the District service area have been identified as "warm spots" requiring once per one (1) month maintenance frequency intervals:

- One low manhole with a flat section of sewer pipe known as the Rancho San Diego Village Shopping Center is a recognized "warm spot" for the District and is a regularly scheduled maintenance visit.
- A long section of off road flat sewer in a District easement on private property referred to as Paseo Salamoner results in the need for frequent cleaning and has made this section of pipe a second "warm spot".
- "Warm spots" 3 and 4 are designated by the District as the Cottonwood Lift Station and the Hidden Mountain Lift Station, both receiving monthly vacuum maintenance.

The following three (3) locations within the District service area have been identified as "warm spots" requiring once per three (3) month maintenance frequency intervals:

- The Russell Square Lift Station receives a quarterly inspection and vacuum in order to minimize any problems from occurring at this lift station.
- A flat section of 8-inch sewer pipe in Fury Lane between Carpenter and Calle Verde is inspected and cleaned every three months in order to avoid the chance of any flows being delayed in this flatter section of pipe.

- A light commercial area comprising 435 feet of flatter sewer pipe north of Chase Avenue along Jamacha Road is cleaned every three months to assure that no problems develop.

Two other “special areas” that District Operations staff maintains are residential areas that experience grease build-ups due to suspected catering operations being operated out of residences. The sewer mains are cleaned twice a year to assure that no blockages occur. Turbulence in one manhole is suspected to increase the accumulation of grease buildup as well. These were added to the “warm spot” list and assigned a maintenance frequency of twice per twelve (12) months.

Table VII-2 summarizes the nine (9) “warm spots’ discussed hereinabove.

Table VII-2 - “Warm Spots”

Spot	Location	Description	Maintenance
1	Rancho San Diego Shopping	Manhole	12/Year
2	Paseo Salamoner Sewer	Off-Road	12/Year
3	Cottonwood Lift Station	Wet Well	12/Year
4	Hidden Mountain Lift Station	Wet Well	12/Year
5	Russell Square Lift Station	Wet Well	4/Year
6	Fury Lane: Carpenter-Calle Verde	8” Sewer	4/Year
7	Jamacha/Chase Sewer	435 LF	4/Year
8	Donahue & Muira Lane - 8” Sewer	Residential	2/Year
9	1429 Fuerte Heights – 8” Sewer	Residential	2/Year

Exhibit VII-A includes the 26 non-residential accounts that are related to the food business and the 9 “warm spots” identified by the District.

The Legal Authority to Prohibit Discharges to the District System:

The District’s existing ordinance 52.04 “Prohibitions Against Discharge of Objectionable Wastes” disallows a wide range of pollutants, including oils, grease, gasoline, cleaning solvent, fuel, viscous materials, animal or dairy wastes, septic wastes, and any other material that could be harmful to the District sewer system.

Requirements to Install Grease Removal Devices:

The County of San Diego’s Ordinance 9275 regulates the building permits that private landowners seeking sewer service from the District obtain, and require the landowners to install the appropriate oil and grease traps and interceptors pursuant to the Uniform Plumbing Code.

Legal Authority to Inspect Grease Producing Facilities:

The District has determined that existing legal elements were adequate for the authority to inspect grease producing facilities and to prohibit discharges. The District's existing ordinance 51.03 "allows District personnel unrestricted access at reasonable hours to all premises served by District sewers for inspection and testing purposes, and to determine whether the customer is complying with the rules, regulations and ordinances of the District concerning sewer services."

SECTION VIII—CAPACITY MANAGEMENT

Requirement*

Each Enrollee shall prepare and implement a capital improvement plan (CIP) that provides hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions and the appropriate design storm or wet weather event. The CIP shall include the following elements:

- a. Evaluation of those sections of the collection system that experience or contribute to SSO discharge caused by hydraulic deficiency;
- b. Establish design criteria if it does not exist or if deficient;
- c. Establish short- and long-term capacity enhancement measures to include in the CIP including an implementation schedule and funding sources;
- d. Develop a completion schedule for the CIP developed, which is reviewed and updated in accordance with Section D.14 of the Order.

Supporting Documents

A summary of the hydraulic capacity evaluation analysis related to this section and the supporting official documents are shown in Table VIII.1.

The District is preparing an updated Sewer Capacity Evaluation which is anticipated to be completed in late 2009. This document will include data collected in 2007 on inflow and infiltration, operational experience with the Relief Sewer Pipeline, hydraulic modeling, capital improvements, and funding and implementation schedules.

*SWRCB Order No. 2006-0003-DWQ § D.13 (viii)

TABLE VIII.1

Item Required	Supporting Documents
a. Evaluate collection system for hydraulic deficiencies	<ul style="list-style-type: none"> • Sewer System Master Plan: H2O Map – Sewer Model Calibration Capacity Analysis and System Assessment with Sewer Priority Report, June 2007. Otay Water District. • Sewer System Master Plan: H2O Map – Sewer Existing Dry and Wet Weather Flow Reports, Ultimate Dry and Wet Weather Flow Reports. • CCTX Inspection of Sewer Mains. Task 1,2,3 and 4. December 2008 – April 2009 RBF Consulting.
b. Establish design criteria	<ul style="list-style-type: none"> • Water Agency Standards – Standard Guidelines, Drawings and Details. September 2008.
c. Establish short- and long-term capacity enhancement measures	<ul style="list-style-type: none"> • Sewer System Master Plan: H2O Map – Sewer Model Calibration Capacity Analysis and System Assessment with Sewer Priority Report, June 2007. Otay Water District. • Sewer System Master Plan: H2O Map – Sewer Existing Dry and Wet Weather Flow Reports, Ultimate Dry and Wet Weather Flow Reports. • CCTX Inspection of Sewer Mains. Task 1,2,3 and 4. December 2008 – April 2009 RBF Consulting. • Capital Improvement Program FY 2009–2010. Otay Water District.

TABLE VIII.1 CONTINUED

<p>d. Develop a completion schedule</p>	<ul style="list-style-type: none">• Sewer System Master Plan: H2O Map – Sewer Model Calibration Capacity Analysis and System Assessment with Sewer Priority Report, June 2007. Otay Water District.• Sewer System Master Plan: H2O Map – Sewer Existing Dry and Wet Weather Flow Reports, Ultimate Dry and Wet Weather Flow Reports.• CCTX Inspection of Sewer Mains. Task 1,2,3 and 4. December 2008 – April 2009 RBF Consulting.• Capital Improvement Program FY 2009–2010. Otay Water District.
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SECTION IX—MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

Requirement*

Each Enrollee shall:

- a. Maintain relevant information to establish and prioritize SSMP activities
- b. Monitor implementation and where appropriate measure the effectiveness of each SSMP element
- c. Assess the success of the preventative maintenance program
- d. Update SSMP program elements based on monitoring or performance evaluations
- e. Identify and illustrate SSO trends including frequency, location and volume

Supporting Documents

A memorandum describing the process to monitor, measure and modify the SSMP follows this page. A copy of the 2006-2009 SSO report is included.

*SWRCB Order No. 2006-0003-DWQ § D.13 (ix)

Process to Monitor, Measure and Modify SSMP Program Elements

The following describes the process and methods by which the District will monitor the effectiveness of the SSMP elements and provide for ongoing modification and updating to keep the elements current, accurate, and available for audit.

Performance Indicators

A number of performance indicators are or will be tracked to evaluate the long-term effectiveness of the SSMP elements described in this plan and for reporting to the Water Board in the Annual SSO Report. Some of these indicators could be expected to relate directly to specific elements or O&M activities, whereas others relate to multiple activities or program effectiveness as a whole. For example, it may be possible to correlate the number of blockages attributed to roots with the total annual footage (or multi-year cumulative footage) of sewer lines subject to rodding as part of our preventative maintenance program (see SSMP Section VI). In contrast, the volume of SSOs reaching surface waters would more likely reflect multiple maintenance activities, emergency response times and even uncontrollable factors.

In measuring an outcome that is characterized by a relatively small number of events (e.g. number of annual wet weather SSOs), it is important to recognize that statistical variability may dominate short-term trends and that true causal relationships are likely to be evident only over the long term.

The following table lists the quantitative indicators that are currently tracked or planned to be tracked. As the historic record grows, future annual reports to the Water Board will include trend plots for key measures. Performance measures related to maintenance activities will be tabulated and charted in the annual collection system report.

SSMP Updates and Modifications

It is the District's intention that the SSMP remain a living document and that it be regularly updated to reflect program or organizational changes, new regulatory requirements, and other changing conditions. Methods to ensure this objective is met include:

- The District's General Manager has the overall responsibility for maintaining and updating the SSMP. This will involve input and coordination with the Chief, Water Operations and the Systems Operations Manager. If conditions or higher-level priorities warrant, an outside consultant may be engaged, at the direction of the General Manager or designee, to update the plan.

- A number of the activities described in the SSMP reflect ongoing programs for which the review and update process is well established. Examples include preventative maintenance (PM) measures, staff training, outreach, inspection, and testing.
- The Water Board and the General Order 2006-003-DWQ require periodic auditing of the SSMP. This elevates maintenance of the SSMP to a mandatory status on par with other regulatory requirements.
- In addition to periodic audits, Order 2006-003-DWQ requires that the SSMP be updated every five years. However, updates may be conducted more frequently if warranted through significant changes in the supporting documents for the program elements.

Proposed SSMP Performance Indicators

Indicator
Number of SSOs (by season)
Wet season
Dry Season
Number of SSOs (by volume)
< 10 gal
10 – 99 gal
100 – 999 gal
≥1000 gal
SSO Volume
Total
Recovered
Total Volume conveyed to the plant
Total volume SSO / Total volume conveyed
Number of SSO (by cause)
Blockages
Roots
Grease
Debris
Debris from Laterals
Animal Carcass
Construction Debris
Multiple causes
Infrastructure failure
Inflow & Infiltration
Electrical Power Failure
Flow Capacity Deficiency
Natural Disaster
Bypass
Cause Unknown
Number of SSOs per mile of sewer per year
Volume of SSOs per mile of sewer per year
Average Emergency Response Time
Business Hours
Non-business hours
Maintenance activities (lineal ft/yr)
Televised inspection
Top-down cleaning
Smoke inspection

Number and Size of SSOs

There were a total of four (4) SSOs during years 2006 through 2009. One overflow was caused by an infrastructure failure at a lift station and another by an infrastructure failure on a force main. Another was caused by roots, and the remaining spill was caused by a suspected blockage just outside of the District's sewer jurisdiction. The number and the sizes of the SSOs are summarized in Table 1.

Table 1. Number of SSOs

Size of SSO (gallons)	Number	Percent of Total by Number
Greater than or equal to 1,000	1	25%
From 999 to 99	1	25%
From 10 to 99	2	50%
Less than 10 (can include in line above)	N/A	
[Public portion of lateral (if applicable)]	N/A	
Total		100%

Volume of Spills

No volume of sewer reached waters of the State. Volumes of the spills contained and returned to the treatment process are shown in Table 2.

Table 2. Volume of SSOs

	Volume (gallons)	Percent of Total by Number
Total volume contained and returned to sewer system for treatment	1,555	
Total volume reaching waters of the state	N/A	
Total volume not contained but not reaching waters of the State (everything else)	930	
Total	2,485	100%

SECTION X—SSMP PROGRAM AUDITS

Requirement*

- a. Perform a periodic internal audit at least every two years and prepare a report;
- b. The audit shall focus on the effectiveness of the SSMP and the District's compliance with SSMP requirements including identifying SSMP deficiencies and corrective steps.

Supporting Documents

A summary of the District's measures and activities related to this section and the supporting official documents are shown in Table X.1.

A copy of each document follows the table.

*SWRCB Order No. 2006-0003-DWQ § D.13 (x)

TABLE X.I

Item Required	Supporting Documents
a. Perform a periodic internal audit	SSMP Audit Program. Draft SSMP Audit being prepared for bi-annual review and acceptance. Initial audit to be completed by July 1, 2011. b. Demonstrate effectiveness and compliance with SSMP requirements
b. Demonstrate effectiveness and compliance with SSMP requirements	SSMP Audit Program. Annual Review and Update of SSMP effectiveness and compliance.

SSMP Audit Program

Internal audits to identify the progress of the implementation of the SSMP and evaluate its effectiveness (including any corrective measures needed) are required on a periodic basis. Audits shall be conducted every two years at minimum with the results kept on file.

The District’s plan is to conduct the internal audit in conjunction with the bi-annual review and update of the SSMP. In addition to identifying and correcting deficiencies (or specifying the schedule for such correction), the audit will review effectiveness of implementing the SSMP elements using the performance measures listed in Section IX.

As indicated in Section IX, performance measures are expected to yield meaningful results only when viewed over a number of years (i.e. long-term trends) and may show significant variability on a year-to-year basis. The audit will also include a qualitative evaluation of the overall effectiveness of implementing SSMP elements. Lastly, it will describe improvements to the collection system completed during the past year and those proposed for the upcoming year.

The first audit (2011) will focus primarily on the completeness of the SSMP to date. Subsequent audits will be conducted during the late winter season so that its results are available for inclusion in a combined Annual SSO/SSMP Report that is due July 1. As the SSMP develops and implementation can be measured, the emphasis of each audit will shift toward the performance measures described in Section IX.

SECTION XI—COMMUNICATION PROGRAM

Requirement*

- a. Each Enrollee shall communicate on a regular basis with the Public on SSMP development, implementation and performance
- b. The communication system shall provide the Public opportunity to provide input on program development and implementation
- c. The system shall include a plan to communicate with tributary and/or satellite collection systems.

Supporting Documents

A summary of the District's communication program related to this section and the supporting official documents are shown in Table XI.1.

TABLE XI.1

Items Received	Supporting Documents
a. Communicate on a regular basis with Public on SSMP Performance.	Implement Bill Stuffer Program; include telephone numbers; include Web sites with Information.
b. Provide Public with opportunity for input on Program Development and Implementation.	Invite Public to SSMP update workshops; include updates in bills with Bill Stuffer and telephone number.
c. System to community with tributary and Saturday collection systems.	N/A

* SWRCB Order No. 2006-0003-DWQ § D.13 (xi)

Appendix A

- A-1 Otay Water District Board of Directors Agenda Item 8a "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems - Approval of Otay Water District Plan and Schedule for the Development of a Sewer System Management Plan".
- A-2 Otay Water District Board of Directors Meeting Minutes of November 7, 2007, Meeting Minutes Item No. 9 a) Approval of the proposed Plan and Schedule for the Development of the District's Sewer System Management Plan (SSMP).
- A-3 Otay Water District letter dated November 8, 2007 with attached confirmation of November 7, 2007 on-line SSO certification of Development Plan and Schedule, Section I Goals and Section II Organization.
- A-4 County of San Diego Department of Environmental Health Food and Housing Division Grease Traps/Interceptors in Food Facilities, Food Facility Plan Check Application Part I, II and Diagram.

AGENDA ITEM 8a



STAFF REPORT

TYPE MEETING:	Regular Board	MEETING DATE:	November 7, 2007
SUBMITTED BY:	Meryll Gonzalez <i>MKG</i> Assistant Civil Engineer	PROJECT No./	P1210/ DIV. 3,4,5
	Ken Simmons <i>KS</i> Senior Civil Engineer	SUBPROJECTS	25000 NO.
	Ron Ripperger <i>RR</i> Engineering Manager		
APPROVED BY:	Rod Posada <i>R. Posada</i> (Chief) Chief, Engineering		
APPROVED BY:	Manny Magaña <i>M. Magaña</i> (Asst. GM): Assistant General Manager, Engineering and Operations		
SUBJECT:	Statewide General Waste Discharge Requirements for Sanitary Sewer Systems - Approval of Otay Water District Plan and Schedule for the Development of a Sewer System Management Plan		

GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District's (District) Board of Directors approve the proposed Plan and Schedule for the development of the District's Sewer System Management Plan (SSMP).

COMMITTEE ACTION: _____

Please see Attachment A.

PURPOSE:

The California State Water Resources Control Board Order No. 2006-003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems requires District Board approval of the Plan and Schedule for the development of the District's SSMP.

ANALYSIS:

On May 2, 2006, the State Water Resources Control Board (SWRCB) issued Order No. 2006-003, the Statewide General Waste Discharge Requirements (WDRs) for sanitary sewer systems. These WDRs are the regulatory mechanism for all agencies that own or operate sanitary sewer collection systems greater than one-mile in

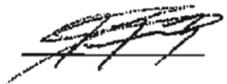
length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility. The ultimate goal of the WDRs is to reduce the frequency and volume of sanitary sewer overflows (SSO's) by requiring Districts, sewer agencies, cities, and other entities to properly operate, maintain, and manage their wastewater collection system.

According to the WDRs, each agency must develop and implement a system-specific SSMP. To implement the elements of the SSMP, both the proposed plan to prepare an SSMP and the related schedule must be certified by the agency to be in compliance with the WDRs. The list of the WDRs requirements and the schedule must be presented to the agency's governing board for approval at a public meeting in order to be in compliance.

To meet the WDRs No. 2006-0003, staff has developed the proposed SSMP Development Plan and Schedule for Board approval (Attachment B).

Staff recommends that the Board approve the Development Plan and Schedule for preparation of the District SSMP.

FISCAL IMPACT:



This effort will be performed in-house and is covered by the operating budget.

STRATEGIC GOAL:

This project supports the District's Mission Statement, "To provide safe, reliable water, recycled water and wastewater services to our community in an innovative, cost efficient, water wise and environmentally responsible manner," and the District's Strategic Goals, "To satisfy current and future water needs for potable, recycled, and wastewater services."

LEGAL IMPACT:

None.



General Manager

P:\WORKING\SSMP\Staff Reports\Staff Report SSMP Plan and Schedule_10-4-07.doc

MG/KS/RR/RP:jf

Attachments: Attachment A
Attachment B



ATTACHMENT A

SUBJECT/PROJECT:	Statewide General Waste Discharge Requirements for Sanitary Sewer Systems - Approval of Otay Water District Plan and Schedule for the Development of a Sewer System Management Plan
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COMMITTEE ACTION:

The Engineering, Operations, and Water Resources Committee reviewed this item at a meeting held on October 29, 2007. The following comments were made:

- Staff indicated that in May 2006, the State Water Resources Control Board issued an order that all agencies which own or operate a sanitary sewer collection system comply with the Statewide General Waste Discharge Requirements.
- According to the requirements, each agency must develop and implement a system-specific Sewer System Management Plan (SSMP). To be able to implement the elements of the SSMP, the development plan and related schedule must be presented and approved by the agency's governing board to be certified under the State Water Resources Control Board.
- Staff is requesting that the Board approve the proposed SSMP Development Plan and Schedule.

Upon completion of the discussion, the Committee supports Staff's recommendation and forwarding to the Board of Directors for discussion and approval.

ATTACHMENT B

SSMP DEVELOPMENT PLAN AND SCHEDULE for the OTAY WATER DISTRICT		
SSMP Component	Due Date	Work Element
	1/2/2007	Implement the Electronic Spill Reporting Program - COMPLETED.
	11/2/2007	Develop & Approve SSMP Development Plan and Schedule - 11/7/07 BOARD ACTION
(i) Goal	11/2/2007	Define Goals of SSMP
(ii) Organization	11/2/2007	(a) Authorized Representative (b) Management and Organization Chart (c) SSO Reporting Chain of Communication
(iii) Legal Authority	5/2/2009	(a) To Prevent illicit Discharges into the System (b) To Require Proper Design and Construction of Sewers (c) To Ensure Access to Publicly Owned Portion of Lateral (d) To Limit the Discharge of FOG and other Debris (e) To Enforce Violations of Sewer Ordinances
(iv) Operation and Maintenance Program	5/2/2009	(a) Up-to-Date Map of Sanitary Sewer System (b) Preventative Maintenance Program (c) Rehabilitation and Replacement Plan (d) Training for Sanitary Sewer System Staff and Contractors (e) Equipment and Replacement Part Inventory
(v) Design and Performance Provisions	8/2/2009	(a) Design and Construction Standards and Specifications (b) Procedures and Standards for Installation, Rehabilitation, and Repair Projects
(vi) Overflow Emergency Response Program	5/2/2009	(a) Proper Notification Procedures for SSOs (b) Appropriate Response Program for SSOs (c) Prompt Notification to Regulatory Agencies (d) Emergency Response Plan and Appropriate Staff Training (e) Emergency Operation Procedures such as Traffic and Crowd Control (f) Containment and Prevention Program for SSO Discharge into U.S. waters
(vii) FOG Control Program	5/2/2009	(a) Implementation Plan and Schedule for Public Outreach (b) Plan and Schedule for Disposal of FOG within the Service Area (c) Legal authority to prohibit FOG discharges and prevent related SSOs and blockages (d) Requirement to install grease removal devices, and provision of design standards and requirements for such devices (e) Authority to inspect grease producing facilities, enforcement authorities, and evidence of sufficient enforcement staff for FOG ordinance (f) Identification and maintenance scheduling of sewer sections prone to FOG blockages (g) Development and Implementation of source control measures for FOG sources in above identified sections
(viii) System Evaluation and Capacity Assurance Plan	8/2/2009	(a) Sanitary Sewer System Evaluation (b) Design Criteria (c) Capacity Enhancement Measures (d) Completion Schedule
(ix) Monitoring, Measurement, and Plan Modifications	8/2/2009	(a) Maintenance of information to prioritize SSMP activities (b) Monitoring of Implementation and effectiveness of SSMP elements (c) Assessment of Preventative Maintenance Program (d) Update of program elements based on evaluation (e) Identification and Illustration of SSO trends
(x) Program Audits	8/2/2009	(a) Identify key result areas and performance measures within SSMP (b) Develop criteria and procedures for measuring system performance and Plan compliance (c) Develop criteria and procedure for measuring the effectiveness of the Plan (d) Develop procedures for periodic Plan updates to address deficiencies and needed improvements (e) Develop procedures for preparing and filing bi-annual Audit Reports
(xi) Communication Program	8/2/2009	Community Outreach / Feedback Communication with Satellite Agencies

**MINUTES OF THE
BOARD OF DIRECTORS MEETING OF THE
OTAY WATER DISTRICT
November 7, 2007**

1. The meeting was called to order by President Croucher at 3:31 p.m.

2. ROLL CALL

Directors Present: Bonilla, Breitfelder, Croucher, Lopez and Robak

Directors Absent: None

Staff Present: General Manager Mark Watton, Asst. GM Administration and Finance German Alvarez, Asst. GM Engineering and Operations Manny Magana, General Counsel Yuri Calderon, Chief of Information Technology Geoff Stevens, Chief Financial Officer Joe Beachem, Chief of Engineering Rod Posada, Chief of Operations Pedro Porras, Chief of Administration Rom Sarno, Finance Manager Rita Bell, Finance Manager, Jim Cudlip, District Secretary Susan Cruz and others per attached list.

3. PLEDGE OF ALLEGIANCE

4. APPROVAL OF AGENDA

A motion was made by Director Breitfelder, seconded by Director Lopez and carried with the following vote:

Ayes:	Directors Bonilla, Breitfelder, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to approve the agenda.

5. APPROVAL OF MINUTES

A motion was made by Director Breitfelder, seconded by Director Lopez and carried with the following vote:

Ayes:	Directors Breitfelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to approve the minutes of the Special Board Meeting of August 20, 2007 and Regular Board Meeting of September 5, 2007.

6. PUBLIC PARTICIPATION – OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO SPEAK TO THE BOARD ON ANY SUBJECT MATTER WITHIN THE BOARD'S JURISDICTION BUT NOT AN ITEM ON TODAY'S AGENDA

Mr. Gary Rogers of Dudek & Associates introduced himself and indicated that he was in attendance to observe the proceedings.

CONSENT CALENDAR

7. ITEMS TO BE ACTED UPON WITHOUT DISCUSSION, UNLESS A REQUEST IS MADE BY A MEMBER OF THE BOARD OR THE PUBLIC TO DISCUSS A PARTICULAR ITEM:

A motion was made by Director Bonilla, seconded by Director Breitfelder and carried with the following vote:

Ayes:	Directors Breitfelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to approve the following consent calendar items:

- a) APPROVE THE REIMBURSEMENT REQUEST WITH MCMILLIN OTAY RANCH, LLC, FOR THE COMPLETED CAPITAL IMPROVEMENT PROJECT, MCMILLIN OTAY RANCH SPA 2, VILLAGE 6 DEVELOPMENT, PL 16-INCH, 711 ZONE, BIRCH ROAD – LA MEDIA/SR 125 (CIP P2435[W101]), FOR THE AMOUNT OF \$215,418
- b) AWARD OF A PROFESSIONAL CORROSION SERVICES CONTRACT TO SCHIFF ASSOCIATES FOR THE CATHODIC PROTECTION PROGRAM AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE AN AGREEMENT WITH SCHIFF ASSOCIATES IN AN AMOUNT NOT TO EXCEED \$250,000 DURING FISCAL YEARS 2007-2008 AND 2008-2009
- c) AWARD OF A PROFESSIONAL ENGINEERING DESIGN SERVICES CONTRACT TO LEE & RO, INC. AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE AN AGREEMENT WITH LEE & RO FOR AN AMOUNT NOT TO EXCEED \$175,000 DURING FISCAL YEARS 2007-2008 AND 2008-2009
- d) AWARD A CONTRACT TO TECHKNOWSION, INC. FOR MAINTENANCE AND TECHNICAL SUPPORT OF THE SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM

- e) APPROVE AMENDMENT NO. 1 TO THE AGREEMENT WITH CRICKET COMMUNICATIONS, INC. FOR AN EXISTING COMMUNICATIONS FACILITY AT THE 485-1 RESERVOIR SITE
- f) AWARD A PROFESSIONAL SERVICES CONTRACT TO BOYLE ENGINEERING CORPORATION FOR AS-NEEDED POTABLE AND OFF-SITE RECYCLED WATER PLAN CHECKING SERVICES FOR DEVELOPER PROJECTS IN AN AMOUNT NOT TO EXCEED \$150,000
- g) ADOPT RESOLUTION NO. 4108 ANNEXING THOSE LANDS DESCRIBED AS CALTRANS STATE ROUTE 125 AND STATE ROUTE 54 INTERCHANGE AND ANNEXING SAID PROPERTY TO IMPROVEMENT DISTRICT NO. 1 OF THE OTAY WATER DISTRICT FOR WATER SERVICE
- h) AWARD A PAVING CONTRACT TO KIRK PAVING IN THE AMOUNT OF \$73,068.00 TO REPAIR THE ROAD SURFACE AT THE INTERSECTION OF JAMACHA BLVD. AND SWEETWATER SPRINGS BLVD.
- i) CONSIDERATION TO CAST VOTES TO ELECT FIVE (5) REPRESENTATIVES TO THE NATIONAL WATER RESOURCES ASSOCIATION'S CALIFORNIA CAUCUS BOARD OF DIRECTORS

INFORMATION / ACTION ITEMS

8. FINANCE AND ADMINISTRATION SERVICES

- a) ACCEPT THE DISTRICT'S AUDITED FINANCIAL STATEMENTS, INCLUDING THE AUDITORS' UNQUALIFIED OPINION, FOR THE FISCAL YEAR ENDED JUNE 30, 2007

Finance Manager Jim Cudlip indicated that staff is presenting the audited financial statements for the Fiscal Year ended June 30, 2007 for the board's acceptance. He stated that the staff report provides a number of detailed statistics on the income, expenses and percentages, but the main item of interest is that the District has received an unqualified opinion on its financials and internal controls. He introduced Mr. Rich Teaman of Teaman, Ramirez & Smith, Inc., the District's auditor to provide further information on the findings of the audit.

Mr. Teaman indicated that he is happy to report that the District received a "clean opinion" in the audit of its financial statements. He stated that this is the highest level opinion that can be issued. He noted that the board might notice that the opinion letter is dated approximately one month later than in previous audits. He indicated that the date change is due to new Standards issued in December 2006 by the American Institute of Certified Public Accountants which changed how the audit report is dated. In past, the report is dated the last day of the

auditor's field work. The new standard requires that drafts be issued and representation be acquired that management has reviewed the drafts. When this process is complete, the report can be dated. He noted that the audit report is being presented at approximately the same time, but the date is different due to this new process.

He also indicated that the financial statements show some changes related to the issuance of the 2007 Certificates of Participation. He stated that the District's liabilities and cash have increased due to the bond issue.

Mr. Teaman also noted that along with the Financial Statements, they issue an *Internal Controls and Financial Compliance Report* in which the audit determined that there were no findings or exceptions to report. He stated this report is included in the *Single Audit Report*, a new report which includes a schedule indicating the District's expenditures of Federal awards (grants). The *Single Audit Report* looks at additional compliance items and internal controls related to the Federal grants program administered by the District. The audit found no issues or findings to report with regard to the grant program.

The audit reviewed procedures relating to the District's investments and investment policy. He stated the audit randomly selects transactions and determines whether the transactions follow the District's *Investment Policy*. Again, there were no exceptions or issues to report.

There were also no issues to report with regard to the *SAS 61 Report* which indicates that if the auditing firm felt that they were selected because they would provide a favorable opinion, they would need to report this concern within the *SAS 61 Report*.

Mr. Teaman indicated that the *Management Letter* indicates, thus, that there were no management letter comments for this engagement.

Director Robak stated that the Finance, Administration and Communications Committee reviewed the audit findings in detail with Mr. Teaman and the committee was pleased with the results of the audit and recommends that the board accept the Audited Financial Statements for the Fiscal Year ended June 30, 2007.

Director Bonilla inquired with regard to the banking institutional change the District made a couple years ago, if it would be wise to include, within the audit, an evaluation of the District's banking services. Mr. Teaman indicated that it certainly could be included, however, the District could also do a review internally and prepare an evaluation of the services. He stated that through a bidding process, the District may discover new innovative ideas from another banking institution that is seeking the District's business. He indicated that the bidding process may be more suitable.

General Manager Watton indicated that this is an issue that can be reviewed by the Finance, Administration and Communications Committee.

A motion was made by Director Robak, seconded by Director Breitfelder and carried with the following vote:

Ayes:	Directors Breitfelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to accept the District's Audited Financial Statements, including the auditors' unqualified opinion, for Fiscal Year ended June 30, 2007.

9. ENGINEERING AND WATER OPERATIONS

- a) APPROVE THE PROPOSED PLAN AND SCHEDULE FOR THE DEVELOPMENT OF THE DISTRICT'S SEWER SYSTEM MANAGEMENT PLAN (SSMP)

Assistant Civil Engineer Meryl Gonzalez indicated that staff is requesting the board's approval of the proposed Plan and Schedule for the development of the District's Sewer System Management Plan (SSMP). She stated that in May 2006, the State Water Resources Control Board issued the Statewide General Waste Discharge Requirements (WDRs) for sanitary sewer systems. She indicated that the WDRs serve as the regulatory mechanism for all agencies that own or operate sewer collection systems with the ultimate goal of reducing both the frequency and volume of sewer spills. According to the WDRs, each agency must develop and implement a system-specific SSMP. She indicated before the District can implement the elements of its SSMP, and to maintain compliance with the State Board's WDRs, the District's SSMP Development Plan and Schedule must be approved by the Board of Directors. Ms. Gonzales referenced Attachment B to staffs' report which outlines the District's development plan and schedule which consists of eleven elements (see attachment). She noted that each item has a milestone due date in which they must be completed with an ultimate completion target date of August 2, 2009.

She stated that staff recommends that the board approve the development plan and schedule for the preparation of the District's SSMP.

Director Lopez indicated that this item was reviewed by the Engineering, Operations and Water Resources Committee and the committee was comfortable with staffs' recommendation and supports approval of the development plan and schedule.

Director Robak inquired if the District has been penalized for any breaks or spills. Chief of Operations Pedro Porras indicated that the District has had overflows

due to clogged pipes, but no spills and no penalties. It was indicated that the District is very proactive in scheduling cleanings, etc., to avoid spills.

A motion was made by Director Lopez, seconded by Director Breiffelder and carried with the following vote:

Ayes:	Directors Breiffelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to approve staffs' recommendation.

- b) **AWARD OF A PROFESSIONAL ENGINEERING PLANNING SERVICES CONTRACT TO PBS&J FOR THE NORTH DISTRICT RECYCLED WATER CONCEPT (NDRWC) STUDY, PHASE I PROJECT IN AN AMOUNT NOT TO EXCEED \$149,595**

Assistant Civil Engineer Gonzalez indicated that earlier in the year the District completed an Integrated Water Resources Plan (IRP) that examined potential water supply options to enhance the reliability and diversification of the District's water resources supply portfolio. One of the outcomes of the IRP effort included the development of the North District Recycled Water System to maximize recycled water use while decreasing imported supply needs and operating cost of the District's existing recycled water system. She stated in order to allow for future recycled water infrastructure, the District must address the regulatory and institutional requirements for recycled water use in the Jamacha Basin.

She presented a slide showing the Jamacha Basin with the Ralph Chapman Water Recycling Facility and the Sweetwater Reservoir which are located within the basin. Ms. Gonzalez stated the purpose of the North District Recycled Water Concept Study (Phase I) is to:

- Identify and investigate all opportunities and challenges associated with recycled water use in the Jamacha Basin
- Develop an implementation plan that presents various strategies to meet regulatory requirements and inter-agency coordination and stakeholder support

She indicated that District staff plans to formulate the study in collaboration with Sweetwater Authority, Regional Water Control Board, California Department of Public Health, County of San Diego, City of San Diego, development communities and other planning groups, as well as, all other interested stakeholders. She indicated based on preliminary estimates, six potential customers have been identified with a total recycled demand of 1,550 acre feet per year.

Director Robak indicated that Cuyamaca College is plumbing their new landscapes with purple pipe and inquired if their demand has been factored into the potential customers demand. It was indicated that Cuyamaca College is a current customer and they would be included in the final report as the report will be more detailed. Ms. Gonzalez reviewed the project scope which included research and data gathering; stakeholder outreach, involvement and coordination; identification and assessment of evaluation of regulatory, institutional, environmental, and key permitting issues; opportunities and constraints assessment; mitigation and monitoring plan, etc.

She indicated that in accordance with Policy 21, staff solicited proposals for Phase I of the study and received two proposals:

- RMC Eater and Environment
- PBS&J

The proposals were reviewed by a consultant selection panel and PBS&J was selected based on the District's criteria. It is recommended that the contract be awarded to PBS&J for an amount not-to-exceed \$149,595.

It was discussed that the regional board will be the biggest stakeholder as they have a concern with the use of recycled water up-stream in the basin. Staff will be meeting with the regional board next week to explore their concerns.

It was inquired how much extra capacity the District can access from the South Bay Water Reclamation Plant. It was indicated that the District is taking all recycled water available from the plant. The plant has a capacity of 9 million gallons (MG); the city requires 3 MG and the District takes the remaining 6 MG.

A motion was made by Director Lopez, seconded by Director Robak and carried with the following vote:

Ayes:	Directors Breitfelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to approve staffs' recommendation.

10. BOARD INFORMATION / ACTION ITEMS

a) DISCUSSION OF 2007 BOARD MEETING CALENDAR

There were no changes to the Board meeting calendar.

REPORTS

11. GENERAL MANAGER'S REPORT

General Manager Watton indicated that he provided copies of correspondence from the Ramona Municipal Water District thanking the District for its assistance during the Witch Fire and the City of Chula Vista thanking the Salt Creek Golf Club for allowing the City of Chula Vista Fire Department to utilize its facilities as an Emergency Operating Center to combat the Harris Fire. He also noted pictures taken of the Harris Fire that were published in the state-wide distributed *Brown and Caldwell Water News*.

He introduced Mr. Jim Gerber who recently joined the District as its Safety Administrator.

He indicated that he is scheduled to make a presentation to the City of Chula Vista Council on the water supply outlook and Bay Delta issues.

He noted that the District set up its Emergency Operations Center (EOC) on October 22 to respond to the fires threatening the District's facilities. He indicated that it was gratifying to see staff work together effectively and with the City of Chula Vista, San Miguel Fire Department, Cal Fire and other fire agencies. He noted that when the fire threatened the District administrative facilities, staff was able to quickly organize an alternate location for the EOC. The District's vehicles and personnel were moved to the new location without any incident. He stated that none of the District's water facilities were damaged in the fire, but there was economic loss to the District's habitat management area which will be assessed and a request for assistance will be submitted to appropriate agencies.

Information Technology Chief Geoff Stevens indicated that the District received an award from the 2006-2007 Municipal Information Systems Association of California (MISAC) Award for excellence in information technology practices that have surpassed local government standards. He indicated that 300 cities and agencies belong to MISAC and in conjunction with a city college, they have developed a set of business practices that they measure IT organizations against. The District received the highest award presented by the organization.

General Manager Watton shared that the District has implemented an "Out-Dialer" which is an automated system that calls customers with a pre-recorded phone message that is tailored to their specific situation. He indicated that the District saves one full-time equivalent by utilizing the out-dialer as customer service staff member no longer need to make such calls.

He indicated that Governor Schwarzenegger signed AB554 and the District is now able to establish the OPEB trust with PERS as has been discussed in past meetings. The Finance Department is currently working on this effort.

He noted that Director Bonilla had shared with staff that new laws have been adopted that provides full protection of CD investments by the FDIC. He

indicated that staff originally thought that investing in the new CD's would require changes to the District's investment policy. However, due to the anticipated return on the CD investment and the fact that it will be fully covered by the FDIC, it was determined that changes were not required to the investment policy. He stated that the District will be investing in a CD with Neighborhood Bank who has offered the District a very good rate of return. He noted that the investment fits in with the District's investment program and meets the returns sought by the Strategic Plan.

He indicated that staff had shared with the board at its workshop on October 9 that there is a slowdown in growth within the District. He stated that the slowdown is continuing and staff is exploring areas of efficiency and how the District can delay or slowdown some projects to balance the budget. He indicated that it is early in the fiscal year which gives time for staff to be proactive to manage the budget.

He noted that the District is in discussions with Helix WD, Padre Dam MWD and Sweetwater Authority of the possibility of Otay joining the Joint Water Agencies NCCP/HCP efforts. He stated staff believes that it is a superior environmental program and he wished to share with the board that staff is actively working with its neighboring agencies on an environmental plan.

12. SAN DIEGO COUNTY WATER AUTHORITY UPDATE

General Manager Watton indicated that CWA had a very short meeting – due to fires – in which much of the discussion centered on the construction consultant contracts. The remainder of the matters will be brought forward for discussion at the December board meeting.

13. DIRECTORS' REPORTS/REQUESTS

Director Robak indicated that he was also affected by the fire and he wished to thank Otay staff for their assistance. He also shared that on Saturday, November 10, the California Friendly Garden Festival will be held at the Water Conservation Garden. He stated at 10:00 a.m. they will be honoring the firefighters of San Miguel Consolidated Fire Protection District and Cal Fire. He understands that Supervisor Dianne Jacob will attend and possibly Mayor Jerry Sanders as well. He also mentioned that he received a mailer for Helix Water District customers regarding their artificial turf program. He indicated it was a very nice piece and he would share a copy with the District.

Director Lopez indicated that it was gratifying that none of the District's staff experienced any loss from the fires especially in knowing that Rancho Bernardo had tragically lost 390 homes. He commended General Manager Watton for keeping the board informed during the firestorm and staff for their hard work during the emergency.

Director Bonilla indicated that there were elections in Baja California and the new Governor was sworn in last Thursday. He indicated that the new Governor had headed the water agency for the State many years ago and has been very involved in water issues. He was looking forward to meeting with staff to discuss cross-border water issues. He stated that the new mayor of Tijuana was also the former director of the Baja Water District. He stated that he is very optimistic in the District's relationship with Mexico and that there was a lot of interest in the desalination plant project in Rosarito. He stated that he would like to move forward with the coordination of meetings with Mexico.

Director Breilfelder thanked Directors Lopez and Robak for their participation in the Water Conservation Summit. He stated that Mayor Sanders made the opening address and the discussions were very active and produced a document which would be distributed at the next scheduled Conservation Action Committee. He indicated that he would provide an update at a future meeting following the committee's meeting. He indicated that Senator Kehoe spoke at the Council Water Utilities meeting. He stated that he was very appreciative of the resources shared between agencies during the firestorm and that he has only heard positive comments about the District's emergency operations. He indicated that the District has received invitations from SDG&E and AT&T to discuss their emergency operations and, as it seems the fires have become more common than they have been in the past, he thought it might be a good idea to take advantage of some of these type invitations. He indicated that he planned on doing so and getting a little more involved.

14. PRESIDENT'S REPORT

President Croucher indicated that he was very impressed with the shared resources for auto and mutual aid of the fire and water districts. He indicated that he was proud to be associated with Otay Water District and how the District immediately offered assistance to other agencies and the community they serve during the fires. He stated that he is very thankful for his time on the board as he has learned a great deal about water agencies which has assisted him in his profession as a firefighter. He noted that there was no loss of property or injuries to firefighters or civilians within the San Miguel Consolidated Fire Protection District.

RECESS TO CLOSED SESSION

15. CLOSED SESSION

President Croucher indicated that Item 13(a)(i), HARRON v. OTAY WATER DISTRICT, has been pulled from the agenda as the Board no longer needs to discuss this item. The Board will only discuss Items 13(a)(ii) and 13(b).

The board recessed to closed session at 4:56 p.m. to discuss the following matters:

16. CLOSED SESSION

a) ANTICIPATED LITIGATION (GOVERNMENT CODE §54956.9)

78 CASES RELATED TO THE FENTON BUSINESS CENTER

RETURN TO OPEN SESSION

17. REPORT ON ANY ACTIONS TAKEN IN CLOSED SESSION. THE BOARD MAY ALSO TAKE ACTION ON ANY ITEMS POSTED IN CLOSED SESSION

The board reconvened from closed session at 5:30 p.m. General Counsel Yuri Calderon indicated that the board had taken action by a motion made by Director Bonilla, seconded by Director Breitfelder and carried with the following vote

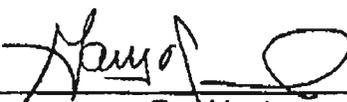
Ayes:	Directors Breitfelder, Bonilla, Croucher, Lopez and Robak
Noes:	None
Abstain:	None
Absent:	None

to accept 64 claims and deny 11 claims (due to insufficient information) related to the Fenton Business Center.

He stated that no other reportable actions were taken in closed session.

18. ADJOURNMENT

With no further business to come before the Board, President Croucher adjourned the meeting at 5:31 p.m.



President

ATTEST:



District Secretary



...Dedicated to Community Service

2554 SWEETWATER SPRINGS BOULEVARD, SPRING VALLEY, CALIFORNIA 91978-2004
TELEPHONE: 670-2222, AREA CODE 619 www.otaywater.gov

November 8, 2007

Project: P1210-0025000

SSO Program Manager
State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

SUBJECT: SSMP Provision for Statewide General Waste Discharge Requirements
for Sanitary Sewer Systems (WQO No. 2006-003-DWQ);
Notice of Certification

To Whom It May Concern:

The Otay Water District (District) has received approval of the SSMP Development Plan and Schedule from the District's governing board at a public meeting held on November 7, 2007. Enclosed is a copy of the signed SSO Database Certification form for your records. Based on the approved plan and schedule, SSMP Sections (i) and (ii) have also been certified as complete as of November 7, 2007.

Should you have any questions, please contact Meryll Gonzalez at (619) 670-2747.

Sincerely,
OTAY WATER DISTRICT

Meryll C. Gonzalez
Assistant Civil Engineer

MG:jf

Enclosure

cc: Gary Stalker
Ron Ripperger



[Menu](#) | [Help](#) | [Log out](#)

Navigate to:

You are logged-in as: gstalker If this account does not belong to you, please log out.

SSO - Sewer System Management Plan (SSMP) ?

[SSO Menu](#)

Regional Water Board: Region 9 - San Diego
Agency: OTAY MWD
Sanitary Sewer System: Otay Water District CS

Last Updated:

SSMP Element	Certification Date
Development Plan and Schedule	<input type="text" value="11/07/2007"/> (Date Format: MM/DD/YYYY)
Section I - Goal	<input type="text" value="11/07/2007"/> (Date Format: MM/DD/YYYY)
Section II - Organization	<input type="text" value="11/07/2007"/> (Date Format: MM/DD/YYYY)
Section III - Legal Authority	<input type="text"/> (Date Format: MM/DD/YYYY)
Section IV - Operation & Maintenance Program	<input type="text"/> (Date Format: MM/DD/YYYY)
Section V - Design & Performance Provisions	<input type="text"/> (Date Format: MM/DD/YYYY)
Section VI - Overflow Emergency Response Plan	<input type="text"/> (Date Format: MM/DD/YYYY)
Section VII - FOG Control Program	<input type="text"/> (Date Format: MM/DD/YYYY)
Section VIII - System Evaluation & Capacity Assurance Plan	<input type="text"/> (Date Format: MM/DD/YYYY)
Section IX - Monitoring, Measurement, and Program Modifications	<input type="text"/> (Date Format: MM/DD/YYYY)
Section X - SSMP Program Audits	<input type="text"/> (Date Format: MM/DD/YYYY)
Section XI - Communication Program	<input type="text"/> (Date Format: MM/DD/YYYY)
Complete SSMP Implementation	<input type="text"/> (Date Format: MM/DD/YYYY)
Certification Note:	<input type="text"/>
* Certified by:	<input type="text" value="Gary Stalker"/> <i>Gary Stalker</i>

Note: Questions with "*" are required to be answered before CERTIFY.

<input type="button" value="Certify"/>
--

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County of San Diego
DEPARTMENT OF ENVIRONMENTAL HEALTH
FOOD AND HOUSING DIVISION

Grease Traps/Interceptors in Food Facilities

1. All new grease trap/interceptor installations shall be located outside the footprint of the food facility wherever possible.
2. When the grease trap/interceptor cannot be placed outdoors, it shall be outside of the food activity areas including food and utensil storage, preparation, and washing areas. Acceptable locations include:
 - a. A room or area such as that used for janitorial or mechanical equipment. This room or area to be located so that maintenance personnel and equipment for cleaning the grease trap do not access the food activity areas. Interceptor rooms must have adequate ventilation and may include floor drainage and a hose bibb for cleaning.
 - b. An area near the rear or delivery door allowing access for maintenance. Grease trap shall not be in the traffic area and placed at least six inches from walls.
3. A legal air gap separation is to be maintained for sinks or equipment required to drain into floor sinks prior to going to the inlet of a grease trap.
4. Grease traps located indoors but outside the food activity areas shall be placed so that the lid (with extension where needed) is flush with the finished floor.
5. Structural hardships that preclude placement of the grease trap outside of food activity areas or below ground shall be approved by this Department on a case by case basis. A letter must be submitted along with supporting documentation by the owner of the food facility or his designated agent, providing evidence why it cannot be installed outside of the food activity area.
 - a. In instances where there are special conditions, which will not allow the floors to be saw cut because of high tension concrete, then small or low profile grease traps will be allowed above floors. A legal air gap is to be maintained at the inlet, and the grease trap bottom is to be properly sealed to the floor.
6. These requirements are not applicable to existing grease traps in existing food facilities unless undergoing major renovations.
7. Application for a consultative inspection shall be made to the Department of Environmental Health (DEH), Food & Housing Division, Plan Check Program for any new or replacement grease trap/interceptor. For further information contact the Plan Check Program at (619) 338-2364.



County of San Diego
DEPARTMENT OF ENVIRONMENTAL HEALTH
FOOD AND HOUSING DIVISION
FOOD FACILITY PLAN CHECK APPLICATION
www.sdcdeh.org



MAIN OFFICE SAN DIEGO
 1255 IMPERIAL 3rd Floor
 SAN DIEGO, CA 92101

NORTH COUNTY
 151 E.CARMEL ST
 SAN MARCOS, CA 92078

(For office use only) PLAN CHECK #: _____ INTAKE DATE: _____ AMT PAID: _____ CHECK # _____
--

PART I

FACILITY BUSINESS AND CONTACT INFORMATION

<input type="checkbox"/> NEW/TI	<input type="checkbox"/> REMODEL	<input type="checkbox"/> CONVERSION	<input type="checkbox"/> MOBILE	<input type="checkbox"/> CONSULTATION	<input type="checkbox"/> REVISION	OTHER _____
---------------------------------	----------------------------------	-------------------------------------	---------------------------------	---------------------------------------	-----------------------------------	-------------

Facility Name _____ Assessor's Parcel No. _____
 Facility Address _____ City _____ Zip _____

BUSINESS OWNER:
 Name _____ Company _____
 Mailing Address _____ City _____ State _____ Zip _____
 Phone () _____ Fax () _____ E-Mail _____

DESIGNER/CONTRACTOR:
 Name _____ Company _____
 Mailing Address _____ City _____ State _____ Zip _____
 E-Mail Address _____ State Contractor's License if applicable _____
 Contact Person _____ Contact Phone () _____
 Contact Fax () _____ Contact E-Mail Address _____

FACILITY INFORMATION

<input type="checkbox"/> Unpackaged Food Prep	<input type="checkbox"/> 100% Prepackaged Only	<input type="checkbox"/> Limited (MFF/SFS)	<input type="checkbox"/> Wholesale Processing
---	--	--	---

For Permanent Food Facilities

Total Square Feet of Facility: _____ Projected Date for Completion: _____ Total # Staff: _____

Max. Number of Food Employees per Shift: 1-10 11-25 26-100 100+ Seating: 0 1-20 21-50 51-100 101+

Anticipated Max # Meals to be Served: _____ Breakfast _____ Lunch _____ Dinner Customer Utensils: Single Service Multi-service

Is there outdoor dining, outdoor bar, barbecue, wood oven etc. associated with the food facility? Yes No If yes, explain: _____

Is this facility within a Food Court Yes No-If so is the facility enclosed Yes No Explain _____

Are sneeze guards required? Yes No-If yes plans must indicate details of the sneeze guard and location. _____

Grease Trap/Interceptor required: Yes No; If yes indicate location _____

Employees Restrooms _____; Public Access? Yes No Will alcohol be served and consumed on site? Yes No

SEWER: Public- Septic/ Private WATER: Public- Well/ Private (If private contact Land Use at (858) 565-5173)
 Identify the municipal water and wastewater district(s) _____

COMPLETE PART II

PART II

SUBMIT THE FOLLOWING DOCUMENTS WITH YOUR APPLICATION. Applications will not be processed until all required documents are received and all fees are paid.

- 1) Plans must be submitted to a stated scale (i.e., 1/4" per ft.) and done in a professional manner. The minimum size is 11" x 17". A total of three (3) sets are required. An Environmental Health Note section must be on plans.
- 2) Proposed menu (Including seasonal, off-site and catering menus).
- 3) Finish schedule of interior finishes.
- 4) Plumbing layout showing type and location of equipment with drains, floor sinks and plumbing schedule.
- 5) Equipment schedule showing type, manufacturer, and model numbers.
- 6) Floor plan layout. All equipment shall be clearly labeled on the plan with its common name.
- 7) Manufacturer specification sheets "cut sheets" for equipment shown on the plan.
- 8) Complete exhaust ventilation plans (HVAC), including restroom ventilation and kitchen exhaust system plans.
- 9) All existing equipment and finishes must be defined.
- 10) Site plan showing the location of restrooms, mop basin, alleys, streets, vacant lots, adjacent businesses, and outside equipment (dumpsters, well, septic system, etc.).
- 11) Written legal agreement for shared restrooms or common restrooms not located within the establishment.
- 12) If there are open or continuous doors, then the food prep areas must be shown as completely enclosed.
- 13) For unenclosed (non-occupied) Mobile Food Facilities (MFF), operational procedures for food handling and the cleaning and sanitizing of food-contact surfaces, food equipment and utensils.
- 14) MFF commissary agreement letter, if available at that time, shall accompany the plans (otherwise to be submitted upon application for the operational health permit.)

TYPE OF OPERATION (check all that apply)		
<input type="checkbox"/> Kitchen (Hood Ventilation)	<input type="checkbox"/> Kitchen (No hood)	<input type="checkbox"/> Buffet or salad bar
<input type="checkbox"/> Ventless cooking-2 exempt max	<input type="checkbox"/> Institution	<input type="checkbox"/> Tableside / display cooking
<input type="checkbox"/> Cafeteria	<input type="checkbox"/> Take out only	<input type="checkbox"/> Hospital/Licensed care facility
<input type="checkbox"/> Fast food	<input type="checkbox"/> Catering	<input type="checkbox"/> Lodging facility
<input type="checkbox"/> Bar	<input type="checkbox"/> Mobile vendor	<input type="checkbox"/> Galley
<input type="checkbox"/> Deli	<input type="checkbox"/> School	<input type="checkbox"/> Commissary/Vending HQ
Grocery Related		
<input type="checkbox"/> Market	<input type="checkbox"/> Produce processing	<input type="checkbox"/> Shellfish storage
<input type="checkbox"/> Raw Meat	<input type="checkbox"/> Smoked fish	<input type="checkbox"/> Wholesale food distribution warehouse
<input type="checkbox"/> Seafood / fish	<input type="checkbox"/> Bakery	<input type="checkbox"/> Commissary
<input type="checkbox"/> Deli	<input type="checkbox"/> Sushi prep	<input type="checkbox"/> Ice production / packaging
<input type="checkbox"/> Produce	<input type="checkbox"/> Self-service bulk items	<input type="checkbox"/> Self-service baked goods

OTHER AGENCIES: BLDG DEPARTMENT FIRE DEPARTMENT ZONING WATER/WASTEWATER DISTRICTS APCD DEH-LWQ
 (NOTE: If you are the business owner and an honorably discharged veteran you may be eligible for a fee exemption.)

I declare under penalty of perjury that to the best of my knowledge and belief, the description of use and information contained on this application and plans are correct and true. I hereby consent to all necessary inspections made pursuant to law and incidental to the issuance of this review and the operation of this business. I also agree to conform to all conditions, orders, and directions, issued pursuant to the California Health and Safety Code, and all applicable County and City Ordinances. I understand that if the plans are incomplete due to a lack of any of the required information, the plans will be rejected and upon resubmission, a plan recheck fee will be charged. I am aware that plan check fees are not fully refundable and that plans, once reviewed, will be picked up within 60 days or they will be discarded. Plans are valid for one year after stamp. Any changes to the released documents will be submitted and filed with the County of San Diego, Department of Environment Health.

Authorized Signature _____ Date _____

Print Name and Title Here _____

(For office use only)
 PLAN CHECK #/TYPE: _____ PERMIT NUMBER/TYPER: _____ CENSUS TRACT: _____

ASSIGNED TO: _____ ROUTE CODE: _____

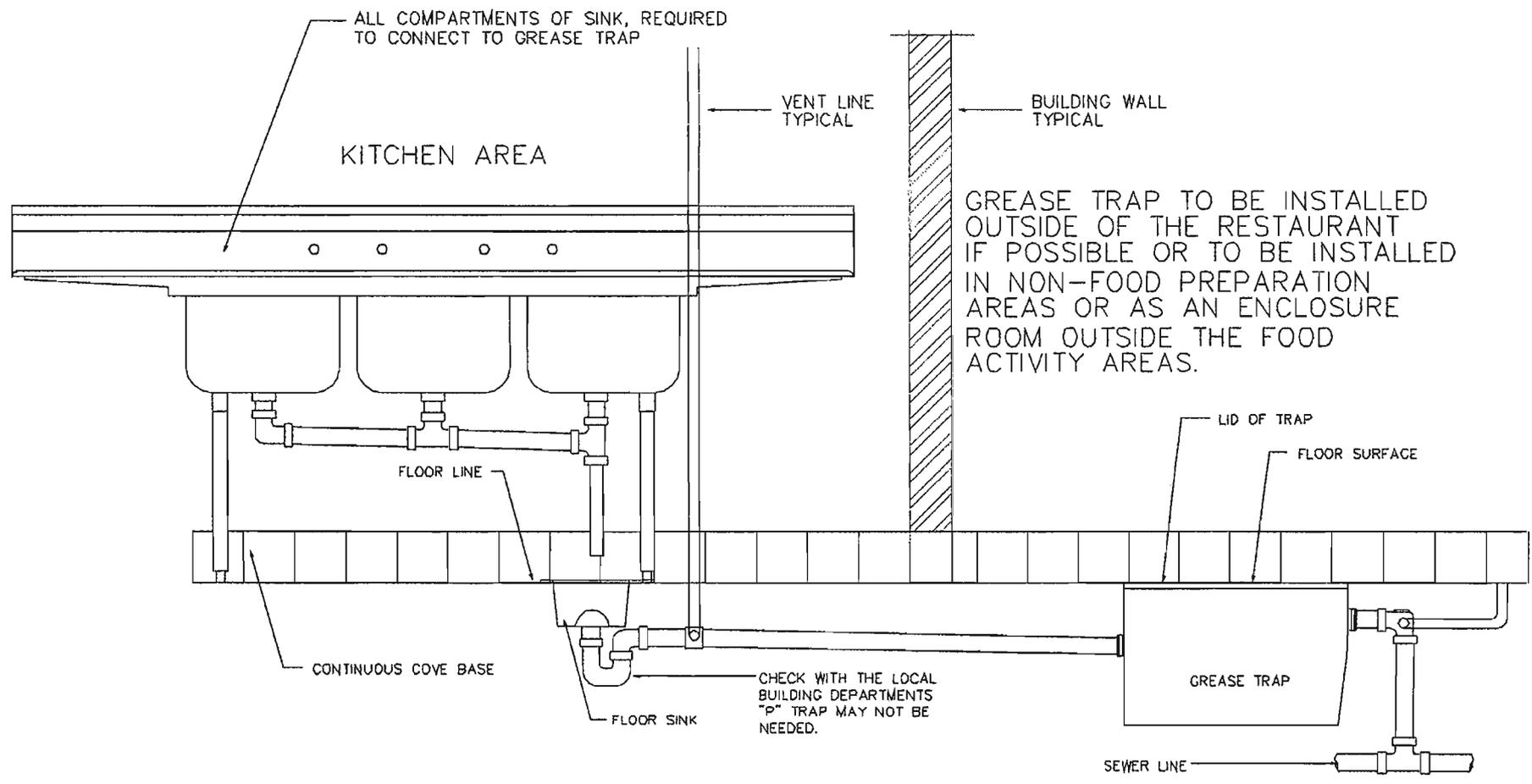
PLAN STATUS APPROVED DISAPPROVED RED TAG; PC INITIALS _____ REVIEW DATE _____

RECHECK STATUS APPROVED DISAPPROVED RED TAG; PC INITIALS _____ RECHECK DATE _____

DATE APPROVED _____

GREASE TRAPS ARE REQUESTED BY THE LOCAL BUILDING DEPARTMENT OR SEWER DISTRICT. CHECK WITH THESE AGENCIES TO DETERMINE IF A GREASE TRAP IS NECESSARY AND TO THEIR SIZE REQUIREMENTS.

GREASE TRAP NEEDS TO BE INSTALLED OUTSIDE THE FOOD ACTIVITY SUCH AS FOOD PREPARATION, WARE WASHING, DRY STORAGE AND ANY FOOD SERVING AREAS.



Appendix B

- B-1 State Water Resources Control Board, February 20, 2008, Order No. WQ 2008-0002-EXEC, "Amended-Monitoring and Reporting Program No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems"

- B-2 California Regional Water Quality Control Board, March 14, 2007, San Diego Region, Order R9-2007-0005, "Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region"

- B-3 State Water Resources Control Board, May 2, 2006, Order No. 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems"

- B-4 State Water Resources Control Board, May 2, 2006, "Monitoring and Reporting Program No. 2006-0003-DWQ", Statewide General Waste Discharge Requirements for Sanitary Sewer Systems"

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER NO. WQ 2008-0002-EXEC

ADOPTING AMENDED MONITORING AND REPORTING REQUIREMENTS FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER
SYSTEMS

The State of California, Water Resources Control Board (State Water Board) finds:

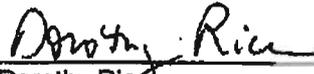
1. The State Water Board is authorized to prescribe statewide general waste discharge requirements for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code 13263, subdivision (i).
2. The State Water Board on May 2, 2006, adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, pursuant to that authority.
3. The State Water Board on May 2, 2006, adopted Monitoring and Reporting Requirements to implement the General Waste Discharge Requirements for Sanitary Sewer Systems.
4. State Water Board Order No. 2006-0003-DWQ, paragraph G.2., and the Monitoring and Reporting Requirements, both provide that the Executive Director may modify the terms of the Monitoring and Reporting Requirements at any time.
5. The time allowed in those Monitoring and Reporting Requirements for the filing of the initial report of an overflow is too long to adequately protect the public health and safety or the beneficial uses of the waters of the state when there is a sewage collection system spill. An additional notification requirement is necessary and appropriate to ensure the Office of Emergency Services, local public health officials, and the applicable regional water quality control board are apprised of a spill that reaches a drainage channel or surface water.
6. Further, the burden of providing a notification as soon as possible is de minimis and will allow response agencies to take action as soon as possible to protect public health and safety and beneficial uses of the waters of the state.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Resolution No. 2002-0104 and Order No. 2006-0003-DWQ, the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems No. 2006-0003-DWQ is hereby amended as shown in Attachment A, with new text indicated by double-underline.

Dated:

February 20, 2008



Dorothy Rice
Executive Director

2. **Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.**
3. **Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.**

SSO Reporting Timeframes

4. **Category 1 SSOs – Except as provided above, all SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.**

The above reporting requirements are in addition to do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. **Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).**
6. **Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.**
7. **If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.**
8. **In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in**

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ
(AS REVISED BY ORDER NO. WQ 2008-0002-EXEC)

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

NOTIFICATION

Although State and Regional Water Board staff do not have duties as first responders, this Monitoring and Reporting Program is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.
2. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
 - A. Equal or exceed 1000 gallons, or
 - B. Result in a discharge to a drainage channel and/or surface water; or
 - C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. Category 2 SSOs:

- A. Location of SSO by entering GPS coordinates;
- B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
- C. County where SSO occurred;
- D. Whether or not the SSO entered a drainage channel and/or surface water;
- E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
- F. Estimated SSO volume in gallons;
- G. SSO source (manhole, cleanout, etc.);
- H. SSO cause (mainline blockage, roots, etc.);
- I. Time of SSO notification or discovery;
- J. Estimated operator arrival time;
- K. SSO destination;
- L. Estimated SSO end time; and
- M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

- A. All information listed above (if applicable and known), as well as;
- B. Identification of sewage discharge as a private lateral sewage discharge; and
- C. Responsible party contact information (if known).

11. Category 1 SSOs:

- A. All information listed for Category 2 SSOs, as well as;
- B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- C. Estimated SSO amount recovered;
- D. Response and corrective action taken;
- E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
- F. Parameters that samples were analyzed for (if applicable);
- G. Identification of whether or not health warnings were posted;
- H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
- I. Whether or not there is an ongoing investigation;
- J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- K. OES control number (if applicable);
- L. Date OES was called (if applicable);
- M. Time OES was called (if applicable);
- N. Identification of whether or not County Health Officers were called;
- O. Date County Health Officer was called (if applicable); and
- P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.
3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.
2. Omitted.
3. All records shall be made available for review upon State or Regional Water Board staff's request.
4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;
5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:
 - a. Record of Certified report, as submitted to the online SSO database;
 - b. All original recordings for continuous monitoring instrumentation;
 - c. Service call records and complaint logs of calls received by the Enrollee;
 - d. SSO calls;
 - e. SSO records;
 - f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
 - g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
 - h. A list and description of complaints from customers or others from the previous 5 years; and
 - i. Documentation of performance and implementation measures for the previous 5 years.
6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical technique or method used; and,
 - f. The results of such analyses.

C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board. The notification requirements added by Order No. WQ 2008-0002-EXEC will become effective upon issuance by the Executive Director.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Board.



Jeanne Townsend
Clerk to the Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

ORDER R9-2007-0005

WASTE DISCHARGE REQUIREMENTS
FOR SEWAGE COLLECTION AGENCIES
IN THE SAN DIEGO REGION

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. **STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS:** State Water Resource Control Board (State Board) Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, adopted by the State Board on May 2 2006, establishes minimum requirements to prevent sanitary sewer overflows (SSOs) from publicly owned/ operated sanitary sewer system. Order No. 2006-0003-DWQ is the primary regulatory mechanism for sanitary sewer systems statewide, but allows each regional board to issue more stringent or more prescriptive Waste Discharge Requirements (WDRs) for sanitary sewer systems within their respective jurisdiction.
2. **ENROLLMENT UNDER ORDER NO. 2006-0003-DWQ:** In accordance with Order No. 2006-0003-DWQ, all federal and state agencies, municipalities, counties, districts, and other public entities that own, operate, acquire, or assume responsibility for sanitary sewer systems 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 are required to apply for coverage under the general WDRs.
3. **ORDER No. 96-04:** On May 9, 1996, this Regional Board adopted Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies*, prohibiting the discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant. Each Sewage Collection Agency currently regulated under Order No. 96-04 is required to obtain enrollment under the State Board Order No. 2006-0003-DWQ.
4. **SAN DIEGO REGION SANITARY SEWER OVERFLOW REGULATIONS:** Order No. 96-04 has been an effective regulatory mechanism in reducing the number and magnitude of sewage spills in the Region. The Order is more stringent and prescriptive than Order No. 2006-0003-DWQ in that Order No. 2006-0003-DWQ may allow some SSOs that are currently prohibited under Order No. 96-04. In order to maintain regulation of Sanitary Sewer Systems in the San Diego Region consistent with the provisions of Order No. 96-04, this Order reaffirms the prohibition on all SSOs upstream of a sewage treatment plant. This strict prohibition implements the requirements contained in the Basin Plan, California Water Code, and Federal Clean Water Act.

5. **CONSISTENT REGIONAL REQUIREMENTS:** The regulation of all Sewage Collection Agencies will be consistent within the San Diego Region by requiring agencies such as California Department of Corrections; California State University, San Marcos; San Diego State University; and University of California, San Diego, which have not been regulated under Order No. 96-04, to comply with Regional Board requirements that augment State Board Order No. 2006-0003-DWQ.
6. **BASIN PLAN:** The Regional Board adopted a Water Quality Control Plan for the San Diego Basin (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was subsequently approved by the State Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses, narrative, and numerical water quality objectives, and prohibitions which are applicable to the discharges prohibited under this Order.
7. **PROHIBITIONS CONTAINED IN BASIN PLAN:** The Basin Plan contains the following prohibitions which are applicable to the discharges prohibited under this Order:
 - a. "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited."
 - b. "The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited."
 - c. "The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. ..."
 - d. "The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board."
 - e. "The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited."
 - f. "The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited."
 - g. "The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board."

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8. **PORTER-COLOGNE WATER QUALITY CONTROL ACT (CALIFORNIA WATER CODE, DIVISION 7):** California Water Code Section 13243 provides that a Regional Board, in establishing waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited. California Water Code 13260 prohibits the discharge of waste to land prior to the filing of a required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs. California Water Code 13264 prohibits discharge of waste absent a report of waste discharge and waste discharge requirements.

9. **FEDERAL CLEAN WATER ACT:** The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. Furthermore, the Code of Federal Regulation requires proper operation and maintenance of all POTW facilities including collection systems, which results in prevention of SSOs.

10. **RESCISSION OF ORDER No. 96-04:** Order No. 96-04 can be rescinded after all of the Sewage Collection Agencies regulated under Order No. 96-04 have obtained coverage under Order No. 2006-0003-DWQ.

11. **PRIVATE LATERAL SEWAGE DISCHARGES REPORTING:** Order No. 96-04 does not require Sewage Collection Agencies to report Private Lateral Sewage Discharges. Over the past several years, however, this Regional Board has been tracking the number of Private Lateral Sewage Discharges based on courtesy reports from the Sewage Collection Agencies. During the period from July 2004 through June 2006, a total of 268 Private Lateral Sewage Discharges were reported by the Agencies. During some of those months, more Private Lateral Sewage Discharges were reported than public SSOs. Because the Agencies are not required to report Private Lateral Sewage Discharges, it is not known if the numbers reported fully represent the number and locations of Private Lateral Sewage Spills in the Region.

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Finding Nos. 2, 3, and 4 of State Board Order No. 2006-0003-DWQ pertaining to causes of SSOs and the potential threat to water quality resulting from SSOs are also applicable to Private Lateral Sewage Discharges. Because Private Lateral Sewage Discharges are numerous and are a potential threat to public health and the environment, there is a need to have a reliable reporting system for Private Lateral Sewage Discharges for similar reasons as the public SSOs. Although sewage collection agencies are not responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, sewage collection agencies are typically notified and/or are the first responders to Private Lateral Sewage Discharges. Consequently, requiring the sewage collection agencies to report all known Private Lateral Sewage Discharges is reasonable and a first step toward development of a regulatory approach for reducing Private Lateral Sewage Discharges in the San Diego Region.

12. **PERMITTING FEES:** This Order will serve as additional requirements to the State Board Order No. 2006-0003-DWQ. Sewage Collection Agencies that are covered and pay the fees under State Board Order No. 2006-0003-DWQ (or orders that supersede 2006-0003-DWQ) will not be required to pay for fees under this Order No. R9-2007-0005.
13. **CALIFORNIA ENVIRONMENTAL QUALITY ACT:** The action to adopt this Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.
14. **PUBLIC NOTICE:** The Regional Board has notified all known interested persons and the public of its intent to consider adoption of this Order. Interested persons and the public have had reasonable opportunity to participate in review of the proposed Order.
15. **PUBLIC HEARING:** The Regional Board has considered all comments pertaining to this Order submitted to the Regional Board in writing, or by oral presentations at the public hearing held on February 14, 2007.

IT IS HEREBY ORDERED, that all Sewage Collection Agencies within the San Diego Region, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following, in addition to the State Water Resource Control Board Order No. 2006-0003-DWQ (or orders that supersede 2006-0003-DWQ) and its addenda (hereinafter referred to as State Board Order):

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A. Definitions

1. For purposes of this Order, a Sewage Collection Agency shall mean an "enrollee", as defined in the State Board Order, within the boundaries of the San Diego Region.

B. Prohibition

1. The discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant is prohibited.

C. Monitoring and Reporting Program Requirements

1. Each Sewage Collection Agency shall report all SSOs in accordance with the Monitoring and Reporting Program No. 96-04 until the Sewage Collection Agency notifies the Regional Board that they can successfully report the SSOs to the State Board Online SSO System. The notification shall be a letter signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official.
2. For Category 1 (as defined in State Board Monitoring and Reporting Program No. 2006-0003-DWQ) SSOs, the Sewage Collection Agency shall provide notification of the SSO to the Regional Board by phone, email, or fax within 24 hours after the Sewage Collection Agency becomes aware of the SSO, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the name and phone number of the person reporting the SSO, the responsible sewage collection agency, the estimated total sewer overflow volume, the location of the SSO, the receiving water (if any), the start date/time of the SSO (if known), the end date/time of the SSO (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.
3. The Sewage Collection Agency shall provide notification of all Private Lateral Sewage Discharges (as defined in the State Board Order), for which they become aware of, that equal or exceed 1,000 gallons; result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system, to the Regional Board by phone or fax within 24 hours after the Sewage Collection Agency becomes aware of the Private Lateral Sewage Discharge, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the following information, if known: the name and phone number of the person reporting the Private Lateral Sewage Discharge, the service area where the Private Lateral Sewage Discharge occurred, the responsible party (other than the Sewage Collection Agency, if known), the estimated Private

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Lateral Sewage Discharge volume, the location of the Private Lateral Sewage Discharge, the receiving water (if any), the start date/time of the Private Lateral Sewage Discharge, the end date/time of the Private Lateral Sewage Discharge (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

4. The following requirement supersedes the Private Lateral Sewage Discharge Reporting Timeframe for Private Lateral Sewage Discharges in the State Board Monitoring and Reporting Program No. 2006-0003-DWQ: For Private Lateral Sewage Discharges that occur within a Sewage Collection Agency's service area and that a Sewage Collection Agency becomes aware of, the Sewage Collection Agency shall report the Private Lateral Sewage Discharge to the State Board Online SSO Database within 30 days after the end of the calendar month in which the Private Lateral Sewage Discharge occurs. The Sewage Collection Agency must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Sewage Collection Agency) should be identified, if known. The Sewage Collection Agency will not be responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, but only the reporting of those within their jurisdiction and for which they become aware of.

D. Notification

1. Upon completion with Monitoring and Reporting Program Requirement C.1, the Regional Board will give written notice to the Sewage Collection Agency stating that regulation of the Sewage Collection Agency under Order No. 96-04 is terminated.
2. Order No. 96-04 is rescinded once regulation of all Sewage Collection Agencies under Order No. 96-04 is terminated. The Regional Board will give written notice to all of the Sewage Collection Agencies stating that all Sewage Collection Agencies under Order No. 96-04 was terminated and, thus, Order 96-04 is rescinded.

I, John Robertus, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of Order No. 2007-0005 adopted by the California Regional Water Quality Control Board, San Diego Region on February 14, 2007.



JOHN H. ROBERTUS
Executive Officer

JHR:mpm:rwm:jjl

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**STATE WATER RESOURCES CONTROL BOARD{PRIVATE }
ORDER NO. 2006-0003**

**STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS**

The State Water Resources Control Board, hereinafter referred to as "State Water Board", finds that:

1. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems 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 are required to comply with the terms of this Order. Such entities are hereinafter referred to as "Enrollees"
2. Sanitary sewer overflows (SSOs) are overflows from sanitary sewer systems of domestic wastewater, as well as industrial and commercial wastewater, depending on the pattern of land uses in the area served by the sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. SSOs may cause a public nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.
3. Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.
4. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system age and construction material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

SEWER SYSTEM MANAGEMENT PLANS

5. To facilitate proper funding and management of sanitary sewer systems, each Enrollee must develop and implement a system-specific Sewer System Management Plan (SSMP). To be effective, SSMPs must include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, an SSMP must contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.
6. Many local public agencies in California have already developed SSMPs and implemented measures to reduce SSOs. These entities can build upon their existing efforts to establish a comprehensive SSMP consistent with this Order. Others, however, still require technical assistance and, in some cases, funding to improve sanitary sewer system operation and maintenance in order to reduce SSOs.
7. SSMP certification by technically qualified and experienced persons can provide a useful and cost-effective means for ensuring that SSMPs are developed and implemented appropriately.
8. It is the State Water Board's intent to gather additional information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and consequent public health and/or environmental impacts occurring in the State.
9. Both uniform SSO reporting and a centralized statewide electronic database are needed to collect information to allow the State Water Board and Regional Water Quality Control Boards (Regional Water Boards) to effectively analyze the extent of SSOs statewide and their potential impacts on beneficial uses and public health. The monitoring and reporting program required by this Order and the attached **Monitoring and Reporting Program No. 2006-0003**, are necessary to assure compliance with these waste discharge requirements (WDRs).
10. Information regarding SSOs must be provided to Regional Water Boards and other regulatory agencies in a timely manner and be made available to the public in a complete, concise, and timely fashion.
11. Some Regional Water Boards have issued WDRs or WDRs that serve as National Pollution Discharge Elimination System (NPDES) permits to sanitary sewer system owners/operators within their jurisdictions. This Order establishes minimum requirements to prevent SSOs. Although it is the State Water Board's intent that this Order be the primary regulatory mechanism for sanitary sewer systems statewide, Regional Water Boards may issue more stringent or more

prescriptive WDRs for sanitary sewer systems. Upon issuance or reissuance of a Regional Water Board's WDRs for a system subject to this Order, the Regional Water Board shall coordinate its requirements with stated requirements within this Order, to identify requirements that are more stringent, to remove requirements that are less stringent than this Order, and to provide consistency in reporting.

REGULATORY CONSIDERATIONS

12. California Water Code section 13263 provides that the State Water Board may prescribe general WDRs for a category of discharges if the State Water Board finds or determines that:

- The discharges are produced by the same or similar operations;
- The discharges involve the same or similar types of waste;
- The discharges require the same or similar treatment standards; and
- The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

This Order establishes requirements for a class of operations, facilities, and discharges that are similar throughout the state.

13. The issuance of general WDRs to the Enrollees will:

- a) Reduce the administrative burden of issuing individual WDRs to each Enrollee;
- b) Provide for a unified statewide approach for the reporting and database tracking of SSOs;
- c) Establish consistent and uniform requirements for SSMP development and implementation;
- d) Provide statewide consistency in reporting; and
- e) Facilitate consistent enforcement for violations.

14. The beneficial uses of surface waters that can be impaired by SSOs include, but are not limited to, aquatic life, drinking water supply, body contact and non-contact recreation, and aesthetics. The beneficial uses of ground water that can be impaired include, but are not limited to, drinking water and agricultural supply. Surface and ground waters throughout the state support these uses to varying degrees.

15. The implementation of requirements set forth in this Order will ensure the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each region and take into account the environmental characteristics of hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect

water quality in the area, costs associated with compliance with these requirements, the need for developing housing within California, and the need to develop and use recycled water.

16. The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. In addition, many Basin Plans adopted by the Regional Water Boards contain discharge prohibitions that apply to the discharge of untreated or partially treated wastewater. Finally, the California Water Code generally prohibits the discharge of waste to land prior to the filing of any required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs.
17. California Water Code section 13263 requires a water board to, after any necessary hearing, prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The requirements shall, among other things, take into consideration the need to prevent nuisance.
18. California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
 - a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - c. Occurs during, or as a result of, the treatment or disposal of wastes.
19. This Order is consistent with State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the Order imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than prescribed in State Water Board or Regional Water Board plans and policies.
20. The action to adopt this General Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt

this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

21. The Fact Sheet, which is incorporated by reference in the Order, contains supplemental information that was also considered in establishing these requirements.
22. The State Water Board has notified all affected public agencies and all known interested persons of the intent to prescribe general WDRs that require Enrollees to develop SSMPs and to report all SSOs.
23. The State Water Board conducted a public hearing on February 8, 2006, to receive oral and written comments on the draft order. The State Water Board received and considered, at its May 2, 2006, meeting, additional public comments on substantial changes made to the proposed general WDRs following the February 8, 2006, public hearing. The State Water Board has considered all comments pertaining to the proposed general WDRs.

IT IS HEREBY ORDERED, that pursuant to California Water Code section 13263, the Enrollees, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

A. DEFINITIONS

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
 - (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
 - (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
 - (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.
2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipes or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, district, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order.
4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is <http://ciwqs.waterboards.ca.gov>. This online database is maintained on a secure site and is controlled by unique usernames and passwords.
5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.
6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.
7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:
 - a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - c. Occurs during, or as a result of, the treatment or disposal of wastes.

B. APPLICATION REQUIREMENTS

1. **Deadlines for Application** – All public agencies that currently own or operate sanitary sewer systems within the State of California must apply for coverage under the general WDRs within six (6) months of the date of adoption of the general WDRs. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after the date of adoption of this Order must apply for coverage under the general WDRs at least three (3) months prior to operation of those facilities.
2. **Applications under the general WDRs** – In order to apply for coverage pursuant to the general WDRs, a legally authorized representative for each agency must submit a complete application package. Within sixty (60) days of adoption of the general WDRs, State Water Board staff will send specific instructions on how to

apply for coverage under the general WDRs to all known public agencies that own sanitary sewer systems. Agencies that do not receive notice may obtain applications and instructions online on the Water Board's website.

3. Coverage under the general WDRs – Permit coverage will be in effect once a complete application package has been submitted and approved by the State Water Board's Division of Water Quality.

C. PROHIBITIONS

1. Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.
2. Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

D. PROVISIONS

1. The Enrollee must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for enforcement action.
2. It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with the general WDRs. Nothing in the general WDRs shall be:
 - (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
 - (ii) Interpreted or applied to authorize an SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
 - (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual NPDES permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
 - (iv) Interpreted or applied to supersede any more specific or more stringent WDRs or enforcement order issued by a Regional Water Board.
3. The Enrollee shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Enrollee shall take all feasible steps to contain and mitigate the impacts of an SSO.
4. In the event of an SSO, the Enrollee shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into

flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

5. All SSOs must be reported in accordance with Section G of the general WDRs.
6. In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:
 - (i) The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;
 - (ii) The Enrollee can identify the cause or likely cause of the discharge event;
 - (iii) There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.
 - (iv) The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;
 - (v) The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
 - Proper management, operation and maintenance;
 - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);
 - Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);
 - Installation of adequate backup equipment; and
 - Inflow and infiltration prevention and control to the extent practicable.
 - (vi) The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

(vii) The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.

7. When a sanitary sewer overflow occurs, the Enrollee shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

The Enrollee shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

- (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;
 - (ii) Vacuum truck recovery of sanitary sewer overflows and wash down water;
 - (iii) Cleanup of debris at the overflow site;
 - (iv) System modifications to prevent another SSO at the same location;
 - (v) Adequate sampling to determine the nature and impact of the release; and
 - (vi) Adequate public notification to protect the public from exposure to the SSO.
8. The Enrollee shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Enrollee, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
 9. The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.
 10. The Enrollee shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Enrollee.
 11. The Enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the Internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

12. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)' signature and stamp.
13. The mandatory elements of the SSMP are specified below. However, if the Enrollee believes that any element of this section is not appropriate or applicable to the Enrollee's sanitary sewer system, the SSMP program does not need to address that element. The Enrollee must justify why that element is not applicable. The SSMP must be approved by the deadlines listed in the SSMP Time Schedule below.

Sewer System Management Plan (SSMP)

- (i) **Goal:** The goal of the 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.
- (ii) **Organization:** The SSMP must identify:
 - (a) The name of the responsible or authorized representative as described in Section J of this Order.
 - (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
 - (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 County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).
- (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.);

- (b) Require that sewers and connections be properly designed and constructed;
 - (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
 - (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and
 - (e) Enforce any violation of its sewer ordinances.
- (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 stormwater conveyance facilities;
 - (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;
 - (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;
 - (d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

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

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

(vi) **Overflow Emergency Response Plan** - Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures 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;
- (b) A program to ensure an appropriate response to all overflows;
- (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;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (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.

(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;
- (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;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

(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 sanitary 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;

- (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
 - (c) **Capacity Enhancement Measures:** The steps needed to establish a short- 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 and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
 - (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.
- (ix) **Monitoring, Measurement, and Program Modifications:** The Enrollee shall:
- (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
 - (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
 - (c) Assess the success of the preventative maintenance program;
 - (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
 - (e) Identify and illustrate SSO trends, including: frequency, 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.

- (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 Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

14. Both the SSMP and the Enrollee's program to implement the SSMP must be certified by the Enrollee to be in compliance with the requirements set forth above and must be presented to the Enrollee's governing board for approval at a public meeting. The Enrollee shall certify that the SSMP, and subparts thereof, are in compliance with the general WDRs within the time frames identified in the time schedule provided in subsection D.15, below.

In order to complete this certification, the Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
P.O. Box 100
Sacramento, CA 95812

The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the governing board of the Enrollee is required in accordance with D.14 when significant updates to the SSMP are made. To complete the re-certification process, the Enrollee shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

15. The Enrollee shall comply with these requirements according to the following schedule. This time schedule does not supersede existing requirements or time schedules associated with other permits or regulatory requirements.

Sewer System Management Plan Time Schedule

Task and Associated Section	Completion Date			
	Population > 100,000	Population between 100,000 and 10,000	Population between 10,000 and 2,500	Population < 2,500
Application for Permit Coverage Section C	6 months after WDRs Adoption			
Reporting Program Section G	6 months after WDRs Adoption ¹			
SSMP Development Plan and Schedule No specific Section	9 months after WDRs Adoption ²	12 months after WDRs Adoption ²	15 months after WDRs Adoption ²	18 months after WDRs Adoption ²
Goals and Organization Structure Section D 13 (i) & (ii)	12 months after WDRs Adoption ²		18 months after WDRs Adoption ²	
Overflow Emergency Response Program Section D 13 (vi)	24 months after WDRs Adoption ²	30 months after WDRs Adoption ²	36 months after WDRs Adoption ²	39 months after WDRs Adoption ²
Legal Authority Section D 13 (iii)				
Operation and Maintenance Program Section D 13 (iv)				
Grease Control Program Section D 13 (vii)				
Design and Performance Section D 13 (v)	36 months after WDRs Adoption	39 months after WDRs Adoption	48 months after WDRs Adoption	51 months after WDRs Adoption
System Evaluation and Capacity Assurance Plan Section D 13 (viii)				
Final SSMP, incorporating all of the SSMP requirements Section D 13				

1. In the event that by July 1, 2006 the Executive Director is able to execute a memorandum of agreement (MOA) with the California Water Environment Association (CWEA) or discharger representatives outlining a strategy and time schedule for CWEA or another entity to provide statewide training on the adopted monitoring program, SSO database electronic reporting, and SSMP development, consistent with this Order, then the schedule of Reporting Program Section G shall be replaced with the following schedule:

Reporting Program Section G	
Regional Boards 4, 8, and 9	8 months after WDRs Adoption
Regional Boards 1, 2, and 3	12 months after WDRs Adoption
Regional Boards 5, 6, and 7	16 months after WDRs Adoption

If this MOU is not executed by July 1, 2006, the reporting program time schedule will remain six (6) months for all regions and agency size categories.

2. In the event that the Executive Director executes the MOA identified in note 1 by July 1, 2006, then the deadline for this task shall be extended by six (6) months. The time schedule identified in the MOA must be consistent with the extended time schedule provided by this note. If the MOA is not executed by July 1, 2006, the six (6) month time extension will not be granted.

E. WDRs and SSMP AVAILABILITY

1. A copy of the general WDRs and the certified SSMP shall be maintained at appropriate locations (such as the Enrollee's offices, facilities, and/or Internet homepage) and shall be available to sanitary sewer system operating and maintenance personnel at all times.

F. ENTRY AND INSPECTION

1. The Enrollee shall allow the State or Regional Water Boards or their authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The Enrollee shall furnish to the State or Regional Water Board, within a reasonable time, any information that the State or Regional Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Enrollee shall also furnish to the Executive Director of the State Water Board or Executive Officer of the applicable Regional Water Board, upon request, copies of records required to be kept by this Order.
2. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2006-0003 and future revisions thereto, as specified by the Executive Director. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2006-0003. Unless superseded by a specific enforcement Order for a specific Enrollee, these reporting requirements are intended to replace other mandatory routine written reports associated with SSOs.
3. All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within 30 days of receiving an account and prior to recording spills into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding a Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.
4. Pursuant to Health and Safety Code section 5411.5, any person who, without regard to intent or negligence, causes or permits any untreated wastewater or other waste to be discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State, as soon as that person has knowledge of the discharge, shall immediately notify the local health officer of the discharge. Discharges of untreated or partially treated wastewater to storm drains and drainage channels, whether man-made or natural or concrete-lined, shall be reported as required above.

Any SSO greater than 1,000 gallons discharged in or on any waters of the State, or discharged in or deposited where it is, or probably will be, discharged in or on any surface waters of the State shall also be reported to the Office of Emergency Services pursuant to California Water Code section 13271.

H. CHANGE IN OWNERSHIP

1. This Order is not transferable to any person or party, except after notice to the Executive Director. The Enrollee shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Enrollee containing a specific date for the transfer of this Order's responsibility and coverage between the existing Enrollee and the new Enrollee. This agreement shall include an acknowledgement that the existing Enrollee is liable for violations up to the transfer date and that the new Enrollee is liable from the transfer date forward.

I. INCOMPLETE REPORTS

1. If an Enrollee becomes aware that it failed to submit any relevant facts in any report required under this Order, the Enrollee shall promptly submit such facts or information by formally amending the report in the Online SSO Database.

J. REPORT DECLARATION

- 1 All applications, reports, or information shall be signed and certified as follows:
 - (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)
 - (ii) An individual is a duly authorized representative only if:
 - (a) The authorization is made in writing by a person described in paragraph (i) of this provision; and
 - (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.

K. CIVIL MONETARY REMEDIES FOR DISCHARGE VIOLATIONS

1. The California Water Code provides various enforcement options, including civil monetary remedies, for violations of this Order.
2. The California Water Code also provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or

falsifying any information provided in the technical or monitoring reports is subject to civil monetary penalties.

L. SEVERABILITY

1. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
2. This order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Enrollee from liability under federal, state or local laws, nor create a vested right for the Enrollee to continue the waste discharge.

CERTIFICATION

The undersigned Clerk to the State Water Board does hereby certify that the foregoing is a full, true, and correct copy of general WDRs duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 2, 2006.

AYE: Tam M. Doduc
Gerald D. Secundy

NO: Arthur G. Baggett

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

STATE WATER RESOURCES CONTROL BOARD

**MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS**

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

A. SANITARY SEWER OVERFLOW REPORTING**SSO Categories**

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
 - A. Equal or exceed 1000 gallons, or
 - B. Result in a discharge to a drainage channel and/or surface water; or
 - C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.
2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.
3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – All SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

The above reporting requirements do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local

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County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

5. **Category 2 SSOs** – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).
6. **Private Lateral Sewage Discharges** – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.
7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.
8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

At a minimum, the following mandatory information must be included prior to finalizing and certifying an SSO report for each category of SSO:

9. **Category 2 SSOs:**
 - A. Location of SSO by entering GPS coordinates;
 - B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
 - C. County where SSO occurred;
 - D. Whether or not the SSO entered a drainage channel and/or surface water;
 - E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;

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- F. Estimated SSO volume in gallons;
- G. SSO source (manhole, cleanout, etc.);
- H. SSO cause (mainline blockage, roots, etc.);
- I. Time of SSO notification or discovery;
- J. Estimated operator arrival time;
- K. SSO destination;
- L. Estimated SSO end time; and
- M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

- A. All information listed above (if applicable and known), as well as;
- B. Identification of sewage discharge as a private lateral sewage discharge; and
- C. Responsible party contact information (if known).

11. Category 1 SSOs:

- A. All information listed for Category 2 SSOs, as well as;
- B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- C. Estimated SSO amount recovered;
- D. Response and corrective action taken;
- E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
- F. Parameters that samples were analyzed for (if applicable);
- G. Identification of whether or not health warnings were posted;
- H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
- I. Whether or not there is an ongoing investigation;
- J. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- K. OES control number (if applicable);
- L. Date OES was called (if applicable);
- M. Time OES was called (if applicable);
- N. Identification of whether or not County Health Officers were called;
- O. Date County Health Officer was called (if applicable); and
- P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant to California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

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1. The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services
Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.
3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.
3. All records shall be made available for review upon State or Regional Water Board staff's request.
4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;
5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:
 - a. Record of Certified report, as submitted to the online SSO database;
 - b. All original recordings for continuous monitoring instrumentation;
 - c. Service call records and complaint logs of calls received by the Enrollee;
 - d. SSO calls;
 - e. SSO records;
 - f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
 - g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
 - h. A list and description of complaints from customers or others from the previous 5 years; and
 - i. Documentation of performance and implementation measures for the previous 5 years.
6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:

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- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical technique or method used; and,
- f. The results of such analyses.

C. Certification

1. All final reports must be certified by an authorized person as required by Provision J of the Order.
2. Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on May 2, 2006.



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Clerk to the Board

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Appendix C

- C-1 Section 6.1 - Gravity Sewer Pipeline Design Guidelines
- C-2 Section 6.2 - Sewer Manholes and Cleanouts Design Guidelines
- C-3 Section 6.3 - Sewer Laterals Design Guidelines
- C-4 Section 6.4 - Pressure Systems (Force Mains) Design Guidelines
- C-5 Standard Specifications for Potable Water, Recycled Water and Sewer Facilities – Table of Contents
- C-6 Standard Drawings for Potable Water, Recycled Water and Sewer Facilities – Table of Contents

WATER AGENCIES' STANDARDS

Design Guidelines for Water and Sewer Facilities

SECTION 6.1 GRAVITY SEWER PIPELINE DESIGN

6.1.1 PURPOSE

The purpose of this section is to provide guidelines for the use, location, alignment and design of gravity sewer collection pipelines for conveying raw sewage.

6.1.2 STANDARD TERMS AND DEFINITIONS

Wherever technical terms occur in these guidelines or in related documents, the intent and meaning shall be interpreted as described in Standard Terms and Definitions.

The following terms and definitions as found in this section shall have the following meaning:

- SDR: Standard Dimension Ratio (SDR) is the pipe diameter divided by the pipe wall thickness and provides a method of specifying product dimensions to maintain mechanical properties regardless of size. For a given dimension ratio the pipe stiffness remains constant for all pipe sizes.
- Collector: Generally eight inch (8") through fifteen inch (15") pipe that collects sewage from neighborhoods and groups of business and delivers sewage into a single, larger interceptor pipe.
- Interceptor: Generally fifteen inch (15") and larger pipe that gathers sewage flow from several smaller collector pipe connections and transports this sewage to a treatment facility or outfall.
- Outfall: Generally eighteen inch (18") and larger pipe having no (or minimal) collector pipe connections that carries sewage flow to a treatment facility.

6.1.3 GENERAL

It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document. The Engineer of Work may not deviate from the criteria presented in this section without prior written approval of the Agency's Engineer.

- A. Use and placement of manholes and cleanouts shall be in accordance with Section 6.2.
- B. Use and placement of sewer laterals in gravity sewer collection shall be in accordance with Section 6.3.
- C. Use and design of Sewer Force mains shall be in accordance with Section 6.4.

6.1.4 GUIDELINE

Gravity sewer systems are designed for steady flow conditions based on ability to self-clean at peak hour pipe velocity. Factors to consider in determining gravity system hydraulics include the design formula, roughness coefficient, velocity and slope, and sulfide control. PVC gravity sewer pipe is considered flexible pipe material and shall be designed accordingly.

A. Requirements: Pipe to be used to convey raw sewage shall comply to the following:

- 1 Gravity sewer mains and appurtenant components shall primarily be Polyvinyl Chloride (PVC) sewer pipe, in accordance with the WAS Approved Materials List.

Polyethylene Lined Ductile Iron Pipe (DIP) and High Density Polyethylene Pipe (HDPE) may be used in some circumstances. Prior written approval of the Agency's Engineer is required when pipe materials other than PVC are proposed for use by the designer.

- 2. Minimum size pipe for sewer mains shall be eight inch (8"). Six inch (6") sizes may be allowed in some circumstances only with prior approval of the Agency's Engineer.
- 3. PVC pipe shall have common profiles for inter-changeability between rough-barrel dimensions, couplings, ends, and elastomeric gaskets to facilitate future repairs.
- 4. Pipe, fittings, couplings, and joints shall comply with the size, dimensions, materials, and performance requirements of the following ASTM designations:

Pipe Sizes	ASTM Designations
6" through 15"	ASTM D 3034, SDR 35
18" through 27"	ASTM F 679, SDR 35 (T-I)
21" through 48"	ASTM F 794, Closed Profile

- 5. Curves: Horizontal and vertical curve alignments in sewer mains are allowed in accordance with the manufacturer's recommendations and as follows.
 - a. Horizontal and vertical curves are not permitted in the same stretch of pipe between manholes.
 - b. Generally horizontal curves shall match the centerline radius of the road in which the sewer main is to be installed. Curves in sewer pipe shall be as recommended by the pipe manufacturer with a minimum radius of two hundred feet (200').
 - c. Vertical curves should be avoided whenever possible. Vertical curves may be allowed for changes in slope without the use of an additional manhole in accordance with the manufacturer's recommendations and prior written approval of the Agency's Engineer. If vertical curves cannot be avoided, specific design calculations shall be provided to the Agency's Engineer with a minimum radius of two hundred feet (200').
- 6. Change in Direction: The maximum change in direction allowed is ninety degrees (90°) for mains fifteen inches (15") in diameter and less, and forty five degrees (45°) for mains eighteen inches (18") and larger.

Whenever a change in deflection occurs a manhole will be required at the change in direction in accordance with Section 6.2.

7. Trench Loads: PVC sewer pipe is considered flexible pipe material and shall be designed accordingly. Trench loads shall be calculated and a detailed report provided to the Agency's Engineer when the pipe depth exceeds fourteen feet (14'). Calculations shall consider dead loads (i.e. soil above the pipe and asphalt or concrete) and live loads (i.e. vehicle traffic). Maximum long-term deflection of gravity sewer pipe shall not exceed the manufactures recommendations.
8. Pipe slopes: Sewer mains shall be designed to have minimum and maximum slopes in accordance with Section 4.2.
9. Depth of Flow: Depth of flow within a sewer main shall be in accordance with Section 4.2.
10. Junctions or Intersection sewer mains shall have a manhole placed in accordance with Section 6.2. The crown elevations shall be matched within the manhole.
11. Inverted Siphons: Inverted siphons are used in gravity sewer systems to overcome grade obstructions that cannot be resolved in any other practical fashion.

Every effort shall be made to avoid a siphon. Siphons will not be permitted without prior approval of the Agency's Engineer. Alternates to siphons include, but are not limited to aerial crossings, separation structures, relocation of obstructions, relocation of sewer mains, low head pipes, and gravity flow beneath the obstruction. Inverted siphons are a specialty design and a design report shall be provided to the Agency's Engineer for evaluation and consideration.

B. Locations. Sewer mains shall be located, based on the above needs, at areas described below.

1. In general, sewer mains should be located on the centerline of streets or easements. Refer to Section 1.5 for easement widths required.
2. Depth of sewer mains shall be as described as follows:
 - a. Minimum Depth: Sewer mains shall be a minimum five feet (5') deep to flow line, unless otherwise approved by the Agency's Engineer. Greater depths may be required where it is necessary to extend mains to serve other areas, or to achieve required depth of laterals at the property line. Anything less than five feet (5') requires the approval of the Agency's Engineer.
 - b. Maximum Depth: Sewer mains shall have a maximum depth to flow line of fourteen feet (14'), unless otherwise approved by the Agency's Engineer. The maximum depth of pipe is based on sewer cleaning and maintenance access requirements. Request for approval of deeper mains shall include a sewer main alignment and profile study showing that no other way of providing a main with less than fourteen feet (14') of cover is feasible.
3. Parallel and perpendicular separations between water and sewer mains shall be in accordance with WAS Standard Drawing WI-01 through WI-03.
4. Mains shall be placed on straight lines between structures wherever possible.

5. Generally sewer mains shall be accessible for cleaning equipment, maintenance and repair. Access roads shall have a minimum forty-five foot (45') centerline radius to accommodate cleaning equipment.

Mains shall not be located in the following locations:

- Inaccessible areas.
 - Under median strips.
 - Parking lanes.
 - Within heavy landscape areas that receives more than just ground cover. Bushes, trees or brush should not be planted around the area of the lateral.
- C. Appurtenances: Sewer main appurtenances will be required in accordance with WAS Standard Specification 15065 and the Approved Materials List.
 - D. Installation: Sewer mains shall be installed at locations shown on the approved plans in accordance with WAS Standard Specification 15065 and applicable Standard Drawings.

6.1.5 NOTATIONS ON PLANS

Sewer mains shall be shown in the plan and profile views of the sheet(s) and shall include, but not be limited to the following:

- A. Standard symbols, stationing and plan callouts in accordance with Section 1.1.
- B. Plan View: Indicate size, class, type of pipe materials and locations of laterals, manholes and pipe connections in accordance with Section 1.1
- C. Profile View: Indicate size, class, type of pipe materials and locations of manholes, flow-line/invert elevations, and slopes in accordance with Section 1.1. If vertical curves cannot be avoided the curve shall be indicated by showing invert elevations at fifteen foot (15') to twenty five foot (25') intervals.

6.1.6 MATERIAL SELECTION

Selection of pipeline materials and appurtenances to be used with the installation of gravity sewers shall be in accordance with WAS Standard Specification 15065 and the Approved Materials List.

6.1.7 REFERENCE

- A. Should the reader have any suggestions or questions concerning the material in this section, contact one of the member agencies listed.
- B. The publications listed below form a part of this section to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said publications unless otherwise called for. The following list of publications, as directly referenced within the body of this document, has been provided for the users convenience. It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document.

1. Water Agencies' Standards (WAS):
 - a. Design Guidelines
 1. Section 1.1, Drafting Guidelines
 2. Section 1.5, Easements and Encroachments
 3. Section 4.2, Sewer Planning
 4. Section 6.2, Sewer Manholes and Cleanouts
 5. Section 6.3, Sewer Laterals
 6. Section 6.4, Sewer Pressure Systems (Force Mains)
 - b. Standard Specifications:
 1. Section 15065, Polyvinyl Chloride (PVC) Gravity Sewer Pipe
 - c. Standard Drawings:
 1. WI-01 through WI-03
 - d. Approved Materials List for Sewer Facilities
2. American Society for Testing and Materials (ASTM):
 - a. ASTM D3034, Type PSM Poly (vinyl chloride) (PVC) Sewer Pipe and Fittings.
 - b. ASTM F 679, PVC Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
 - c. ASTM F 794, Poly (vinyl chloride) (PVC) Profile Gravity Sewer Pipe and Fittings.

END OF SECTION

WATER AGENCIES' STANDARDS

Design Guidelines for Water and Sewer Facilities

SECTION 6.2 SEWER MANHOLES AND CLEANOUTS

6.2.1 PURPOSE

The purpose of this section is to provide guidelines for the use and placement of manholes and cleanouts in gravity sewer collection pipelines.

6.2.2 STANDARD TERMS AND DEFINITIONS

Wherever technical terms occur in these guidelines or in related documents, the intent and meaning shall be interpreted as described in Standard Terms and Definitions.

6.2.3 GENERAL

It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document. The Engineer of Work may not deviate from the criteria presented in this section without prior written approval of the Agency Engineer.

- A. Design for gravity sewers mains shall be in accordance with Section 6.1.
- B. Use and placement of sewer laterals in gravity sewer collection shall be in accordance with Section 6.3.

6.2.4 GUIDELINE

- A. Requirements: Manholes are required in gravity sewer pipelines to provide access for maintenance.

Manholes are generally located in the following areas:

- Change in direction of flow.
- Change in pipe size or material.
- Change in grade.
- Intersections of mains.

- B. Locations: Manholes shall be located at areas described as follows:
 - 1. Manhole spacing is typically determined by the available sewer maintenance methods and equipment. Maximum spacing of manholes shall be four hundred feet (400') for mains twelve inch (12") and smaller and five hundred feet (500') for mains over twelve inch (12") unless otherwise approved by the Agency Engineer.
 - 2. Manholes shall be located in areas where a change in the direction of flow is made. Whenever a change in direction occurs with a radius less than five hundred feet (500'), a manhole shall be located within approximately ten feet (10') of the downstream end of the curve (EC). One exception to this is when a reverse curve is used, in which case the manhole should be located at the

point of reverse curve. Maximum distances between manholes are to be maintained.

3. Manholes shall be placed at areas where a change in the pipe size occurs. A change in pipe diameter greater than six inches (6") is not allowed without prior approval of the Agency Engineer. A smooth transition within the manhole must be provided between all changes in pipe size.
4. Manholes shall be placed at areas where a change in the pipe grade occurs. Where the change in grade is greater than ten percent (10%), or the potential for a hydraulic jump within the manhole exists, the grade change shall be made in a smooth vertical curve with a manhole twenty five feet (25') downstream from where the sewer levels out to the lesser grade.
5. Manholes shall be located at the ends of mains larger than eight inches (8"), on mains that have four (4) or more laterals at or near the end or on mains extending beyond two hundred feet (200') from the nearest manhole. Manholes at end of mains shall be limited to no more than four (4) laterals entering directly into the manhole.
6. Manholes shall be located at junctions or intersection of side mains.
 - a. Manholes with multiple angled inlets and outlets shall be spaced to provide adequate clearance between penetrations to assure clearance and water tightness.
 - b. Manholes shall be installed on the existing sewer main where a proposed side main is to be connected.
 - c. Typically sewer laterals intercepting the main do not require a manhole in accordance with Section 6.3 and Standard Drawings SS-01 and SS-02 except as follows:
 - 1 Laterals shall be connected to the sewer main at a manhole when the lateral serving a property has two (2) or more branches installed to serve more than one facility on the property. Residential lots with a second dwelling may be excluded from this requirement at the direction of the Agency Engineer.
 2. Laterals matching the size of the sewer main shall be connected to the main at a manhole.
7. Manholes shall be located at the beginning point and ending point of vertical curves if the curve is longer than two hundred feet (200').
8. Manholes shall not be located in the following locations:
 - Inaccessible areas.
 - Gutters and other depressions or areas subject to inundation.
 - In sidewalks or crosswalks.
 - In driveways.
 - In freeway ramps.
 - Between railroad or trolley tracks. Manholes within a railroad or trolley right-of-way shall be located a minimum of fifteen feet (15') from the track bed.

C. Manhole Appurtenances: Manhole appurtenances will be required as indicated below in accordance with WAS Standard Specification 03461

1. All manholes will include thirty-six inch (36") diameter frames and two concentric covers. Locking manhole lids may be required in areas where manholes are located in unpaved areas and other areas as determined by the Agency Engineer.
2. Manhole bases may be poured in place, in accordance the WAS Specification Section 03000, or precast concrete, in accordance with WAS Specification Section 03461, with a minimum drop through the manhole as follows:
 - a. Mains fifteen inch (15") and smaller: A minimum drop of 0.20 feet and a maximum of 0.60 feet shall be used on a straight-through line.
 - b. Mains eighteen inches (18") and larger: The drop across for the manhole shall be calculated using the following formula:

$$\text{Drop in feet} = D \times [(S_1 + S_2) / 2] + 0.20$$

Where D equals the inside diameter of the manhole, S1 equals the invert slope entering the manhole, and S2 equals the invert slope leaving the manhole. (All dimensions in feet and slopes are feet/foot.) Calculations shall be provided for review with final requirements summarized on the plans in a data table.

- c. Provide a minimum two tenths of a foot (0.20') drop from any new sewer side inlet invert elevation to any new manhole sewer outlet elevation.
3. T-shaped PVC liner shall be integrally cast into the shaft sections, cone section and grade rings in accordance with WAS Standard Specification 03461 and Standard Drawing SM-07. The base shall incorporate a polyurethane coating. The PVC liner and polyurethane coating are required in the following cases:
 - Mains eighteen-inch (18") in diameter and larger.
 - All manholes where entering pipe slope is 5% or greater.
 - Canyon areas where manholes are normally sealed permanently.
 - Known locations of higher sulfide concentration, such as the discharge from sewage pump station force main.
 - All manholes within one thousand feet (1,000') of receiving a force main discharge.
 - All drop manholes.
 - Other areas, where a corrosive atmosphere is anticipated.
 - Siphon inlet and outlet manholes/structures.

- D. Installation: Manholes shall be installed at locations shown on the approved plans in accordance with WAS Standard Specification 03461 and Standard Drawing SM-01 through SM-07.

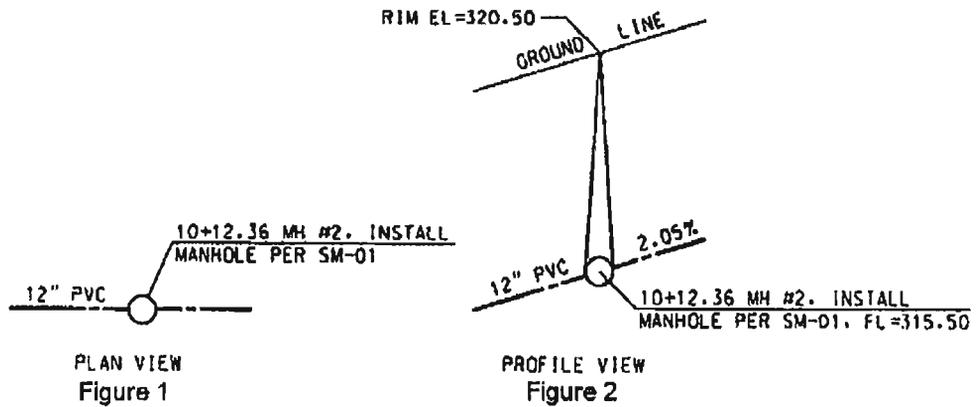
6.2.5 NOTATIONS ON PLANS

Sewer manholes shall be shown in the plan and profile views of the sheet(s) and include, but not limited to the following:

- A. Standard symbols, stationing and plan callout notes shall be in accordance with Section 1.1.

- B. A numbering system shall be incorporated on the plans numbering each manhole to be constructed. The Engineer of Work shall make an inquiry to the Agency whether an existing numbering system is in place. If no system exists, manholes shall be numbered starting with manhole number one (#1) and increase in the direction matching the direction of stationing.
- C. Plan View: Manholes shown in the plan view shall be shown with stationing and incorporate a numbering system on the plans. Refer to Figure 1 below.
- D. Profile View: Along with stationing and a numbering system, manholes shall also show rim elevations and flow line/invert elevations. Refer to Figure 2 below.

Manhole Plan Callouts



6.2.6 DROP MANHOLES

Due to cleaning problems associated with drop manholes, it is desirable not to use drop manholes. Drop manholes may be used only with prior approval of the Agency Engineer. Drop manholes may be considered when two collection lines have a vertical difference of four feet (4') or more and are connected at a manhole. Drop manholes shall be installed in accordance with WAS Standard Drawing SM-09 and SM-10.

6.2.7 SEWER CLEANOUTS

Size-on-size cleanouts are required at the upstream end of mains eight inches (8") and smaller that extend no more than two hundred feet (200') past the manhole and have no more than three (3) laterals installed at or near the end of the main. Cleanouts shall be in accordance with WAS Specification Section 15065 and Standard Drawing SC-01.

6.2.8 MATERIAL SELECTION

Manholes and appurtenant components to be used with the installation of gravity sewers shall be in accordance with WAS Standard Specification 03461 and the Approved Materials List.

6.2.9 REFERENCE

- A. Should the reader have any suggestions or questions concerning the material in this section, please contact one of the agencies listed.

B. The publications listed below form a part of this section to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said publications unless otherwise called for. The following list of publications, as directly referenced within the body of this document, has been provided for the users convenience. It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document.

1. Water Agencies' Standards (WAS):

a. Design Guidelines

- 1 Section 1.1, Drafting Guidelines
- 2 Section 4.2, Sewer Planning
- 3 Section 6.1, Sewer Pipeline Design
- 4 Section 6.3, Sewer Laterals

b. Standard Specifications

- 1 Section 03000, Cast in Place Concrete
- 2 Section 03461, Precast Concrete Manholes
- 3 Section 15065, Polyvinyl Chloride (PVC) Gravity Sewer Pipe

c. Standard Drawings

- 1 SC-01
- 2 SM-01 through SM-11

d. Approved Materials List for Sewer Facilities

END OF SECTION

WATER AGENCIES' STANDARDS

Design Guidelines for Water and Sewer Facilities

SECTION 6.3 SEWER LATERALS

6.3.1 PURPOSE

The purpose of this section is to provide guidelines for the use and placement of sewer laterals in gravity sewer collection pipelines.

6.3.2 STANDARD TERMS AND DEFINITIONS

Wherever technical terms occur in these guidelines or in related documents, the intent and meaning shall be interpreted as described in Standard Terms and Definitions

6.3.3 GENERAL

It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document. The Engineer of Work may not deviate from the criteria presented in this section without prior written approval of the Agency Engineer.

- A. Design for gravity sewer mains shall be in accordance with Section 6.1.
- B. Use and placement of manholes and cleanouts shall be in accordance with Section 6.2.

6.3.4 GUIDELINE

- A. Requirements: Sewer laterals shall be used primarily for gravity applications of conveying raw sewage collected from properties to the agency's sewage collection system.
 - 1. Each parcel or lot shall have a separate connection to the public sewer main. Laterals may not cross more than one (1) property line.
 - 2. Sewer laterals shall be a minimum four inch (4") and a maximum of six inch (6"). Eight inch (8") laterals may be used only with prior approval of the Agency Engineer. Laterals shall be sized in accordance with the County or City of Jurisdiction building codes/requirements and these guidelines.
 - 3. Typically sewer laterals intercepting the main do not require a manhole, refer to WAS Standard Drawings SS-01 and SS-02. Laterals shall be connected to the sewer main at a manhole when the lateral serving a property has two (2) or more branches installed to serve more than one facility on the property. Residential lots with a second dwelling may be excluded from this requirement at the direction of the Agency Engineer.
 - 4. Laterals shall have a minimum slope of 2% (1/4" per foot) and shall not exceed 100%.

5. Deep-cut laterals may be allowed when the vertical difference between the lateral and the sewer main is four feet (4') or more. Prior approval of the Agency Engineer is required. Deep-cut laterals shall be called out as such on the approved plans.
6. Parallel and perpendicular separations between water and sewer laterals shall be in accordance with WAS Standard Drawing WI-01 through WI-03.
7. Lateral connections to interceptor mains eighteen inches (18") and larger shall be made at a manhole. The lateral and interceptor main top of pipe elevations shall be matched such that the lateral will have free outflow into the interceptor main. If the top of the lateral cannot be matched to the top of the interceptor pipe because of elevation constraints with the lateral, then the minimum allowable conditions shall be as follows:
 - a. Match the invert elevation of the lateral to maximum D/d ratio of the interceptor pipe. If this cannot be achieved, then calculations shall be provided for a special manhole base design.
 - b. Special notes and details and approval of the Agency Engineer are required.
8. Private pumping units are allowed only in accordance with the County or City of Jurisdiction building codes/requirements. If allowed, pressurized laterals from private pumping units shall discharge at a vertical grade break to a standard sewer lateral with a cleanout at the property line, refer to Figure 1 below. The gravity sewer lateral shall be connected to the sewer main in accordance with WAS Standard Drawing SS-01 through SS-04.

Figure 1
Pressurized Sewer Lateral



9. Sewer laterals internal to the building and from the building to the property line are considered private. Private lateral installations are governed by the Uniform Building Code and enforced by the local building authority.
 10. Laterals shall be installed with a cleanout placed at the property line in accordance with Uniform Building Code and the local building authority.
- B. Locations: Laterals shall be located as described below:**
1. Laterals shall run perpendicular from the sewer main to the property line, except in a cul-de-sac.

Laterals can connect directly into a manhole at the end of a main or in a cul-de-sac as described in Section 6.2.
 2. Laterals shall be a minimum of four feet (4') deep at the property line, unless otherwise approved by the Agency Engineer. Laterals with less than three feet (3') cover will require concrete encasement.
 3. Laterals shall have a four foot (4') minimum separation between successive laterals. Refer to WAS Standard Drawing SS-03.

4. Laterals shall not be located in the following locations:

- In driveways.
- Parking areas (if possible).
- Within five feet (5') of the property line between lots.
- Within heavy landscape areas that receives more than just ground cover. Bushes, trees or brush should not be planted around the area of the lateral.

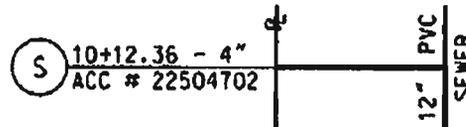
C. Installation: Sewer Laterals shall be installed at locations shown on the approved plans in accordance with WAS Standard Specification 15065 and Standard Drawings SS-01 through SS-04.

6.3.5 NOTATIONS ON PLANS

Laterals shall be shown in the plan view portion of the sheet(s) only and include, but not be limited to, the following information:

- A. Standard symbols, stationing and plan callout notes in accordance with Section 1.1.
- B. Stationing of the lateral at the connection to the sewer main.
- C. Size of lateral.
- D. Account number (if applicable).
- E. Refer to Figure 2 below.

Figure 2
Sewer Lateral Plan Callouts



6.3.6 MATERIAL SELECTION

Sewer laterals and appurtenant components to be used with the installation of gravity sewers shall be in accordance with WAS Standard Specification 15065 and the Approved Materials List.

6.3.7 REFERENCE

- A. Should the reader have any suggestions or questions concerning the material in this section, please contact one of the agencies listed.
- B. The publications listed below form a part of this section to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said publications unless otherwise called for. The following list of publications, as directly referenced within the body of this document, has been provided for the user's convenience. It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document.

1. Water Agencies' Standards (WAS):
 - a. Design Guidelines
 1. Section 1.1, Drafting Guidelines
 2. Section 4.2, Sewer Planning
 3. Section 6.1, Sewer Pipeline Design
 4. Section 6.2, Sewer Manholes and Cleanouts
 - b. Standard Specifications
 1. Section 15065, Polyvinyl Chloride (PVC) Gravity Sewer Pipe
 - c. Standard Drawings
 1. WI-01 through WI-03
 2. SS-01 through SS-04
 - d. Approved Materials List for Sewer Facilities

END OF SECTION

WATER AGENCIES' STANDARDS

Design Guidelines for Water and Sewer Facilities

SECTION 6.4 PRESSURE SYSTEMS (FORCE MAINS)

6.4.1 PURPOSE

The purpose of this section is to provide guidelines for the use, location, alignment and design of pressure sewer pipelines for conveying raw sewage.

6.4.2 STANDARD TERMS AND DEFINITIONS

Wherever technical terms occur in these guidelines or in related documents, the intent and meaning shall be interpreted as described in Standard Terms and Definitions.

The following terms and definitions as found in this section shall have the following meaning:

Force Main: Pressurized pipeline used to convey wastewater from a lift station to a gravity sewer main.

Lift Station: A pump station used for lifting sewer flows from a lower to a higher elevation.

6.4.3 GENERAL

It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document. The Engineer of Work may not deviate from the criteria presented in this section without prior written approval of the Agency's Engineer.

A. Use and design of sewer pipelines shall be in accordance with Section 6.1.

6.4.4 GUIDELINE

A. General Requirements

1. Dual Force Mains: The use of dual force mains shall be as directed by the Agency Engineer. Dual mains may be required where maintenance will be required on a regular basis or due to environmental constraints such as sensitive habitat areas. Each force main shall include the following: isolation valves, check valve, air vac, emergency pump connection, and valved drainage line into the wet well (located inside the dry well). This shall allow use of either force main should the second line require draining and repair.
2. PVC Pressure Pipe: PVC pipe is the preferred material for force mains. Force main fittings and appurtenances shall be ductile or cast iron. Analyze pipeline stresses to PVC that will occur with pressure on/off cycles and surge pressures to ensure the PVC will operate over the working life of the pump station (50 years). Use a roughness coefficient that is appropriate for PVC pipe at the end of its planned design life. However, the minimum pressure class for all stations regardless of total dynamic head requirements shall be at least Class 200.
3. Ductile Iron Pipe (Special Station Requirement): Epoxy lined and coated ductile iron pipe may be specified for force mains in special cases, with prior approval by the Agency Engineer. This may include high lift stations (total discharge head greater than 100 psi) where the initial length of the force main to the property line

(where access for repair is typically difficult due to the depth of pipe) may be constructed of ductile iron. Considerations must be made for corrosion monitoring and protection.

4. Force Main Isolation Valves: Install isolation valves on each force main both inside the dry well (located near the wall penetration) and outside the station within the fenced-in area (located upstream of the emergency pump connections).
5. Flex Couplings at Pump Station Wall: Install dual flexible couplings (dresser couplings) or ball and socket type fittings outside the station on the force main to allow for differential settlement.
6. Corrosion Protection: All buried ferrous pipe, fittings, and valves shall be coated as specified in the contract documents. Prior to backfill, all fittings shall be coated with a wax tape system. All fasteners on buried fittings shall be stainless steel Class 316.
7. Thrust Blocks: Provide thrust blocks at bends on the force main. In constructing the mains, ensure that at bends, each force main thrust block is installed against undisturbed soil. Vertical thrust restraining clamps on siphon high points shall be specified as required to restrain the pipe. Refer to Section 5.2 in the WASDG for use of thrust blocks.
8. Restrained Buried Pipe Joints: Specify restrained mechanical joints as required in special areas (steep sloped areas, fill areas without sufficient resistance to thrust) to ensure security of joints. Indicate locations of restrained joints on the drawings. Fittings that provide joint thrust restraint and/or joint rotation shall be provided as required, PEBA IRON, Megalug or Flexend respectively. Perform restrained length calculations where required to determine if restrained joints are required.
9. Cut-Off Walls: Cut-off walls per WAS Section 02202 shall be used as required for piping on steep slopes. Provide vertical thrust restraint and/or joint rotation fittings, i.e., for subsidence allowance as required.
10. Use of 45-Degree Elbow fittings: To reduce the potential for stoppages where a 90-degree change of direction in the force main is required, show and specify two 45-degree elbows or a horizontal curve instead of a 90-degree elbow.
11. Force Main Drains: (Special Station Requirement): If low points exist in the force main, install valved drains at these points to allow localized draining of the force main to suitable locations to facilitate repairs.
12. Force Main Separation and Pipe Joint Stagger: Construct the force mains in separate trenches with a minimum 5 feet separation between their outer surfaces. Plans should contain a notation for staggering the pipe joints to lessen potential undermining if a leak occurs in either force main.
13. Use of Combination Air Valves: Where at all possible, force mains shall be designed with a continuous uphill slope without high points so that air-release valves are not required on the force main. If the force main cannot be designed this way, provide two (2) redundant air-release valves at high points where there are siphons or at discontinuities in grade. Combination air-release valves (i.e., two body valves to allow air release during filling, air release for trapped air under pressure, and air entry (vacuum relief) during pipe emptying,) shall be installed inside a vault to allow access to the valves for maintenance. All piping and valve appurtenances within the vault shall be Type 316 stainless steel. Discharge from the air vent shall be piped to the nearest sewer manhole. If a manhole is not located within suitable distance, install a separate vault with activated charcoal canister for odor control of the air valve discharge.

B. Isolation Valves and Emergency Pumping Connection

1. Solid Wedge Type Valves: For buried applications, provide "solid wedge" type gate valves for sewage applications with the following features: type 316 stainless steel stem, gate, and seat inserts, stainless steel fasteners in wetted areas, and fusion bond epoxy on all ferrous parts. Valves shall be designed for buried service with water tight bonnet and buried service gear operator.
2. Isolation Valve Location: Install isolation valves inside the station fenced-in area. Where difficult soil conditions exist or where valves may not be easily accessible, install the valves in a vault for easy access. Isolation valves shall be installed on each force main both inside the dry well (located near the wall penetration) and outside the station within the fenced-in area (located upstream of the emergency pump connections).
3. Force Main Drain Lines: Install valved drain lines on each discharge line manifold in the pump room for draining each force main individually back into the wet well (use during maintenance to repair leaks in one force main while operating the second force main).
4. Emergency Pumping Connections: An emergency pump discharge connection shall be built into both force mains. This assembly shall be designed as follows: locate a "wye" fitting on each force main downstream of the flex couplings and force main isolation valve. Extend the side outlet of the wye to an isolation valve and blind flange in a service box vault (use Type 316 stainless steel bolting for corrosion resistance). Size each service box large enough for connections of large diameter flexible discharge hoses from emergency pumps. Orient the blind flange at 45 degrees up from horizontal for ease of connecting hoses in the service box vault. During emergencies which require draining the force main or bypassing the station pumps, a portable pump will be connected to this assembly. The minimum allowable diameter size for the connection is 6 inches. The Agency Engineer may elect to use a quick connect coupling instead of the blind flange in order to facilitate an emergency connection where time will be critical. (Note: this emergency connection can also be used as a cleanout.)
5. Valving Diagram: Specify a wall mounted plastic laminated diagram in the station that shows the location(s) of the dual force mains and the force main valving on the site. This sign shall also note the maintenance schedule for exercising and testing the force main isolation valves.
6. Eccentric plug valves: Specify eccentric plug valves with tight shut-off with pressure in either direction (a distinct advantage in sludge pipelines with multiple flow routings) to provide flexibility.

C. Discharge Manhole

1. Discharge Manhole: The force main will typically discharge into a separate manhole (PVC lined) with gravity discharge into the trunk sewer. Install offset fittings and/or long radius elbows as required in order to enter the manhole at the required height and in the direction of flow in the trunk sewer.
2. Discharge Level to Manhole: If the force main discharges directly into a interceptor sewer, the force main discharge shall be above the flow line of the gravity sewer and in the direction of flow in the trunk sewer (to prevent back flooding into the wet well with leaking check valves).

D. Odor Control

1. Chemical Odor Control: Force mains longer than one mile with excessive detention times of more than 24 hours can create odor problems in downstream discharge sewers. If required due to downstream sewer conditions, provide an odor control system which can include chemical injection into the wet well such as calcium nitrate or other approved chemicals. Long force mains are defined as pressure pipelines greater in length than one mile.
2. Dedicated Gravity Discharge (Special Station Requirement): In some cases, a dedicated force main gravity discharge line to a trunk sewer may be required to prevent odors on existing gravity mains and laterals.

E. Allowable Pipe Velocities

1. In general, the maximum recommended suction pipe velocity is 5 fps. Velocity at the suction bell shall not exceed 3.5 fps. Install a larger suction line than the pump inlet diameter if required to reduce velocity and inlet head losses, in order to provide the required net positive suction head (NPSH) according to the Hydraulic Institute, and prevent cavitations for high flow rate pumps.
2. The maximum recommended velocity in the station discharge piping is 8 fps. The minimum discharge velocity in the force main shall be 4 fps at a designed capacity in order to achieve cleansing velocity.
3. Suction and discharge pipe design shall follow Hydraulic Institute recommendations for items not addressed above in this Section.

6.4.5 NOTATIONS ON PLANS

Sewer pressure mains shall be shown in the plan and profile views of the sheet(s) and shall include, but not be limited to the following:

- A Standard symbols, stationing and plan callouts in accordance with Section 1.1.
- B. Plan View: Indicate size, class, type of pipe materials and locations of laterals, manholes and pipe connections in accordance with Section 1.1.
- C. Profile View: Indicate size, class, type of pipe materials and locations of manholes, flow-line/invert elevations, and slopes in accordance with Section 1.1. If vertical curves cannot be avoided the curve shall be indicated by showing invert elevations at fifteen foot (15') to twenty five foot (25') intervals.

6.4.6 REFERENCE

- A. Should the reader have any suggestions or questions concerning the material in this section, contact one of the member agencies listed.
- B. The publications listed below form a part of this section to the extent referenced and are referred to in the text by the basic designation only. Reference shall be made to the latest edition of said publications unless otherwise called for. The following list of publications, as directly referenced within the body of this document, has been provided for the user's convenience. It is the responsibility of the user of these documents to make reference to and/or utilize industry standards not otherwise directly referenced within this document.

- 1 Water Agencies' Standards (WAS):
 - a. Design Guidelines
 1. Section 1.1, Drafting Guidelines
 2. Section 1.5, Easements and Encroachments
 3. Section 4.2, Sewer Planning
 4. Section 6.1, Gravity Sewer Pipeline Design
 5. Section 6.2, Sewer Manholes and Cleanouts
 6. Section 6.3, Sewer Laterals
 - b. Standard Specifications:
 1. Section 15064, Polyvinyl Chloride (PVC) Pressure Pipe
 - c. Standard Drawings:
 1. WI-01 through WI-03
 - d. Approved Materials List for Sewer Facilities
1. American Society for Testing and Materials (ASTM):
 - a. ASTM D3034, Type PSM Poly (vinyl chloride) (PVC) Sewer Pipe and Fittings.
 - b. ASTM F 794, Poly (vinyl chloride) (PVC) Profile Gravity Sewer Pipe and Fittings.
 - c. ASTM A 536, Standard Specifications for Ductile Iron Casings

END OF SECTION

WATER AGENCIES' STANDARDS

**Standard Specifications for Potable Water,
Recycled Water and Sewer Facilities**

SECTION 2

**STANDARD SPECIFICATIONS FOR POTABLE WATER,
RECYCLED WATER AND SEWER FACILITIES**

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Standard Specifications, Division 1 through 16



**Standard Specifications for Potable Water,
Recycled Water and Sewer Facilities**

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DIVISION 03 CONCRETE			
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DIVISION 05 METALS			
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DIVISION 08 DOORS AND WINDOWS			
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DIVISION 09 FINISHES			
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**Standard Specifications for Potable Water,
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15057	03/01/2006	Copper Tubing, Brass and Bronze Pipe Fittings	4
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WATER AGENCIES' STANDARDS

**Standard Specifications for Potable Water,
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SECTION 3

**STANDARD DRAWINGS FOR POTABLE WATER,
RECYCLED WATER AND SEWER FACILITIES**

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Standard Drawings for Potable and Recycled Water Facilities

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WA-03	11/03/2006	50mm (2") Air and Vacuum Valve Enclosure Locations
WA-04	11/03/2006	100mm (4") Automatic Combination Air Release and Air/Vacuum Valve Installations
WA-05	11/03/2006	150mm (6") Automatic Combination Air Release and Air/Vacuum Valve Installations
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WC-02	03/01/2001	Rubber-Ring Joint Bonding Detail for Metallic Pipelines
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WC-04	03/01/2001	Above Ground Insulating Flange
WC-05	03/01/2001	Buried Insulating Flange Detail
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WC-07	07/30/2007	Buried Insulated Valve Detail
WC-08	07/30/2007	Buried Insulated Butterfly Valve Test Station Wiring Diagram (ELIMINATED 7/30/07)
WC-09	03/01/2001	Two Wire Test Station
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WC-11	03/01/2001	Single Anode Installation Detail
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WF-03	09/03/2001	High Pressure Dry Barrel Fire Hydrant Installation
WF-04	09/12/2008	Fire Hydrant Locations and Port Orientation
WF-05	09/12/2008	100mm (4") and Larger Fire Service Installation (1 of 2)
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Standard Drawings for Potable and Recycled Water Facilities

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WI-03	03/01/2001	Water, Recycled Water and Sewer Main Parallel and Perpendicular Separation Notes
WI-04	03/01/2001	Post Meter Constant Pressure Recycled Water Line 75mm (3") Diameter or Less
		Crossing Potable Water Main or Lateral within Public Right of Way
WI-05	09/03/2001	Allowable Leakage Chart for Testing of Pipes with Rubber Joints
WI-06	12/31/2004	Standard Symbols for Potable and Recycled Water Construction Drawings (1 of 4)
WI-06	11/03/2006	Standard Symbols for Potable and Recycled Water Construction Drawings (2 of 4)
WI-06	12/31/2004	Standard Symbols for Potable and Recycled Water Construction Drawings (3 of 4)
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WM-08	11/16/2007	Recycled Water "Do Not Drink" Sign
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WP-01	12/31/2004	Warning/Identification Tape and Tracer Wire Installations
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WP-03	03/01/2001	Cutting and Plugging Abandoned Water, Recycled Water and Sewer Mains
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WP-05	07/30/2007	Slope Protection Installations
WP-06	03/01/2001	Pipe Protection Pad Installations
WP-07	03/01/2001	Cut - Off Wall Installation in Traveled Areas
WP-08	09/03/2001	Pipe Encasement for Existing Water Main at Utility Undercuts
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WR-03	11/16/2007	25mm and 50mm (1" and 2") Recycled Water Irrigation Check Valve Installation
WR-04	11/03/2006	Recycled Water Irrigation Cross Connection Test Station
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WR-06	09/12/2008	75mm (3") or Larger Recycled Water Irrigation Wye Strainer & Check Valve (1 of 2)
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WR-07	09/12/2008	75mm (3") or Larger Recycled Water Irrigation Cross Connection Test Station (2 of 2)

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WS-04	03/01/2001	100mm (4") or 150mm (6") Fireline/Master Meter Installation (1 of 2)
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WS-05	11/03/2006	100mm (4") or 150mm (6") Meter Installation (1 of 2)
WS-05	11/03/2006	100mm (4") or 150mm (6") Meter Installation (2 of 2)
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WS-07	03/01/2001	Existing Water Service Assembly Reconnection
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WV-04	03/01/2001	Steel Valve Stem Extension for Valves 100mm (4") and Larger
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