

Gap Analysis for Waste Discharge Requirements Compliance

City of Modesto



March, 2007

Gap Analysis for Waste Discharge Requirements

March 2007

Prepared for:

City of Modesto

Prepared by

HDR Engineering, Inc.

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The material assembled in this report was gathered through interviews with City staff during a visit to the City's offices, phone interviews, and City staff response to emails during November through December 2006.

The author of this report is Mike N. Agbodo, PE, HDR's project manager. The report was reviewed by James A. Cathcart, PE, and Jeroen Olthof, PE. Production support was provided by Terri Parsons, Dave Dettloff, and Marcia Blackmon.

Table of Contents

<u>Section</u>	<u>Page</u>
Acknowledgement	i
1-Introduction	1
2-Background	1
3-Project Approach	5
4-Gap Analysis	5
4.1 Sewer System Management Plan	5
4.2 Fats, Oil and Grease (FOG) Control Program	14
4.3 System Evaluation and Capacity Assurance Plan	15
4.4 Rockwells.....	17
4.5 Storm Drain Cross Connections	18
5-Conclusions and Recommendations	18
5.1 Compliance with the WDR	18
5.2 Key Recommendations	20
5.3 Additional Observations	22

Tables

5-1. Summary of Major Recommendations for Compliance with WDR	20
---------------------------------------------------------------------	----

Figures

1-1. Location Map	2
4-1. Public Works Organization.....	8
4-2. Collections Division Organization.....	9
4-3. City of Modesto Wastewater Maintenance	12
4-4. SSO Locations	16
4-5. Rockwells Locations.....	19

Appendices

A-Waste Discharge Requirements of the California State Water Resources Control Board	
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1-Introduction

The City of Modesto (City), California is located in Stanislaus County (County) in the northern section of the San Joaquin Valley, approximately 30 miles south of the City of Stockton. Highway 99 intersects the City along the north-south axis and Highway 132, along the east-west axis. Figure 1-1 shows the location of the City.

The City retained HDR Engineering, Inc. (HDR) to provide a Gap Analysis to help identify the steps needed to comply with the statewide general Waste Discharge Requirements (WDR) regulation. This regulation for sanitary sewer systems was recently released by the California State Water Resources Control Board (SWRCB). The purpose of this analysis is:

- To examine the current state of the City's management, operations and maintenance (O&M) practices, and capital programs related to its wastewater collection system; and
- To develop an opinion and make recommendations on the City's current readiness to comply with the new WDR regulation.

HDR's analysis comprises data collection, and City staff interviews. Data were collected between November 2006 and December 2006, and the interviews were conducted during an on-site visit on November 29, 2006. The staff members who were interviewed are knowledgeable in the City's collection system O&M practices.

This draft report presents the preliminary findings of the Gap Analysis and identifies the requirements that the City currently complies with, as well as areas that require improvement to achieve compliance.

2-Background

The City operates its own wastewater collection system and associated infrastructure facilities within the City limits and some unincorporated areas. The City's Public Works Department manages and maintains nearly 650 miles of sanitary sewer lines ranging from 6 to 66 inches in diameter, and 40 lift stations. The average age of this system is between 1-107 years old. The City is served by two Wastewater Treatment Plants: a primary treatment facility located on Sutter Avenue and a secondary treatment facility located about 7 miles away from Jennings Road.

The statewide general WDR for Sanitary Sewer Systems is similar in content to the defunct Capacity, Management, Operations & Maintenance (CMOM) regulation proposed by the U.S. Environmental Protection Agency. Adopted by the SWRCB on May 2, 2006, the WDR regulation contains requirements for monitoring, reporting, and developing and implementing Sanitary Sewer Management Plans (SSMPs). This regulation affects all municipal sewer agencies in the state and regulates the discharge of sanitary sewer overflows (SSOs) to receiving waters.

An SSO is defined by the WDR as any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system, including:

- Overflows or releases of untreated or partially treated wastewater that reach waters of the United States.
- Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States.
- Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs may cause a public nuisance, particularly when raw wastewater is discharged to areas having 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.

Agencies in California that own sanitary sewer systems and experience SSOs are required to enter the SSO information into California's Integrated Water Quality System (CIWQS) database – the SWRCB's information management system for regulatory and water quality data reporting. In addition, SWRCB requires that agencies notify the State Office of Emergency Services (OES) within 24 hours of any spill that exceeds 1,000 gallons.

In summary, the WDR is intended to:

- Provide a consistent and unified statewide approach for the reporting and database tracking of SSOs.
- Establish consistent and uniform requirements for SSMP development and implementation.
- Facilitate consistent enforcement of the WDR regulation and violations.

All public agencies that currently own or operate sanitary sewer systems in the state must apply for coverage under the general WDR within six months of the date of adoption of the general WDR. Additionally, public agencies that acquire or assume responsibility for operating sanitary sewer systems after adoption of the WDR must apply for coverage under the general WDR at least three months before operating those facilities.

Highlights of the WDR are:

- Electronic reporting;
- Four categories of SSMP compliance deadlines for service population:
 - Over 100,000 – August 2007 (Modesto falls in this category);
 - Between 10,000 and 100,000 – November 2007;
 - Between 2,000 and 10,000 – February 2008; and
 - Under 2,500 – May 2008.

- Two categories of SSOs:
 - Category 1 – A discharge that equals or exceeds 1,000 gallons and results in a discharge to a drainage channel, surface water, or drainpipe that was not fully captured and returned to the sanitary sewer system; and
 - Category 2 – A discharge that is under 1,000 gallons, or does not discharge to a drainage channel or surface water, or was captured and returned to the sanitary sewer system.

As with the CMOM regulation, capacity assurance is at the heart of the WDR. The SWRCB's WDR requires the preparation of SSMPs, while implementation of SSMPs is the responsibility of the nine Regional Water Quality Control Boards (RWQCBs). The SSMP consists of a set of documented plans to address how a wastewater collection system conducts business management, funding, design, operations, maintenance, and emergency response. The System Evaluation and Capacity Assurance Plan (SECAP) element of the SSMP includes evaluation of peak flows, design criteria, and capacity enhancement measures, and a schedule with planned completion dates of capital improvements.

Goals of the SSMP are to:

- Properly manage, operate, and maintain all portions of the agency's wastewater collection system;
- Provide adequate capacity to convey peak wastewater flows;
- Minimize the frequency of SSOs;
- Mitigate the impacts that are associated with any SSO that may occur; and
- Meet all applicable regulatory notification and reporting requirements.

The SSMP prescribes specific milestones that relate to the specific elements required in the WDR:

1. Goals,
2. Organization,
3. Legal Authority,
4. Operations and Maintenance Program,
5. Design and Performance Provisions,
6. Overflow Emergency Response Plan,
7. Fats, Oil and Grease (FOG) Control Program,
8. System Evaluation and Capacity Assurance Plan (SECAP),
9. Monitoring, Management, and Plan Modifications,
10. SSMP Program Audits, and
11. Communication Program.

An SSMP program audit must be conducted at least every two years, and the audit report must be kept on file by the City staff. Successful implementation of an SSMP and compliance with the WDR could result in significant cost-savings to the City and its residents.

This report includes a step-by-step analysis of the WDR regulation and HDR's opinion of the City's current compliance status for each important element of the regulation.



3–Project Approach

Gap analysis is a means of examining systemic factors that have contributed to, or caused, a gap between the current state of the system and the future and desired state outlined in the WDR compliance requirements. The gap analysis process includes an in-depth analysis of the factors that have created the current state, laying the groundwork for improvement planning. This approach ensures that the system improvement process does not jump from identification of problem areas to proposing and implementing solutions without first understanding the conditions that created the current state.

HDR conducted the gap analysis in accordance with the following guidelines:

- The research team gathered information and used it to develop a future or desired system state that is based on the indicators in the gap analysis.
- The team identified those portions of the WDR that the system already complies with.
- The team identified the gaps between the current system state and its future state, and developed a problem statement that summarizes the underlying structural issues that must be addressed to close the gap.
- The team developed a root-cause analysis to determine the factors that are crucial to improvement.
- These factors were then used to develop specific goals, objectives, and a schedule for the improvement plan to satisfy the WDR.

4–Gap Analysis

This section discusses the various elements of the general WDR and HDR’s opinion of the City’s current compliance status:

- Sewer System Management Plan;
- Fats, Oil and Grease (FOG) Control program;
- System Evaluation and Capacity Assurance Plan;
- Rockwells; and
- Storm Drain Cross Connections.

4.1 Sewer System Management Plan

A critical requirement of the WDR is the preparation of a plan and a schedule to properly manage, operate, and maintain all parts of the City’s sanitary sewer system to reduce, prevent, and mitigate SSOs. In line with this goal, the City retained the services of Carollo Engineers to prepare a Wastewater Master Plan. The outcome of this plan is documented in the June 2006 Draft Report titled “City of Modesto Wastewater Collection System Master Plan,” which can be downloaded from the City’s website. This plan addressed all of the essential elements of the System Evaluation and Capacity Assurance element of the SSMP for the trunk sewers (pipes 10-inches and greater in diameter).



The report also identified a CIP implementation plan and schedule. To simplify the CIP schedule and phasing of projects, it was assumed that each collection system project required two years to plan, design and construct. As a result, the total capital cost was distributed over two years. The actual duration of the project will likely vary from this assumption and is dependent on the complexity of each project. The two year duration applies to the chemical coating program and CCTV inspections, and also to the City's storm drain cross connection removal project.

Table ES. 4 in the Carollo report identifies the fiscal year in which the projects would be implemented. This schedule assumed that the high priority projects would be implemented within the first five years of the CIP. Some of the high priority projects identified are as follows:

- Carpenter Relief Trunk
- Rehabilitation of the Emerald Trunk
- Capacity improvement and rehabilitation of the Sutter Trunk
- Capacity improvement of the D Street Trunk
- Storm drain cross connection removal program
- Crown spraying and CCTV inspection program
- New service to various proposed developments within the Coffee/Claratina, Keirnan/Carver, and Roselle/Claribel CPD's.

Lower priority projects were assigned to later years of the CIP schedule.

HDR considers the Master Plan adequate for the needs of the SSMP requirements of the WDR. However, the WDR requires updating the SSMP every two years, and the hydraulic model should which formed the basis for the capital improvement project recommendations should be expanded to include pipes 8 inches in diameter. Also, the final report of this Plan has not yet been released by Carollo—the final master plan report is expected to be adopted in spring 2007.

The City's compliance status regarding the specific requirements of the SSMP is discussed in Sections 4.1.1 through 4.1.4.

4.1.1 Goal

The goal of the 2006 draft master plan is to provide a plan and schedule to properly manage, operate, and maintain the City's sewer system. Implementation of the recommendations of the sewer master plan prepared by Carollo will help the City move a step closer to meeting the WDR requirements, as well as reduce and prevent SSOs. Adopting the tenets of the WDR is not only a step towards compliance with a state regulation, but is a good best management practice and leads to significant cost-savings to the City and its residents. Proactive maintenance of the City's buried assets means that the City will not be in a reactive position and will be able to avoid catastrophic system failures which could result in a threat to public health and/or the loss of human life before they occur—sink holes in the City's streets due to a sewer collapse could result in loss of human life.



4.1.2 Organization

The City has an organizational structure in place designating staff responsible for various collection and maintenance activities, as well as implementing specific measures in the SSMP program. Also, the Emergency Overflow Response Plan prepared by Risk Management Solutions outlines the chain of communication for reporting SSOs. This structure is considered adequate to comply with the WDR.

Figures 4-1 and 4-2 show how the City's Public Works and the Collections Division are organized respectively.

4.1.3 Legal Authority

The City's municipal ordinance addresses illicit discharges and illegal connections to the sanitary sewer system. Also the City's design standard requires that sewers and connections are properly designed, and illegal discharge of fats, oil, and grease are prohibited. Copies of both the City's ordinance and the sewer design standards can be obtained from the City's website. Chapter 6 of the City's ordinance pertains to sewer systems. A violation of the City's ordinance is a punishable offence. According to City staff, some developers are able to bypass and disregard the City's ordinance. HDR recommends a committee be set up to ensure that all new developments adhere to this ordinance. City staff believe that some developers are able to bypass and disregard the ordinance requirements.

4.1.4 Operation and Maintenance Program

Maintain an Up-to-Date System Map

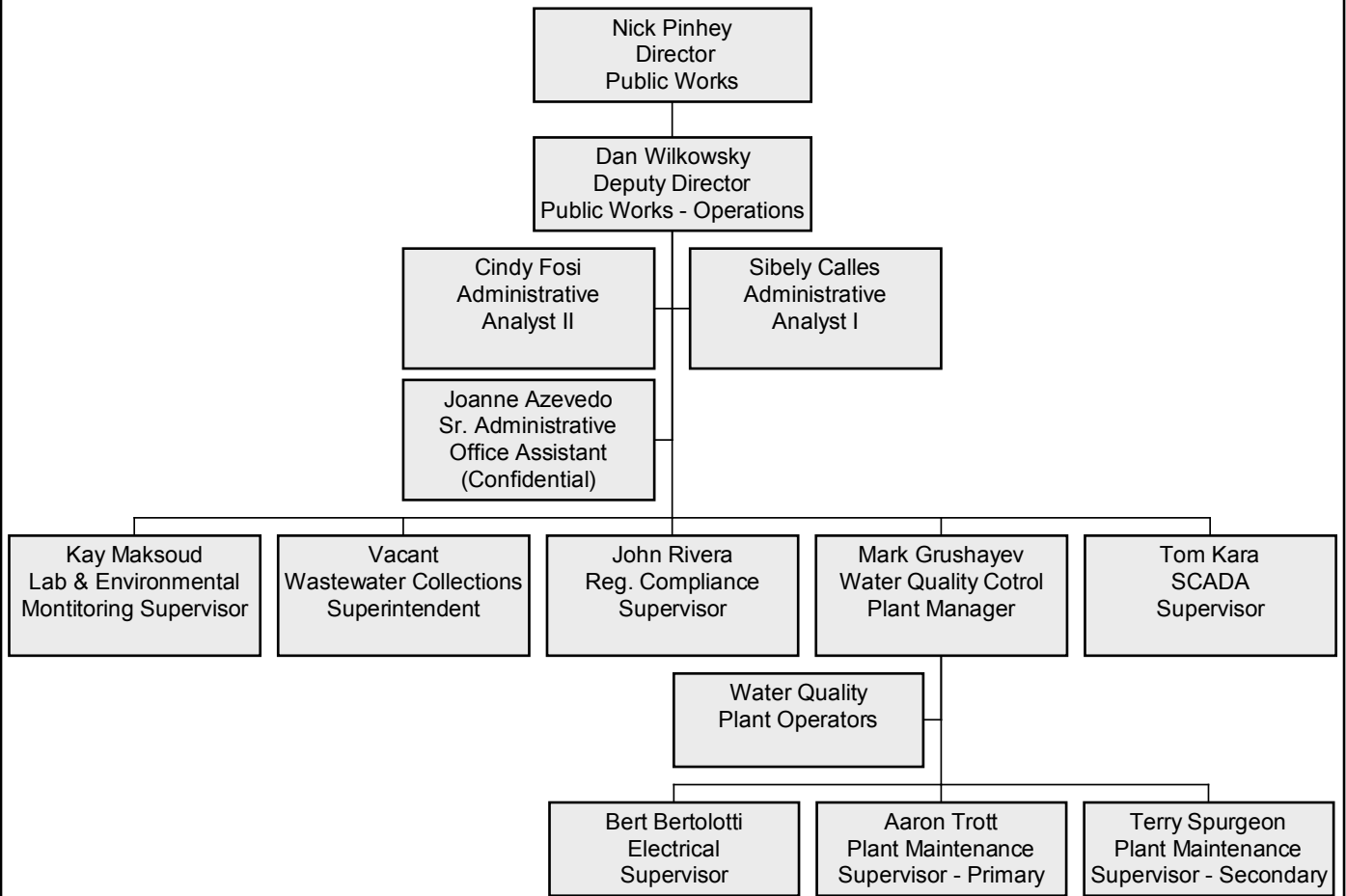
Block Book Maps. Extensive discussions with City staff indicate that the block book maps of the City's sewer system infrastructure are inadequate and that considerable effort would be required for City staff to update the block book maps. The City's Information Technology (IT) department is responsible for creating the geographic information system (GIS) map of the system and acknowledges that the City's sewer records map has not been updated since approximately 1985. In the meantime, the City has experienced tremendous growth and numerous new subdivisions have been built. With outdated maps, the City's Collections staff in most cases, do not know where the system's pipes and manholes are located.

Three resultant problems from the lack of adequate maps are:

- Time is wasted trying to locate manholes;
- Inefficiencies in locating manholes impede O&M staff work, oftentimes in crisis situations; and
- No documentation of infrastructure.

HDR recommends the City takes immediate steps to prepare an updated block book map of the City's sewer system. HDR understands the City's Wastewater Collections Division staff have been asking for many years for an update to the block book maps, without success. The activities undertaken by the City in the last few years and HDR's recommendations regarding how the City can update the block book maps are described in the following sections.

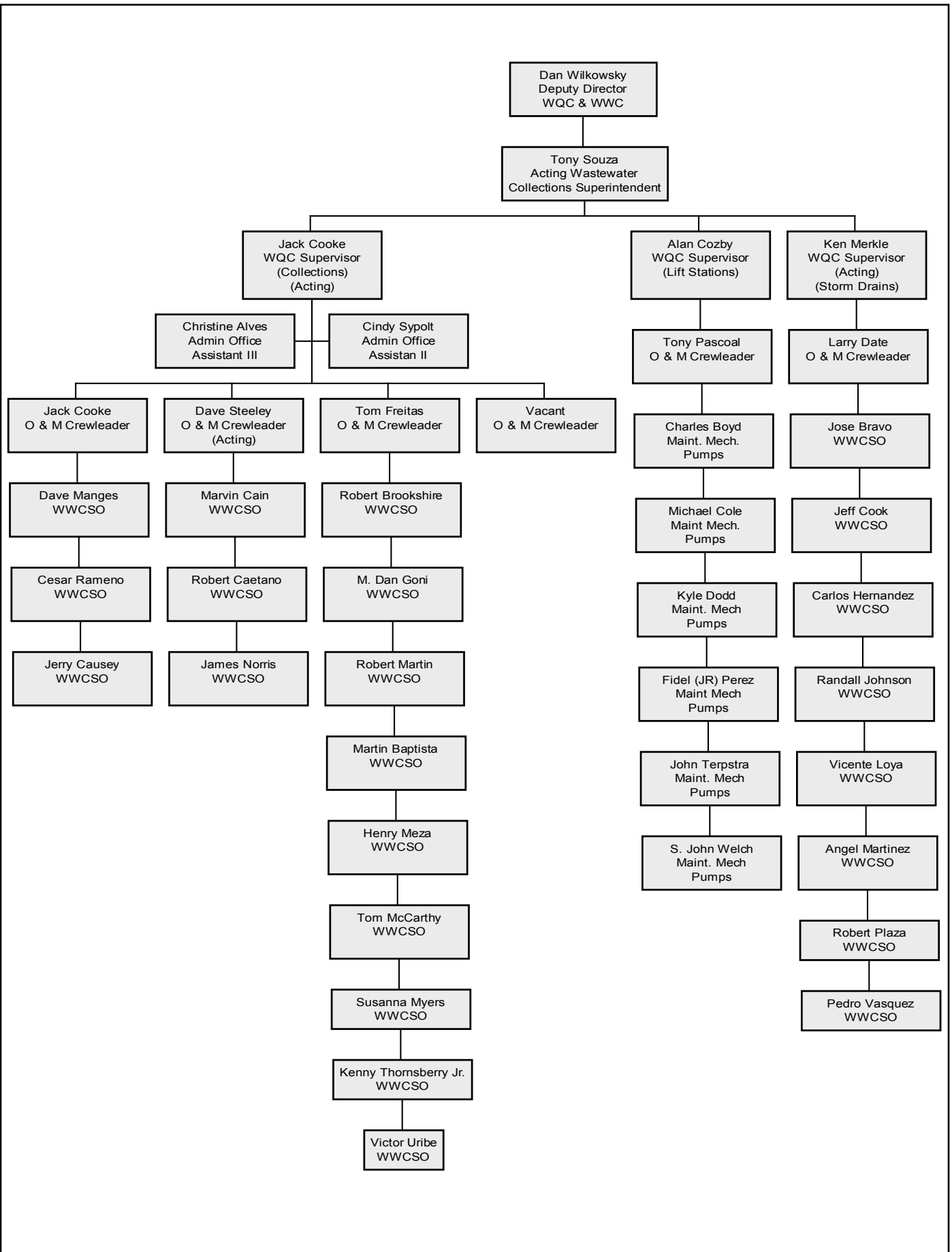
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Public Works Organization

FIGURE 4-1





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O & M Organization

FIGURE 4-2



Citywide GIS Sewer Map. The creation of the sanitary sewer GIS database began two years ago and continues today. The City's goal is to prepare and maintain a complete and accurate sanitary sewer GIS database that reflects the current system configuration, but this desire is constrained by the limited resources of the GIS group. The original GIS database was developed by converting the City's paper sewer plat maps, but not all of the information shown on the plat maps was transferred into the database. Since then, City staff have been expanding the database by extracting information from subdivision and capital improvement plan drawings, and the database is largely complete for mainlines and manholes. However, not all the information shown on these maps (e.g., laterals, manhole numbering and footages) is being transferred to the database.

City staff have been simultaneously filling in gaps in the database and correcting spatial and data descriptor errors. Even with these efforts, the current GIS does not reflect a 100% inventory or correct attribute information of the sanitary sewer system. Shortcomings exist related to the spatial accuracy of these data sets, as well as crucial information about lateral locations, and rim and invert elevations.

The GIS group currently maintains data on sanitary sewer main lines, manholes, lift stations, and service agreement areas. The main line descriptors include pipe sizes, pipe types, direction of flow, and installation year (for which information is limited). Directional flow descriptors were recently added (fall 2006). However, work is required to ensure that the field values in these two separate systems are properly synchronized.

In addition to the GIS database, the City also maintains an electronic engineering records document management system. Engineering drawings (e.g., subdivision improvement plans) are scanned and indexed within this system and are made available to all staff via a web interface or through the GIS system; although field crews lack access.

Challenges. Multiple challenges inhibit the City's ability to develop an up-to-date and complete sewer inventory, missing data sets, lack of as-built drawings, field changes that are not formally documented, and higher priorities of other programs and projects – but the primary reason is limited staffing and financial resources.

Insufficient GIS Staff. Currently the GIS program is supported by three staff members and one 1,000-hour employee. This staffing level is insufficient to effectively handle all GIS data maintenance, daily operation, program development requirements, data quality improvements, applications maintenance and development, system integration, training, software upgrades, mapping, analysis, and project and applications requests. These priorities make it difficult to develop and maintain the basic components of the GIS program, its data sets, applications, analysis, and mapping.

Equally important is that Public Works does not have a dedicated GIS user, which it needs to take advantage of the GIS data and functionalities that exist today, as well as to help manage the City's specific GIS data needs. City IT staff indicated that development of a Citywide GIS database for the sewer system utilizing Global Positioning System (GPS) technology is considered a low priority due to limited resources.

Undocumented System Changes. Another pressing issue is that gaps exist within the engineering maps due to undocumented sewer system changes. Many sewer facilities have been installed, expanded, removed, abandoned, or altered without documenting the

changes on the maps. The details of these system changes may exist only in the memory of current staff. As tenured staff leave the City, this invaluable institutional knowledge could be lost forever. The first step in completing the sewer system GIS database is to recognize the importance of retrieving this undocumented information and to incorporate it into a digital mapping environment that is seamless, easy to access, and convenient to use.

Development of Block Book Maps. The optimal GIS database would be developed by first accurately and completely inventorying the sewer infrastructure in the field, using GPS technology. Then the sewer main lines and laterals would be captured by connecting the dots from the field inventory, using existing paper map records (plats and subdivision improvement plans) as well as Public Works field crew knowledge of the system. This is the methodology currently being used to develop a complete and accurate inventory of the City's water system.

Approximately 852,000 feet (161 miles) of sewers were modeled by Carollo as part of the wastewater master plan hydraulic modeling efforts, which comprise approximately 25 percent of the City's entire system. The model primarily contains pipes with diameters of 10 inches and larger, but also includes some pipes less than 10 inches, as needed for continuity.

Carollo surveyed approximately 200 manholes to collect rim and invert elevations as part of the 2006 study. Carollo also reviewed approximately 850 plat maps, as-built drawings and gathered additional pipeline invert elevations for developing the hydraulic model pipe attribute database.

The data synthesis was first performed in GIS and then imported to the H2OMAP Sewer model. As a first step towards the development of the City's block book maps, the City should determine whether the Carollo hydraulic model or the City's existing GIS database on the sewer system provides a better foundation for the development of the maps. If the City choose to use the hydraulic model database, the City should utilize this GIS database obtained from Carollo Engineers, update it and use it as a starting point for creating the block book maps of the sewer system as follows:

- Randomly verify approximately 10% of the system through surveys;
- Where discrepancies exist, retain the services of a qualified surveyor to collect necessary information for updating the GIS database; and
- Add rim, and invert elevation attributes for pipes less than 10 inches in diameter.

Development Submittals Format. Currently, the City's Construction Administration Office (CAO) receives most submittals on new developments in hard copy format, with only a few submitted in an AutoCAD format; neither format can be readily loaded into the City's GIS format. However, according to City staff, GIS is not the most desirable format for receiving the as-built data from developers, because the data still must be verified by staff familiar with GIS, basic mapping, and civil engineering. City staff indicated that the information is received in a format called "as-built" drawings, but in reality, they often are just copies of approved construction plans and do not identify field construction changes. Also, all information from developers is currently provided as tentative maps (not final maps) and they are provided in hard copy format (not electronic).

HDR recommends that the City require developers to provide electronic "as built" maps for easy import into the City's GIS database and should require final record drawings (not

tentative maps). By doing so, the City will save significant time and money by not unnecessarily spending extra resources to convert the developers' information into an electronic format.

Routine and Preventive Maintenance

The City's maintenance program includes periodic cleaning and maintenance of the sanitary sewer system, and more frequent and accelerated cleaning and maintenance of known problem areas. As illustrated in Figure 4-3, currently, the City jet rodding (flushes the system) crews are cleaning 18% of the entire system annually. This equates to a 5.5 cleaning cycle rotation. City Power rodding (removes roots and heavy materials) crews are cleaning 23% of the system annually which puts them on a 4.3 year cleaning cycle. The figure also shows the approximately 11.77 miles of CCTV are performed annually, which equates to approximately 1.5% of entire system.

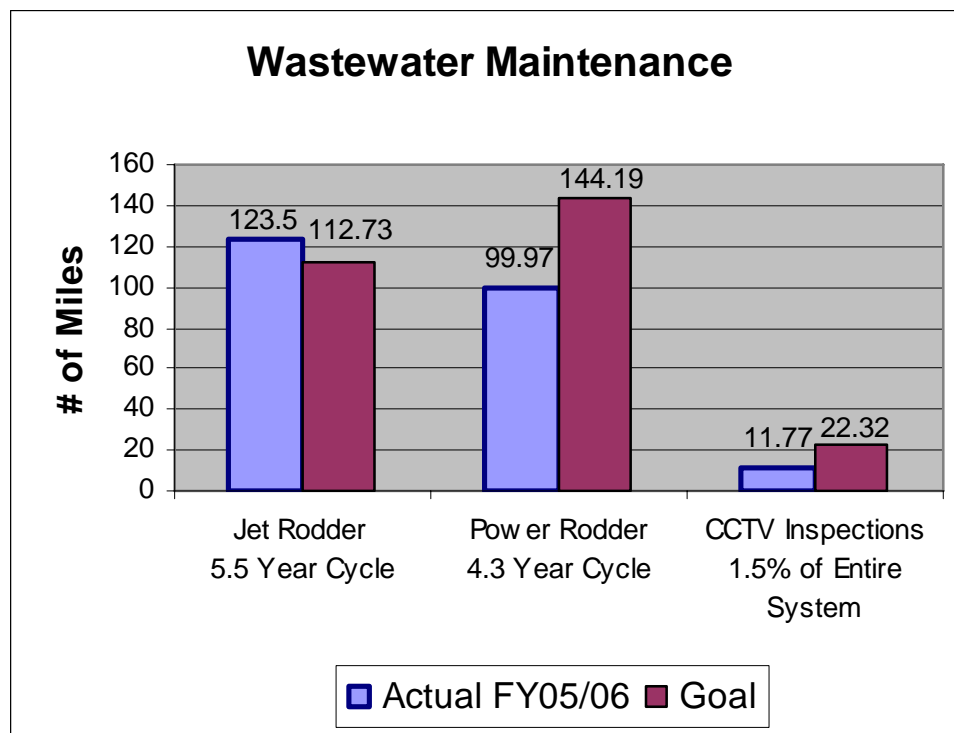


Figure 4-3. City of Modesto Wastewater Maintenance

Software Systems. In the early 1990s, the City purchased CASS WORKS, and used it Citywide to track sewer, water, storm drain, and other infrastructure maintenance. The entire City abandoned use of CASS WORKS because of a lack of support in managing the database. The City's Collections staff also abandoned CASS WORKS, and now uses the recently purchased OASIS software for its database to document all scheduled and completed maintenance activities, such as work orders. The OASIS software has worked well for past few years, although the Collections Division data entry staff has been frustrated by the laborious process of entering field information into the database.

Operating the OASIS database and the CASS WORKS software in tandem is a duplication of effort. The City renewed its CASS WORKS license in December 2006, and conducted a training program in January 2007. Since the CASS WORKS software is being implemented Citywide, it makes sense to adopt only one platform instead of having two similar systems in parallel. This will greatly enhance the City's efficiencies in collecting and centralizing the information gathered from the field inspections.

The CASS WORKS maintenance module schedules and tracks maintenance activities for line segments, manholes, and pump stations, and allows the recording and tracking of rehabilitation and routine maintenance activities. This database application provides users with an easier way to organize the large quantities of data associated with facilities maintenance, master planning, and modeling. The network inventory table defines all sewer facility types and how they interconnect. The inspection module assists with managing inspection and rehabilitation work, and can be used in developing prioritized master plans that include I/I flow reduction. Standard procedures and forms are included for conducting field inspections and for rating observations.

Other Software. There are other sophisticated computerized maintenance management system (CMMS) software packages that can perform similar functions to CASS WORKS software with regard to collection system management. Prior to investing in CASS WORKS for collection systems maintenance activities, the City should evaluate other CMMS software such as Hansen, Sussex, and GBA Master Series.

Sewer Line Inspections. The City's current sewer line rehabilitation plan is based largely on the age of the pipe and not the condition. City staff provided Carollo with the installation history of the pipes and Carollo used the information to prepare a rehabilitation and replacement plan. Typically, the industry standard uses a combination of closed-circuit television (CCTV) inspections and sewer line age data to develop a robust rehabilitation and replacement program. Currently, the City's rehabilitation and replacement (R&R) program does not fully utilize CCTV inspection data. HDR recommends that the City perform CCTV inspections on the critical sewer lines in the system, and also prepare and implement a plan to inspect the remainder of the system as soon as possible. At the present rate of inspection, City staff is only able to view 1.5% of the entire system annually, which is inadequate. City staff routinely collects information on the condition of the sewers using City-owned CCTV inspection equipment, but only as a follow-up to condition that prompted the City staff to respond, and not routinely. The ability of the staff to inspect the entire system on its own is limited by available resources. To be more productive, the staff requires additional manpower for routine inspection, new work, and warranty work (work performed prior to the end of the first year of the sewer installation) on most of the sewers.

Telecommunications. The City's O&M staff currently use the NEXTEL telephone system for communications. A dedicated or stand-alone communication system via radio frequency is needed. This dedicated system will ensure redundancy with no breakdown in communication should a natural disaster hit the City's service area.

4.1.5 Training

Based on discussions with the City's Collection staff, additional training on CASS WORKS data entry or system upgrades is advised.



4.2 Fats, Oil and Grease (FOG) Control Program

The following presents the City's current FOG program.

Installation of Grease Removal Devices

Grease Interceptor/Grease Trap. The City classifies a grease interceptor as a larger gravity separation unit located outside a building, and a grease trap as a smaller gravity separation unit usually located inside a building.

Grease-Discharging Facilities. The City requires that a grease-discharging facility install and maintain a grease interceptor with a minimum capacity of 750 gallons. Any upcoming new facility that will contain a kitchen or cooking equipment must contact the Environmental Compliance Section (ECS) to determine the need for a grease control device. This requirement also applies to established grease-producing facilities that will be undergoing a major renovation. The ECS must be contacted before any building permits are issued. If a facility needs a grease control device, it is provided with a sizing/survey sheet (Appendix H of the 1997 Uniform Plumbing Code). Some grease-discharging facilities have installed smaller units because they have been approved for a conditional waiver due to factors such as minimal or absence of grease in their discharge or limitations in their space for a 750-gallon or larger grease interceptor. In such a case, a 100-lb grease trap is substituted for the minimum grease interceptor size requirement.

Inspecting Grease-Producing Facilities. The City's ECS and the Collections staff identify any problems in the sewer lines that are caused by grease. If a grease problem within the range of any business that has the potential to discharge grease is identified, the problem is reported to the ECS. Inspectors then go to the problem area, identify any businesses that may have contributed to the problem, and inspect the facility to assess the need for a new or upgraded grease control device. If the facility has a grease trap or grease interceptor, it will be required to show maintenance manifests and/or maintenance logs. If a discrepancy is noted, depending on the severity of the grease problem and type of grease collection device present, the facility is given a schedule that enables it to achieve compliance with current regulations. Should a facility fail to follow guidelines and/or regulations, fines may then be imposed should that become necessary.

Grease Interceptor Maintenance. The City Municipal Code 5-6.219 outlines the City's regulations regarding interceptor maintenance, as follows:

- Any person who owns or operates a gravity separation interceptor shall properly maintain the interceptor at all times. The interceptor shall be cleaned as often as necessary to ensure that sediment and floating materials do not accumulate to impair the efficiency of the interceptor. An interceptor is not considered to be properly maintained if for any reason it is not in good working condition or if its operational fluid capacity has been reduced by more than twenty-five (25) percent by the accumulation of floating materials, sediment, oils or greases.
- The use of chemicals, microbiological agents, or other materials for the emulsification, suspension or dissolution of oil and grease is prohibited.
- When an interceptor is cleaned, the removed sediment, liquid, and floating material shall be legally disposed of in a manner other than to the City's collection system, publicly owned treatment works (POTW) or storm drain. Manifests for the cleaning of

the interceptor shall be kept at the same facility as the interceptor and shall be available at all times for inspection.

- If the interceptor is not maintained adequately under the conditions of use, the interceptor shall be resized and the user shall install one that is effective in accomplishing its intended purpose.
- The owner and lessee, sublessee, proprietor, operator, or superintendent of any facility who is required to install an interceptor are individually and severally liable for any failure to properly maintaining such interceptor. (Added by Ord. 3137-C.S., § 1, effective 6-17-99)

Strengthening the Program. The City has been formulating a FOG Control Program, whose elements are outlined above. Based on the description of the City's program above and current industry practices, the City needs to strengthen and target its FOG program through the following:

- Educating the public via newspaper, radio, and television advertisements;
- Educating young children at school who will carry the message of FOG prevention to their parents at home; and
- Enforcing penalties on businesses that violate FOG control measures.

Also, the City should consider developing a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within its service area.

4.3 System Evaluation and Capacity Assurance Plan

The 2006 Draft Wastewater Master Plan outlines the capital improvement plan that will provide hydraulic capacity of key sanitary sewer system elements for dry-weather conditions, as well as the appropriate design storm or wet-weather event conditions.

The following Sections 4.3.1 through 4.3.4 discuss the requirements of the System Evaluation and Capacity Assurance Plan (SECAP) requirements of WDR, and the City's current compliance status.

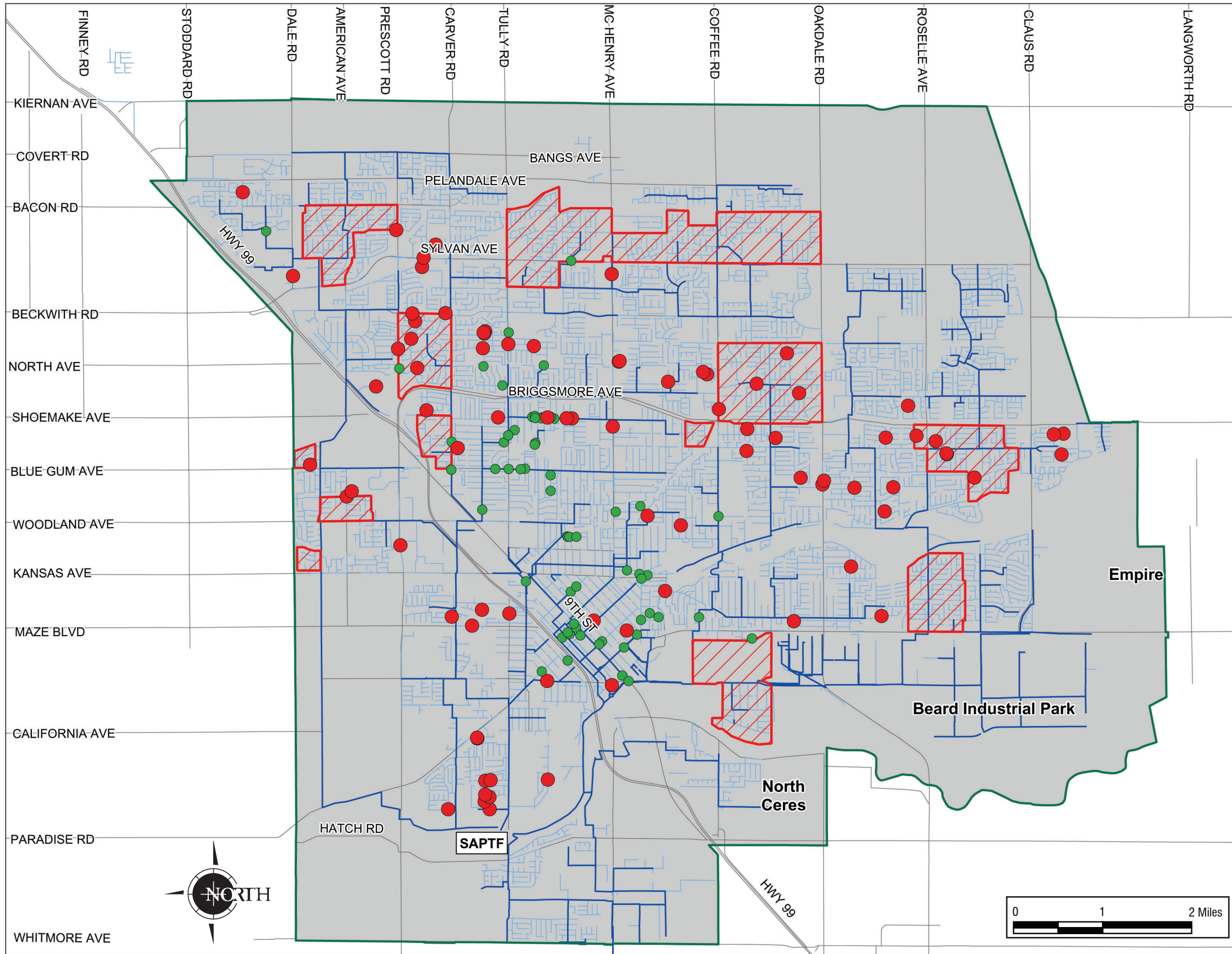
4.3.1 Evaluation

The draft wastewater master plan prepared by Carollo evaluated portions of the sanitary sewer system that are experiencing or contributing to SSO discharges caused by hydraulic deficiency. The evaluation considered the capacity of pipes 10 inches and greater in diameter and the major sources that contribute to the peak flows associated with overflows.

Reducing SSOs. The Draft Master Plan indicates that the City's existing collection system has experienced some SSO problems. Figure 4-4 presents the locations of the SSOs since 2000.

The Plan did not provide any information on the cause of the SSO events; therefore, the nature of the SSOs cannot be linked to either dry- or wet-weather conditions. SSOs are prohibited by the WDR, so the City should implement both short- and long-term measures to reduce SSOs.

Source: City of Modesto Information Technology - GIS, Carrol Engineers | G:\Projects\51275\MODESTO_GAP\graphics\docs\SSOLocations.ai | Last Updated - 03-16-07



Legend

- Sanitary Sewer Overflow
- Direct Storm Connections
- Existing Collection System**
- 8" and Smaller
- 10" and Larger
- Major Roads
- ▨ Periodic Flooding Due to Rockwells
- ▭ Study Area



Reporting SSOs. The SWRCB gathers information on the causes and sources of SSOs to augment existing information and to determine the full extent of SSOs and the consequent public health and/or environmental impacts. From now on, the City should report all such SSOs to the SWRCB's database, as required on page 6 of 20 of the WDR document dated May 2, 2006. The online spill reporting system is hosted, controlled, and maintained by the SWRCB, at <http://ciwqs.waterboards.ca.gov>. Information regarding SSOs must be provided to the RWQCBs in a timely manner and be made available to the public in a complete and concise manner.

4.3.2 Design Criteria

The City has established design criteria for handling sewer flows. The City's permit application and plan checking department ensures that new subdivisions are designed according to the City's standards. These provisions are adequate and in line with the WDR requirements.

4.3.3 Capacity Enhancement Measures

The 2006 Draft Master Plan has outlined both the short-term and long-term improvement projects to address the identified hydraulic deficiencies, including prioritization, alternative analysis, and schedule. The Plan identified the necessary pipe diameter increases needed to convey flows to the treatment plant. The information provided in the Plan meets the Capacity Enhancement Measures requirements of WDR.

4.3.4 Schedule

The 2006 Draft Master Plan developed by Carollo identified a CIP implementation plan and schedule. The report assumed that each collection system project required two years to plan, design, and construct (see Section 4.1 of this report and Table ES.4 of the Carollo report for more details on the implementation plan and schedule).

4.4 Rockwells

Based on discussions with City staff and according to the City's draft Storm Drain Master Plan (2003), several areas of the City drain to approximately 11,000 rockwells for subsurface disposal. Figure 4-5 shows the locations of the rockwells.

A rockwell consists of a 36" diameter hole drilled to an average depth of 25 to 50 feet and filled with wash graded pea gravel or 1^{1/2} inch drain rock that have been placed in depressed areas where storm waters are likely to collect. Their intended function is to allow storm water runoff to percolate through the rock and sand layers and into the ground. Many rockwells perform well for a few years, but eventually lose their capacity for accepting water and require sediment removal and maintenance. Rockwells lack the capacity to manage storm runoff produced during heavy storm events, resulting in periodic flooding of streets and adjacent properties.

Rockwells and known periodic flooding areas are illustrated on Figure 4-4. SSOs within these areas create a greater potential for contaminating groundwater resources or receiving streams. This contamination would violate the WDR, and the City could be penalized for

failure to eliminate the cross discharge. HDR recommends that the City evaluate its potential liability with regard to the cross discharge between SSOs and the rockwells.

4.5 Storm Drain Cross Connections

Some areas in the City such as the downtown area contain storm drain cross connections to the sanitary sewer collection system. These direct storm drain connections dramatically increase flows during storm events, because stormwater is routed directly into the sanitary sewer system. The City has documented 52 known storm drain cross connections where storm runoff is discharged into the sanitary sewer system. The City developed a Storm Drain Master Plan as a reference document to facilitate planning and implementing improvements to the storm drain infrastructure required to accommodate storm water runoff under existing and future conditions. As part of a separate project, the City is developing conceptual alternatives for removing the cross connections from the wastewater collection system, and reducing the impacts of street flooding.

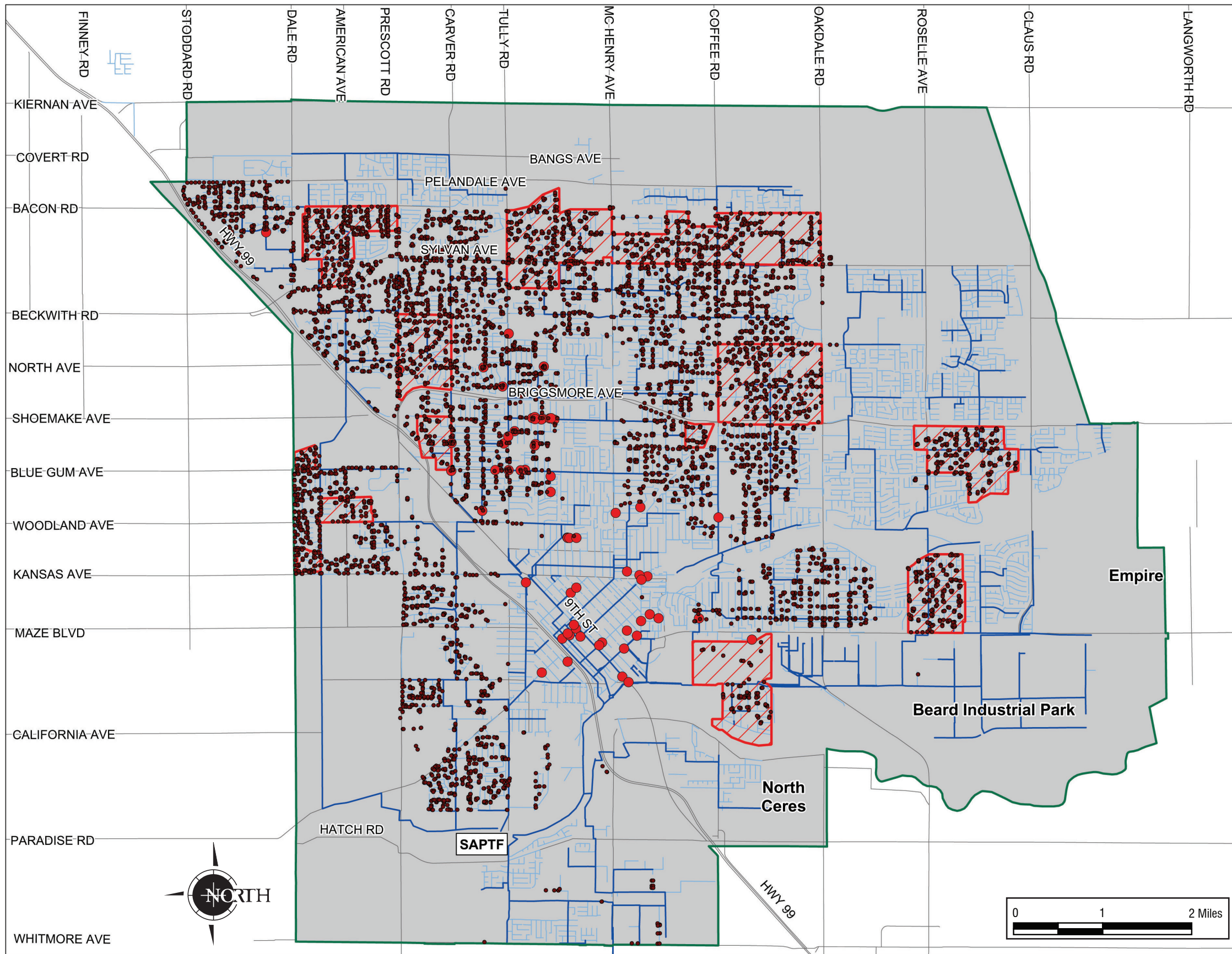
5–Conclusions and Recommendations

5.1 Compliance with the WDR

Based on extensive discussions with City staff, review of various reports, and responses to e-mail questionnaires, HDR has prepared the following conclusions and recommendations for the City’s consideration to be in compliance with the WDR.

- ***Block Book Maps.*** Inadequate block book maps currently limit the City’s Collections staff in performing their duties. The City receives “as-built” drawings, but in reality these are often just copies of the approved construction plans that do not identify field construction changes. As a result, the accuracy of the drawings is compromised. This, coupled with lack of needed compatible information (no service laterals, footages, measurements, or manhole numbering that correlates to the City’s sewer plat maps) all add to the City’s inability to properly identify the sewer infrastructure, as is required by the WDR. HDR recommends the City takes immediate steps to prepare the bloc book maps for the sewer infrastructure as a top priority.
- ***Staff Resources.*** Lack of adequate resources was identified as one of the reasons why City staff are unable to perform their jobs effectively. Additional resources are needed to augment the existing staff in both the GIS and the Collections departments. Also, recruiting a dedicated team of wastewater and stormwater engineers for the Collection department responsible for specifically addressing sanitary sewer system issues will boost the City’s efforts to address SSOs problems.
- ***Interdepartmental Communication.*** Lack of communication, cooperation, and coordination between the various City departments is another problem that impedes the ability of the departments to work productively towards a common goal. In response, HDR recommends the formation of a Task Force consisting of staff from GIS, Mapping, Collections, and Engineering. This task force would seek ways to break down communication barriers and to identify bottlenecks in creating block book maps of the City’s sewer system.

Source: City of Modesto Information Technology - GIS, Carrol Engineers | G:\Projects\51275\MODESTO_GAP\graphics\docs\Rockwells\locations.at | Last Updated: 03-16-07



Legend

- Rock Well
- Direct Storm Connections

Existing Collection System

- 8" and Smaller
- 10" and Larger
- Major Roads
- ▨ Reports of Periodic Flooding
- ▭ Study Area

Rockwells Locations
FIGURE 4-5

- **Funding.** The City's 2006 Draft Wastewater Master Plan has identified over \$420 million for trunk sewer CIP projects (pipes 10 inches or more less in diameter) of facility projects in the next 30 years. This does not take into consideration the unmet needs of the portion of the infrastructure that is 8" in diameter or smaller and which comprises the majority of the system. To fund these projects, the City will need to increase the wastewater collection service rates for residential and commercial users. The City is currently working with user interest groups and will present the data for City Council review later this year. Once the rate structure is set, the City can issue bonds for project funding. The Master Plan prioritizes projects needed for capacity and reliability, and those projects will be constructed in the order identified in the Master Plan and as funding allows.
 - City staff will have to add at least two full-time (engineering) employees or hire a Program Manager to administer the design consultants. In addition, Construction Administration will have to increase proportionally for construction management and inspection. Once funding is in place, the City can become more proactive by addressing wastewater collection and treatment needs before they arise. HDR understands that the City has retained a rate study consultant to help the City implement rate increases in order to fund compliance with the WDR.
 - One option of funding support is to collect fees from developers, which will take a coordinated effort from City departments. Developer payments of the GIS-related fees will enable the City to partly fund the creation of the GIS maps, to address the sewer block book maps preparation issues, and to update the existing GIS system maps.

5.2 Key Recommendations

Table 5-1 summarizes the key recommendations to achieve compliance with the WDR. A total of approximately \$4.3 million is required to provide the mapping, staffing, equipment, software, studies and other resources needed for the City's Collections, GIS, and Mapping staff to update and maintain systems adequate to support the City's WDR requirements. Compliance with the WDR requirements would result in significant cost-savings to the City and its residents. Failure to comply with the WDR requirements could result in significant penalties.

TABLE 5-1. SUMMARY OF MAJOR RECOMMENDATIONS FOR COMPLIANCE WITH WDR					
	Problem Summary	Recommendations	Budget Allowance	Priority	Time Frame
1	Block Book Maps	Using a GIS format, develop and maintain a complete sanitary sewer utilities inventory with details of the data components that should be included with this data set. Also pursue integration with the City's existing maintenance management system (CASS WORKS) and utility billing system (HTE). Using GPS technology and a contractor, inventory all City sewer facilities.	\$800,000	High	Nov 2, 2008

TABLE 5-1. SUMMARY OF MAJOR RECOMMENDATIONS FOR COMPLIANCE WITH WDR

	Problem Summary	Recommendations	Budget Allowance	Priority	Time Frame
2	Computerized Maintenance Management System (CMMS)	Implement a CMMS that can integrate CCTV information with all of the already-acquired maintenance data. (The City is currently looking to move towards implementing CASS WORKS instead of OASIS; this or any other similar database management system (such as Hanson, GBA Master Series, or Sussex) would greatly improve the O&M management.) Then retain the services of a qualified consultant to populate the City's CMMS system with the system attributes from the GIS database.	\$250,000	High	Nov 2, 2008
3	Augment GIS staff or hire external consultant	Replace temporary employees with full-time permanent workers, thus eliminating the overtime problems that now exist. Alternatively, hire an external consultant to develop the City's block book maps.	\$100,000	High	Nov 2, 2008
4	Proactive Maintenance Program	Implement a proactive maintenance program to replace the current reactive mode of operation. Expand the Collections staff work force by adding four (4) additional collections operators. Many parts of the system have not been cleaned due to limited staffing, and additional staff will help the City move towards a proactive maintenance program.	\$300,000	High	Nov 2, 2008
5	Fats, Oil and Grease (FOG) Program	Strengthen the City's rudimentary FOG program to include public outreach and a formal FOG program of the City's Collection staff.	\$100,000	High	Nov 2, 2008
6	Closed-Circuit Television (CCTV)	Expand CCTV operations equipment and staffing to include one (1) additional van and four (4) additional crew members to properly perform CCTV inspections of new, existing lines and warranty inspections of new subdivisions.	\$500,000	High	Nov 2, 2008
7	Rockwells Study	Conduct a study to evaluate the City's potential liability regarding cross-discharge between SSOs and the rockwells.	\$100,000	High	Nov 2, 2008
8	Asset Management Plan	Implement a robust asset management plan to proactively develop a rehabilitation and replacement program.	\$1,000,000	High	Nov 2, 2008
9	System Evaluation and Capacity Assurance Plan (SECAP)	The model that was used in developing the Draft Sewer Master Plan covers only 10-inch-diameter and larger pipes. The City should extend the model to include smaller pipes. Expand model to include 8-4 inch-diameter sewers. Update the plan at least every two years.	\$300,000	Medium	May 2, 2009

TABLE 5-1. SUMMARY OF MAJOR RECOMMENDATIONS FOR COMPLIANCE WITH WDR					
	Problem Summary	Recommendations	Budget Allowance	Priority	Time Frame
10	Upgrade field equipment for sewer crews and eventually have electronic maps in sewer crew trucks and use of PDAs	Upgrade field equipment to make CCTV software compatible with other office software for a smooth and effective transfer of information using wireless technology and expanded multimedia capability, as well as GIS mapping (15 vehicles at \$10,000 per truck). Eventually move towards using electronic maps on hard-mounted laptop computers in the sewer crews trucks. As part of this program, implement the use of PDAs in collecting information in the field.	\$200,000	Medium	Nov 2, 2008
11	Stormwater Block Book Maps	Develop stormwater system block book maps so that the City staff can identify and locate stormwater structures, as these systems are sometimes interconnected with the sanitary sewer system.	\$500,000	Medium	Nov 2, 2008
12	On-going Training	Provide on-going training for the City's collection and administrative staff to be proficient in use of the CASS WORKS database and GIS and collection systems maintenance activities.	\$30,000	Medium	As-needed
13	Emergency Overflow Response Plan	City staff should update the recently prepared Emergency Overflow Response Plan. This would involve completing the plan as well including systematic and consistent review to ensure the adequacy of the plan in meeting the WDR requirements. Revisit and update the plan annually.	\$10,000	Medium	Nov 2, 2008
14	Telecommunications	Provide a dedicated, stand-alone communications system. (The current NEXTEL system relies on the telephone system and a catastrophic disaster might break down communications and so render the City's sewer crews ineffective.)	\$100,000	Low	Nov 2, 2008
TOTAL			\$4.3 Mil		
^a The cost of one (1) additional Collection staff is approximately \$73,000. The cost of an additional CCTV van is approximately \$200,000.					

5.3 Additional Observations

HDR and City staff made the following additional observations:

- **Overtime.** Sewer Division staff are often pulled into serving other City departments, such as responding to emergency watermain breaks. These emergencies distract Collections staff from their regular duties. Quite often, these emergencies utilize all Collections personnel and develop into an overtime situation.
- **Grease-Related Work.** Weekly and monthly grease maintenance work orders have accelerated.



- ***Design Criteria.*** The City recently updated its design criteria for sewer systems and appurtenances. Although HDR has not reviewed the criteria in detail, it appears that the City has made adequate provisions for handling flow projections and infiltration and inflow allowance. However, the City should enforce strict adherence to the design standards.
- ***Electronic Submittals.*** HDR recommends that the City's GIS and mapping staff meet to discuss an appropriate format for receiving electronic data from developers to minimize the time invested by City staff in importing the data into the City's GIS database. Alternatively, developers should be required to pay fees to fund the City's GIS work; currently, the City does not collect any fees from developers for this effort. Successful implementation of fee collection from developers will require a coordinated effort by the City and the development community.
- ***Capital Improvement Program Funding.*** City should continue the work on the rate study currently underway to develop a consistent, and properly funded CIP program based on the Wastewater Master Plan recommendations.

M:\Projects\007541.City of Modesto\51275.Gap Analysis for WDR\1.0 Project Development\Modesto WDR Gap Analysis 3-19-07.doc

APPENDIX A

WASTE DISCHARGE REQUIREMENTS

**OF THE CALIFORNIA STATE
WATER RESOURCES CONTROL BOARD**

**STATE WATER RESOURCES CONTROL BOARD
ORDER NO. 2006-0003-DWQ**

**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-DWQ, 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

<u>Task and Associated Section</u>	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)	36 months after WDRs Adoption	39 months after WDRs Adoption	48 months after WDRs Adoption	51 months after WDRs Adoption
Design and Performance Section D 13 (v)				
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 30days 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

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;

- 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.

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:

- 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.

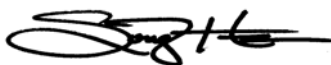
C. Certification

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.



Song Her
Clerk to the Board