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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>Acrylonitrile butadiene styrene</td>
</tr>
<tr>
<td>ACP</td>
<td>Asbestos Cement Pipe</td>
</tr>
<tr>
<td>AWWARF</td>
<td>American Water Works Association Research Foundation</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Aided Drafting</td>
</tr>
<tr>
<td>CCTV</td>
<td>Closed Circuit Television</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CIP</td>
<td>Capital Improvement Program/Plan/Project</td>
</tr>
<tr>
<td>CIPP</td>
<td>cured-in-place pipe</td>
</tr>
<tr>
<td>CMMP</td>
<td>Computerized Maintenance Management Program</td>
</tr>
<tr>
<td>CPA</td>
<td>Certified Public Accountant</td>
</tr>
<tr>
<td>CWEA</td>
<td>California Water Environment Association</td>
</tr>
<tr>
<td>CIWQS</td>
<td>California Integrated Water Quality System</td>
</tr>
<tr>
<td>DEH</td>
<td>Department of Environmental Health (County of San Diego)</td>
</tr>
<tr>
<td>DWQ</td>
<td>Division of Water Quality</td>
</tr>
<tr>
<td>FOG</td>
<td>Fats, Oils, and Grease</td>
</tr>
<tr>
<td>FSE</td>
<td>food service establishments</td>
</tr>
<tr>
<td>ft</td>
<td>feet</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>gpd</td>
<td>gallons per day</td>
</tr>
<tr>
<td>gpd/ac</td>
<td>gallons per day per acre</td>
</tr>
<tr>
<td>GRE</td>
<td>Grease Removal Equipment</td>
</tr>
<tr>
<td>HDPE</td>
<td>High Density Polyethylene</td>
</tr>
<tr>
<td>I&amp;I</td>
<td>Inflow and Infiltration</td>
</tr>
<tr>
<td>IFP</td>
<td>Integrated Facilities Plan</td>
</tr>
<tr>
<td>IIPP</td>
<td>Injury/Illness Prevention Program</td>
</tr>
<tr>
<td>IPS</td>
<td>Influent Pump Station</td>
</tr>
<tr>
<td>IS</td>
<td>Information Systems</td>
</tr>
<tr>
<td>LF (lf)</td>
<td>Linear Feet</td>
</tr>
<tr>
<td>MGD</td>
<td>Million Gallons per Day</td>
</tr>
<tr>
<td>MRP</td>
<td>Monitoring and Reporting Program</td>
</tr>
<tr>
<td>MUTCD</td>
<td>Manual of Uniform Traffic Control Devices</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>Operation and Maintenance</td>
</tr>
<tr>
<td>OES</td>
<td>Office of Emergency Services</td>
</tr>
<tr>
<td>District</td>
<td>Padre Dam Municipal Water District</td>
</tr>
<tr>
<td>PE</td>
<td>Professional Engineer</td>
</tr>
<tr>
<td>POTW</td>
<td>Publicly Owned Treatment Works</td>
</tr>
<tr>
<td>PS</td>
<td>Pump Station</td>
</tr>
<tr>
<td>PVC</td>
<td>Polyvinyl Chloride</td>
</tr>
<tr>
<td>RCP</td>
<td>Reinforced Concrete Pipe</td>
</tr>
<tr>
<td>RDII</td>
<td>Rainfall Dependent Inflow and Infiltration</td>
</tr>
<tr>
<td>RFP</td>
<td>Request for Proposal</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>SANDAG</td>
<td>San Diego Association of Governments</td>
</tr>
<tr>
<td>SCADA</td>
<td>Supervisory Control and Data Acquisition</td>
</tr>
<tr>
<td>SQL</td>
<td>Structured Query Language</td>
</tr>
<tr>
<td>SSMP</td>
<td>Sewer System Management Plan</td>
</tr>
<tr>
<td>SSO</td>
<td>Sanitary Sewer Overflow</td>
</tr>
<tr>
<td>SSOERP</td>
<td>Sanitary Sewer Overflow Emergency Response Plan</td>
</tr>
<tr>
<td>SSOPP</td>
<td>Sanitary Sewer Overflow Prevention Plan</td>
</tr>
<tr>
<td>SSORP</td>
<td>Sanitary Sewer Overflow Response Plan</td>
</tr>
<tr>
<td>SWRCB</td>
<td>State Water Resources Control Board</td>
</tr>
<tr>
<td>TDH</td>
<td>Total Dynamic Head</td>
</tr>
<tr>
<td>UWMP</td>
<td>Urban Water Management Plan</td>
</tr>
<tr>
<td>VCP</td>
<td>Vitrified Clay Pipe</td>
</tr>
<tr>
<td>WADG</td>
<td>Water Agencies’ Design Guide</td>
</tr>
<tr>
<td>WAS</td>
<td>Water Agency Standards</td>
</tr>
<tr>
<td>WDR</td>
<td>Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003)</td>
</tr>
<tr>
<td>WRF</td>
<td>Water Reclamation Facility</td>
</tr>
</tbody>
</table>
Introduction

This introductory section provides background information on the purpose and organization of this Sewer System Management Plan (SSMP) and provides a summary of the District’s sewer collection, conveyance, and treatment system.

Background - SSMP Requirement

In 1994, the San Diego Regional Water Quality Control Board (RWQCB) issued Order 96-04 which prohibited sanitary sewer overflows (SSOs) by sewage collection agencies. In response to the order, Padre Dam Municipal Water District (District) developed and implemented a sanitary sewer overflow response plan (SSORP). The intent of the SSORP was to “establish procedures for responding to SSOs, so as to: 1) minimize the sewer overflow volume which enters surface waters, and 2) minimize the adverse effects of sewer overflows on water quality and beneficial uses.” The SSORP was established as a “living” document to be reviewed and amended after each SSO.

On May 2, 2006 the State Water Resources Control Board (SWRCB) adopted Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR). Subsequently, the San Diego RWQCB adopted Order No. R9-2007-005 which reaffirmed the prohibition of all SSOs upstream of a sewage treatment plant and rescinded Order No. 96-04. Key provisions of the current General Waste Discharge Requirements (WDRs) include: 1) the elimination of SSOs through development of system-wide operation, maintenance, and management plans, 2) reducing impacts to the State’s water bodies and protecting public health, 3) improved SSO reporting procedures by establishing an enforceable regulation that allows the SWRCB to gather consistent data on causes and sources of SSOs, and 4) the mandatory development and implementation of a system-specific SSMP.

Another component of the WDR is the Monitoring and Reporting Program (MRP) that includes specific SSO notification, reporting and record keeping requirements to meet SSO reporting requirements in the Water Code and facilitate compliance monitoring and enforcement for violations. On February 20, 2008 the State Water Resources Control Board adopted Order No. WQ 2008-0002-EXEC, amending the MRP requirements of the first Statewide WDR. Subsequently, the State Water Resources Control Board adopted Order No. WQ 2013-0058-EXEC, amending the MRP requirements of Order No. 2006-0003-DWQ and superseding the MRP requirements of Order No. 2008-0002-EXEC.

The current Statewide and Regional WDRs are included in this SSMP report as Appendix A and Appendix B, respectively. While the State Water Resources Control Board WDR is the primary regulatory mechanism for sanitary sewer systems statewide, it allows each regional board to issue stricter WDRs for sanitary sewer systems within their respective jurisdiction. Generally, the San Diego Regional Water Quality Control Board Order No. R9-2007-0005 sets forth more prescriptive monitoring and reporting requirements than the State Water Resources Control Board Order No. WQ 2013-0058-EXEC.

This SSMP is an update of the District’s previous SSMP dated April 2014, incorporating any new or amended requirements issued by the State Water Resources Control Board or the Regional Water Quality Control Board to ensure compliance with the WDRs of the State and San Diego Regional jurisdictions. Although waste discharge requirements may change over the years, the
District’s commitment to eliminating SSOs and protecting public health and the environment remains constant.

The intent of this SSMP is to develop a document to facilitate the proper management, maintenance and emergency response of the District’s sanitary sewer system. Additional goals of the SSMP include:

- Develop a proactive approach towards operation and maintenance activities, including development of a strategic rehabilitation and replacement plan.
- Ensure compliance with the monitoring and reporting requirements of the WDRs.
- Minimize SSOs occurrences.
- Mitigate the impacts of SSOs.

Padre Dam Municipal Water District's SSMP is presented in the following sections. The primary operational components of the SSMP include: 1) Sanitary Sewer Overflow Emergency Response Plan, 2) Operation and Maintenance (O&M) Program, 3) Fats, Oils, and Grease (FOG) Control Program, 4) System Evaluation and Capacity Assurance Plan, and 5) a system wide sewer Master Plan. Additionally, over the years the District has successfully developed, refined, and implemented numerous processes intended to better manage its sewer collection system.

The goal of this SSMP is to develop a user friendly “living” document for staff use, regulator use, and public review as required by the WDRs. Detailed responses to the WDR action items demonstrate the District’s compliance. More detailed information can be obtained from the individually referenced documents.

**SSMP Requirements - Document Organization**

A key requirement of the Waste Discharge Requirements is the development of an agency SSMP. To be effective, the SSMP must include provisions for proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost-benefit analysis. The SSMP itself includes eleven mandatory elements, as listed below.

1. Goals
2. Organization
3. Legal Authority
4. Operation and Maintenance Program
6. Overflow Emergency Response Plan
7. FOG Control Program
8. System Evaluation and Capacity Assurance Program
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program
In this SSMP, each element above is specifically addressed, is consistent with State Water Resources Control Board requirements, and is provided as a separate section of this document. Excerpts from the WDRs outlining the requirements to be addressed by each element are shown in italics in the shaded boxes. The District’s responses to these elemental requirements follow the organization of the WDR sequentially so that the reader can easily reference the WDR language. Additional information and supporting documents can be found in the appendices and are referenced as required.

**Sewer System Overview**

Padre Dam Municipal Water District was approved by voters in 1976 by merging the Santee County Water District and the Rio San Diego Municipal Water District. The Alpine Highlands Water District and the Crest Public Utility District later merged into Padre Dam. The District serves water to approximately 100,000 customers located in the City of Santee, parts of El Cajon, and the unincorporated areas of the County of San Diego, including Lakeside, Flinn Springs, Harbison Canyon, Blossom Valley, Alpine, Dehesa, and Crest. The District provides wastewater collection services through more than 15,100 connections to a population of approximately 70,600 (based on 2017 San Diego Association of Governments (SANDAG) estimates) including the City of Santee, parts of El Cajon, and parts of the County of San Diego (County).

The wastewater collection system includes 164 miles of gravity sewer main and approximately 4.6 miles of pressure sewer main (forcemain). The District’s service area is predominately comprised of residential customers (approximately 90%); the balance of the accounts is mostly commercial. In addition, the District operates four (4) wastewater lift stations and one primary wastewater pumping station (See Appendix C – Wastewater Collection System Map).

The average age of the collection system is approximately 39 years. The oldest sewer facilities were installed in 1959. The system is primarily (96%) composed of vitrified clay pipe (VCP) and polyvinyl chloride (PVC) pipe ranging in diameter from 4-inches to 30-inches. The remainder of the system was constructed using (epoxy) lined asbestos cement pipe (ACP), ductile iron pipe (DIP), techite pipe, ACP, and HDPE pipe materials. The majority of new installations, including developer funded projects, are constructed using PVC pipe. Appendix E – Operation and Maintenance Program – includes a tabular breakdown of the District’s gravity sewer system.

In general, the wastewater collection system drains from the east to the west. Four diversion structures exist between the District’s wastewater collection system and the County’s Lakeside Interceptor which allows the District to pass flow into the Lakeside Interceptor and ultimately to the City of San Diego’s (City) METRO system. Wastewater that is not diverted at the diversion structures converges upon the District’s Influent Pump Station (IPS) located in the District’s operation yard at 9120 Carlton Oaks Drive in Santee California. The IPS is set up to pump two (2) million gallons per day (MGD) of flow to the District’s Ray Stoyer Water Reclamation Facility (WRF) via 19,700 feet of 20-inch diameter HDPE forcemain. The remaining flow is directed to the City’s METRO system. A January – March 2016 flow study indicates that an average daily dry weather flow of approximately 4.35 MGD reaches the IPS, which is 1.8% less than a previous flow study conducted in 2010. This decrease is attributed to various factors, including water conservation and higher efficiency plumbing fixtures and appliances. The District’s sewer service area is shown in Figure 1.

The District has an effective operation and maintenance (O&M) program in place that includes cleaning, inspection, and monitoring of the sewer collection system. The O&M program is based
on a proactive preventative maintenance approach to keep the collection system in good repair, preventing excessive infiltration/inflow (I&I), minimizing system failures which can lead to overflows, and protecting the capital investment in the collection system.
Figure 1: Padre Dam Sewer System
Section 1: Goals

The portion of the Waste Discharge Requirement that describes the purpose and intent of the SSMP states the following:

The goal of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system.

To develop a comprehensive and effective plan and schedule, the District has established its own set of goals in regards to the management, operation, and maintenance of its sewer collection system. These goals assist the District in meeting its overall objectives to continue to provide safe, responsive, and reliable sewer service, including:

- Minimize the frequency of sanitary sewer overflows (SSOs).
- Mitigate the impacts of SSOs.
- Properly monitor and report SSOs in accordance with current regulatory agency requirements.
- Prevent public health hazards associated with exposure to sewage.
- Continue to properly fund, manage, operate, and maintain all components of the wastewater collection system owned and operated by the District with adequately trained staff and/or contractors.
- Provide adequate capacity to convey peak flows as defined in the District’s current Comprehensive Facilities Master Plan.
- Perform all operations in a safe manner to prevent personal injury or property damage.

This SSMP contains the programs and policies necessary to achieve the District’s goals listed above. A key component in achieving these goals is ensuring adequate funding is available to properly manage, operate, and maintain the wastewater collection system. To facilitate this, the District’s Board of Directors adopted the following documents/programs:

- The Padre Dam 2012 – 2022 Strategic Plan: A longer term planning document that identifies the District’s primary goals over a ten year period. The Strategic Plan was last updated in 2018.
- The Padre Dam Comprehensive Facilities Master Plan (CFMP or Master Plan): A longer term planning document that evaluates the District’s existing facilities, equipment, and infrastructure in comparison to future growth projections, wastewater usage trends, and existing and future demands to determine if the existing system is adequate to serve the District’s future needs. Analysis is performed during development of the Master Plan in order to identify necessary sewer system projects for inclusion in the CIP. The Master Plan was last adopted in 2015.
- The Padre Dam Five Year Business Plan and Budget for Fiscal Years 2018 – 2022: A comprehensive roadmap for achieving operational performance, capital replacements, and preventative maintenance. This Plan is a mechanism that ensures a reliable revenue
stream is available to sufficiently fund the maintenance and replacement of the District’s infrastructure; including the sanitary sewer system.

- The Padre Dam 2018 – 2022 Capital Improvement Program and Budget: A major component of the Five Year Business Plan and Budget that identifies the necessary improvement/replacement projects and preventative maintenance activities. The Capital Improvement Program Budget is reforecasted annually.
Section 2: Organization

This section of the SSMP identifies those District staff members who are responsible for implementing this SSMP, responding to SSO events, and meeting the SSO monitoring and reporting requirements. This section also includes the designation of the authorized representative to meet the SWRCB requirements for completing and certifying spill reports. The required elements of the WDR are as follows:

<p>| | |</p>
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<tbody>
<tr>
<td>a)</td>
<td>The name of the responsible or authorized representative as described in Section J of the WDR.</td>
</tr>
<tr>
<td>b)</td>
<td>The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and</td>
</tr>
<tr>
<td>c)</td>
<td>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.</td>
</tr>
</tbody>
</table>

The District’s duly authorized representative is the Director of Operations and Water Quality. At this time this position is held by Mr. Paul Clarke.

2.1 Implementing, Managing, and Updating Sewer System Management Plan

The WDR requires that the SSMP include the administrative and maintenance positions responsible for implementing specific measures in the SSMP program, including lines of authority by organization chart or similar document. Figure 2 shows the organizational chart identifying the lines of authority of those District staff that are responsible for implementing, managing, and updating the SSMP.

Narrative explanation of District’s organization chart (Parenthesis indicate name of person in that position as of April 2019):

- CEO/General Manager (Mr. Allen Carlisle) – Responsible for leading and directing the operations of the District. Establishes policy, plans strategy, delegates responsibility, provides resources to departments, and interacts with the Board of Directors.
- Communications Officer (Ms. Melissa McChesney) – Administers District communications to the public and media; including crisis event communication.
- Director of Operations and Water Quality (Mr. Paul Clarke) – Oversees and directs the activities of the Operations Department. Manages day to day operations, determines priorities, plans and coordinates repairs to the sewer system, prepares reports for regulatory agencies, and ensures staff is appropriately trained. Also, responsible for ensuring water quality and protecting the environment. Sets departmental goals and budget. The District’s duly authorized representative for this SSMP.
Figure 2: Padre Dam Municipal Water District Sewer System Management Plan (SSMP) Organization Chart
• Safety & Risk Manager (Mr. Larry Costello) – Responsible for investigating, preparing, and adjusting claims for the District. Also, develops and oversees the District’s risk management and safety programs; including safe practices for working with hazardous materials such as sewage.

• Director of Operations (AWP) (Mr. Kyle Swanson) – Responsible for assisting the Director of Operations and Water Quality with the construction and maintenance of the sewer system. Incumbent monitors water quality parameters of the sewer system to ensure compliance with State and Federal Regulations.

• Construction and Maintenance Crew Supervisor (Mr. Richard Schultz) – Supervises field crews, responds and supervises after hours emergencies (wastewater blockages and spills), investigates SSOs and supports SSO reporting, inspects sewer operations and maintenance activities for quality assurance, and provides relevant information to District management.

• Construction Equipment Operator – Operates motorized equipment in the installation, repair, and maintenance of sewer systems, responds to notification of stoppages and SSOs, and assists in the documentation and cleanup response.

• Field Crews – Staff perform preventative maintenance activities, mobilize equipment, and respond to notification of stoppages and SSOs.

• WRF Plant Manager (Mr. Robert Northcote) – Accountable for all the functions, operations, and effluent water quality from the District’s WRF.

• Compliance Administrator (Mr. John Tackett) – Responsible for overseeing all areas of compliance with Padre Dam’s Rules and Regulations regarding industrial waste discharges into the sewer system and Fats, Oils, and Grease (FOG) program. Duties include: Creating and monitoring compliance programs; issuing permits; maintaining records of investigations and actions taken; maintaining computer database of industrial users and permitted FOG facilities; conducting field investigations; following up to verify corrective action is satisfactorily completed; prepares notices of violations; and uses monitoring equipment to detect pollutants and non-compliance.

• Senior Lab Analyst – Under direction of the Director of Operations and Water Quality samples and tests receiving waters impacted by SSOs.

• Director of Engineering and Planning (Mr. Mark Niemiec, P.E.) – Develops goals, policies, and priorities for the District’s infrastructure. Oversees the preparation of reports and designs, administers the budget, and serves as a liaison to the Board of Directors.

• Cathodic Protection Specialist (Mr. Shea Hodges) – responsible for maintaining cathodic protection systems on all sewer pipelines, lift stations, and the District’s WRF, and oversees infrastructure coatings.

• Chief Financial Officer/Director of Finance (Ms. Karen Jassoy) – Provides professional assistance to Padre Dam’s Board of Directors, Management Team, and other departments on finance/budget related matters; provides comprehensive financial management services and solves a broad range of complex finance, rate setting, and financing problems; prepares revenue projections and models; analyzes and makes recommendations on major construction, capital improvement, and operating programs.
• Information Systems Manager (Mr. Brian Croom) – Provides technical support to all District Staff and electronic systems, including SCADA system, protects and monitors electronic equipment and data.

• GIS/Mapping Coordinator – Responsible for coordinating and developing the processes needed for mapping the Padre Dam’s sewer collection system into CAD and GIS to be used in the various sewer maps, applications, and other sewer data analysis needed.

• GIS/CAD Specialist – Responsible for maintaining current GIS sewer feature classes used for mapping the sewer system, documenting new and rehabilitated assets, and providing in-house support to both the Operations and Engineering Departments with regards to sewer system information and assets.

• Accounting Manager (Mr. Kevin Woo) – Prepares and analyzes financial reports, works closely with engineering staff to prioritize and budget sewer rehabilitation or replacement projects.

• Accountant – Assists the Accounting Manager in developing financial reports, planning, and budgeting District projects.

• Customer Service Manager (Mr. Arthur Oughton) – Serves as the main point of contact with the public for telephone calls received on the District’s general customer service phone. Responsible for disseminating sewer spill information received from the public on the District’s general customer service phone to the appropriate District Staff.

• Customer Service Representative – Responsible for communication with the District’s customers regarding accounts, billing, processing customer inquiries and resolving problems.

• Engineering Manager, CIP (Mr. Michael Hindle, P.E.) – Prepares wastewater collection system planning documents and ultimately responsible for overseeing and managing the capital improvement program.

• Engineers and Construction Inspectors – Ensure that new and rehabilitated sewer assets are constructed to meet District standards. Interact with field crews to handle emergencies and provide verbal status reports to the Director of Engineering and Planning.

• Engineering Technician – Assists Engineers in developing and implementing new and rehabilitated sewer projects.

• Engineering Manager, Developer & Construction (Mr. Courtney Mael) – Responsible for managing developer projects that propose changes to the District’s sewer collection system infrastructure or capacity model, oversees construction inspectors.

• Development Services Specialist – Assists the Engineering Manager, Developer & Construction in reviewing and managing developer projects. Responsible for plan checks and ensuring that District sewer infrastructure standards are met by developers.

• Utility Locator – Supports Engineering Manager in locating underground sewer facilities, ensures sewer system components are well marked and maintained.

Note: For complete District contact information see the phone list in Appendix D.
2.2 Chain of Communication for Reporting Sanitary Sewer Overflows

The WDR requires a specified chain of communication for reporting SSOs, from receipt of a complaint or other information through reporting to the regulatory agencies. The District’s chain of communication for reporting SSOs is described in order below and as shown in Section 6, Figure 3: Padre Dam Municipal Water District SSO Emergency Response Matrix.

- District’s Customer Service Department (normal business hours) or an outside agency (non-business hours) receives initial report of a complaint regarding SSO and contacts the District’s Construction and Maintenance Crew Supervisor.
- District’s Construction and Maintenance Crew Supervisor is notified of potential SSO and responds to reported site.
- District’s Construction and Maintenance Crew Supervisor assesses the overflow situation and communicates pertinent information to the Director of Operations (AWP). The Construction and Maintenance Crew Supervisor records and obtains the necessary SSO information and begins notifying the proper regulatory agencies within the appropriate time frame.
- District’s Communications Officer is notified of the SSO and takes the steps necessary and applicable law, to notify the public, issue public safety notices, and handle media relations, as required depending on the severity of the SSO.
- District’s Construction and Maintenance Crew Supervisor prepares an overflow field report documenting entire event and is also responsible for electronically submitting the SSO reports to the online CIWQS database.
- District’s Director of Operations and Water Quality reviews and finalizes report and then electronically certifies the reports requiring certification on the online SSO System via the California Integrated Water Quality System (CIWQS).

Additionally, see Appendix F – Sanitary Sewer Overflow Emergency Response Plan (SSOERP) for reporting and notification requirements to the proper regulatory agencies.
Section 3: Legal Authority

This section of the SSMP demonstrates the District’s legal authority to own and operate a public sewer system through sanitary sewer system use ordinances, service agreements, or other legally binding procedures in a manner to ensure health and safety standards and requirements. The WDR required elements with respect to legal authority are as follows:

Each enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

a) Prevent illicit discharges into its sanitary sewer system
b) Require that sewers and connections be properly designed and constructed
c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the District
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

Padre Dam Municipal Water District (District) is governed, pursuant to the Municipal Water District Law of 1911 (California Water Code, Section 71000 et seq.) Specifically, California Water Code sections 71590, 71600, and 71601 provide the District with enforcement authority for ordinance violations. Additionally, the District is authorized under California statutes to establish and enforce a set of Rules and Regulations used to regulate the affairs of the District and to set forth the terms and conditions under which the District provides potable water, recycled water, and sewer services to its customers. Pursuant to this authority, the District enacted the Padre Dam Municipal Water District Santee Lakes Recreation Preserve Rules and Regulations (“Rules and Regulations”) in January, 2007 and has updated them regularly since. The last update to the Rules and Regulations was adopted in January 2019.

3.1 Prevention of Illicit Discharges into the System

Per Section 1.4.1(b) of the Rules and Regulations, “make or cause to be made any connection or re-connection to facilities owned or used by the District, in order to obtain water, sewer, or recycled water service without authorization or consent of the District” is considered a violation of State law and is subject to penalties imposed by the District. Additionally, Civil Code Sections 1882-1882.6 permit the District to file a civil action against any person for damages for the unauthorized taking of District water, illegal or unauthorized connections to any facilities owned or used by the District, or interference with District property or facilities, and permit the recovery of three times the amount of actual damage, plus the cost of suit and reasonable attorney’s fees.

3.2 Proper Design and Construction of New and Rehabilitated Sewer Connections

Sections 3.1.5 and 3.1.6 of the Rules and Regulations provide for the design and construction of sewer facilities at the District’s or Developer’s expense. Per Section 3.1.5, “[t]he Board of Directors may authorize construction of capital improvements, upon a determination that such
facilities are necessary to correct a deficiency in the water or sewer system, or to provide adequate domestic, commercial, or fire service in accordance with District system design standards or current health and safety requirements.” In Section 3.1.6, “[t]he developer shall install or cause to be installed all water or sewer facilities required to serve the property being developed or improved.” Furthermore, construction plans from developers “must be prepared by a California licensed civil engineer in accordance with the conditions set forth in Water Agencies’ Standards (WAS) – Water Agencies' Design Guide (WADG) for Water and Sewer Facilities.”

During construction of the sewer facilities, California Water Code Section 71601 provides additional authority to inspect and remedy any violations of the Rules and Regulations.

3.3 Access for Maintenance, Inspection, or Repairs for Portions of District Owned Laterals

California Water Code Section 71601 explicitly grants the District the authority to inspect any property that is believed to be involved with a violation of the Rules and Regulations. Additionally, Section 6.1.5 of the Rules and Regulations, provides the District with the right to inspect the premises of any facility involved directly or indirectly with the discharge of wastewater into the sewer system. As a practical matter, in all but the rarest instances, the only portions of the sewer system that the District owns and maintains are either on District property, in a public right-of-way, or in a legally defined utility easement.

3.4 Limitation of Discharge of Fats, Oils, and Grease and Other Debris

Per the WDR, the District is responsible for implementing and maintaining a FOG source control program to reduce the amount of these substances discharged to the sewer collection system. Key provisions of the program include:

- A public education outreach program.
- The legal authority to prohibit discharges to the system.
- Requirements to install grease removal devices.
- The authority to inspect grease producing facilities and associated grease removal devices.
- Identifying sections of the sewer collection system subject to FOG blockages, and establish a cleaning maintenance schedule for each section.
- Development and implementation of source control measures for all sources of FOG.

Currently the District implements a FOG control program, which includes permitting, inspection, and enforcement and is primarily administered by the District’s Lead Compliance Administrator. The intent of the control program is to: 1) eliminate the discharge of excess grease and oil into the wastewater collection system, 2) minimize the potential formation of blockages to the flow of wastewater as a result of grease accumulations, and 3) eliminate SSOs that may result from such blockages. The legal authority and specific requirements associated with the District’s FOG control program are provided in the District’s Rules and Regulations Section 6 – Sewer Collection System and are listed below:
• Code of Federal Regulations (40 CFR Section 403.5(b)(3)) – Federal authority for the prohibition of the discharge of “solid or viscous pollutants in amounts which will cause obstruction to the flow” of sewage into a sewer system.

• Water Code Section 71590 – General authority to take measures necessary to ensure the continued operation of the sewer system.

• Section 6.7 of the Rules and Regulations requires all food establishments desiring to discharge wastewater into the District’s sewer system to obtain a permit from the District. Additionally, this section of the Rules and Regulations sets forth the wastewater discharge requirements from food establishments. The intent of the program is to eliminate the discharge of excess grease and oil into the wastewater collection system that may form blockages and lead to a sewage spill. Depending on the type of food establishment, the permit may require pretreatment of wastewater prior to discharge, restriction of peak flow discharges, discharge of certain wastewater only to specified sewers, or relocation of the point of discharge.

• Section 6.4 of the Rules and Regulations provides for industrial wastewater discharge permits issued by the District for different categories of industrial discharge such as petroleum based oils and grease that are typically discharged by businesses such as automotive repair facilities, gas stations and car washes. The categories of industrial water as listed in Section 6.4 of the Rules and Regulations are:
  o Category 1 - Industries that discharge wastewater generated from a process that is subject to EPA Categorical Standards.
  o Category 2 - Industries engaged in activities resulting in the discharge of toxic wastewater or other wastewater that is not regulated by the EPA, including but not limited to the following activities:
    ▪ Treatment, storage, and disposal of hazardous wastes (TSDF’s)
    ▪ Manufacturing of chemical or microbiological products
    ▪ Formulation of solvents, lubricants, paints, or inks
    ▪ Industrial laundries
    ▪ Processing of Ag or Ag/Cr based photo-sensitive materials
    ▪ Cleaning of boat hulls, large metal fabrications, or salvage
    ▪ Radiator repair, auto body sanding, or furniture stripping
    ▪ Silk-screen, offset, or lithographic printing
    ▪ Chemical laboratory work
    ▪ Cleaning vehicle engines, chassis, or other parts
    ▪ Cleaning parts in a non-automotive machine shop by solvent, hot caustic, jet washer, pressure spray, or steam cleaning
  o Category 3 - Industries discharging non-toxic wastewater, including but not limited to industries:
    ▪ With discharges common in household wastes
    ▪ Laundering linens and non-industrial clothing
- Vehicle exterior body washing
- Food establishments and industries with a potential FOG discharge that do not otherwise fall within Category 1 or 2
  - Category 4 - Industries using chemicals that are not discharged with wastewater into the District’s sewer system.

### 3.5 Enforcement of the District’s Sewer Ordinances

The District is authorized under California statutes to establish and enforce its Rules and Regulations, and to enforce certain laws and restrictions referenced herein:

- Under Civil Code Sections 1882-1882.6, the District is permitted to file a civil action for damages for the unauthorized taking of District water, illegal or unauthorized connections to any facilities owned or used by the District, or interference with District property or facilities; and permits the recovery of three times the amount of actual damage, plus the costs of suit and reasonable attorney’s fees.

- Per Section 1.4 of the Rules and Regulations, “any violation of these Rules and Regulations shall be cause for the Board of Directors to apply such penalties as may be provided by law, or to take any other action as deemed appropriate, including the discontinuance of potable water, recycled water, sewer, or recreational service.”

Additionally, California Water Code sections 71600 and 71601 provide provisions to enforce violations of the District’s sewer ordinances including the charging and collecting of fines as punishment as detailed in Section 71601.
Section 4: Operation and Maintenance Program

Section 4 summarizes the District’s operation and maintenance program per the WDR requirements detailed below:

The District currently has a proactive operation and maintenance (O&M) program in place that includes cleaning, inspection, and monitoring of the sewer collection system (See Appendix E – O&M Program). The O&M program is based on a preventative maintenance approach to keep the collection system in good repair, preventing excessive infiltration/inflow (I&I), minimizing system failures which can lead to overflows, and protecting the capital investment in the collection system. Additionally, the District has developed a Geographic Information System (GIS) based database allowing staff to analyze collected data to address the deficiencies identified during O&M activities. The collected data also provides the basis to identify, evaluate, and prioritize projects as part of the District’s Capital Improvement Program (CIP).

The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee’s system:

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;

Describe routine preventative maintenance 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;

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 should 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.

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

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

Compliance with the WDR minimum conditions as it relates to the O&M program is demonstrated below.

4.1 Collection System Map

The District’s GIS department is responsible for all mapping activities, including maintaining GIS sewer feature classes used for mapping the system. The GIS department has developed an internal ArcMap desktop application to be used in the office and for field use, a 200-scale mapbook (sewer atlas) and web map of the sewer collection system. The mapbook and web map are periodically printed and republished as needed from the updated mapping system as new
facilities are constructed and/or existing facilities modified. As part of the mapping quality control process, field crews and Engineering staff submit Field Record Change Orders to the GIS Coordinator when a discrepancy between the mapping and field conditions is discovered. When discrepancies are reported, the mapping is promptly revised accordingly.

The electronic collection system map shows the location of all gravity sewer mains, manholes, laterals, pumping stations, and force mains (pressurized sewer lines). This map also references original record drawings where detailed construction information can be obtained. In addition to the electronic sewer collection mapping system, a general system overview map has also been developed for use in planning and design activities. This map is also updated with new or modified facilities. Examples of the District’s mapping capabilities including the map of the sewer collection system is attached in Appendix C.

The electronic and printed maps are a critical component of District planning activities, hydraulic modeling (capacity analysis), the FOG Control Program, and the preventative maintenance program for activities such as cleaning and closed circuit television (CCTV).

Stormwater conveyance facilities fall under the jurisdiction of other agencies. The location of storm water conveyance facilities are shown on separate plans prepared by the agency of jurisdiction. However, the District recognizes the link between a sanitary sewer overflow (SSO) and its potential entry into a storm drain facility that outlets in receiving waters and has incorporated applicable stormwater conveyance facilities, as mapped by the agency of jurisdiction, into its GIS database as shown in Figures F-2.1 through F-2.9, Sewer Collection and Storm Drain Systems within Appendix F.

4.2 Prioritized Preventative Maintenance

Planned preventative maintenance activities are predominantly performed by District Staff at scheduled frequencies established based on historical experience, previously collected data, and sewer main attribute data. The overall objective is to minimize the risk of blockages and/or equipment failures that could possibly lead to a SSO. Maintenance activities within the preventative maintenance program include:

4.2.1 Sewer Cleaning

History and experience have indicated that smaller diameter gravity sewers (6” to 10”) are at a higher risk for blockages than the larger diameter gravity sewers (12” to 30”). The District has established a production schedule for cleaning all sewer mains every 14 to 16 months regardless of the size of the main. Additionally, the District maintains a list of higher frequency preventative maintenance locations on our “Hot Spot” list. These sewer line sections have a history of blockages or SSOs due primarily to grease and roots. “Hot Spot” locations are cleaned every 60 to 180 days as necessary to prevent blockages and/or depending on historical cleaning records and smart cover monitoring. Inverted siphons are typically treated as trouble spots and receive a higher frequency of care due to grease build up and/or debris settling.

Sewer cleaning is accomplished using combination sewer cleaning trucks capable of hydraulically washing the pipe wall followed by vacuum removal of the sewer debris at the next downstream manhole as-needed. The District owns two such trucks. Each truck is operated by a two-person crew.
Sewer cleaning is scheduled by maintenance basin, which mimics drainage basins. The District’s sewer maintenance basins are shown on Figure E-7; found at the end of this document. The schedule for each sewer link (manhole to manhole) is entered into Wincan, a proprietary sewer inspection and asset management software program created by CD Lab AG. Once the cleaning activity is conducted, data regarding the cleaning including completion, type of debris, and amount of debris is recorded in the same software. This data can then be used to assist in the scheduling of CCTV inspections.

4.2.2 **Closed Circuit Television (CCTV)**

The primary objective of the CCTV program is to inspect all sewers in the collection system and document their condition. CCTV inspections also assist the District in planning and refining the preventative O&M activities. Currently, the District performs the vast majority of its own CCTV inspections but has outsourced some CCTV inspections when specialty equipment is required. CCTV inspections are conducted using Wincan software to provide a condition assessment of the sewer. Each sewer link is assigned a score based on the amount and type of damage observed.

Outside of emergency situations and unplanned maintenance activities, CCTV inspections are scheduled based on the sewer cleaning schedule while also considering pipe size, and pipe age. All these factors are considered to promote efficiency and to reduce the risk of a large failure. The CCTV schedule is entered into the Wincan inspection software by sewer link (MH to MH).

During CCTV inspections, the Wincan software records the data entered by the operator. This data is then used within the Wincan software to track completed work and for further analysis and evaluation.

4.2.3 **Manhole Inspections**

Manhole inspections are also performed routinely by the sewer maintenance crews. Manhole inspections may be conducted either concurrently with or separately from flushing or CCTV activities to document the condition of the manhole. Items inspected include the manhole cover, the manhole chimney, the manhole bench, and the manhole channel. The inspection is visual and digital photographs of major defects are recorded.

4.2.4 **Pump Station Maintenance**

In addition to sewer cleaning, CCTV, and manhole inspection the District also regularly maintains its pumping facilities, which include one main sewer influent pump station and four smaller lift stations. Various components of the pumping facilities are checked daily, weekly, monthly, or annually as part of the preventative maintenance program.

Scheduling of maintenance for the pumping facilities is accomplished through the use of an Excel spreadsheet or a computer maintenance management program (CMMP). Schedule frequencies are primarily based on previous activities. Additionally, the District’s SCADA system also alerts maintenance crews of upcoming maintenance or of potential problems based on pump run hours.

It should be noted that the pumps and associated motors in the Influent Pump Station (IPS) are on a five (5) year refurbishment schedule documented via the CMMP or Excel spreadsheet. Furthermore, following occasional clogging in the IPS solids handling pumps, the District has replaced the four low-lift pumps with chopper-style pumps. This type of pump has a blade that
cuts rags into smaller, more manageable pieces as they enter the pump casing and has greatly reduced the potential for clogging. More detailed equipment information for the IPS and all four lift stations is included in Appendix E-6, Lift Station Spare Parts List.

4.3 Rehabilitation and Replacement Plan

The District’s rehabilitation and replacement plan is highly dependent on CCTV data collected by the field crews. The field crew completes a pipe graphic report while collecting the CCTV data. Any anomalies, deficiencies, areas of concerns, and/or laterals are highlighted on a pipe graphic and photographic report. The pipe graphic reports are reviewed by the Construction and Maintenance Crew Supervisor, who determines if repairs are required. Isolated deficiencies are typically handled as spot repairs and this work is performed by District crews. However, if multiple deficiencies are noted in close proximity to one another, the CCTV data is further evaluated by the Engineering department, as required, to determine if the repairs warrant inclusion in the Capital Improvement Program (CIP).

Projects in the CIP are based on the District’s Master Plan document and/or data collected from the field. The District’s Master Plan document evaluates existing District facilities, equipment, and infrastructure and compares this to growth projections, water/wastewater usage trends, and existing and future demands to determine if the existing system is adequate to serve the District’s future customers. Analysis performed during development of the Master Plan identified sewer system projects and these projects have been included in the CIP.

In addition to the Master Plan document, if analysis of regularly collected O&M data indicates an engineering rehabilitation or replacement solution for an identified deficiency is required, the necessary information is routed through the Engineering Department for additional analysis, prioritization, and inclusion in the CIP.

The CIP is the foundation of the District’s long range capital investments and financial planning. The CIP is an annually updated financial planning tool and is intended to provide a comprehensive view of the new capital facilities and the improvements to the existing capital facilities required to successfully carry out the District’s mission. This comprehensive approach provides an opportunity for the District to prioritize capital expenditures, manage cash flow, and establish rates and charges that provide sufficient revenue to fund the required projects. Currently, the CIP is structured over a five year planning horizon.

Each proposed project in the CIP is assigned a priority ranking according to a prioritization criteria developed by the American Water Works Association Research Foundation (AWWARF). These criteria provide a basis for determining which projects should be done in any given year and how projects should be scheduled and budgeted over a five year planning horizon of the CIP.

The District recently placed a higher priority on sewer rehabilitation projects which include trenchless repair methods such as, cured-in-place pipe (CIPP) repair. CIPP utilizes a fabric tube impregnated with polyester or epoxy resin. The tube is inserted into the existing pipeline and inflated against the pipe wall, then cured either at ambient temperature or by re-circulating hot water or steam. Some variations use ultra-violet light to cure the resin. CIPP systems create a close-fit ‘pipe-within-a-pipe’ which has quantifiable structural strength and can be designed to suit various loading conditions. The ring-stiffness of the liner is enhanced by the restraint provided by the host pipe and the surrounding ground. Laterals are temporarily closed off during CIPP lining and are re-opened remotely after the lining has cured by cutting the lateral opening from within.
the lined sewer main, but care must be taken to ensure a smooth cut. After lateral service connections are cut back open, they are sealed with short connection liners called “top hats,” comprised of resin impregnated, fiberglass laminate and shaped to fit within the lateral connection and wrap around several inches within the main pipeline. Top Hats are cured in place with UV light.

4.4 Training

The District views regular training of maintenance staff members in items relating to sanitary sewer system operations and maintenance as an essential component to maintain industry standards of operation and critical to safety. The following training is required of appropriate staff members:

- Attendance to California Water Environment Association (CWEA) sponsored workshops or webinars
- On the job training
- Safety tailgate meetings bi-monthly
- Target safety web based safety training and awareness program
- SSMP training

Additionally, the following are licensing requirements for maintenance staff members as it relates to sanitary sewer system operations and maintenance:

Collection Systems Maintenance Grade 1, or higher, certificate from CWEA

Valid California driver’s license Class A or Class B (vactor truck only)

As part of the District’s contractual requirements, all contractors working on District facilities will be required to submit documentation (for review) regarding their level of training and certifications.

4.5 Contingency Equipment and Replacement Inventories

Essential to the operation and maintenance of the District’s sewer collection system is the District owned equipment used to effectively respond to incidents and efficiently perform preventative (routine and reactive) maintenance goals. Currently, the District owns two (2) vactor trucks, one (1) CCTV camera truck, and one easement (sewer cleaning) machine. Additionally, contingency equipment (e.g. portable pumps, piping, generators) supports an effective response to emergency conditions. Spare/replacement parts are kept in inventory to minimize equipment/facility downtime in the event of an unplanned failure. Replacement parts and appropriately maintained emergency response equipment and accessories allow field crews to effectively respond to incidents. A list of major equipment and a spare parts inventory for sewer system operations can be found in Appendix E along with a detailed description of the District’s O&M program. Replacement and spare parts are stored in the District’s warehouse. These parts are identified and requested by the O&M staff.
Section 5: Design and Performance Provisions

Section D.13. (v) of the WDR states the following:

| 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. |

5.1 Standards for Installation, Rehabilitation, and Repair of Sanitary Sewers

The District is one of several public water agencies in the region of San Diego County that adhere to a common set of standard specifications and design guidelines known as the Water Agencies' Standards (WAS). The WAS is composed of the two main documents listed below:

- “Standard Specifications for Water, Recycled Water, and Sewer Facilities” – This document includes construction specifications, standard drawings, and an approved materials list.
- “Design Guidelines For Water and Sewer Facilities” – This document contains a common set of design guidelines for planning and design of potable water, recycled water, raw water, and sewer facilities.

The primary intent of both documents is to standardize project requirements for designers, contractors and suppliers within San Diego County. Additionally, committees for each document, comprised of individuals from each member agency, meet regularly to modify the documents as necessary to keep up with changing products, regulations, and design approaches.

Neither document specifically addresses rehabilitation of sanitary sewer systems. However, the District’s Engineering Department references the Standard Specifications for Public Works Construction (Greenbook) and has also developed some standards and specifications to address sewer facility rehabilitation needs on a project specific basis. Additionally, design and construction standards and specifications for more specialized projects such as pump stations are also managed by the Capital Improvement Program (CIP) group.

The current Specifications and Design Guidelines, including all updates, are available through the Water Agencies’ Standards website, www.sdwas.org. There is no charge for viewing, downloading, or printing the Specifications. Registration is not mandatory, however, automatic e-mail notification of updates to the Specifications will be sent to registered users only.
5.2 Standards for Inspection and Testing for New and Rehabilitated Sanitary Sewer Facilities

The District has a field engineering department consisting of a construction manager, inspectors, a utility locator, and a development services specialist. This staff is responsible for inspecting all District projects, including developer driven projects and CIP. All members of the field engineering staff are trained and experienced to inspect the construction of wastewater conveyance facilities. Each inspector maintains a copy of the Standard Specifications (WAS), project specific specifications, and other pertinent specification documents (Greenbook, Caltrans, etc.) as required by a specific project.

Procedures and standards for inspection and testing the installation of new sewer facilities are addressed by the Standard Specifications and also by specifications developed by licensed professional engineers for projects managed by the CIP group.
Section 6: Overflow Emergency Response Plan

In 1996, the District developed and implemented a sanitary sewer overflow response plan (SSORP) in accordance with San Diego Regional Water Quality Control Board (RWQCB) Order No. 96-04 which prohibited SSOs by sewage collection agencies. In 2006, the State Water Resources Control Board (SWRCB) adopted Order No. 2006-003-DWQ; subsequently, the San Diego RWQCB adopted Order No. R9-2007-0005, which reaffirmed the prohibition of all SSOs upstream of a treatment plant and rescinded Order No. 96-04. In 2008, the SWRCB adopted Order No. WQ 2008-0002-EXEC, amending the MRP requirements of the first Statewide WDR. Subsequently, the SWRCB adopted Order No. WQ 2013-0058-EXEC, amending the monitoring and reporting program (MRP) requirements of Order No. 2006-0003-DWQ and superseding the MRP requirements of Order No. 2008-0002-EXEC.

The District has reviewed and updated its previous Sanitary Sewer Overflow Emergency Response Plan (SSOERP) to ensure that the document is current and in compliance with the requirements set forth by Order No. 2006-003-DWQ and the amended MRP that became effective in 2013. A copy of the District’s SSOERP can be found as Appendix F. The District is committed to maintaining and implementing a SSOERP that identifies measures to protect public health and the environment. The WDR states the following with respect to the SSOERP:

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 treated and partially treated wastewater to the 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.

Compliance with the WDR requirements as it relates to the SSOERP is demonstrated in the following subsections.
6.1 Notification Procedures

The District’s SSOERP and associated response plan matrix address the procedures for getting the first responder to the scene of a potential sewer overflow. The District receives phone calls at one main telephone number that is staffed 24 hours a day by either the District’s customer service or the assigned after business hours duty call person. Other local agencies, including the police and fire departments, call the main telephone number if they receive a report of a problem with the sewer system. The SSOERP includes the following:

- Reporting of a problem from internal and external sources.
- Response activities taken during normal business hours and after normal business hours.
- Actions taken based on responsible agency.
- The SSO Emergency Response Matrix is shown in Figure 3 on the following page.

The District’s SSOERP also covers SSO notification to the appropriate regulatory agencies. Notification requirements and contact information for the necessary agencies are included in the SSOERP. Referring to the response matrix, once a problem is reported to either the District’s Customer Service department (normal business hours) or to the District’s call answering service (outside normal business hours) the chain of communication for notification is implemented. Initial communications are internal until the overflow is verified and located. For SSOs within the District’s jurisdictional boundaries notifications to regulatory agencies including the San Diego Regional Water Quality Control Board, County of San Diego Department of Environmental Health, and California Office of Emergency Services are described in the SSOERP located in Appendix F.

6.2 Response to Overflows

The District’s SSOERP addresses response to all overflows including response actions, containment and control, cleanup, and impact mitigation. As illustrated in the overflow response matrix, District operations staff responds to all reported overflow events, including those SSOs that do not discharge to the waters of the United States and those that are private lateral sewer discharges (PLSDs). Additionally, in the SSO emergency response plan matrix, a process is in place to locate the overflow event and attempt initial containment to protect the public health and environment. Once these steps are taken, the following sequence of events occurs as outlined in the SSO emergency response plan matrix and described in more detail in the SSOERP in Appendix F:

- Determine jurisdictional responsibility.
- If the SSO is determined to be District’s responsibility, begin notification procedures.
- Control SSO.
- Recovery and clean-up.
- Document field observations and prepare field report.
- If the SSO is not determined to be District’s responsibility, notify responsible party and assist as required to protect the public health and environment until responsible party arrives to control SSO.
Category 1 SSO: discharge of any volume that reaches surface water or tributary drainage channel or MS4 and is not fully recovered prior to reaching surface waters

Category 2 SSO: discharge of 1,000 gallons or more that does not reach surface water, drainage channel, or MS4

Category 3 SSO: all other discharges

Figure 3: Padre Dam Municipal Water District SSO Emergency Response Matrix
6.3 **Emergency Response Plan Training**

The District has an annual training program required of appropriate District staff members that includes: overflow response training, tabletop exercises (simulate overflow events), safety training, and technical skills training. Additionally, after each overflow event, a Spill Review Committee composed of the Director of Operations and Water Quality, Director of Operations (AWP), Construction and Maintenance Crew Supervisor, Safety Risk Manager, and/or Field Crew meet to review and discuss the event.

Contractors constructing District sewer projects are required to develop and submit a sewer bypass plan, if bypassing is required, to complete the work. Typical requirements of a sewer bypass plan include:

- Identification of all nearby waterways, channels, and entrances to storm drains.
- Providing a fully redundant, (100%) backup of the bypass system.
- Continuously monitoring flow levels upstream and downstream of the bypass.
- Providing emergency standby power, if required.

The District also requires contractors performing sewer improvement projects to submit a Spill Prevention and Overflow Emergency Response Plan in accordance with this SSMP prior to beginning work. All plans are subject to review and approval by a District Engineer. Additionally, contractors working on District capital improvement projects are required to submit an Injury/Illness Prevention Program (IIPP).

6.4 **Traffic and Crowd Control**

During an SSO event the following procedure is followed with regards to traffic and crowd control:

- **Traffic Control** – Upon arriving at the scene, District field crews set up the appropriate traffic control equipment. Field crews have the necessary equipment to address traffic control and other necessary emergency response activities. All District Field Crew members are trained in flagging and traffic control procedures. The District has existing traffic control and safety procedures that comply with the California Manual of Uniform Traffic Control Devices (MUTCD). The District also owns an emergency response trailer that contains specialized equipment for any water or sewer emergency, including confined space entry/rescue equipment. Additionally, after a verified event, local law enforcement is contacted to assist in traffic control when necessary.

- **Crowd Control** – All crowd control activities are handled by local law enforcement. The District assists by establishing a work zone. This work zone is delineated using barriers and caution tape.

6.5 **Containment and Prevention of Overflows**

The District has established a program for responding to SSOs so as to minimize the sewer overflow volume which enters surface waters and to minimize the adverse effects on water quality and beneficial uses. The specific activities within the program include the following:
6.5.1 Initial Assessment and Response
Once the Customer Service Representative (during business hours) or the Duty Person (after business hours) is notified that a sewer overflow has occurred the following initial actions are taken:

- Notify the Construction and Maintenance Crew Supervisor
- Respond to the reported overflow location and survey the scene.
- If overflow is verified, identify and request the appropriate resources required to assist with containing the overflow and mitigating the cause of the overflow.
- Communicate information with District management.
- Begin to collect information necessary to complete an overflow field report and take photos.
- Attempt to contain the overflow. Attempt to determine the cause of the overflow, e.g., line blockage, line breakage, pump station failure, electrical failure, etc.
- If possible, take immediate steps to stop the overflow.

6.5.2 Overflow Containment and Control
The primary objective of the responders to a sewer overflow incident is to protect the public’s health. Therefore, if it is at all possible that the public may come into contact with any sewage material from an overflow event, the responders should remove that possibility by isolating the surrounding area. The perimeter of the sewer overflow site can be controlled with cones, barricades, vehicles or some other device that restricts public access.

After the public has been isolated from the spill area, containment can proceed. The spill should be contained within the smallest possible area, and every effort should be made to prevent the discharge of sewage into any receiving waters. The following are containment suggestions:

- Identify and request the need for additional equipment or material to contain or isolate the overflow.
- Determine the immediate flow path of the overflow, e.g., storm drain, street curb gutter, body of water, culvert, landscaped area, etc.
- Take steps to contain the overflow. Containment measures include, but are not limited to, the following:
  - Block or bag storm drain inlets.
  - Cover drop inlets with plastic sheets.
  - Construct a containment pond using hay bales, plastic sheets, sand bags, earthen berms, etc.
  - Possibly construct a diversion to a downstream manhole.

Once the overflow has been contained, return the sewage to the collection system using a vactor truck, pump(s) with associated hoses and piping, and/or vacuum trucks. Additionally, during the
containment procedure immediate efforts should be made to clear the stoppage in the line and restore flow to normal conditions.

**Note:** For spills that occur within the Water Reclamation Facility, every effort should be made to keep the spill from leaving the property.

### 6.5.3 Overflow Cleanup

Sewer overflow sites are to be thoroughly cleaned as soon as possible after the overflow event is eliminated. All signs of sewage residue and gross pollution shall be removed to prevent the chance for public contact and/or to prevent future rain events from flushing the residue to a nearby body of water. The following steps should be taken to ensure that the overflow site(s) are returned to their previous conditions:

- Where possible, the area affected by the overflow is to be thoroughly flushed and cleaned of any sewage residue, washdown water, and/or gross pollution.
- Solids and debris are to be flushed, swept, raked, or gathered by hand and disposed of in the proper manner.
- If sewage has resulted in ponding, the area should be pumped dry and the residue and site cleanup managed as described above.
- Where appropriate, the overflow site is to be disinfected with chlorine.

  **Note:** Never apply disinfectant to a water course (storm drain, flood channel) or body of water.

- For overflows that have reached surface waters, contact the District’s laboratory for assistance.

### 6.5.4 Posting

If the overflow occurs outside of the Water Reclamation Facility or the overflow leaves the treatment facility premises, posting of the overflow location and quarantine area with contaminated water signs may be required. The County of San Diego Department of Environmental Health (DEH) is the responsible authority for directing the closure of areas and determining the locations of the posted signs; however, the District will provide assistance to DEH as required.

### 6.5.5 Sampling and Monitoring

The determination if sampling and monitoring is required is made primarily based on the location of the overflow event and the magnitude of the event. Sampling and monitoring of receiving waters impacted by the overflow is required by regulatory agencies if the overflow is 50,000 gallons or greater or at the direction of the Director of Operations and Water Quality, particularly whenever an overflow reaches a storm drain and is not recovered, or reaches surface water directly. Sampling at appropriate locations will allow the District to establish and monitor the levels of contamination as well as to establish or compare with the natural background levels of bacteria in the receiving waters. The water quality monitoring requirements are further described in Section 3.6 of the SSOERP.
Section 7: Fats, Oils, and Grease Control Program

The WDR requires an evaluation of the fats, oils and grease within the service area to be undertaken. The WDR states:

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.

In accordance with the WDR, the District is responsible for implementing and maintaining a FOG source control program to reduce the amount of these substances discharged to the sewer collection system. Key provisions of the program include:

- A public education outreach program.
- The legal authority to prohibit discharges to the system.
- Requirements to install grease removal devices.
- The authority to inspect grease producing facilities.
- Identifying sections of the sewer collection system subject to FOG blockages, and establish a cleaning maintenance schedule for each section.
- Implementation of source control measures for all sources of FOG.
Currently the District implements a FOG control program. The specific requirements comprising the District’s FOG control program are detailed in the District’s Rules and Regulations Section 6 – Sewer Collection System (included in Appendix G). Implementation of the FOG program, including permitting, inspection, and enforcement, is primarily administered by the District’s Compliance Administrator. The intent of the control program is to 1) eliminate the discharge of excess grease and oil into the wastewater collection system, 2) to minimize the potential formation of blockages to the flow of wastewater as a result of grease accumulations, and 3) to eliminate sanitary sewer overflows (SSO) that may result from such blockages.

7.1 FOG and District’s FOG Control Program

FOGs present in wastewater are commonly composed of animal fats, vegetable fats, food solids of varying densities, and water and petroleum based oils and grease. Food based fats and grease are commonly discharged from restaurants and other food preparation facilities. Three common discharges of this type of FOG are in the form of waste cooking oil, grease trap wastes, and interceptor wastes. Typically, especially in large sewer service areas, food based FOG is difficult to control because of the large number of restaurants and fast food establishments.

Within the District’s sewer service area there are over 160 permitted food establishments (See Map G-9 in Appendix G). All food establishments desiring to discharge wastewater into the District’s sewer system must obtain a Wastewater Discharge permit from the District. In addition to providing information to the District regarding the type and location of the establishment, the discharge permit allows the District to evaluate each potential discharger to the sewer system on a case by case basis. Permit application requirements and other specific requirements in the permit process are detailed in Section 6 of the Rules and Regulations.

Information on all of the permitted food establishments are tracked in an electronic database system called “LinkoFOG.” The District’s Compliance Administrator is responsible for updating and maintaining the FOG database. The database organizes many aspects of the FOG Program including the tracking of: permitted grease traps, inspections, maintenance schedules, violations, and enforcements.

The District’s Lead Compliance Administrator routinely inspects restaurants and other permit holders to ensure that grease removal equipment (grease traps, grease interceptors, and other pre-treatment equipment) is installed and working correctly. District ordinances require grease removal equipment on all new restaurants and grease producers.

The District, using a combination of historical sewer cleaning records and closed circuit television (CCTV) data, is able to identify sections of the collection system subject to FOG blockages and subsequently include these sections on the preventative maintenance cleaning schedule. If necessary, sections of sewer may be included as part of the “Hot Spot” cleaning list in which cleaning frequencies are increased. Ideally, however, the ultimate objective of the FOG program is to eliminate the need for increased sewer cleaning based on FOGs only.

Finally, petroleum based oils and grease are typically discharged by businesses such as automotive repair facilities, gas stations and car washes. Any person, municipality, sanitation district, or government agency proposing to discharge industrial waste into a District sewer shall obtain a Permit for Industrial Waste Discharge from the District (Section 6.4.2 – Rules and Regulations).
7.2 Public Education Outreach Program

The District’s website includes an entire webpage dedicated to the District’s FOG Program. The webpage is found by accessing the District’s website (www.padredam.org) and by clicking the following links: Your Water > Wastewater > Fats, Oils & Grease Program. The FOG Program Webpage includes the following information:

- An Overview of FOG and how it can be detrimental to sewer collection systems.
- Permit information for restaurants and food service establishments (FSE)
- FOG BMP Toolkit which includes:
  - How to prevent FOG related sewer overflows
  - FOG Best Management Practices (BMP)
- Food Service Establishment (FSE) Wastewater Discharge Permit Application
- FOG Training Video

Another public outreach effort that has been used targets residences and involves including a one page, bilingual (English and Spanish) mailing included in customer billing packages describing FOGs and how to prevent sewage spills. The intent of the program is to increase awareness regarding the proper disposal of fats, oils, and greases.

Additionally, the District conducts annual inspections that reinforce the concept of FOG control to the restaurants and commercial kitchens. These are face to face meetings that provide business owners the opportunity to ask questions and receive input on how to improve FOG management.

7.3 Disposal of FOG

The WDR requires the Sewer System Management Plan (SSMP) to include, if appropriate, a “plan and schedule for the disposal of FOG generated within the sanitary sewer system service area.” In the District’s case, the planning and scheduling for the disposal of FOG is the responsibility of the discharger. In the District’s Rules and Regulations Section 6.7.5, the discharger is responsible for the proper removal and disposal of material captured from grease pretreatment devices, and from collection drums used for segregating oils, greases, and greasy solids. Additionally, dischargers are required to provide documentation to the District’s Compliance Administrator indicating the proper disposal of all grease and oil to a recycling or disposal contractor or facility. Below is a list of some reputable FOG removal companies:

<table>
<thead>
<tr>
<th>Table 7-1 FOG Removal Company Contacts</th>
</tr>
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<tbody>
<tr>
<td>Company Name</td>
</tr>
<tr>
<td>Al Max Sanitation</td>
</tr>
<tr>
<td>Atlas Pumping</td>
</tr>
<tr>
<td>Affordable Grease Pumping</td>
</tr>
<tr>
<td>Darling Intl.</td>
</tr>
<tr>
<td>Diamond Environmental Services</td>
</tr>
</tbody>
</table>
7.4 Disposal of FOG

Refer to Section 3.4 of the Legal Authority section of this SSMP.

7.5 Source Control Measures

Section 6.7.5 of the Rules and Regulations requires each discharger to install a grease pretreatment device to remove grease from wastewater prior to discharge when applicable. Additionally, as part of the Wastewater Discharge permit package, the District includes guidelines for maintenance of grease removal equipment, grease trap/interceptor cleaning record verification form, grease waste haulers standards, and waste discharge requirements for grease traps and interceptors.

Under the District’s existing FOG control program (Rules and Regulations – Section 6) each discharger shall install a grease pretreatment device, of a type approved by the District, to remove grease from wastewater prior to discharge. Additionally, each discharger shall also provide a collection drum or other container for the purpose of physically segregating all oils, greases, and greasy solids. Routine inspections are performed by the District’s Compliance Staff to ensure source control measures are functioning as intended.

7.6 Inspection of FOG Producing Facilities

In addition to the inspection authority described in Section 3.3 of the Legal Authority section of this SSMP, Section 6.1.5 of the District’s Rules and Regulations provides the District with the authority to inspect, at its own discretion, the premises of any facility (including FOG dischargers) that directly or indirectly discharge wastewater into the sewer system. The right to inspect also includes reviewing and/or receiving a copy of pertinent records relating to pretreatment operations, disposal records, and operations log books.

7.7 FOG Blockage History

The District’s FOG control program is composed of two primary components: 1) source control and 2) targeted cleaning and maintenance of identified sewer lines. Identification and more frequent cleaning of trouble spots (“Hot Spots”) or sewer lines that are prone to grease accumulation is the principal means of FOG control currently utilized.

- FOG Problem Identification: Potential FOG problem areas are typically associated with restaurants. Additionally, the District also monitors and tracks the locations and causes of dry weather blockages and SSOs to determine if they were FOG related. In either case, based on the information provided by field crews, the District’s Geographic Information System (GIS) department has developed a comprehensive database consisting of specific field information. Information from the database can then be analyzed to determine the relationship, if any, between grease-producing facilities and “Hot Spots” which assists in optimizing sewer cleaning maintenance schedules.

- “Hot Spot” Cleaning: Approximately 18,120 linear feet (lf) of sewer (2% of the gravity system) are included in the “Hot Spot” cleaning program as of the date of this SSMP
Update. A sewer link is often classified as a “Hot Spot” due to history of blockages related to fats, oils, and grease. See Appendix G for a map illustrating the location and proximity of “Hot Spots” to grease trap locations within the District’s service area.

The District monitors the number of SSOs due to FOG on an annual basis. The District has practiced summarizing this information in internal SSMP 2-year Program Audits beginning in calendar year 2016. A 2019 Program Audit containing SSO information through the end of 2018 is found in Appendix H. Also, contained within the 2-year Program Audit is a summary of the number of facilities inspected and violations encountered. These metrics, along with the education outreach activities implemented annually are to assist the District in measuring the effectiveness of the FOG program and determine whether program changes are warranted.
Section 8: System Evaluation and Capacity Assurance Plan

Section D.13. (viii) of the WDR requires a system evaluation and capacity assurance plan. The WDR states:

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, and the major sources that contribute to 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.

Under the Sewer System Management Plan (SSMP) it is the District’s responsibility to make certain that its capital improvement program (CIP) includes provisions to ensure adequate hydraulic capacity of key sewer system elements for dry weather peak flow and wet weather (design storm) conditions. Major components of the capacity assurance plan, as determined by the WDR, include:

- Evaluating the hydraulic capacity of the collection system.
- Reviewing and updating, if required, pertinent design criteria.
- Identifying system hydraulic deficiencies and including them as projects in the CIP.
- Developing a schedule to ensure projects in CIP are executed.

8.1 District Capacity Evaluation

The District’s Comprehensive Facilities Master Plan (CFMP or Master Plan) provides an assessment of the capacity of the sewer system. The main purpose is to evaluate the carrying capacity of the sewer lines against the projected peak flow from land use, population growth, and water conservation trends. The sewer system has been hydraulically analyzed comparing previously collected flow monitoring data and hydraulic modeling results against District design.
criteria. Evaluation of the modeling results provided the basis for capacity-related project identification.

Every five to seven years, or as needed, District Engineering staff updates the Master Plan sewer capacity evaluation. Updated land use information, population growth projections, water conservation trends, and the re-assessment of customer fees drive the need for these updates. The entire sewer collection system is evaluated using updated information, flow monitoring studies, and projections. Identified projects are checked against previously determined projects and the project list and associated costs are updated as required.

As of the date of this SSMP Update, the District has completed the 2015 CFMP, as well as updated Sewer Hydraulic Model Calibration and System Analysis in September 2018. This effort includes the estimation and verification of existing and future (projected) sewer flows. Water billing data is analyzed and compared with historical sewer flow data that was collected during District wide sewer flow studies (performed in 1998, 2005, 2010, and most recently in 2016). This data is analyzed along with historical rainfall data and recent water conservation trends to establish average dry weather flows, average wet weather flows, and peak wet weather flows. This data is also used to estimate average infiltration and inflow factors.

Another goal of the Master Plan is to review and analyze wastewater generator factors for various land use categories including residential, commercial, and industrial. This analysis allows the development of wastewater flow coefficients for each land use category (gpd/ac), which is used by District Staff and/or prospective Developers for estimating additional flows associated with future developments.

In addition to its Master Plan, the District has an effective and proactive capacity evaluation program in place that includes planning and monitoring capacity in the sewer collection system. Beginning in 1997, the District has evaluated the capacity in the sewer collection system every five to seven years, or as needed. The program is currently the responsibility of the District’s Engineering Department. The primary elements of the District’s capacity evaluation program are described in the following sections:

### 8.1.1 Mapping

The District’s Geographic Information System (GIS) Department is responsible for all mapping activities, including maintaining current GIS sewer feature classes used for mapping the sewer collection system. In regards to capacity evaluation, a complete and accurate map of the system allows the Engineering Department to:

- Define the location, size, and extent of the collection system.
- Develop a flow measurement plan.
- Determine the extents of hydraulic modeling.

### 8.1.2 Flow Measurement

Every five to seven years the District issues a request for proposal (RFP) to flow monitoring contractors to provide flow monitoring services for a period varying from 2 to 4 weeks. Release of the RFP typically coincides with anticipated wet weather so that both dry weather and wet weather flows are captured during the flow monitoring period. A standard requirement of the District is for the contractor to develop a rainfall dependent inflow and infiltration (RDII) analysis from the flow
data collected during monitoring period. Sewer flow meters are placed in strategically located manholes throughout the collection system in an attempt to minimize the number of meters (cost) while maximizing the amount of quality flow data.

Flow monitoring is the key component of the capacity evaluation plan in that it:

- Defines the flows observed in the system.
- Provides the basis of model “calibration.”
- Identifies types of defects (inflow or infiltration).

The most recent District wide flow study was performed in January through March of 2016, as an update to the results of a 2010 flow monitoring study used in the sewer model evaluation for the 2015 CFMP. The flow data from this study indicates the District’s dry weather sewer flows have decreased by approximately 1.8% from the time the previous flow study was performed in 2010, while maintaining service to a larger population. This decrease is attributed to various factors, including water conservation and higher efficiency plumbing fixtures and appliances.

8.1.3 Physical Inspection

In some instances, either to troubleshoot a flow monitoring problem or to confirm flow monitoring results, the District may elect to supplement flow monitoring with physical inspection of the sewer system. Standard physical inspection techniques include:

- Visual inspection.
- Smoke testing.
- Closed Circuit Television (CCTV) inspection.

8.1.4 Hydraulic Modeling

Hydraulic modeling is performed by a combination of in-house District Staff and consultants. The modeling software used is InfoSWMM Version 14. InfoSWMM allows for dynamic modeling and is fully compatible with GIS. Hydraulic modeling provides the District with the following:

- Theoretical capacity of the collection system.
- Tool for evaluating extreme flow loading events (future population, design storm event) allowing District to “stress” the system.
- Project identification based on collection system deficiencies (as related to District design criteria).
- Alternative evaluation.
- Proposed development capacity verification.

8.1.5 Capital Improvement Program (CIP)

Projects are identified based on a combination of flow monitoring data, hydraulic modeling simulations, and routine internal coordination between the Operations and Engineering departments. When a problem in the sanitary sewer system such as a “Hot Spot” is discovered by field crews, Operations and Engineering staff work collaboratively to identify new projects to
resolve the problem. As the scope of identified projects is refined, the identified projects are then included in the CIP where they are prioritized and funding sources are determined.

The District’s current Master Plan details the methods and assumptions taken in evaluating the sewer collection system. The documents describe the approach taken for estimating system loads, characterize system flow components, and the development of the hydraulic sewer model and associated parameters for both existing and projected conditions. The sewer system evaluation was performed for both average dry weather and peak wet weather flow conditions. Where deficiencies were identified, projects were recommended for inclusion in the District’s CIP. The District’s capacity evaluation plan is updated periodically using the most recent data collected from flow monitoring results, field inspections, and local agency development planning information. The update is conducted to determine if flow increases are occurring as projected. Appendix C contains a map of the collection system illustrating projected capital improvement projects and anticipated schedules.

8.2 Design Criteria

In general, the philosophy of the District’s capacity evaluation is based on the objective to eliminate the occurrence of sanitary sewer overflows (SSOs). This objective is consistent with National Pollutant Discharge Elimination System (NPDES) permit requirements and San Diego Regional Water Quality Control Board policy. From a hydraulic modeling standpoint, a new sewer is designed to a hydraulic capacity under peak dry weather flow conditions of:

- \( \frac{d}{D} < 0.5 \) (Pipes diameter, \( D \), \( \leq 12 \)-inch)
- \( \frac{d}{D} < 0.75 \) (Pipe diameter, \( D \), \( > 12 \)-inch)

A sewer line is typically considered hydraulically deficient where the model indicates a \( \frac{d}{D} \) ratio greater than 90\% during a 10-year, 24-hour storm event. Although these criteria are typically used in the design of new sewers and are not necessarily the rule for existing sewers, this approach allows for potential projects to be identified and included in the CIP. The projects would be prioritized against other CIP projects. Additionally, the current software being used in-house for hydraulic sewer modeling, InfoSWMM Version 14, has the ability to calculate SSO volumes found during modeling.

8.3 Capacity Enhancement Measures

Short-term and long-term capital improvement projects needed to address identified hydraulic deficiencies are identified in the District’s Master Plan and the CIP. The Master Plan includes a list of each sewer improvement project identified as necessary to increase the capacity of portions of the sewer system that are shown to be deficient. The District’s CIP provides a comprehensive view of the projects required over the next twenty years. The CIP is the foundation of the District’s long range capital investments and financial planning. The CIP is an annually updated financial planning tool and is intended to provide a comprehensive view of the new capital facilities and the improvements to the existing capital facilities required to successfully carry out the District’s mission. This comprehensive approach provides an opportunity for the District to prioritize capital expenditures, manage cash flow, and establish rates and charges that provide sufficient revenue to fund the required projects.
CIP planning is an iterative process that begins with preparation of a draft CIP by Operations and Engineering staff, review by Finance and management, fine-tuning by staff, and finally approval by Padre Dam MWD’s General Manager and Board of Directors.

Potential CIP projects are initially identified through the District’s master planning process, operations field inspections, customer complaints, developer activity, regulatory requirements, and Board direction. At the beginning of the CIP budget cycle, identified projects are prioritized without regard to budget or schedule constraints. Each proposed project in the CIP is assigned a priority ranking according to the prioritization criteria developed by the American Water Works Association Research Foundation. The prioritization system provides a method to rank or rate the relative importance of a project based on the following criteria:

- Protection of health and safety.
- Maintaining and enhancing infrastructure reliability.
- Meeting legal requirements and regulatory compliance.
- Maintaining and enhancing efficiency and competitiveness.
- Maintaining and enhancing customer service.
- Rate of return on the District’s investment.

Projects are then scheduled over the span of the CIP, currently five years, in priority order with consideration given to constraints such as availability of funding, difficulty of implementation, staffing, and dependencies between projects.

Once a project is released for design the capacity of the sewer is reviewed using the most recent data available to determine if the proposed diameter is still appropriate. At that stage of design, a pre-design report or memorandum is also typically completed where the feasibility of alternative design options are also explored.

**8.4 Schedule**

Sewer system evaluation and capacity assurance is assessed as a part of the District’s Master Plan, which identifies sewer system deficiencies over a 25 year planning horizon. The District's current Master Plan was adopted in 2015. The District anticipates it will re-evaluate the Master Plan every five years and will make updates/revisions every 10 years.
Section 9: Monitoring, Measurement, and Program Modifications

Section D.13. (ix) of the WDR states the following:

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.

The District collects, maintains, and updates relevant data for the following activities: closed circuit television (CCTV), sewer cleaning, FOG control, sewer capacity evaluation, SSOs, and customer complaints. All of the data collected is stored in electronic databases. Each dataset typically contains a common data field, such as a sewer link (manhole to manhole ID), which allows the datasets to be cross referenced against each other to provide an overall picture of the sewer collection system and to assist in optimizing sewer maintenance.

9.1 Implementation and Effectiveness of the SSMP Elements

A brief description of how the District implements and measures the effectiveness of the major operational components of the Sewer System Management Plan (SSMP) is described below. The actual evaluation is summarized in the SSMP Internal 2-year Program Audit. An internal Program Audit including SSMP element information through calendar year 2018 is included in this document as Appendix H.

- Operations and Maintenance (O&M) Program: Monitoring implementation of the O&M program is the responsibility of the District’s Construction and Maintenance Crew Supervisor. Effectiveness of the O&M program is measured based on the following key performance indicators:
  - Number of sanitary sewer overflows (SSOs) per year.
  - Number of dry weather SSOs per year.
  - Number of SSOs per year by cause (e.g., grease, roots, debris, etc.).
  - Length of gravity sewers cleaned annually.
  - Actual versus scheduled cleaning dates for gravity sewers.
  - Length of gravity sewers CCTV inspected annually.
  - Record of pump station maintenance work orders completed annually.
• Sanitary Sewer Overflow Emergency Response Plan (SSOERP): Implementation of the SSOERP is the responsibility of the District’s Construction and Maintenance Crew Supervisor. Performance indicators to measure the effectiveness of the plan may include volume of SSO contained in relation to calculated total SSO volume, if SSO reached surface waters, and the response time to an SSO event or other service call.

• FOG Control Program: Implementation of the FOG Control Program is the responsibility of the District's Lead Compliance Administrator. Effectiveness of the FOG Control Program is ultimately based on the occurrence of SSOs caused by FOG. The Lead Compliance Administrator is also required to inspect all of the permitted grease traps annually. Facilities that have a history of grease trap performance deficiencies are tracked and randomly inspected throughout the year.

• System Evaluation and Capacity Assurance Plan: Sewer system capacity evaluation is currently the responsibility of the District’s Engineering Department. Evaluation of the sewer system includes reviewing land use information and population growth projections, performing sewer flow studies, and hydraulic modeling. Effectiveness of the capacity assurance plan is based on the occurrence of capacity-related overflows and by the timely completion of identified sewer replacement projects as a sewer reaches its capacity.

These metrics are defined to assist the District in measuring the effectiveness of the SSMP and determine whether program changes are warranted.

9.2 Success of the Preventative Maintenance Program

Success of the preventative maintenance program directly relates to the occurrence of SSOs. Other measures of success include increasing the useful life of an asset due to an effective maintenance program and the cost of repairs for system failures.

9.3 Updating the SSMP

The intent of this SSMP is that it will be a “living” document that will be updated or amended as signification changes to the sewer collection system occur or as policies and procedures change. At a minimum the SSMP will be reviewed every two years and updated every five years to comply with the WDR requirements.

9.4 SSO Trends

For any given SSO, event data is collected including, but not limited to, location, cause of overflow, and estimated volume of overflow. The District will use this information to identify trends in SSO events, and to continually improve its overall SSO response and preventative maintenance activities. Refer to the 2-year Program Audit Template found as Appendix H for further details.
Section 10: SSMP Program Audits

Section D.13. (x) of the WDR states the following:

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

The District has practiced summarizing SSMP element information in internal SSMP 2-year Program Audits beginning in calendar year 2016. Table 10-1 below provides a schedule over the next 16 years for when the District is to conduct Audits versus SSMP updates.

Table 10-1: SSMP Audit and Update Schedule

<table>
<thead>
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<th>Year</th>
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<td></td>
<td>Audit*</td>
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<td>Audit</td>
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* Included as/with this document

Appendix H contains the District’s 2019 Program Audit, including information for 2014 through 2018. The Program Audit is to be completed internally or by a qualified consultant every 2 years. The audit includes the following:

- An evaluation of the effectiveness of the major operational components of the SSMP.
- Identification of successes of implementing SSMP elements and needed improvements.
- Description of system improvements during the past two years.
• Description of system improvements planned for the upcoming two years.

The completed audit using the template included in Appendix H will be the final report and will be kept on file with corresponding SSMP documents.
Section 11: Communication Program

This section summarizes the District’s communication program as required by the WDR. The WDR states the following:

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.

11.1 Online Communications

To assure communications with the public on a regular basis, information regarding the development, implementation and performance of the District’s Sewer System Management Plan (SSMP) will be posted on the District’s website (www.padredam.org), where it will be available to the public 24 hours per day. The District has updated its website design with the following features:

- The most recent SSMP is posted in PDF format, readable by anyone with a free, downloadable version of Adobe Acrobat software. A link to the SSMP document can be found on the District’s website by clicking: About Us > Policies, Plans & Reports.
- The SSMP is included with the District’s key planning and regulatory documents including those listed below. All of these documents are available for the public to view on the District’s website by clicking: About Us > Policies, Plans & Reports.
  - Urban Water Management Plan (UWMP)
  - Comprehensive Facilities Master Plan (CFMP)
  - Capital Improvement Program (CIP) Plan
  - Five-Year Business Plan and Budget
- Regulatory and public outreach information about the FOG program, required in Section 7 of the SSMP, can be reached by clicking: Your Water > Wastewater > Fats, Oils & Grease Program
- Public outreach information on sewer lateral maintenance and repair is available by clicking: Customer Service > When to Call for a Sewer Repair.
- Every page on the website will provide an electronic link allowing the reader to email comments or questions, to which the District’s communications staff will respond.

11.2 Print Communications

The District provides newsletters, brochures and notices to customers throughout the year. The following communications will provide information regarding the development, implementation and performance of the SSMP:
• Customers are currently billed on a monthly schedule and receive a two-page, 8.5 x 11 inch newsletter with their bill quarterly. Each year, one of the four newsletters will educate customers on:
  o Sewer system management issues
  o The Master Plan, CIP and SSMP and access to them on the District’s website
  o Preventive maintenance results
  o Sewer main breaks
  o FOG prevention
  o Tree root blockage prevention

• Customers are provided with advanced notice when they will be impacted by construction. In addition to details about the project, these notices introduce customers to the importance of infrastructure issues and capital investment, and to the District’s Master Plan, CIP, and SSMP.

11.3 Public Meetings

The District conducts Board of Directors (Board) meetings twice monthly and Board subcommittee meetings bimonthly or quarterly. The date, time and agenda of each meeting is publicly noticed and posted on the District’s website, the meetings are open to the public, and customers are encouraged to attend. The District’s website provides Board meeting minutes, as well, for public review. Agenda items regarding the development, implementation and performance of the SSMP will be brought by staff to the Board throughout the year as required.
APPENDIX A
Statewide Waste Discharge Requirements for Sanitary Sewer Systems
APPENDIX A-1
State Water Resources Control Board
Order No. 2006-003-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

<table>
<thead>
<tr>
<th>Task and Associated Section</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application for Permit Coverage</strong>&lt;br&gt;Section C</td>
<td>6 months after WDRs Adoption</td>
</tr>
<tr>
<td><strong>Reporting Program</strong>&lt;br&gt;Section G</td>
<td>6 months after WDRs Adoption¹</td>
</tr>
<tr>
<td><strong>SSMP Development Plan and Schedule</strong>&lt;br&gt;No specific Section</td>
<td>9 months after WDRs Adoption²</td>
</tr>
<tr>
<td><strong>Goals and Organization Structure</strong>&lt;br&gt;Section D 13 (i) &amp; (ii)</td>
<td>12 months after WDRs Adoption²</td>
</tr>
<tr>
<td><strong>Overflow Emergency Response Program</strong>&lt;br&gt;Section D 13 (vi)</td>
<td>24 months after WDRs Adoption²</td>
</tr>
<tr>
<td><strong>Legal Authority</strong>&lt;br&gt;Section D 13 (iii)</td>
<td>24 months after WDRs Adoption²</td>
</tr>
<tr>
<td><strong>Operation and Maintenance Program</strong>&lt;br&gt;Section D 13 (iv)</td>
<td>36 months after WDRs Adoption</td>
</tr>
<tr>
<td><strong>Grease Control Program</strong>&lt;br&gt;Section D 13 (vii)</td>
<td></td>
</tr>
<tr>
<td><strong>Design and Performance</strong>&lt;br&gt;Section D 13 (v)</td>
<td></td>
</tr>
<tr>
<td><strong>System Evaluation and Capacity Assurance Plan</strong>&lt;br&gt;Section D 13 (viii)</td>
<td></td>
</tr>
<tr>
<td><strong>Final SSMP, incorporating all of the SSMP requirements</strong>&lt;br&gt;Section D 13</td>
<td></td>
</tr>
</tbody>
</table>

¹ For populations of 100,000 and greater, the SSMP must be completed within 6 months after WDRs Adoption.
² For populations of less than 100,000, the SSMP must be completed within 18 months after WDRs Adoption.
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:

<table>
<thead>
<tr>
<th>Reporting Program</th>
<th>Section G</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Boards 4, 8, and 9</td>
<td>8 months after WDRs Adoption</td>
<td></td>
</tr>
<tr>
<td>Regional Boards 1, 2, and 3</td>
<td>12 months after WDRs Adoption</td>
<td></td>
</tr>
<tr>
<td>Regional Boards 5, 6, and 7</td>
<td>16 months after WDRs Adoption</td>
<td></td>
</tr>
</tbody>
</table>

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

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

E. WDRs and SSMP AVAILABILITY

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

F. ENTRY AND INSPECTION

1. The Enrollee shall allow the State or Regional Water Boards or their authorized
representative, upon presentation of credentials and other documents as may be
required by law, to:

   a. Enter upon the Enrollee’s premises where a regulated facility or activity
      is located or conducted, or where records are kept under the
      conditions of this Order;

   b. Have access to and copy, at reasonable times, any records that must
      be kept under the conditions of this Order;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

G. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The Enrollee shall furnish to the State or Regional Water Board, within a reasonable time, any information that the State or Regional Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Enrollee shall also furnish to the Executive Director of the State Water Board or Executive Officer of the applicable Regional Water Board, upon request, copies of records required to be kept by this Order.

2. The Enrollee shall comply with the attached Monitoring and Reporting Program No. 2006-0003 and future revisions thereto, as specified by the Executive Director. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2006-0003. Unless superseded by a specific enforcement Order for a specific Enrollee, these reporting requirements are intended to replace other mandatory routine written reports associated with SSOs.

3. All Enrollees must obtain SSO Database accounts and receive a “Username” and “Password” by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within 30 days of receiving an account and prior to recording spills into the SSO Database, all Enrollees must complete the “Collection System Questionnaire”, which collects pertinent information regarding an 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
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.

2. All records shall be made available for review upon State or Regional Water Board staff’s request.

3. 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;

4. 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.

5. 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
APPENDIX A-2

State Water Resources Control Board

Order No. WQ 2008-0002-EXEC

Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

Note: SWRCB Order No. WQ 2008-0002-EXEC amends the MRP Requirements per SWRCB Order No. 2006-0003-DWQ per Appendix A-1.
STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  

ORDER NO. WQ 2008-0002-EXEC  

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

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

1. The State Water Board is authorized to prescribe statewide general waste discharge  
requirements for categories of discharges that involve the same or similar operations  
and the same of similar types of waste pursuant to Water Code 13263, subdivision (l).  

2. The State Water Board on May 2, 2006, adopted Statewide General Waste Discharge  
Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, pursuant to that  
authority.  

3. The State Water Board on May 2, 2006, adopted Monitoring and Reporting  
Requirements to implement the General Waste Discharge Requirements for Sanitary  
Sewer Systems.  

4. State Water Board Order No. 2006-0003-DWQ, paragraph G.2., and the Monitoring and  
Reporting Requirements, both provide that the Executive Director may modify the terms  
of the Monitoring and Reporting Requirements at any time.  

5. The time allowed in those Monitoring and Reporting Requirements for the filing of the  
initial report of an overflow is too long to adequately protect the public health and safety  
or the beneficial uses of the waters of the state when there is a sewage collection  
system spill. An additional notification requirement is necessary and appropriate to  
ensure the Office of Emergency Services, local public health officials, and the applicable  
regional water quality control board are apprised of a spill that reaches a drainage  
channel or surface water.  

6. Further, the burden of providing a notification as soon as possible is de minimis and will  
allow response agencies to take action as soon as possible to protect public health and  
safety and beneficial uses of the waters of the state.  

IT IS HEREBY ORDERED THAT:  

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

Dated: February 20, 2008  

Dorothy Rice  
Executive Director
ATTACHMENT A

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

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
SANITARY SEWER SYSTEMS

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

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

1. For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.

2. As soon as possible, but no later then twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

1. Category 1 - All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
   A. Equal or exceed 1000 gallons, or
   B. Result in a discharge to a drainage channel and/or surface water; or
   C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.
2. Category 2 – All other discharges of sewage resulting from a failure in the Enrollee’s sanitary sewer system.

3. Private Lateral Sewage Discharges – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

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

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

5. Category 2 SSOs – All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).

6. Private Lateral Sewage Discharges – All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee’s discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.

7. If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.

8. In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in
accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

**Mandatory Information to be Included in SSO Online Reporting**

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

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

9. **Category 2 SSOs:**

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

10. **Private Lateral Sewage Discharges:**

    A. All information listed above (if applicable and known), as well as;
    B. Identification of sewage discharge as a private lateral sewage discharge; and
    C. Responsible party contact information (if known).
11. Category 1 SSOs:

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

Reporting to Other Regulatory Agencies

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

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

   Office of Emergency Services
   Phone (800) 852-7550

2. The Enrollee shall report SSOs to County Health officials in accordance with
California Health and Safety Code Section 5410 et seq.

3. The SSO database will automatically generate an e-mail notification with
customized information about the SSO upon initial reporting of the SSO and final
certification for all Category 1 SSOs. E-mails will be sent to the appropriate
County Health Officer and/or Environmental Health Department if the county
desires this information, and the appropriate Regional Water Board.
B. Record Keeping

1. Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

[2. Omitted.]

3. All records shall be made available for review upon State or Regional Water Board staff’s request.

4. All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;

5. The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:
   a. Record of Certified report, as submitted to the online SSO database;
   b. All original recordings for continuous monitoring instrumentation;
   c. Service call records and complaint logs of calls received by the Enrollee;
   d. SSO calls;
   e. SSO records;
   f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
   g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
   h. A list and description of complaints from customers or others from the previous 5 years; and
   i. Documentation of performance and implementation measures for the previous 5 years.

6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical technique or method used; and,
   f. The results of such analyses.
C. Certification

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

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

CERTIFICATION

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

Jeanne Townsend
Clerk to the Board
Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

Note: SWRCB Order No. WQ 2013-0058-EXEC amends the MRP Requirements per SWRCB Order No. 2006-0003-DWQ per Appendix A-1, and supersedes the MRP Requirements per SWRCB Order No. 2008-0002-EXEC per Appendix A-2.
STATE OF CALIFORNIA
WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR
SANITARY SEWER SYSTEMS

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

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(l).

2. Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.

3. Water Code section 13271, et seq. requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.

4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems" \(^1\) (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.

5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.

6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.

7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information\(^2\) to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

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\(^2\) Cal OES Hazardous Materials Spill Reports available Online at: [http://w3.calema.ca.gov/operational/malhaz.nsf/$defaultview](http://w3.calema.ca.gov/operational/malhaz.nsf/$defaultview) and [http://w3.calema.ca.gov/operational/malhaz.nsf](http://w3.calema.ca.gov/operational/malhaz.nsf)
and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to redesigning the CIWQS\(^3\) Online SSO Database to allow "event" based SSO reporting versus the original "location" based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.

9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.

10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program\(^4\) objectives, assess compliance, and enforce the requirements of the SSS WDRs.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

\[8/6/13\]
Date

[Signature]
Thomas Howard
Executive Director

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\(^3\) California Integrated Water Quality System (CIWQS) publicly available at http://www.waterboards.ca.gov/ciwqs/publicreports.shtml

\(^4\) Statewide Sanitary Sewer Overflow Reduction Program information is available at: http://www.waterboards.ca.gov/water_issues/programs/sso/
ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD
ORDER NO. WQ 2013-0058-EXEC

AMENDING MONITORING AND REPORTING PROGRAM
FOR
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 2006-0003-DWQ, “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to $5,000 a day per violation pursuant to Water Code section 13350; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

A. SUMMARY OF MRP REQUIREMENTS

Table 1 – Spill Categories and Definitions

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>DEFINITIONS</th>
</tr>
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<tbody>
<tr>
<td>CATEGORY 1</td>
<td>Discharges of untreated or partially treated wastewater of <strong>any volume</strong> resulting from an enrollee’s sanitary sewer system failure or flow condition that:</td>
</tr>
<tr>
<td></td>
<td>• Reach surface water and/or reach a drainage channel tributary to a surface water; or</td>
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<td></td>
<td>• Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).</td>
</tr>
<tr>
<td>CATEGORY 2</td>
<td>Discharges of untreated or partially treated wastewater of <strong>1,000 gallons or greater</strong> resulting from an enrollee’s sanitary sewer system failure or flow condition that <strong>do not</strong> reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.</td>
</tr>
<tr>
<td>CATEGORY 3</td>
<td>All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.</td>
</tr>
<tr>
<td>PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)</td>
<td>Discharges of untreated or partially treated wastewater resulting from blockages or other problems <strong>within a privately owned sewer lateral</strong> connected to the enrollee’s sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.</td>
</tr>
</tbody>
</table>
## Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>REQUIREMENT</th>
<th>METHOD</th>
</tr>
</thead>
</table>
| **NOTIFICATION**  
(see section B of MRP) | • Within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water**, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.  
Call Cal OES at: (800) 852-7550 | |
| **REPORTING**  
(see section C of MRP) | • Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.  
• Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.  
• Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred.  
• SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.  
• “No Spill” Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.  
• Collection System Questionnaire: Update and certify every 12 months. | Enter data into the CIWQS Online SSO Database [http://ciwqs.waterboards.ca.gov/](http://ciwqs.waterboards.ca.gov/), certified by enrollee’s Legally Responsible Official(s). |
| **WATER QUALITY MONITORING**  
(see section D of MRP) | • Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. | Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. |
| **RECORD KEEPING**  
(see section E of MRP) | • SSO event records.  
• Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.  
• Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.  
• Collection system telemetry records if relied upon to document and/or estimate SSO Volume. | Self-maintained records shall be available during inspections or upon request. |
B. NOTIFICATION REQUIREMENTS

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:
   i. Name of person notifying Cal OES and direct return phone number.
   ii. Estimated SSO volume discharged (gallons).
   iii. If ongoing, estimated SSO discharge rate (gallons per minute).
   iv. SSO Incident Description:
      a. Brief narrative.
      b. On-scene point of contact for additional information (name and cell phone number).
      c. Date and time enrollee became aware of the SSO.
      d. Name of sanitary sewer system agency causing the SSO.
      e. SSO cause (if known).
   v. Indication of whether the SSO has been contained.
   vi. Indication of whether surface water is impacted.
   vii. Name of surface water impacted by the SSO, if applicable.
   viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
   ix. Any other known SSO impacts.
   x. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.
C. REPORTING REQUIREMENTS

1. CIWQS Online SSO Database Account: All enrollees shall obtain a CIWQS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. SSO Mandatory Reporting Information: For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. SSO Categories

   i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:

      a. Reach surface water and/or reach a drainage channel tributary to a surface water; or

      b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

   ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

   iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.

4. Sanitary Sewer Overflow Reporting to CIWQS - Timeframes

   i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

      a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.

      b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.
ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.

iii. **“No Spill” Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/ May/ June, Q3 - July/ August/ September, and Q4 - October/ November/ December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a “No Spill” certification statement for that month.

iv. **Amended SSO Reports** – The enrollee may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to the adoption date of this MRP may only be amended up to 120 days after the effective date of this MRP. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The enrollee shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

i. **Causes and Circumstances of the SSO:**
   a. Complete and detailed explanation of how and when the SSO was discovered.
   b. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
   c. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
   d. Detailed description of the cause(s) of the SSO.
   e. Copies of original field crew records used to document the SSO.
   f. Historical maintenance records for the failure location.

ii. **Enrollee’s Response to SSO:**
   a. Chronological narrative description of all actions taken by enrollee to terminate the spill.
   b. Explanation of how the SSMP Overflow Emergency Response plan was implemented to respond to and mitigate the SSO.
c. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. **Water Quality Monitoring:**
   a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
   b. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee’s sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:
a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

1. **SSO Contact Information**: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. **SSO Location Name**.
3. **Location of the overflow event (SSO)** by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. **Estimate of the SSO volume**, inclusive of all discharge point(s).
8. **Estimate of the SSO volume** that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. **Estimate of the SSO volume recovered** (if applicable).
10. **Number of SSO appearance point(s)**.
11. **Description and location of SSO appearance point(s)**. If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. **SSO start date and time**.
13. **Date and time the enrollee was notified of, or self-discovered, the SSO**.
14. **Estimated operator arrival time**.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.

b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a:

1. **Description of SSO destination(s)**.
2. **SSO end date and time**.
3. **SSO causes** (mainline blockage, roots, etc.).
4. **SSO failure point** (main, lateral, etc.).
5. Whether or not the spill was associated with a storm event.
6. **Description of spill corrective action**, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. **Description of spill response activities**.
8. **Spill response completion date**.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.
10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

c. **Draft Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:
   1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.

d. **Certified Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:
   1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.

e. **Certified Category 3 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:
   1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.

ii. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee’s sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

The enrollee shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the enrollee’s approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:
a. Submit an **electronic** copy of the enrollee’s approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board  
Division of Water Quality  
Attn: SSO Program Manager  
1001 I Street, 15th Floor, Sacramento, CA 95814

D. **WATER QUALITY MONITORING REQUIREMENTS:**

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
   i. Ammonia
   ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. **RECORD KEEPING REQUIREMENTS:**

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee’s sanitary sewer system contractor(s).
2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
   i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not
result in SSOs. Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.

b. Date and time the complainant or informant first noticed the SSO.

c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.

d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.

iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

i. Supervisory Control and Data Acquisition (SCADA) systems

ii. Alarm system(s)

iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

F. CERTIFICATION

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.

2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO’s or DS’s contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.
5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

CERTIFICATION

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

Date  7/30/13

Jeanine Townsend
Clerk to the Board
APPENDIX B
Regional Waste Discharge Requirements for Sanitary Sewer Systems
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

ORDER R9-2007-0005

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

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

1. STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS: State Water Resource Control Board (State Board) Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, adopted by the State Board on May 2 2006, establishes minimum requirements to prevent sanitary sewer overflows (SSOs) from publicly owned operated sanitary sewer systems. Order No. 2006-0003-DWQ is the primary regulatory mechanism for sanitary sewer systems statewide, but allows each regional board to issue more stringent or more prescriptive Waste Discharge Requirements (WDRs) for sanitary sewer systems within their respective jurisdiction.

2. ENROLLMENT UNDER ORDER NO. 2006-0003-DWQ: In accordance with Order No. 2006-0003-DWQ, all federal and state agencies, municipalities, counties, districts, and other public entities that own, operate, acquire, or assume responsibility for sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to apply for coverage under the general WDRs.

3. ORDER NO. 96-04: On May 9, 1996, this Regional Board adopted Order No. 96-04, General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies, prohibiting the discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant. Each Sewage Collection Agency currently regulated under Order No. 96-04 is required to obtain enrollment under the State Board Order No. 2006-0003-DWQ.

4. SAN DIEGO REGION SANITARY SEWER OVERFLOW REGULATIONS: Order No. 96-04 has been an effective regulatory mechanism in reducing the number and magnitude of sewage spills in the Region. The Order is more stringent and prescriptive than Order No. 2006-0003-DWQ in that Order No. 2006-0003-DWQ may allow some SSOs that are currently prohibited under Order No. 96-04. In order to maintain regulation of Sanitary Sewer Systems in the San Diego Region consistent with the provisions of Order No. 96-04, this Order reaffirms the prohibition on all SSOs upstream of a sewage treatment plant. This strict prohibition implements the requirements contained in the Basin Plan, California Water Code, and Federal Clean Water Act.
5. **CONSISTENT REGIONAL REQUIREMENTS:** The regulation of all Sewage Collection Agencies will be consistent within the San Diego Region by requiring agencies such as California Department of Corrections; California State University, San Marcos; San Diego State University; and University of California, San Diego, which have not been regulated under Order No. 96-04, to comply with Regional Board requirements that augment State Board Order No. 2006-0003-DWQ.

6. **BASIN PLAN:** The Regional Board adopted a Water Quality Control Plan for the San Diego Basin (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was subsequently approved by the State Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses, narrative, and numerical water quality objectives, and prohibitions which are applicable to the discharges prohibited under this Order.

7. **PROHIBITIONS CONTAINED IN BASIN PLAN:** The Basin Plan contains the following prohibitions which are applicable to the discharges prohibited under this Order:

   a. "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited."

   b. "The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited."

   c. "The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. ..."

   d. "The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board."

   e. "The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited."

   f. "The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited."

   g. "The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board."
8. PORTER-COLOGNE WATER QUALITY CONTROL ACT (CALIFORNIA WATER CODE, DIVISION 7): California Water Code Section 13243 provides that a Regional Board, in establishing waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited. California Water Code 13280 prohibits the discharge of waste to land prior to the filing of a required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs. California Water Code 13264 prohibits discharge of waste absent a report of waste discharge and waste discharge requirements.

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

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

11. PRIVATE LATERAL SEWAGE DISCHARGES REPORTING: Order No. 96-04 does not require Sewage Collection Agencies to report Private Lateral Sewage Discharges. Over the past several years, however, this Regional Board has been tracking the number of Private Lateral Sewage Discharges based on courtesy reports from the Sewage Collection Agencies. During the period from July 2004 through June 2006, a total of 268 Private Lateral Sewage Discharges were reported by the Agencies. During some of those months, more Private Lateral Sewage Discharges were reported than public SSOs. Because the Agencies are not required to report Private Lateral Sewage Discharges, it is not known if the numbers reported fully represent the number and locations of Private Lateral Sewage Spills in the Region.
Finding Nos. 2, 3, and 4 of State Board Order No. 2006-0003-DWQ pertaining to causes of SSOs and the potential threat to water quality resulting from SSOs are also applicable to Private Lateral Sewage Discharges. Because Private Lateral Sewage Discharges are numerous and are a potential threat to public health and the environment, there is a need to have a reliable reporting system for Private Lateral Sewage Discharges for similar reasons as the public SSOs. Although sewage collection agencies are not responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, sewage collection agencies are typically notified and/or are the first responders to Private Lateral Sewage Discharges. Consequently, requiring the sewage collection agencies to report all known Private Lateral Sewage Discharges is reasonable and a first step toward development of a regulatory approach for reducing Private Lateral Sewage Discharges in the San Diego Region.

12. PERMITTING FEES: This Order will serve as additional requirements to the State Board Order No. 2006-0003-DWQ. Sewage Collection Agencies that are covered and pay the fees under State Board Order No. 2006-0003-DWQ (or orders that supersede 2006-0003-DWQ) will not be required to pay for fees under this Order No. R9-2007-0005.

13. CALIFORNIA ENVIRONMENTAL QUALITY ACT: The action to adopt this Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

14. PUBLIC NOTICE: The Regional Board has notified all known interested persons and the public of its intent to consider adoption of this Order. Interested persons and the public have had reasonable opportunity to participate in review of the proposed Order.

15. PUBLIC HEARING: The Regional Board has considered all comments pertaining to this Order submitted to the Regional Board in writing, or by oral presentations at the public hearing held on February 14, 2007.

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

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

B. Prohibition

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

C. Monitoring and Reporting Program Requirements

1. Each Sewage Collection Agency shall report all SSOs in accordance with the Monitoring and Reporting Program No. 96-04 until the Sewage Collection Agency notifies the Regional Board that they can successfully report the SSOs to the State Board Online SSO System. The notification shall be a letter signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official.

2. For Category 1 (as defined in State Board Monitoring and Reporting Program No. 2006-0003-DWQ) SSOs, the Sewage Collection Agency shall provide notification of the SSO to the Regional Board by phone, email, or fax within 24 hours after the Sewage Collection Agency becomes aware of the SSO, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the name and phone number of the person reporting the SSO, the responsible sewage collection agency, the estimated total sewer overflow volume, the location of the SSO, the receiving water (if any), the start date/time of the SSO (if known), the end date/time of the SSO (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

3. The Sewage Collection Agency shall provide notification of all Private Lateral Sewage Discharges (as defined in the State Board Order), for which they become aware of, that equal or exceed 1,000 gallons; result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system, to the Regional Board by phone or fax within 24 hours after the Sewage Collection Agency becomes aware of the Private Lateral Sewage Discharge, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the following information, if known: the name and phone number of the person reporting the Private Lateral Sewage Discharge, the service area where the Private Lateral Sewage Discharge occurred, the responsible party (other than the Sewage Collection Agency, if known), the estimated Private...
Lateral Sewage Discharge volume, the location of the Private Lateral Sewage Discharge, the receiving water (if any), the start date/time of the Private Lateral Sewage Discharge, the end date/time of the Private Lateral Sewage Discharge (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

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

D. Notification

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

2. Order No. 96-04 is rescinded once regulation of all Sewage Collection Agencies under Order No. 96-04 is terminated. The Regional Board will give written notice to all of the Sewage Collection Agencies stating that all Sewage Collection Agencies under Order No. 96-04 was terminated and, thus, Order 96-04's rescinded.

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

[Signature]
Executive Officer
APPENDIX C-2
Padre Dam Municipal Water District Future Projects Map
## EMERGENCY PHONE NUMBERS

- **All emergencies**: 9 - 1 - 1
- **Sheriff Direct Dispatch**: 858-565-5200
- **Sheriff Santee Office Administration**: 619-956-4000
- **Fire (non-emergency)**: 619-258-4100
- **Heartland Fire & Medical (non-emergency)**: 619-441-1621  Fax: 619-588-8730
- **Cal-Fire (non-emergency)**: 619-590-3100

### EMPLOYEE TELEPHONE ROSTER

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Department</th>
<th>Desk #</th>
<th>Cell #</th>
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2/22/2019
APPENDIX E-1
Padre Dam Municipal Water District Operation and Maintenance Program
OPERATION & MAINTENANCE PROGRAM

Padre Dam Municipal Water District
9300 Fanita Parkway
Santee, CA 92072

April 2019
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Section 1: Introduction

In May of 1996 the San Diego Regional Water Quality Control Board (RWQCB) issued Order 96-04, General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies, which prohibited the discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant. Among other requirements, Order 96-04 required that a sanitary sewer overflow prevention plan (SSOPP) be developed and implemented. In response, Padre Dam Municipal Water District (District) developed its own specific SSOPP. The intent of the SSOPP is to “prevent, or minimize the potential for sanitary sewer overflows”. The SSOPP provides general information, planned maintenance, and replacement schedules that are required to adequately protect the integrity of the District’s sewer facilities and the health and safety of the general public. The SSOPP was established as a “living” document to be continuously updated and amended whenever changes in the design, construction, operation, or maintenance of the sewer system affected the potential for sanitary sewer overflows. It should also be noted that the SSOPP is a requirement of the District’s National Pollutant Discharge Elimination System (NPDES) permit requirements.

On May 2, 2006 the State Water Resources Control Board adopted Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Subsequently, the San Diego RWQCB adopted Order No. R9-2007-0005 which reaffirmed the prohibition of all Sanitary Sewer Overflows (SSOs) upstream of a sewage treatment plant and rescinded Order No. 96-04. Key provisions of the current General Waste Discharge Requirements (WDRs) include: 1) the elimination of SSOs, 2) preventing SSOs from entering the waters of the United States, 3) improved SSO reporting procedures, and 4) the mandatory development and implementation of a system specific Sewer System Management Plan (SSMP). One component of the SSMP is the development of a document describing the measures and activities a sewer collection agency takes to prevent SSOs including, but not limited to, operation and maintenance activities, preventative maintenance procedures, the development of a rehabilitation and replacement plan, and maintaining up-to-date maps of the collection system and facilities.

This document replaces the District’s previous SSOPP and addresses those items required by the WDR regarding operation and maintenance. This document will continue to be a “living” document that will be updated or amended as signification changes to the sewer collection system occur or as policies and procedures change.
Section 2: Sewer System Overview

The District provides wastewater service to the City of Santee, parts of El Cajon, and parts of the County of San Diego (County). In general, the wastewater collection system drains from the east to the west. Four diversion structures exist between the District’s wastewater collection system and the County’s Lakeside Interceptor which allows the District to pass flow into the Lakeside Interceptor and ultimately to the City of San Diego’s (City) METRO system. Wastewater that is not diverted at the diversion structures ultimately converges upon the District’s Influent Pump Station (IPS) located at the District’s operation yard. The IPS is set up to pump two (2) million gallons per day (MGD) of flow to the District’s Ray Stoyer Water Reclamation Facility (WRF) via 19,700 feet of 20-inch diameter HDPE forcemain (See Table 1 for additional IPS data). The remaining flow is directed to the City’s METRO system. Of the 2 MGD sent to the WRF, one (1) MGD is utilized at the Santee Lakes Recreation Preserve and 1 MGD is distributed through the recycled water system to customers for irrigation and commercial uses. A June 2010 flow study indicates that an average daily dry weather flow of approximately 3.2 MGD reaches the IPS (5.9 MGD peak dry weather).

Table 1: Influent Pump Station Data

<table>
<thead>
<tr>
<th>Location</th>
<th># of Pumps</th>
<th>Pump Rating</th>
<th>Forcemain</th>
<th>Pump Motor</th>
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<tr>
<td>9120 Carlton Oaks, Santee</td>
<td>6</td>
<td>1) 1,850 gpm @ 54 ft TDH (Low Head x 4)</td>
<td>19,700 ft of 20-inch HDPE</td>
<td>1) 50 HP, 1150 rpm, 460 volt, 3 phase</td>
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<tr>
<td>(TB: 1231/A6)</td>
<td></td>
<td>2) 1,740 gpm @ 200 ft TDH (High Head x 2)</td>
<td></td>
<td>2) 150 HP, 1750 rpm, 460 volt, 3 phase</td>
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</table>

Notes:
1) TB: Thomas Bros. guide for San Diego County
2) TDH: Total dynamic head
3) Low head pumps lift sewage two stories to high head pumps. High head pumps lift sewage to WRF or to Metro.

In addition to the diversion structures and the IPS described above, the District 1) manages a 164-mile gravity sewer system comprised of manhole structures and their connecting pipeline segments ranging from four (4) inch to thirty (30) inches in diameter and 2) operates and maintains four smaller lift stations. An inventory of the gravity sewer system and a description of the smaller lift stations are shown in the tables below.
Table 2A: District’s Active Gravity Sewer System by Pipe Material

<table>
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<tr>
<th>Pipe Diameter</th>
<th>Length of Pipe (feet) by Pipe Material</th>
<th>Total Length (feet)</th>
<th>Total Length (miles)</th>
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<td>15&quot;</td>
<td>2,432</td>
<td>10,173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16&quot;</td>
<td>385</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18&quot;</td>
<td>733</td>
<td>8,287</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21&quot;</td>
<td>10,886</td>
<td></td>
<td></td>
<td>1,718</td>
</tr>
<tr>
<td>24&quot;</td>
<td>14,772</td>
<td>241</td>
<td>6,308</td>
<td>5,038</td>
</tr>
<tr>
<td>27&quot;</td>
<td>406</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30&quot;</td>
<td>506</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (feet)</td>
<td>6,156</td>
<td>18,917</td>
<td>656</td>
<td>7,745</td>
</tr>
<tr>
<td>Total (miles)</td>
<td>1.17</td>
<td>3.58</td>
<td>0.12</td>
<td>1.47</td>
</tr>
<tr>
<td>% of System</td>
<td>0.71</td>
<td>2.18</td>
<td>0.08</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Table 2B: District’s Gravity and Pressure Sewer System by Pipe Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Source of Age Info</th>
<th>% of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 - Present</td>
<td>Record Drawings</td>
<td>17.34%</td>
</tr>
<tr>
<td>1980 - 1999</td>
<td>Record Drawings</td>
<td>19.47%</td>
</tr>
<tr>
<td>1960 - 1979</td>
<td>Record Drawings</td>
<td>50.42%</td>
</tr>
<tr>
<td>1940 - 1959</td>
<td>Record Drawings</td>
<td>12.76%</td>
</tr>
<tr>
<td>Before 1940</td>
<td>N/A</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>
### Table 2C: District Sewer Lift Stations

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Location</th>
<th># of Pumps</th>
<th>Pump Rating</th>
<th>Forcemain</th>
<th>Pump Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Rise Way</td>
<td>9282 High Rise Way, Santee (TB: 1231/H5)</td>
<td>2</td>
<td>125 gpm @ 85 ft TDH</td>
<td>770 ft of 4-inch PVC</td>
<td>10 HP, 1750 rpm, 460 volt, 3 phase</td>
</tr>
<tr>
<td>Mission Creek</td>
<td>201 River Park Dr., Santee (TB: 1231/C5)</td>
<td>2</td>
<td>600 gpm @ 65 ft TDH</td>
<td>1,100 ft of 6-inch PVC</td>
<td>20 HP, 1770 rpm, 480 volt, 3 phase</td>
</tr>
<tr>
<td>Woodside Avenue</td>
<td>11486 Woodside Ave., Santee (TB: 1231/G4)</td>
<td>2</td>
<td>100 gpm @ 10 ft TDH</td>
<td>113 ft of 4-inch ABS</td>
<td>2.7 HP, 1750 rpm, 230 volt, 3 phase</td>
</tr>
<tr>
<td>Sky Ranch</td>
<td>8810 Ocotillo St., Santee</td>
<td>2</td>
<td>118 gpm @ 83 ft TDH</td>
<td>600 ft of 4-inch PVC &amp; glass lined Ductile Iron</td>
<td>7.5 HP, 1800 rpm, 480 volt, 3 phase</td>
</tr>
</tbody>
</table>

**Notes:**

1) TB: Thomas Bros. guide for San Diego County
2) TDH: Total dynamic head
Section 3: Preventative Maintenance Program

A majority of the planned preventative maintenance tasks are performed by District Staff at scheduled frequencies established based on historical experience, previously collected data, monitoring information from manhole smart covers, and attribute information to minimize the risk of blockages or equipment failures that could possibly lead to a sanitary sewer overflow (SSO). Preventative maintenance tasks have been and are developed for the care of each asset throughout its life cycle. Major preventative maintenance task groupings include:

- Sewer cleaning
- Sewer inspection & condition assessment (including manholes)
- Pump & lift station maintenance

3.1 Gravity Sewers Program

History and experience have indicated that smaller diameter gravity sewers (6” to 10”) are at a higher risk for blockages than the larger diameter gravity sewers (12” to 30”). The District has established a production schedule for cleaning all sewer mains every 14 to 16 months regardless of the size of the main. Additionally, the District maintains a list of higher frequency preventative maintenance locations on our “Hot Spot” list. These sewer line sections have a history of blockages or SSOs due primarily to grease and roots. “Hot Spot” locations are cleaned every 60 to 180 days as necessary to prevent blockages and/or depending on historical cleaning records and smart cover monitoring. Inverted siphons are typically treated as trouble spots and receive a higher frequency of care due to grease build up and/or debris settling.

Sewer cleaning is accomplished using combination sewer cleaning trucks capable of hydraulically washing the pipe wall followed by vacuum removal of the sewer debris at the next downstream manhole as-needed. The District owns two such trucks. Each truck is operated by a two-person crew.

Sewer cleaning is scheduled by maintenance basin, which mimics drainage basins. The District’s sewer maintenance basins are shown on Figure E-6; found at the end of this Appendix. The schedule for each sewer link (manhole to manhole) is entered into the Sewer Maintenance Collector application. Collector for ArcGIS is part of the Esri Geospatial Cloud. Once the cleaning activity is conducted, data regarding the cleaning including completion, type of debris, and amount of debris is recorded in the same software. This data can then be used to assist in the scheduling of CCTV inspections.

The primary objective of the CCTV program is to inspect all sewers in the collection system and document their condition. CCTV inspections also assist the District in planning and refining the preventative O&M activities. Currently, the District performs the vast majority of its own CCTV inspections but has outsourced some CCTV inspections when specialty equipment is required. CCTV inspections are conducted using Wincan software to provide a condition assessment of the sewer. Each sewer link is assigned a score based on the amount and type of damage observed.

Outside of emergency situations and unplanned maintenance activities, CCTV inspections are scheduled based on the sewer cleaning schedule while also considering pipe size, and pipe age.
All these factors are considered to promote efficiency and to reduce the risk of a large failure. The CCTV schedule is entered into the Wincan inspection software by sewer link (MH to MH).

During CCTV inspections, the Wincan software records the data entered by the operator. This data is then used within the Wincan software to track completed work and for further analysis and evaluation.

Manhole inspections may be conducted either concurrently with or separately from flushing or CCTV activities to document the condition of the manhole. Items inspected include the manhole cover, the manhole chimney, the manhole bench, and the manhole channel. The inspection is visual and digital photographs of major defects are recorded.

### 3.2 Private Sewer Laterals

The District is not responsible for the maintenance of individual, private sewer laterals. The responsibility for maintenance lies with the individual property owners for the entire length of the lateral from the structure to the point of connection to the sewer main. Maintenance is defined as “keeping the lateral clear of roots and debris” and repair includes “fixing a collapsed, broken, offset, or crushed sewer lateral or connection”.

### 3.3 Pumping Facilities Program

In addition to sewer cleaning, CCTV, and manhole inspection the District also regularly maintains its pumping facilities. This District operates and maintains one main sewer pump station and four smaller lift stations. Various components of the pumping facilities are inspected daily, weekly, monthly, or annually as part of the preventative maintenance program.

The daily inspection routine consists of checking computer printouts and SCADA systems for operational changes or errors (i.e. pump run times/cycles, active alarms, etc.) checking the pumps at each station for excessive leakage from packing glands, checking the air level in surge tanks where required, and checking flow chart information to evaluate pump performance. Other daily inspection duties may include recording pump motor operation time, investigating alarm lights on electrical panels, checking exhaust systems, inspecting control levels, and servicing check valves. Standby pumps are routinely checked to keep them in ready condition should they be needed.

Two stations have a fixed generator and/or backup engine(s) that are tested monthly according to the manufacturer provided operation and maintenance manual(s). Additionally, the electrical systems, variable frequency drives, pump efficiencies, and backup alarm systems are checked on a monthly basis.

Annual inspections include the control panels and alarm points at each pumping facility. It should be noted that the pumps and associated motors in the Influent Pump Station (IPS) are on a five (5) year refurbishment schedule documented via an Excel spreadsheet.

Scheduling of maintenance for the pumping facilities is accomplished through the use of an Excel spreadsheet. Schedule frequencies are primarily based on previous activities. Additionally, the District’s SCADA system also alerts maintenance crews of upcoming maintenance or of potential problems based on pump run hours.
Maintenance programs used to document data collected from conducted maintenance activities (sewer cleaning, CCTV, FOG inspections) and schedule future maintenance activities are developed and updated by the District’s Geographic Information System (GIS) department.

3.4 Equipment

Essential to the operation and maintenance of the District’s sewer collection system is the District-owned equipment used to achieve preventative maintenance goals. Below is a list of the vehicles owned by the District that are used in sewer maintenance activities. A list of additional equipment used in sewer maintenance activities is attached at the end of this document.

- **Year 2017 Vactor Truck (Model 2110) Plus Jet Rodder (ID # B-114)**
  - 3” Y-Strainer w/ 35’ Fill hose
  - 10 CY Capacity w/Roots 16” Positive Displacement blower 180 degree rotation
  - 8-foot telescoping boom
  - Blue piranha 3000 PSI rodder hose
  - 2500 PSI water pressure
  - Hydraulic extending/rotating 15” hose reel
  - Debris body flush out system

- **Year 2014 Vactor Truck (Model 2110) Plus Jet Rodder (ID # B-97)**
  - 3” Y-Strainer w/35’ Fill hose
  - 10 CY Capacity w/Roots 16” Positive Displacement. blower
  - 180 degree rotation
  - 8-foot telescoping boom
  - Blue piranha 3000 PSI rodder hose
  - 2500 PSI water pressure
  - Hydraulic extending/rotating 15” hose reel
  - Debris body flush out system

- **Year 2003 Ford F-550 Camera Truck (ID # B-34)**
  - Envirosight pan & tilt camera
  - 1,000 foot cable & reel
  - Wincan software
  - Color monitor & printer
  - Pearpoint and Rigid Seasnake lateral camera
  - Other various tools and small accessories

- **Prowler Easement Machine (Sewer Cleaning)**
  - Gas Powered, hydraulically driven
  - 1000’ of 2500 psi rodder hose
  - Ideal for limited access areas

- **CD250M Dri-Prime Pump**
  - Flow rates to 3,720 gallons per minute
  - Capable of handling solids up to 3.0” in diameter
  - Automatically prime 28-feet of suction lift from dry
Replacement parts, for those items that warrant them, are stored in the District’s warehouse and are identified as required by the District mechanics. The District typically stores parts for the critical equipment items.
Section 4: Geographic Information System & Mapping

The District manages a highly competent and functional mapping program utilizing CAD (Computer-Aided Drafting) and GIS (Geographic Information System). In regards to the sewer collection system, the District’s GIS staff are responsible for maintaining all of the sewer feature classes representing the District’s sewer assets as well as providing in-house mapping, data analysis and application support to the Operations and Engineering departments.

4.1 GIS

Padre Dam’s GIS processes for mapping its sewer collection system incorporates the use of Coordinate Geometry (COGO) in real world coordinates from record drawings (As-builts), field change orders, and surveyed data into the CAD base maps, which are then converted to GIS entities and attributed accordingly.

The District’s GIS data contains all of the features of the sewer collection system, including manholes, mains, clean outs, end caps, lift stations, pump station, diversion structures, force mains, laterals, and reducers. This data is currently stored in a SQL Server Geodatabase which is accessed by most District employees and departments through ESRI’s ArcGIS Enterprise solutions. Many of the District’s PPM (planned preventative maintenance) programs have become GIS centric, including the sewer maintenance program for cleaning and CCTVing.

4.2 Sewer Cleaning Collector Application

The sanitary sewer cleaning maintenance program was designed in-house by GIS and Information Systems (IS) staff in the year 2000. This program included a customized MS Access database for the sewer cleaning information to be stored and an ArcMap application to show the sewer mains spatially in the map which are related to the sewer maintenance records and CCTV records per main via an ODBC connection. The sewer cleaning program is currently being migrated into an ArcGIS Enterprise solution to include using the Collector application in the field and using web dashboards to track the maintenance program and to view data for reporting.

The GIS attribute data for the sewer mains is divided into individual links. These links are broken between point features (manholes, end caps, reducers, pump stations, and clean outs). Each point feature is assigned a unique numeric ID; therefore each link has a unique ID as well, which is necessary in order to track the maintenance accurately. A sewer main link uses the upstream and downstream point. For example, end cap ID 8150 and manhole ID 1500 to create the unique ID of 8150-1500.

When cleaning maintenance is performed on link 8150-1500, the operator will enter all the cleaning data into the Collector Application. The data collected will include what was found during cleaning (grit, sand, black water, grease, roots, rags, etc.), the condition of the manhole, hours spent cleaning the main, which crew performed the cleaning, and what maintenance level is assigned to the link.

Depending on the data collected by field crews, the maintenance level falls into one of two categories: 1) regular, or 2) hot spots. If a link is determined to be “regular” maintenance level, the maintenance schedule will be every 14 to 16 months, regardless of pipe size. If a link is determined to be a “hot spot,” then the maintenance crew will clean the link on a more frequent (60 to 180 days) schedule.
In order to keep track of over 3,600 sewer mains (links), the GIS dashboard will show the links that are currently overdue or near the date for cleaning. Additionally, the links are divided into "maintenance basins", which closely follow sewer drainage basins. This allows the sewer cleaning crews to concentrate on basins, which helps maintain an organized approach to the maintenance schedule.

### 4.3 CCTV Database

The District recently migrated its CCTV data into Wincan, a proprietary sewer inspection and asset management software program created by CD Lab AG for CCTV inspection. This software references the District’s GIS database and stores the CCTV data for each sewer link inspected.

CCTV inspection of each sewer link involves the camera operator describing the condition of the link and assigning a numeric score for structural and/or service defects based on severity. This data can then be presented in the form of a report generated by the CCTV software or can be downloaded into the GIS database for further analysis by Engineering staff. Additionally, the CCTV data can then be cross referenced against the sewer cleaning and FOG databases to provide an overall picture of the sewer collection system and assist in optimizing sewer maintenance.

### 4.4 FOG Database

Data collected from the District’s Fats, Oils, and Grease (FOG) program is another component of the sewer maintenance database. Currently, the District is utilizing a software program called LinkoFOG by Linko Data Systems which allows the District’s Code Compliance Administrator to maintain records on food establishments (restaurants, delis, etc.) that have applied for and received a waste discharge permit issued by the District. Data collected includes the name and address of the establishment, grease removal equipment (GRE) inspection dates, permitting dates, maintenance schedules, sampling and monitoring dates including results, violations and enforcement actions.

GRE locations are mapped into the GIS and are correlated to the sewer laterals and mains that serve the food establishment. A Figure showing the locations of the GRE locations is found in Appendix G of this Sewer System Management Plan. This allows District Staff to cross reference the GRE locations against the sewer cleaning and CCTV databases. For instance, substantial amounts of grease found during sewer cleaning can then be referenced back to the business that is potentially violating the conditions of their waste discharge permit.
Section 5: Capital Improvement Program (CIP)

The District has a comprehensive capital improvement program for its own facilities, designed to replace, renovate or repair facilities, infrastructure and/or equipment that have outlived their useful lives or are not operating effectively or efficiently.

Projects in the Capital Improvement Program (CIP) are based on the District’s master plan document and/or data collected from the field. The District’s master plan document evaluates existing District facilities, equipment, and infrastructure and compares this to growth projections, water/wastewater usage trends, and existing and future demands to determine if the existing system is adequate to serve the District’s future customers. Analysis performed during development of the master plan identified sewer system projects and these projects have been included in the CIP.

Currently, the District has an ongoing condition assessment program. The District’s condition assessment program is highly dependent on CCTV data collected by the field crews. The field crew completes a pipe graphic report while collecting the CCTV data. Any anomalies, deficiencies, areas of concerns, and/or laterals are highlighted on a pipe graphic and photographic report. The pipe graphic reports are reviewed by the Construction and Maintenance Crew Supervisor, who determines if repairs are required. Isolated deficiencies are typically handled as spot repairs and this work is performed by District crews. However, if multiple deficiencies are noted in close proximity to one another, the CCTV data is further evaluated by the Engineering department, as required, to determine if the repairs warrant inclusion in the CIP.

In addition to the Master Plan document, if analysis of regularly collected O&M data indicates an engineering rehabilitation or replacement solution for an identified deficiency is required, the necessary information is routed through the Engineering Department for additional analysis, prioritization, and inclusion in the CIP.

The CIP is the foundation of the District’s long range capital investments and financial planning. The CIP is an annually updated financial planning tool and is intended to provide a comprehensive view of the new capital facilities and the improvements to the existing capital facilities required to successfully carry out the District’s mission. This comprehensive approach provides an opportunity for the District to prioritize capital expenditures, manage cash flow, and establish rates and charges that provide sufficient revenue to fund the required projects. Currently, the CIP is structured over a five year planning horizon.

Each proposed project in the CIP is assigned a priority ranking according to a prioritization criteria developed by the American Water Works Association Research Foundation (AWWARF). These criteria provide a basis for determining which projects should be done in any given year and how projects should be scheduled and budgeted over a five year planning horizon of the CIP.

The District recently placed a higher priority on sewer rehabilitation projects which include trenchless repair methods such as, cured-in-place pipe (CIPP) repair. CIPP utilizes a fabric tube impregnated with polyester or epoxy resin. The tube is inserted into the existing pipeline and inflated against the pipe wall, then cured either at ambient temperature or by re-circulating hot water or steam. Some variations use ultra-violet light to cure the resin. CIPP systems create a close-fit 'pipe-within-a-pipe' which has quantifiable structural strength and can be designed to suit various loading conditions. The ring-stiffness of the liner is enhanced by the restraint provided by
the host pipe and the surrounding ground. Laterals are temporarily closed off during CIPP lining and are re-opened remotely after the lining has cured by cutting the lateral opening from within the lined sewer main, but care must be taken to ensure a smooth cut. After lateral service connections are cut back open, they are sealed with short connection liners called “top hats,” comprised of resin impregnated, fiberglass laminate and shaped to fit within the lateral connection and wrap around several inches within the main pipeline. Top Hats are cured in place with UV light.

These criteria provide a basis for determining which projects should be completed in any given year and how projects should be scheduled over the 5-year span of the CIP.
Section 6: Employee Training

The District views training of maintenance staff members in items relating to sanitary sewer system operations and maintenance on a regular basis as an essential component to maintain industry standards of operation and critical to safety. In regards to operations and maintenance training, the following training is required of appropriate staff members:

- Attendance to California Water Environment Association (CWEA) sponsored workshops or webinars
- On the job training
- CWEA Webinar training
- Safety tailgate meetings bi-weekly
- Target safety web based safety training and awareness program
- SSMP training

Additionally, the following are licensing requirements for maintenance staff members as it relates to sanitary sewer system operations and maintenance:

- Collection Systems Maintenance Grade 1, or higher, certificate from CWEA
- Valid California driver's license Class A or Class B (vactor truck only)

As part of the District’s contractual requirements, all contractors working on District facilities will be required to submit documentation (for review) regarding their level of training and certifications.
<table>
<thead>
<tr>
<th>ID #</th>
<th>Equipment Description</th>
<th>Model</th>
<th>Year</th>
<th>Comment(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE-21</td>
<td>Backhoe</td>
<td>John Deere 310 S6</td>
<td>2002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Portable Diesel Pump</td>
<td>Godwin dri-Prime CD 250</td>
<td>2013</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CIPP Spot Repair Kit</td>
<td></td>
<td></td>
<td>2-foot and 4-foot patches</td>
</tr>
<tr>
<td>B-97</td>
<td>Vactor Truck</td>
<td>2110</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>B-114</td>
<td>Vactor Truck</td>
<td>2110</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>B-34</td>
<td>CCTV Van</td>
<td>Ford F-550</td>
<td>2003</td>
<td></td>
</tr>
<tr>
<td>B-48</td>
<td>Pickup Truck</td>
<td>Ford F-150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-63</td>
<td>Vactor Truck</td>
<td>2110</td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vactron – Portable tow behind</td>
<td></td>
<td></td>
<td>Portable jet rodder for difficult access locations</td>
</tr>
<tr>
<td></td>
<td>Wet/Dry Shop Vac</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sprung Steel Hand Rodder</td>
<td></td>
<td></td>
<td>200 foot length with various cutting heads</td>
</tr>
<tr>
<td></td>
<td>Root Saw</td>
<td></td>
<td></td>
<td>With cutting bits 6” diameter to 18”</td>
</tr>
<tr>
<td></td>
<td>Vactor nozzle sleds</td>
<td></td>
<td></td>
<td>Ranging from 6” to 15” diameter</td>
</tr>
<tr>
<td></td>
<td>Tiger tails</td>
<td></td>
<td></td>
<td>Guide for vactor hose</td>
</tr>
<tr>
<td></td>
<td>Leader hose</td>
<td></td>
<td></td>
<td>1” diameter x 15’ long (2,500 psi)</td>
</tr>
<tr>
<td></td>
<td>Spare hose</td>
<td></td>
<td></td>
<td>1” diameter x 675’ long (3,000 psi)</td>
</tr>
<tr>
<td></td>
<td>Clam shells</td>
<td></td>
<td></td>
<td>Tool used to remove material from manhole with extension bar (up to 20’).</td>
</tr>
<tr>
<td></td>
<td>1” Penetrating nozzle</td>
<td></td>
<td></td>
<td>Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>1” 45° nozzle</td>
<td></td>
<td></td>
<td>Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>1” 15° stationary nozzle</td>
<td></td>
<td></td>
<td>Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>1” up-hill nozzle</td>
<td></td>
<td></td>
<td>Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>1” spinning nozzle</td>
<td></td>
<td></td>
<td>Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>1” tadpole nozzle</td>
<td></td>
<td></td>
<td>Ranging from 10” to 30” diameter. Attached to hose for sewer cleaning</td>
</tr>
<tr>
<td></td>
<td>Root cutter spinning nozzle</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td></td>
<td>6” debris basket</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td></td>
<td>8” debris basket</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td></td>
<td>12” debris basket</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td>ID #</td>
<td>Equipment Description</td>
<td>Model</td>
<td>Year</td>
<td>Comment(s)</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------</td>
<td>-------</td>
<td>------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>12” debris basket</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td></td>
<td>30” debris basket with sand trap</td>
<td></td>
<td></td>
<td>Utilized to capture debris in conjunction with jet cleaning</td>
</tr>
<tr>
<td></td>
<td>Manhole Rollers</td>
<td></td>
<td></td>
<td>Attach to manhole for sewer hose during cleaning</td>
</tr>
<tr>
<td></td>
<td>6” trap</td>
<td></td>
<td></td>
<td>2 on each vactor truck; 2 additional in operations yard</td>
</tr>
<tr>
<td></td>
<td>8” trap</td>
<td></td>
<td></td>
<td>2 on each vactor truck; 2 additional in operations yard</td>
</tr>
<tr>
<td></td>
<td>10” trap</td>
<td></td>
<td></td>
<td>2 on each vactor truck; 2 additional in operations yard</td>
</tr>
<tr>
<td></td>
<td>18” trap</td>
<td></td>
<td></td>
<td>1 stored in operations yard</td>
</tr>
<tr>
<td></td>
<td>30” trap</td>
<td></td>
<td></td>
<td>1 stored in operations yard</td>
</tr>
<tr>
<td></td>
<td>30” sand trap</td>
<td></td>
<td></td>
<td>1 stored in operations yard</td>
</tr>
<tr>
<td></td>
<td>5-foot x 34-55 inch wide shoring rails</td>
<td></td>
<td></td>
<td>3 each</td>
</tr>
<tr>
<td></td>
<td>3-foot x 34-55 inch wide shoring rails</td>
<td></td>
<td></td>
<td>3 each</td>
</tr>
<tr>
<td></td>
<td>Single jack 1-foot x 34-55 inch wide shoring rails</td>
<td></td>
<td></td>
<td>2 each</td>
</tr>
<tr>
<td></td>
<td>3” sewer plug - manual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4” sewer plug - manual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6” sewer plug - manual</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>8” sewer plug - manual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10” sewer plug - manual</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>12” sewer plug - manual</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>12” sewer plug - pneumatic</td>
<td></td>
<td></td>
<td>3 each</td>
</tr>
<tr>
<td></td>
<td>6” pneumatic test ball/weenie</td>
<td></td>
<td></td>
<td>1 each</td>
</tr>
<tr>
<td></td>
<td>8” sewer plug - pneumatic</td>
<td></td>
<td></td>
<td>1 each</td>
</tr>
<tr>
<td></td>
<td>10” sewer plug - pneumatic</td>
<td></td>
<td></td>
<td>3 each</td>
</tr>
<tr>
<td></td>
<td>12” sewer plug - pneumatic flow through</td>
<td></td>
<td></td>
<td>1 each</td>
</tr>
<tr>
<td></td>
<td>18”-30” sewer plug - pneumatic</td>
<td></td>
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<td>1 each</td>
</tr>
<tr>
<td></td>
<td>21” sewer plug - pneumatic flow through</td>
<td></td>
<td></td>
<td>1 each</td>
</tr>
<tr>
<td></td>
<td>24”-35” sewer plug - pneumatic flow through</td>
<td></td>
<td></td>
<td>1 each</td>
</tr>
<tr>
<td></td>
<td>Plug, ABS 4” Threaded</td>
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</tr>
<tr>
<td></td>
<td>Plug, ABS 6” Threaded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plug, Inflatable 6”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plug, Inflatable 10”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID #</td>
<td>Equipment Description</td>
<td>Model</td>
<td>Year</td>
<td>Comment(s)</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------</td>
<td>-------</td>
<td>------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Plug, Inflatable 15”</td>
<td></td>
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<tr>
<td></td>
<td>Plug, Mechanical 4”</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Plug, Mechanical 6”</td>
<td></td>
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<tr>
<td></td>
<td>Plug, Mechanical 8”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plug, Mechanical 15”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plug, PVC 4” SL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plug, PVC 6” SL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rigid rod</td>
<td>Hand tool to dislodge debris (100' in 5' lathes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tripod</td>
<td>Confined space entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wench</td>
<td>Confined space entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harness</td>
<td>Confined space entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air blower – 1250 CFM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Atmospheric monitors</td>
<td>GIG g450</td>
<td>Monitor H₂S Levels prior to confined space entry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7) Smart Covers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manhole covers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manhole odor bowls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Odor knocker</td>
<td>Media (bark) used to control odors. Installed near top of manhole shaft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2” Manhole risers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Digital cameras</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smart phones</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Camera</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measuring rollers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air compressor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miscellaneous tools</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Godwin Dri-Prime CD250M pump offers flow rates to 3720 USGPM and has the capability of handling solids up to 3.0" in diameter.

The CD250M is able to automatically prime to 28’ of suction lift from dry. Automatic or manual starting/stoping available through integral mounted control panel or optional wireless-remote access.

Indefinite dry-running is no problem due to the unique Godwin liquid bath mechanical seal design. Solids handling, dry-running, and portability make the CD250M the perfect choice for dewatering and bypass applications.

**Features and Benefits**

- Simple maintenance normally limited to checking fluid levels and filters.
- Dri-Prime (continuously operated Venturi air ejector priming device) requiring no periodic adjustment. Optional compressor clutch available.
- Extensive application flexibility handling sewage, slurries, and liquids with solids up to 3.0’ in diameter.
- Dry-running high pressure liquid bath mechanical seal with high abrasion resistant solid silicon carbide faces.
- Close-coupled centrifugal pump with Dri-Prime system coupled to a diesel engine or electric motor.
- All cast iron construction (stainless steel construction option available) with cast steel impeller.
- Also available in a critically silenced unit which reduces noise levels to less than 70 dBA at 30’.
- Standard engine John Deere 6068HF285 (T3 Flex). Also available with John Deere 6068HC93 (IT4).

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Suction connection</td>
<td>10” 150# ANSI B16.5</td>
</tr>
<tr>
<td>Delivery connection</td>
<td>10” 150# ANSI B16.5</td>
</tr>
<tr>
<td>Max capacity</td>
<td>3720 USGPM †</td>
</tr>
<tr>
<td>Max solids handling</td>
<td>3.0”</td>
</tr>
<tr>
<td>Max impeller diameter</td>
<td>11.4”</td>
</tr>
<tr>
<td>Max operating temp</td>
<td>176°F*</td>
</tr>
<tr>
<td>Max pressure</td>
<td>80 psi</td>
</tr>
<tr>
<td>Max suction pressure</td>
<td>65 psi</td>
</tr>
<tr>
<td>Max casing pressure</td>
<td>120 psi</td>
</tr>
<tr>
<td>Max operating speed</td>
<td>2200 rpm</td>
</tr>
</tbody>
</table>

* Please contact our office for applications in excess of 176°F.
† Larger diameter pipes may be required for maximum flows.
Performance Curve

Materials

**Engine option 1**

John Deere 6068HF285 (T3 Flex), 156 HP @ 2200 rpm

Impeller diameter 11.4”

Pump speed 2200 rpm

**Suction Lift Table**

<table>
<thead>
<tr>
<th>Total Suction Head (feet)</th>
<th>Total Delivery Head (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>62</td>
</tr>
<tr>
<td>Output (USGPM)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3753</td>
</tr>
<tr>
<td>15</td>
<td>3681</td>
</tr>
<tr>
<td>20</td>
<td>3390</td>
</tr>
<tr>
<td>25</td>
<td>3148</td>
</tr>
</tbody>
</table>

Fuel capacity: 150 US Gal

Max Fuel consumption @ 2200 rpm: 8.6 US Gal/hr

Max Fuel consumption @ 1800 rpm: 7.5 US Gal/hr

Weight (Dry): 5,710 lbs

Weight (Wet): 6,790 lbs

Dim.: (L) 168” x (W) 76” x (H) 102”

Performance data provided in tables is based on water tests at sea level and
20°C ambient. All information is approximate and for general guidance only.

Please contact the factory or office for further details.

**Engine option 2**

John Deere 6068HC93 (IT4), 158 HP @ 2200 rpm

Impeller diameter 11.4”

Pump speed 2200 rpm

**Suction Lift Table**

<table>
<thead>
<tr>
<th>Total Suction Head (feet)</th>
<th>Total Delivery Head (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>62</td>
</tr>
<tr>
<td>Output (USGPM)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3753</td>
</tr>
<tr>
<td>15</td>
<td>3681</td>
</tr>
<tr>
<td>20</td>
<td>3390</td>
</tr>
<tr>
<td>25</td>
<td>3148</td>
</tr>
</tbody>
</table>

Fuel capacity: 150 US Gal

Max Fuel consumption @ 2200 rpm: 8.3 US Gal/hr

Max Fuel consumption @ 1800 rpm: 7.5 US Gal/hr

Weight (Dry): 6,010 lbs

Weight (Wet): 7,090 lbs

Dim.: (L) 168” x (W) 76” x (H) 102”

Performance data provided in tables is based on water tests at sea level and
20°C ambient. All information is approximate and for general guidance only.

Please contact the factory or office for further details.

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<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>ADAPTOR, ABS 4&quot; SL X FIP</td>
</tr>
<tr>
<td>ADAPTOR, ABS 6&quot; SL X FIP</td>
</tr>
<tr>
<td>BEND, ABS 22 1/2 SL X SPIGOT</td>
</tr>
<tr>
<td>BEND, ABS 4&quot; 22 1/2 SL X SL</td>
</tr>
<tr>
<td>BEND, ABS 4&quot; 45 SL X SL</td>
</tr>
<tr>
<td>BEND, ABS 4&quot; 45 SL X SPIGOT</td>
</tr>
<tr>
<td>BEND, ABS 6&quot; 22 1/2 SL X SL</td>
</tr>
<tr>
<td>BEND, ABS 6&quot; 45 SL</td>
</tr>
<tr>
<td>BEND, PVC 4&quot; 22 1/2 BELL X BELL</td>
</tr>
<tr>
<td>BEND, PVC 4&quot; 45 BELL X BELL</td>
</tr>
<tr>
<td>BEND, PVC 4&quot; 45 BELL X SPIGOT</td>
</tr>
<tr>
<td>BEND, PVC 6&quot; 22 1/2 BELL X</td>
</tr>
<tr>
<td>SPIGOT BEND, PVC 8&quot; 22 1/2 SL X SL</td>
</tr>
<tr>
<td>BEND, PVC 8&quot; 45 BELL X BELL</td>
</tr>
<tr>
<td>BEND, PVC 8&quot; 45 BELL X SPIGOT</td>
</tr>
<tr>
<td>CAP, PVC 12&quot; BELL</td>
</tr>
<tr>
<td>CAP, PVC 4&quot; BELL</td>
</tr>
<tr>
<td>CAP, PVC 4&quot; SLIP</td>
</tr>
<tr>
<td>CAP, PVC 6&quot; BELL</td>
</tr>
<tr>
<td>CAP, PVC 8&quot; BELL</td>
</tr>
<tr>
<td>COUPLING, ABS 4&quot; SL X SL</td>
</tr>
<tr>
<td>COUPLING, ABS 6&quot; SL X SL</td>
</tr>
<tr>
<td>COUPLING, CALDER 4&quot; MAX ADAPTER 4.13-5.56</td>
</tr>
<tr>
<td>COUPLING, CALDER 6&quot; MAX ADAPTER 6.27-7.75</td>
</tr>
<tr>
<td>COUPLING, CALDER 10&quot; MAX ADAPTER 10.50-12.68</td>
</tr>
<tr>
<td>COUPLING, CALDER 10&quot; PVC-VCP</td>
</tr>
<tr>
<td>COUPLING, CALDER 12&quot; PVC-VCP</td>
</tr>
<tr>
<td>COUPLING, CALDER 15&quot; PVC-VCP</td>
</tr>
<tr>
<td>COUPLING, CALDER 15&quot; VCP-VCP</td>
</tr>
<tr>
<td>COUPLING, CALDER 4&quot; PVC-PVC</td>
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<tr>
<td>COUPLING, CALDER 4&quot; VCP-VCP</td>
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<tr>
<td>COUPLING, CALDER 4&quot; VCP-VCP</td>
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<tr>
<td>COUPLING, CALDER 6&quot; PVC-PVC</td>
</tr>
<tr>
<td>COUPLING, CALDER 6&quot; PVC-VCP</td>
</tr>
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<td>COUPLING, CALDER 8&quot; PVC-PVC</td>
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<tr>
<td>COUPLING, CALDER 8&quot; PVC-VCP</td>
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<tr>
<td>COUPLING, PVC 8&quot; BELL X BELL</td>
</tr>
<tr>
<td>LID, MANHOLE 24&quot;</td>
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<tr>
<td>REDUCER, PVC 8&quot; X 4&quot; ECCENTRIC</td>
</tr>
<tr>
<td>RING, CONCRETE 24&quot; X 4&quot;</td>
</tr>
<tr>
<td>RING, CONCRETE 24&quot; X 6&quot;</td>
</tr>
<tr>
<td>ITEM DESCRIPTION</td>
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<td>RING, CONCRETE 36&quot; X 4&quot;</td>
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<tr>
<td>RING, CONCRETE 36&quot; X 6&quot;</td>
</tr>
<tr>
<td>RING, MANHOLE STEEL 24&quot;</td>
</tr>
<tr>
<td>RING, MANHOLE STEEL 36&quot;</td>
</tr>
<tr>
<td>TEE, PVC 4&quot; SL</td>
</tr>
<tr>
<td>WYE, ABS 4&quot; X 2&quot; SL</td>
</tr>
<tr>
<td>WYE, ABS 4&quot; X 4&quot; SL</td>
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<tr>
<td>WYE, ABS 6&quot; X 6&quot; SL</td>
</tr>
<tr>
<td>WYE, PVC 4&quot; X 4&quot; BELL</td>
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<tr>
<td>WYE, PVC 6&quot; X 4&quot; BELL</td>
</tr>
<tr>
<td>WYE, PVC 6&quot; X 6&quot; BELL</td>
</tr>
<tr>
<td>WYE, PVC 8&quot; X 4&quot; BELL</td>
</tr>
<tr>
<td>WYE, PVC 8&quot; X 6&quot; BELL</td>
</tr>
</tbody>
</table>
SPARE PARTS FOR
SEWER LIFT STATIONS

Padre Dam Municipal Water District
9120 Carlton Oaks Boulevard
Santee, CA 92072

April 2019
Recommended Spare Parts for Sewer Lift Stations

**Influent Pump Station (IPS):**

**Vaughan Chopper Pump Model PE6W8CS-100 (Low-Lift)**

1. Inspection Cover Gasket V112-739 112739-1
2. Cap, Cartridge, Thrust Bearing V108-091 108091-0
3. Bearing Housing (CBH) V108-08 108083-0
4. O-Ring Suction Adapter Buna-N V850-449 N/A
5. Cartridge, Thrust Bearing V108-085 108085- (A and B)
6. O-Ring, Thrust Cartridge, Internal V850-346
7. Shaft, Threaded end V1100-014 101803-6-16
8. Impeller, UC,6U,10.2" Dia V111-133-100 111133-1
9. Thrust Bearings (2) V801-139 N/A
10. Radial Bearings (2) V801-132 N/A
11. Mechanical Seal, Vaughan Flushless V801-309 N/A
12. Cutter Bar Plate, E4R/6U V111-133-100 111133-1
13. Slinger, Seal V801-827 N/A
14. Grease Seal V801-767 N/A
15. Nut, Bearing V801-603 N/A
16. Retainer, Brg. Nut V801-602 N/A
17. Slinger, End Cap V801-600 N/A
18. Upper Cutter V103-852 103852-8
19. Sleeve, End Cap V104-719 N/A
21. O-Ring, Sleeve, Lip Seal, Buna-N V850-131B N/A
22. Lip Seal V801-826 N/A
23. Coupling, Motor, Woods 9S-2 1/8" (50 HP/1750) V800-514 N/A
24. Cutter Nut, Large bore V104-611 104611-3
25. Oil Reservoir V109-396 109396-2
26. O-Ring, Brg. Hsg/End Cap, Buna-N V850-238B N/A
27. Shim, Upper Cutter V104-072
28. Guard, Packing Housing (2 required) V108-520 108520-2
29. Backplate, HE 6W V112-688 112688-2
30. O-ring, Backplate upper Buna-N V850-380B N/A
31. O-Ring, Backplate lower Buna-N V850-380B N/A
32. Adjusting Sleeve (8 required) V107-895 107895-0
33. Adjusting Sleeves, Thrust Brg. Cartridge (4 ea) V107-888 107888-0
34. Suction Plate V112-758 112758-1
35. O-Ring, Suction Plate, Buna-N V801-640B 112693-0
36. Gasket, Suction Plate V112-696 112696-2
37. O-Ring, Casing/Backplate, EPDM V850-463E N/a
Chicago Yeomans Non-Clog Pumps 86154BHT (Hi-Lift)

1. Bearing Holder
2. Thrust Bearing – Ball
3. Radial Bearing – Roller
4. Grease Seal
5. Impeller Self-locking Cap Screw & Washer
6. Grease Seal
7. Gasket (Casing Cover to Volute)
8. Shaft Sleeve
9. Gasket (Elbow Handhole to Volute)
10. Gasket (Suction Elbow to Suction Plate)
11. Gasket (Volute Handhole to Cover)
12. Impeller Wear Ring
13. Suction Wear Ring
14. Mechanical Seal
15. Shaft Sleeve O-Ring
16. Mechanical Seal Adapting Ring O-Ring
17. Seal Box Cover
18. Gasket (Seal Box to Seal Box Cover)
19. Gasket (Casing Cover to Stuffing Box)

JWC Channel Monster Grinders CDD4010XDS-2.0 (2 each)

1. 40” Cutting Chamber
2. Vertical Shaft Support
3. Perforated Drum with 6mm 316 Stainless Steel Rotating Drum
4. Ductile End Housings with Drum and Cutter Siderails
5. Cutters: 11-Tooth Cam, 17-4 Stainless Steel
6. Seals: Lugged Tungsten Carbide Hex Drive/Buna-N
7. Frame: Custom Ultraframe Weldment with Mounting Angles
8. Fasteners
9. Immersible Motor
10. Paint: Tnemec 69 Epoxy Green

Mission Creek:  

<table>
<thead>
<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>Pump Model T6A3-B Gorman Rupp</td>
</tr>
<tr>
<td>1. Repair Rotating Assembly</td>
</tr>
<tr>
<td>2. Suction Flange Gasket</td>
</tr>
<tr>
<td>3. Discharge Flange Gasket</td>
</tr>
<tr>
<td>4. Rotating Assembly O-Ring</td>
</tr>
<tr>
<td>5. Rotating Assembly Shim Set</td>
</tr>
<tr>
<td>6. Wear Plate Assembly</td>
</tr>
<tr>
<td>7. Back Cover O-Ring</td>
</tr>
<tr>
<td>8. Suction Check Valve Assembly</td>
</tr>
<tr>
<td>9. Fill Cover Gasket</td>
</tr>
<tr>
<td>10. Impeller</td>
</tr>
</tbody>
</table>
11. Seal Plate Gasket 10959G
12. Seal Assembly 46513-150
13. Inboard Ball Bearing 23276-009
14. Outboard Ball Bearing S1040
15. Impeller Shaft 10529
16. Shaft Key N0612
17. Bearing Cap Oil Seal S1352
18. Bearing Cap Gasket 38683-248
19. Inboard Oil Seal S1352
20. Impeller Adjustment Shim Set 37J
21. Seal Sleeve O-Ring S2088
22. Rotating Assembly Adjustment Shim Set 13131
23. Rotating Assembly O-Ring S1676

**Sky Ranch:**

Pump Model P3087L72-HO-15-4 Pioneer Pump

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1. 31803106</td>
<td>Discharge Flange Gasket 3” FF-Viton</td>
</tr>
<tr>
<td>2. 23100686A</td>
<td>Pioneer Suction Check Valve</td>
</tr>
<tr>
<td>3. 301033447</td>
<td>Bearing Housing O-Ring Viton</td>
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<tr>
<td>4. 31807905</td>
<td>Seal Plate Gasket</td>
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<tr>
<td>5. 31807908</td>
<td>Suction Flange Gasket</td>
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<tr>
<td>6. 30422187</td>
<td>Seal Assembly</td>
</tr>
<tr>
<td>7. 30103026</td>
<td>Seal Sleeve O-Ring</td>
</tr>
<tr>
<td>8. 30103243</td>
<td>Seal Cover O-Ring</td>
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<tr>
<td>9. 30103243</td>
<td>Fill Cover O-Ring</td>
</tr>
<tr>
<td>10. 21204776</td>
<td>Impeller</td>
</tr>
<tr>
<td>11. 32635635062F125</td>
<td>Impeller Screw</td>
</tr>
<tr>
<td>12. 21422783</td>
<td>Impeller Washer</td>
</tr>
<tr>
<td>13. 12721110, 12721111, 2721112</td>
<td>Impeller Shims (0.005”,0.010”,0.015”)</td>
</tr>
<tr>
<td>14. 353005100156</td>
<td>Snap Ring</td>
</tr>
<tr>
<td>15. 31138922</td>
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</tr>
<tr>
<td>16. 30500110</td>
<td>Outboard Oil Seal</td>
</tr>
<tr>
<td>17. 31339103</td>
<td>Oil Level Sight Gauge</td>
</tr>
<tr>
<td>18. 12211106</td>
<td>Shaft Key</td>
</tr>
<tr>
<td>19. 31339101</td>
<td>Bearing Housing Vent</td>
</tr>
<tr>
<td>20. 31900105</td>
<td>Outboard Bearing</td>
</tr>
<tr>
<td>21. 31900104</td>
<td>Inboard Bearing</td>
</tr>
<tr>
<td>22. 30500110</td>
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</tr>
<tr>
<td>23. 21104683</td>
<td>Fill Cover</td>
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</table>

**Woodside Avenue (JAWS):**

Pump Model JSV3A60-X2.7 Gorman Rupp

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>1. 26823-911</td>
<td>Impeller (JSV3A)</td>
</tr>
<tr>
<td>2. 26824-171</td>
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<tr>
<td>3. 26824-066</td>
<td>Rubber Seal</td>
</tr>
<tr>
<td>Part Number</td>
<td>Description</td>
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<td>------------</td>
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<td>4.</td>
<td>Seal Assembly</td>
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<td>5.</td>
<td>Seal Plate O-Ring</td>
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<td>6.</td>
<td>Drain/Fill Plug O-Ring</td>
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**Woodside Meadows (High Rise):**

Pump Model T3A3-B Gorman Rupp

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Bearing Housing O-Ring</td>
</tr>
<tr>
<td>2.</td>
<td>Rotating Assembly Shim Set</td>
</tr>
<tr>
<td>3.</td>
<td>Wear Plate</td>
</tr>
<tr>
<td>4.</td>
<td>Cover O-Ring</td>
</tr>
<tr>
<td>5.</td>
<td>Cover Assembly</td>
</tr>
<tr>
<td>6.</td>
<td>Pressure Relief Valve</td>
</tr>
<tr>
<td>7.</td>
<td>Suction Flange Gasket</td>
</tr>
<tr>
<td>8.</td>
<td>Check Valve Assembly</td>
</tr>
<tr>
<td>9.</td>
<td>Check Valve Pin</td>
</tr>
<tr>
<td>10.</td>
<td>Discharge Flange Gasket</td>
</tr>
<tr>
<td>11.</td>
<td>Fill Cover Gasket</td>
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<tr>
<td>12.</td>
<td>Fill Cover Assembly</td>
</tr>
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<td>13.</td>
<td>Impeller</td>
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<tr>
<td>14.</td>
<td>Seal Assembly</td>
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<tr>
<td>15.</td>
<td>Seal Plate Gasket</td>
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<td>16.</td>
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<td>17.</td>
<td>Vented Seal Cavity Plug</td>
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<td>18.</td>
<td>Bearing Housing Air Vent</td>
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<td>19.</td>
<td>Snap Ring</td>
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<td>20.</td>
<td>Impeller Shaft</td>
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<td>21.</td>
<td>Shaft Key</td>
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<td>22.</td>
<td>Oil Seal</td>
</tr>
<tr>
<td>23.</td>
<td>Bearing Cap</td>
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<td>Bearing Cap Gasket</td>
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<td>Oil Level Sight Gauge</td>
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<td>34.</td>
<td>Rotating Assembly Adjusting Shims</td>
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<td>35.</td>
<td>Shaft Sleeve O-Ring</td>
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<td>36.</td>
<td>Rotating Assembly</td>
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### Sewer Lift Station Spare Parts

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<tr>
<th>Part Description</th>
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<th>Quantity</th>
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<tbody>
<tr>
<td>1. Wisa Air Bubbler Pump</td>
<td></td>
<td>2 each</td>
</tr>
<tr>
<td>2. Ingraham Air Bubbler Pump</td>
<td></td>
<td>2 each</td>
</tr>
<tr>
<td>3. Wisa Air Bubbler Pump Repair Kit</td>
<td></td>
<td>6 each</td>
</tr>
<tr>
<td>4. Air Bubbler Check Valve</td>
<td></td>
<td>3 each</td>
</tr>
<tr>
<td>5. Seal Plate O-Ring</td>
<td>Part #26824-127 (Jaws)</td>
<td>2 each</td>
</tr>
<tr>
<td>6. Outlet Seal</td>
<td>Part #26824-066 (Jaws)</td>
<td>2 each</td>
</tr>
<tr>
<td>7. Drain / Fill Plug O-Ring (Jaws)</td>
<td></td>
<td>6 each</td>
</tr>
<tr>
<td>8. Gorman Rupp Submersible Pump</td>
<td>Model #JSV3A60</td>
<td>2 each</td>
</tr>
<tr>
<td>9. Gorman Rupp Impeller</td>
<td>(JSV3A)</td>
<td>1 each</td>
</tr>
<tr>
<td>10. 4 IN. Check Valve Assembly RH</td>
<td>Part #46421-040</td>
<td>1 each</td>
</tr>
<tr>
<td>11. 4 IN. Check Valve Assembly LH</td>
<td>Part #46421-039</td>
<td>1 each</td>
</tr>
<tr>
<td>12. Chicago Yeomans Pump Impeller Wear Ring</td>
<td></td>
<td>2 each</td>
</tr>
<tr>
<td>13. Chicago Yeomans Pump Suction Wear Ring</td>
<td></td>
<td>2 each</td>
</tr>
<tr>
<td>14. Mueller Check Valve 10” Hinge Pin</td>
<td>Part #C-91</td>
<td>1 each</td>
</tr>
<tr>
<td>15. Mueller Check Valve 10” Clapper Arm</td>
<td>Part #C-88</td>
<td>1 each</td>
</tr>
<tr>
<td>16. Mueller Check Valve 10” Disc</td>
<td>Part #C-54</td>
<td>1 each</td>
</tr>
<tr>
<td>17. Mueller Check Valve 10” Stuffing Box</td>
<td>Part #C-86</td>
<td>1 each</td>
</tr>
<tr>
<td>18. Mueller Check Valve 10” Stud for Disc</td>
<td>Part #C-49</td>
<td>1 each</td>
</tr>
<tr>
<td>19. Mueller Check Valve 12” Hinge Pin</td>
<td>Part #C-91</td>
<td>1 each</td>
</tr>
<tr>
<td>20. Mueller Check Valve 12” Clapper Arm</td>
<td>Part #C-88</td>
<td>1 each</td>
</tr>
<tr>
<td>21. Mueller Check Valve 12” Disc</td>
<td>Part #C-54</td>
<td>1 each</td>
</tr>
<tr>
<td>22. Mueller Check Valve 12” Stuffing Box</td>
<td>Part #C-86</td>
<td>1 each</td>
</tr>
<tr>
<td>23. Mueller Check Valve 12” Stud for Disc</td>
<td>Part #C-49</td>
<td>1 each</td>
</tr>
<tr>
<td>24. Chicago Yeomans Volute</td>
<td></td>
<td>1 each</td>
</tr>
</tbody>
</table>
APPENDIX E-6
Sewer Maintenance Map
SANITARY SEWER OVERFLOW EMERGENCY RESPONSE PLAN (SSOERP)

Padre Dam Municipal Water District
9300 Fanita Parkway
Santee, CA 92072

April 2019
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Appendix F-4: Best Practices for Sanitary Sewer Overflow Prevention and Response Plan
Appendix F-5: Sewer Lift Station Contingency Plan
Appendix F-6: Spill Report Form
Section 1: Introduction

In 1996, Padre Dam Municipal Water District (District) developed and implemented a sanitary sewer overflow response plan (SSORP) to comply with San Diego Regional Water Quality Control Board (RWQCB) Order 96-04 which prohibited sanitary sewer overflows (SSO) by sewage collection agencies. The intent of the SSORP was to “establish procedures for responding to SSOs, so as to: 1) minimize the sewer overflow volume which enters surface waters, and 2) minimize the adverse effects of sewer overflows on water quality and beneficial uses”. The SSORP was established as a “living” document to be reviewed and amended after each SSO. The SSORP is also a requirement of the District’s National Pollutant Discharge Elimination System (NPDES) permit requirements.

On May 2, 2006 the State Water Resources Control Board adopted Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Subsequently, the San Diego RWQCB adopted Order No. R9-2007-0005 which reaffirmed the prohibition of all Sanitary Sewer Overflows (SSOs) upstream of a sewage treatment plant and rescinded Order No. 96-04. Key provisions of the current General Waste Discharge Requirements (WDRs) include: 1) the elimination of SSOs, 2) preventing SSOs from entering the waters of the United States, 3) improved SSO reporting procedures, and 4) the mandatory development and implementation of a system specific Sewer System Management Plan (SSMP). One goal of the SSMP is to “provide a plan and schedule to properly manage, operate, and maintain all parts of the sewer system” including the development or update of an agency specific Sanitary Sewer Overflow Emergency Response Plan (SSOERP).

Another component of the WDR is the Monitoring and Reporting Program (MRP) that includes specific SSO notification, reporting and record keeping requirements to meet SSO reporting requirements in the Water Code and facilitate compliance monitoring and enforcement for violations. On February 20, 2008 the State Water Resources Control Board adopted Order No. WQ 2008-0002-EXEC, amending the MRP requirements of the first Statewide WDR. Subsequently, the State Water Resources Control Board adopted Order No. WQ 2013-0058-EXEC, amending the MRP requirements of Order No. 2006-0003-DWQ and superseding the MRP requirements of Order No. 2008-0002-EXEC.

The current Statewide and Regional WDRs are included in this SSMP report as Appendix A and Appendix B, respectively. While the State Water Resources Control Board WDR is the primary regulatory mechanism for sanitary sewer systems statewide, it allows each regional board to issue stricter WDRs for sanitary sewer systems within their respective jurisdiction. Generally, the San Diego Regional Water Quality Control Board Order No. R9-2007-0005 sets forth more prescriptive monitoring and reporting requirements than the State Water Resources Control Board Order No. WQ 2013-0058-EXEC.

This SSOERP is an update of the District’s previous SSOERP, incorporating any new or amended requirements issued by the State Water Resources Control Board or the Regional Water Quality Control Board to ensure compliance with the WDRs of the State and San Diego Regional jurisdictions. Although waste discharge requirements may change over the years, two things remain constant. First, the overall intent of an overflow response plan is to 1) minimize the sewer overflow volume which enters surface waters, and 2) minimize the adverse effects of sewer overflows on water quality and beneficial uses. Secondly, the District continues its commitment to maintaining and implementing an overflow response plan that identifies measures to protect public health and the environment.
This document will continue to be a “living” document that will be updated as required to keep up with changing regulations and to ensure that health and safety are constantly a priority. Additionally, this SSOERP will provide the necessary guidelines for District staff when they must respond to a SSO event at any of the District’s operated facilities.
Section 2: SSO Response Organization

The District’s Overflow Response Organization provides a clear look at the organizational structure in place designated to respond to sanitary sewer overflow (SSO) events (See Figure 1 - SSO Emergency Response Matrix).

- **Director of Operations and Water Quality:** The primary role of the Director of Operations and Water Quality is to provide administrative oversight to the Director of Operations (AWP), Construction and Maintenance Crew Supervisor, and Field Crew. During an overflow event, the Director’s responsibilities include, but are not limited to, the following:
  - Reviewing and finalizing SSO reports prior to electronically submitting to online SSO CIWQS database.
  - Reviewing and finalizing District overflow field reports.
  - Ensuring proper regulatory agencies have been notified in appropriate time frame.
  - Confirmation of overflow volume.

- **Director of Operations (AWP):** The primary role of the Director of Operations (AWP) is to supervise the operations staff during a SSO response event, act as a liaison between the Director of Operations and Water Quality and the Construction and Maintenance Crew Supervisor, and to assist the Director of Operations and Water Quality as required.

- **Construction and Maintenance Crew Supervisor:** The primary role of the Construction and Maintenance Crew Supervisor is to manage and coordinate the response to the sewer overflow event immediately after it has been reported. Responsibilities of the Construction and Maintenance Crew Supervisor include, but are not limited to, the following:
  - Directing the Field Crew.
  - Assessing the sewer overflow situation and establishing the overflow abatement priorities.
  - Performing an initial assessment of the onsite and off-site impacts, as required.
  - Observing overflow (if any) and taking notes of size and path, performing required measurements, determining overflow volume, and taking digital photos.
  - Directing immediate control and containment measures.
  - Communicating the overflow situation to the Director of Operations (AWP) as soon as possible, including when the problem is controlled and eliminated.
  - Requesting additional Field Crew assistance and equipment, as necessary.
  - Checking downstream of overflow location to assess flow condition in sewer.
  - Checking upstream sewer of overflow location for potential other overflow discharge points, if warranted.
  - Preparing overflow field report and ensuring all oral and written reports are completed.
  - Initiating proper notification procedures.
  - Supervising all clean-up and disinfection activities.
  - Responsible for entering draft reports into the CIWQS Online SSO Database.
Field Crew: Upon notification from the Construction and Maintenance Crew Supervisor that a sewer overflow has been reported, the primary duties for the Field Crew include, but are not limited to, the following:

- Mobilizing equipment for overflow abatement activities.
- Implementing traffic and safety control procedures.
- Overflow containment and control.
- Checking downstream of overflow location to assess flow condition in sewer.
- Establishing and maintaining site security.
- Mitigating the impact of the overflow on water quality and beneficial uses.
- Clean-up and disinfection, if warranted, of the overflow area.
- Removal of overflow containment materials.
**Category 1 SSO**: discharge of any volume that reaches surface water or tributary drainage channel or MS4 and is not fully recovered prior to reaching surface waters

**Category 2 SSO**: discharge of 1,000 gallons or more that does not reach surface water, drainage channel, or MS4

**Category 3 SSO**: all other discharges

---

**Figure 1: SSO Emergency Response Matrix**
Section 3:  SSO Response Procedures & Impact Mitigation

It is the responsibility of the first District employee to arrive at the scene of the sewer overflow location to protect the health and safety of the public by immediately initiating measures to mitigate the impact of the overflow.

3.1  Initial Assessment and Response

Once the Construction and Maintenance Crew Supervisor (during business hours) or the duty person (after business hours) is notified that a sewer overflow has occurred the following initial actions are taken:

- Respond to the reported overflow location and survey the scene.
- If overflow is verified, identify and request the appropriate resources required to assist with containing the overflow and mitigating the cause of the overflow.
- Communicate information with District management, responsible individual, or other affected jurisdictional agency.
- Attempt to contain the overflow.
- Begin to collect information necessary to complete an overflow field report and take photos.
- Attempt to determine the cause of the overflow, e.g., line blockage, line breakage, pump station failure, electrical failure, etc.
- If possible, take immediate steps to stop the overflow.

3.2  Overflow Containment and Control

The primary objective of the responders to a sewer overflow incident is to protect the public's health. Accordingly, the responders should use available means to isolate the surrounding area to remove the possibility the public could come into contact with any sewage material from an overflow event. Perimeter control may include but is not limited to cones, barricades, vehicles or some other source that restricts public access.

After the public has been isolated from the spill area, containment and clean-up can proceed. The spill should be contained within the smallest possible area, and every effort should be made to prevent the discharge of sewage into any storm drain inlets, channels, or receiving waters. The following are containment suggestions:

- Identify and request the need for additional equipment or material to contain or isolate the overflow.
- Determine the immediate flow path of the overflow, e.g., storm drain, street curb gutter, body of water, culvert, landscaped area, etc.
- Using the Sewer Collection and Storm Drain Systems figures in Appendix F-2 as a guide, take steps to contain the overflow. Containment measures include, but are not limited to, the following:
  - Block or bag storm drain inlets.
  - Cover drop inlets with plastic sheets.
- Construct a containment pond using hay bales, plastic sheets, sand bags, earthen berms, etc.
- Possibly construct a diversion to a downstream manhole.

Once the overflow has been contained, return the sewage to the collection system using a vectored truck, pump(s) with associated hoses and piping, and/or vacuum trucks. Additionally, during the containment procedure immediate efforts should be made to clear the stoppage in the line and restore flow to normal conditions.

In the event of a prolonged line blockage, breakage, or collapse, a determination must be made whether or not to set up a portable bypass pumping operation around the overflow location area. If this is the case, personnel should continuously monitor the bypass pumping operations. Additionally, if the overflow event cannot be controlled by District forces alone, a determination must be made whether or not assistance should be solicited from a neighboring agency or outside contractor.

If required, coordinate posting locations of contaminated water signs and quarantine area with the County of San Diego Department of Environmental Health (DEH). Conduct water quality sampling if mandated by regulatory agencies or the Director of Operations and Water Quality. These procedures are described in detail later in Section 2.5 of this SSOERP.

For spills that occur within the Water Reclamation Facility, every effort should be made to keep the spill from leaving the property.

### 3.3 Overflow Cleanup

Sewer overflow sites are to be thoroughly cleaned as soon as possible after the overflow event is eliminated. All signs of sewage residue and gross pollution shall be removed to prevent the chance for public contact and/or to prevent future rain events from flushing the residue to a nearby body of water. The following steps should be taken to ensure that the overflow site(s) are returned to their previous conditions:

- Where possible, the area affected by the overflow is to be thoroughly flushed and cleaned of any sewage residue, washdown water, and/or gross pollution. Flushing and washdown water is captured and returned to the sewer system but is not included in the reported spill volume.
- Solids and debris are to be flushed, swept, raked, or gathered by hand and disposed of in the proper manner.
- If sewage has resulted in ponding, the area should be pumped dry and the residue and site cleanup managed as described above.
- Where appropriate, the overflow site is to be disinfected with chlorine. **Note:** Never apply disinfectant to a water course (storm drain, flood channel) or body of water.
- For overflows that have reached surface waters, see Section 2.5 for further details.
3.4 Overflow Event Documentation

Documenting the overflow event should not be confused with notification and reporting requirements, which are described later. Aside from notifying the proper regulatory agencies and electronically reporting of the overflow event to the online SSO reporting system via the California Integrated Water Quality System (CIWQS), the District’s Construction and Maintenance Crew Supervisor is responsible for preparing an overflow field report, which provides a record of the events of the incident. The Spill Report Form is found in Appendix F-6 and includes the following:

- Overflow event time (discharge start and stop),
- Personnel on site (arrival and departure times),
- Equipment on site (log of all equipment used),
- Digital photos and/or video documentation,
- Regulatory agencies and/or private owners/tenants notified, and
- Estimate of total overflow volume, volume recovered, and volume of wash down water used

3.5 Posting

If the overflow occurs outside of the Water Reclamation Facility or if the overflow leaves the treatment facility premises, posting of the overflow location and quarantine of the area with contaminated water signs may be required. The County of San Diego Department of Environmental Health (DEH) is the responsible authority for directing the closure of areas and determining the locations of posted signs, however, the District will provide assistance to DEH as required, including posting signs at the required locations. The DEH, having the final authority for posting, generally requires that posting is conducted under the following guidelines:

- If posting of the beaches is required, the signs shall be placed at 50 foot intervals for a minimum of 600 feet on each side of the point of ocean entry.
- If posting of lagoons, wetlands, or creek beds is required, the signs shall be placed at 50 foot intervals for high use areas and 600 foot intervals for low use areas. Both sides of the creek beds, lagoons, and wetlands must be posted.

It is the responsibility of the Director of Operations and Water Quality to remain in contact with DEH until such time as the signs are removed, so that answers about impacts to the receiving waters can be provided to the San Diego RWQCB, the public, and the District’s Board of Directors. DEH will advise the District when to remove signs based on bacteriological sampling and other environmental conditions.

3.6 Water Quality Monitoring

Sampling of receiving waters impacted by the overflow is required by regulatory agencies or at the direction of the Director of Operations and Water Quality, particularly whenever an overflow is greater than 50,000 gallons and reaches a storm drain or surface water. The District’s River Basin Sample/Posting Location for Sanitary Sewer Overflows Manual found in Appendix F-3 provides the sample locations and parameters to be tested. Sampling at appropriate locations will allow the District to establish and monitor the levels of contamination as well as to establish or compare with the natural baseline levels of bacteria in the receiving waters.
If sampling is to be conducted, the Director of Operations and Water Quality will direct the Laboratory Analyst to establish and complete the sampling regime. The Director of Operations and Water Quality should notify DEH that sampling and monitoring is being conducted, and to verify if additional testing is required. The sampling regime is to be continued until a determination is made that contamination resulting from the overflow event no longer exists and no longer poses a health risk to the public as described in the River Basin Sample/Posting Locations for Sanitary Sewer Overflows Manual. All final summary sampling and monitoring reports will be shared with DEH.

The River Basin Sample/Posting Locations for Sanitary Sewer Overflows Manual contains the necessary components to address the requirements of the water quality monitoring program as described in WQ 2013-0058-EXEC Section D and listed below:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g., safety, access restrictions).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents: (i). Ammonia (ii). Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction, which may include total and fecal coliforms, enterococcus, and e-coli.
Section 4: SSO Classification and Quantification

4.1 SSO Classification

Under the current State Water Resources Control Board Order No. WQ 2013-0058-EXEC, SSOs fall into the following categories described below. The SSO category and volume do not affect the District’s SSO response procedures regarding containment, control, and recovery, nor staff’s responsibility to understand and comply with notification and reporting processes.

4.1.1 Category 1

Discharges of untreated or partially treated wastewater of any volume resulting from the District’s sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water, or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g. infiltration pit, percolation pond).

4.1.2 Category 2

Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from the District’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

4.1.3 Category 3

All other discharges of untreated or partially treated wastewater resulting from the District’s sanitary sewer system failure or flow condition.

4.1.4 Private Lateral Sewage Discharges (PLSDs)

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the District’s sanitary sewer system or from other private sewer assets. Note that while WQ 2013-0058-EXEC encourages enrollees to voluntarily report PLSDs to the CIWQS Online SSO Database, the Regional Water Quality Control Board Order R9-2007-0005 requires that the District report PLSDs for documentation purposes. The District is not held responsible for the cause, cleanup, or repair of PLSDs, but only of reporting those that the District is aware of within its jurisdiction.

4.2 Spill Quantification

Spill quantification requires careful documentation and close observation of the overflow event. Staff should make every effort to maintain a careful chronology of the events during an overflow event and make every attempt to conduct linear measurements of the discharge streams and flow velocities in order to effectively quantify the overflow volume. Photo/video documentation of the overflow event should also become a routine procedure in the overflow documentation process.
To assist in overflow volume quantification refer to “Best Practices for Sanitary Sewer Overflow Prevention and Response Plan” found in Appendix F-4. Confirming the official estimate of the overflow volume is the responsibility of the Director of Operations and Water Quality.
Section 5: Reporting and Notifications

While the State Water Resources Control Board Order No. WQ-2013-0058-EXEC is the primary regulatory mechanism for sanitary sewer systems statewide, it allows each regional board to issue stricter WDRs for sanitary sewer systems within their respective jurisdiction. Generally, the San Diego Regional Water Quality Control Board Order No. R9-2007-0005 sets forth more prescriptive monitoring and reporting requirements than the State Water Resources Control Board Order No. WQ 2013-0058-EXEC. Reporting timeframes, required notifications and certifications for the San Diego Region are shown graphically and discussed below:

Figure 2: SSO Monitoring & Reporting Program for San Diego Region
5.1 Certification

- Information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the Order No. 2006-0003-DWQ. This designated person is also known as a Legally Responsible Official (LRO).
- Any designated person (i.e., an LRO) shall be registered with the State Water Resources Control Board to certify reports in accordance with the CIWQS protocols for reporting.
- Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Resources Control Board. However, only LROs may certify reports in CIWQS.
- The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO’s or DS’s contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.
- A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the State as stated in the CIWQS Online SSO Database at the time of certification.

5.2 SSO Reporting Timeframes

5.2.1 Sanitary Sewer Overflow Reporting to CIWQS

As described in the MRP, the timeframe for SSO reporting depends on the SSO category:

- Category 1 and Category 2 – Must be reported as soon as: 1) the District has knowledge of the discharge, 2) reporting is possible, and 3) reporting can be provided without substantially impeding cleanup or other emergency issues.
  - Draft reports shall be submitted to the CIWQS Online SSO Database within three (3) business days of the District becoming aware of the SSO.
  - A final report shall be certified through the CIWQS Online SSO Database within fifteen (15) calendar days of the end date of the SSO.
Additional Reporting Requirements for Category 1 SSOs

The District will submit an SSO Technical Report in the CIWQS Online Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. At a minimum the report shall include the following:

A. Causes and Circumstances of the SSO:

1. Complete and detailed explanation of how and when the SSO was discovered.
2. Diagram showing the SSO failure point, appearance point(s), and final destination(s).
3. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
4. Detailed description of the cause(s) of the SSO.
5. Copies of original field crew records used to document the SSO.
6. Historical maintenance records for the failure location.

B. Enrollee’s Response to SSO:

1. Chronological narrative description of all actions taken by enrollee to terminate the spill.
2. Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
3. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

C. Water Quality Monitoring:

1. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
2. Detailed location map illustrating all water quality sampling points

- Category 3 - Shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into CIWQS and certified by March 30).
• Private Lateral Sewage Discharges – Shall be reported to the CIWQS Online SSO reporting system within 30 calendar days of the end of the month in which the PLSD occurred.

• No Spill Certification – If there are no SSOs during the calendar month, the District shall either:
  ▪ Certify, within 30 calendar days after the end of each calendar month a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or
  ▪ Certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS online SSO Database certifying that there were no SSOs for each month included in the quarterly report.

5.3 Required Notifications (Not to be confused with Reporting)

Effective September 9, 2013, an amendment to the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order No. WQ 2013-0058-EXEC was approved, resulting in the following notifications requirements:

• For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water, either directly or by way of a drainage channel or MS4, the District shall notify the California Office of Emergency Services (Cal OES), the County of San Diego Department of Environmental Health (DEH), and the San Diego RWQCB, as soon as possible, but not later than two (2) hours after:
  ▪ The District has knowledge of the discharge,
  ▪ Notification is possible, and
  ▪ Notification can be provided without substantially impeding cleanup or other emergency measures.

• The District shall provide the information requested by OES before receiving a control number. Spill information requested by OES may include:
  a. Name of person notifying OES and direct return phone number.
  b. Estimated SSO volume discharged (gallons).
  c. If ongoing, estimated SSO discharge rate (gallons per minute).
  d. SSO Incident Description:
     ◆ Brief narrative.
     ◆ On-scene point of contact for additional information (name and cell phone number).
     ◆ Date and time enrollee became aware of the SSO.
     ◆ Name of sanitary sewer system agency causing the SSO.
     ◆ SSO cause (if known).
  e. Indication of whether the SSO has been contained.
  f. Indication of whether surface water is impacted.
  g. Name of surface water impacted by the SSO, if applicable.
h. Indication of whether a drinking water supply is or may be impacted by the SSO.

i. Any other known SSO impacts.

j. SSO incident location (address, city, state, and zip code).

Following the initial notification to OES and until such time that the District certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

Additionally, the following notifications are required per District protocol:

- San Diego RWQCB – Aside from the timeframe to electronically report a SSO event to the online reporting system via CIWQS, the San Diego RWQCB requires 24 hour notification when:
  - The spill is a Category 1 SSO, or
  - The PLSD is equal to or greater than 1,000 gallons and reached or will likely reach surface waters.

The following information should be reported to the San Diego RWQCB:

- Name and phone number of the caller reporting the overflow
- Responsible owner of the sewer system (Padre Dam MWD)
- Location of the overflow
- Total estimated overflow amount
- Surface waters that may be affected
- Whether or not the overflow is still occurring at the time of notification
- Confirmation that other regulatory agencies have been notified

- County of San Diego Department of Environmental Health (DEH) – In accordance with Section 5411.5 of the California Health and Safety Code, the District has a responsibility to notify DEH:
  - Immediately – 1) SSOs to waters of the state (ocean, bay, river, dry or flowing creek or stream, drinking water reservoir, etc.) and 2) unmitigated SSOs to areas with potential public contact (near homes, schools, parks, etc.).
  - Within 24 hours – 1) Mitigated SSOs to the ground only, no potential for contact with waters of the state and 2) unmitigated SSOs to areas without potential public contact.

- Other Recipients – At the direction of the District’s General Manager, the following recipients may require notification of an overflow event:
  - Board of Directors
  - Member agencies
  - Cities along the coast that may have beaches potentially impacted by the overflow
  - Other public agencies
  - Local interest groups
  - Media personnel
Under the authorization of the Director of Operations and Water Quality, the Director of Operations (AWP) has the responsibility of conducting initial notifications. Subsequent reports (preliminary and final drafts) are the responsibility of the Construction Maintenance Supervisor. Any final reports should be reviewed by the Director of Operations and Water Quality for completeness and accuracy, before being sent to the online SSO reporting system. In the absence of the Director of Operations and Water Quality the Director of Operations (AWP) has the responsibility for reviewing the final reports.
Section 6: Other Overflow Events

6.1 Recycled Water Overflow

California Water Code, Section 13529.2 outlines the unauthorized discharge classification and quantification for recycled water. As stated in Section 13529.2, notification to the applicable regulatory agency is required whenever there is an unauthorized discharge of:

- 50,000 gallons or more of recycled water that is treated as “disinfected tertiary 2.2 recycled water,” as defined or described by the State Department of Public Health Services or wastewater receiving advanced treatment beyond disinfected tertiary 2.2 recycled water, or
- 1,000 gallons or more of recycled water that is treated at a level less than “disinfected tertiary 2.2 recycled water,” as defined or described by the State Department of Public Health Services.

6.2 Overflow Events within a Treatment Facility

The District received a letter on January 8, 2002 from the San Diego RWQCB that provides clarification of overflow events within the water reclamation facility (WRF). In its letter, RWQCB stated that the following examples would not be overflow reportable events:

- Contained spills that occur as a result of routine maintenance, cleaning or repairs, unless the spills violated Provision 13 of the NPDES permit.
- Washing down paved areas within the treatment plant facility with secondary treated water that will be contained and returned to the treatment process, and repairs and over-sprays of irrigation lines containing treated water, given that the runoff is completely contained within the WRF plant and returned to the treatment process.

All overflow events that do not fit within these two examples will be considered reportable events. The use of recycled water onsite within the treatment facility is excluded from these two examples provided that access by the public to the area of recycled water use is restricted.

6.3 Overflow Event at the Influent Pump Station

The District’s influent pump station (IPS) and four other sewer lift stations currently respond to pump/lift station failure based on the District’s Sewer Lift Station Contingency Plan in conjunction with this SSOERP. A summary of the IPS contingency plan requirements is described in this section of the SSOERP. For clarification, a copy of the Sewer Lift Station Contingency Plan is also provided as Appendix F-5.

6.3.1 Notification of Problem

In case of an IPS failure, the System Operators would be notified via the SCADA system’s many alarm set-points. These alarms consist of the following:

- High Wet Well Alarm
- Power Failure Alarm
- High High Wet Well Alarm
- Communications Failure Alarm
• High Wet Well Float Alarm
• Pump Failure Alarm

This station has a High Wet Well Alarm set at 302 ft. Spillage from manholes numbers 56, 54, 2574, 2988 and 2989 occurs at an elevation of approximately 314 ft. All of the manholes that spill are located on the Carlton Oaks Golf Course which is southwest of the IPS and Operations yard.

6.3.2 Response to Failures

Upon receiving any of the alarms, the Systems Operator analyzes the SCADA data and determines the appropriate level of response. If warranted, the Distribution Maintenance Manager and the pump technicians would be called to respond to the station. As they are responding, they would call crews to respond with a vacuum truck. Alarms are set at points in which there is time between the detected failure and an actual sewer spill to allow time for an appropriate emergency response. Response times for emergency events at the IPS are relatively quick considering the facility is located in the District's main operations yard.

In an effort to minimize sewage flows to the IPS, Systems Operators would change diversions through the SCADA controls or manually so that all flow is directed to the County of San Diego’s (County’s) sewer system instead of toward the IPS. Within the District there are four diversion structures, including Carlton Hills, Walmart, Town Center, and Cottonwood. Of the four diversion structures, three are currently automated and would be changed through SCADA, including Carlton Hills, Walmart, and Cottonwood.

Sand bags are stocked in the Operations yard for quick access and response to spills. Additional sand bags can be ordered locally and delivered to the sites as needed.

The IPS is set up with a 500 kW emergency diesel generator. The generator is fed fuel through a day tank that pulls the fuel from the District’s underground storage tank. The underground storage tank replenishment order is placed when it has been drawn down to approximately 3,000 gallons.

The IPS is fitted with an emergency bypass piping connection. Two pumps for this connection are typically stored in the District’s operations yard which allows for a quick response and set up. If necessary, crews would bring the pump to the south end of the IPS and begin connecting suction piping to the pump. The suction end of this piping could either be submerged into the IPS wet well or into one of five manholes located upstream of the IPS. Discharge piping is also located in the operations yard and various fittings and pipe lengths are on hand.

The District recently installed a bypass pumping connection with a knife gate valve upstream of the IPS, located adjacent to the SDGE gas facility. This connection has a built in suction line, a manhole and a valve that can shut off flow to the IPS. This system is primarily used for planned bypass operations but could also be used as emergency response.

A second pump, which was recently purchased by the District and is also typically stored in the Operations yard, would be set up as a redundant backup. If additional pumps are needed, they could be rented from one of the vendors listed in the District’s Sewer Lift Station Contingency Plan (see Pump Rental Contacts). The temporary bypass pumping operation would be manned 24 hours a day by District staff while repairs are completed on the IPS.

Staff would be dispatched to the golf course with equipment to clean up any spill debris. Vactor trucks, backhoes and any other necessary equipment would be made available for cleanup efforts.

Pump Technician Operators and Electricians will troubleshoot the event to identify the cause of the pump station failure. They will assess the station's condition, and immediately begin repairs.
Critical spare parts are held in the District’s inventory and can be accessed with little delay. Should appropriate parts not be available, vendors would be contacted to expeditiously obtain the needed parts.
Section 7: Revisions and Employee Training Program

7.1 SSOERP Revisions

The District’s SSOERP is considered a “living” document and shall be reviewed and revised, as necessary, after each overflow event. The Director of Operations and Water Quality, Director of Operations (AWP), and Construction and Maintenance Crew Supervisor shall conduct a review of the SSOERP in order to maintain a document that remains in an up-to-date condition and is in alignment with the SSMP 2-year audit. This review will be performed at least bi-annually.

7.2 Annual Training

The Director of Operations (AWP) shall schedule annual training designed to identify resource shortcomings, clarify roles and responsibilities, improve overflow event response performance and reveal any response weakness. The training may consist of:

- **Response Training** – An annual awareness training meeting with respect to the details of the SSOERP and the responsibilities of District staff. Additional training sessions may also be conducted by the Operations Department to further familiarize staff with overflow event response procedures.

- **Overflow Review Committee** – After each spill event, a Spill Review Committee composed of the Director of Operations and Water Quality, Director of Operations (AWP), Construction and Maintenance Crew Supervisor, and Field Crew will meet to review and discuss the event. Topics of discussion may include the determined cause of the event, the procedural response of staff, regulatory and compliance documentation, and whether additional issues and/or resources have to be addressed.
## Section 8: Contact Information

Listed below is contact information for regulatory agencies and District Staff as they apply to a sanitary sewer overflow event.

<table>
<thead>
<tr>
<th>Regulatory Agency</th>
<th>Phone / Fax #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Water Quality Control Board (San Diego – District 9)</td>
<td>(858) 467-2952 (858) 571-6972 (fax)</td>
</tr>
<tr>
<td>County of San Diego Department of Environmental Health (DEH)</td>
<td>(619) 338-2386 (619) 338-2174 (fax)</td>
</tr>
<tr>
<td>Office of Emergency Services (OES)</td>
<td>(800) 852-7550</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Padre Dam MWD</th>
<th>Position</th>
<th>Phone #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Clarke</td>
<td>Director of Operations and Water Quality</td>
<td>(619) 258-4746</td>
</tr>
<tr>
<td>Kyle Swanson</td>
<td>Director of Operations (AWP)</td>
<td>(619) 258-4673</td>
</tr>
<tr>
<td>Richard Schultz</td>
<td>Construction and Maintenance Crew Supervisor</td>
<td>(619) 258-4777</td>
</tr>
<tr>
<td>Robert Northcote</td>
<td>WRF Plant Manager</td>
<td>(619) 258-4697</td>
</tr>
<tr>
<td>Larry Costello</td>
<td>Safety and Risk Manager</td>
<td>(619) 258-4678</td>
</tr>
<tr>
<td>Mark Niemiec</td>
<td>Director of Engineering and Planning</td>
<td>(619) 258-4766</td>
</tr>
<tr>
<td>Michael Hindle</td>
<td>Engineering Manager</td>
<td>(619) 258-4632</td>
</tr>
<tr>
<td>Melissa McChesney</td>
<td>Communications Manager</td>
<td>(619) 258-4680</td>
</tr>
</tbody>
</table>
APPENDIX F-2

Sewer Collection and Storm Drain System Maps
Legend

- Flow Direction
- Sewer Manholes (Active)
- Storm Drain Outlets
- Lift Stations/Pump Stations
- Water Recycling Facility
- Diversion Structures
- Sewer Gravity Lines
- Sewer Force Main
- Connector
- Stream/River
- Storm Drain Lines

Padre Dam MWD Service Area
Sewer Maintenance Basins & ID

Drainage Basins (Per 2016 Study)

Padre Dam Municipal Water District
Sewer System Management Plan Update

SEWER COLLECTION & STORM DRAIN SYSTEMS
SEWER MAINTENANCE BASIN AREA 1

April 2019
Figure F-2.1
APPENDIX F-3

River Basin Sample / Posting Locations for Sanitary Sewer Overflows
RIVER BASIN SAMPLE/POSTING LOCATIONS FOR SANITARY SEWER OVERFLOWS

Padre Dam Municipal Water District
9300 Fanita Parkway
Santee, CA 92072

April 2019
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Section 1: Description of Manual

This manual serves as a guideline for surface water quality sampling and contaminated water sign posting procedures following a Sanitary Sewer Overflow (SSO). This manual includes the locations, descriptions, explanations, and photographs of each sample site.

Not all SSOs will reach surface waters or require water quality sampling and posting of contaminated water signs. Sampling requirements vary depending on spill volume, duration, weather conditions, precipitation amounts and spill response activities.

Padre Dam Municipal Water District (Padre Dam or District) Staff will work collaboratively with the County of San Diego Department of Environmental Health (DEH) to determine the extent of the spill contamination area, required sampling, and posting activities. Depending on the spill location, District Staff will make every attempt to take one sample upstream of the spill area to establish a baseline contamination level in the receiving waters. After a spill reaches surface waters, samples will be taken downstream of the spill site at one or more of the locations identified in this manual. Prior to taking any samples in the San Diego River or the Pacific Ocean, District Staff will contact County DEH Staff to coordinate a plan for the sampling activities.

If a spill reaches the beach, County DEH staff will require multiple samples at Dog Beach before lifting any beach closures. These samples will typically be taken between the river mouth and the Ocean Beach Pier at the following locations:

- Outlet of river (in the mixing zone of river and ocean)
- Stub Jetty (end of bike path)
- Avalanche Jetty (end of Cape May Place)
- Ocean Beach Pier

County DEH typically requires that two consecutive samples present acceptable results prior to lifting beach closures and removing warning signs that have been posted at the river, creeks, and beaches. District Staff will stay in communication with the DEH staff member assigned to the SSO event to ensure all required tasks completed.

Maximum acceptable sample results are listed in the table below, Per Title 17 of the California Code of Regulations, Division 1, Chapter 5, Subchapter 1, Group 10, Article 4, Section 7958 Bacteriological Standards.

### Table 1: CDPH Bacteriological Standards for Water-Contact Sports

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Standard (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Coliform (2)</td>
<td>1,000</td>
</tr>
<tr>
<td>Total Coliform</td>
<td>10,000</td>
</tr>
<tr>
<td>Fecal Coliform</td>
<td>400</td>
</tr>
<tr>
<td>Enterococci</td>
<td>104</td>
</tr>
</tbody>
</table>

Notes:

1. Number of organisms or colonies forming per 100 ml of water
2. If the ratio of fecal to total coliform exceeds 0.1
Section 2: Sample Collection Information

The following information is presented in the District’s Laboratory Quality Assurance Manual. To ensure accurate laboratory data, all samples are collected and transported according to the 23rd Edition and online version of the Standard Methods for the Examination of Water and Wastewater, sections 1060, 9060 and other method specific requirements. All samplers have received training in proper sampling techniques, procedures and protocols.

2.1 Sample Collection

Samples from the potable water system are collected by the Water Quality Technician, Field Systems Operator, or Distribution personnel.

River basin and lake samples are collected by the Recycled Water staff.

Storm water samples are collected by a Field Operations staff member.

Samplers attach the appropriate sample label to the proper container; collect sample, and then record time, date and other comments on the sampling field sheets. Field analyses are performed at this time and recorded in on field record sheets. Samples are transported to the laboratory in coolers containing cubed ice or blue ice within the required holding time.

2.2 Sample Receiving and Storage

Upon return to the laboratory, the samplers drop off the samples to the lab staff with a copy of the field sheet. The field sheet is compiled in a spiral notebook. See Appendix II in QA Manual.

Table 2: Preservation and Holding Times for Surface Water Samples

<table>
<thead>
<tr>
<th>FT</th>
<th>Analyte</th>
<th>Method</th>
<th>Methodology</th>
<th>Preservative</th>
<th>Holding Time</th>
<th>Type of Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
<td>Total and Fecal Coliform</td>
<td>SM 9221A, B, C, E</td>
<td>Multiple Fermentation Tube</td>
<td>Cool, 4°C 2 drops of 10% Na₂S₂O₃</td>
<td>8 Hours</td>
<td>125 ml sterile Nalgene bottle</td>
</tr>
<tr>
<td>107</td>
<td>E.coli</td>
<td>SM 9223</td>
<td>Colilert-18 Quanti-tray</td>
<td>Cool, 4°C 2 drops of 10% Na₂S₂O₃</td>
<td>8 Hours</td>
<td>500 ml sterile Nalgene bottle</td>
</tr>
<tr>
<td>107</td>
<td>Heterotrophic Plate Count</td>
<td>SM 9215 B</td>
<td>Pour Plate</td>
<td>Cool, 4°C 2 drops of 10% Na₂S₂O₃</td>
<td>8 Hours</td>
<td>125 ml sterile Nalgene bottle</td>
</tr>
</tbody>
</table>
Section 3: River/Beach Sign Posting

Following an SSO that reaches surface waters, District Staff will post contaminated water signs at one or more locations within the sewer service area and downstream of the spill. Typical sites along the San Diego River and Forester Creek are included in this manual. District Staff will post additional signs as required in the general vicinity of the SSO site. District Staff will also work closely with DEH staff to ensure that all areas are sufficiently posted with warning signs. Mission Trails Park and San Diego Lifeguards often call to inquire about postings and closures. Contact information is listed on the following page for each agency.

During wet weather events, local creeks and rivers can experience strong flows. Precautions will be observed to ensure the safety of all staff members performing sign posting or water sampling, and if conditions are dangerous, sampling will be delayed and a supervisor will be notified. Alternate sample locations may be warranted, with the approval from the regulatory agency. During and shortly after rain events, Coliform and Enterococci levels are generally elevated even without the presence of an SSO. Therefore, sampling may be delayed until flows return to normal.

Figure 1: Example of a Contaminated Water Sign Posted at the Beach
## 3.1 Contact Information

- **County DEH Staff**, 6 am to 4 pm ................................................................. 858-495-5579
- **County DEH Duty Line** (After hours, weekends and holidays) .................. 858-656-5255
- **San Diego County DEH** ............................................................................... 619-338-2284
- **Water Recycling Facility** ............................................................................ 619-258-4692
- **San Diego Lifeguards** .................................................................................. 619-221-8999
- **Mission Trails Park** ...................................................................................... 619-668-3281

### Table 3: River Basin Sample and Sign Posting Locations for Sanitary Sewer Overflows Overview

<table>
<thead>
<tr>
<th>Location #</th>
<th>Location Name</th>
<th>Description</th>
<th>Coordinates</th>
<th>North</th>
<th>West</th>
<th>River Sample Location</th>
<th>River Basin Sign Posting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Magnolia Ave</td>
<td>West of Magnolia Avenue Bridge @ San Diego River</td>
<td>32° 50' 52.21&quot;</td>
<td>116° 58' 10.99&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Cuyamaca St</td>
<td>West of Cuyamaca Street Bridge @ San Diego River</td>
<td>32° 50' 47.64&quot;</td>
<td>116° 59' 01.59&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Olive Ln</td>
<td>West of Olive Ln Bridge @ Forster Creek</td>
<td>32° 50' 02.87&quot;</td>
<td>116° 59' 22.35&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>Carlton Oaks Golf Course</td>
<td>Pond South of Clubhouse @ San Diego River</td>
<td>32° 50' 26.73&quot;</td>
<td>117° 00' 34.11&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5</td>
<td>West Hills Pkwy</td>
<td>West of West Hills Parkway Bridge @ San Diego River</td>
<td>32° 50' 22.29&quot;</td>
<td>117° 01' 27.07&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>Kumeyaay Lake</td>
<td>South Side of Lake</td>
<td>32° 50' 27.15&quot;</td>
<td>117° 01' 59.59&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7</td>
<td>Old Mission Dam (Upstream)</td>
<td>South Side of San Diego River</td>
<td>32° 50' 23.37&quot;</td>
<td>117° 02' 34.40&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Old Mission Dam</td>
<td>South Side of San Diego River</td>
<td>32° 50' 22.49&quot;</td>
<td>117° 02' 35.38&quot;</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>9</td>
<td>Old Mission Dam (Downstream)</td>
<td>South Side of San Diego River</td>
<td>32° 50' 23.09&quot;</td>
<td>117° 02' 38.16&quot;</td>
<td>X</td>
<td>X</td>
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<tr>
<td>10</td>
<td>San Diego Mission Rd</td>
<td>North Side of San Diego Mission Road Bridge @ San Diego River</td>
<td>32° 47' 01.81&quot;</td>
<td>117° 06' 15.06&quot;</td>
<td>X</td>
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<tr>
<td>11</td>
<td>Fashion Valley Rd</td>
<td>East Side of Fashion Valley Road Bridge @ San Diego River</td>
<td>32° 45' 51.54&quot;</td>
<td>117° 10' 12.22&quot;</td>
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<tr>
<td>12</td>
<td>Dog Beach</td>
<td>South of River Outlet @ Ocean Beach (Dog Beach)</td>
<td>32° 45' 15.89&quot;</td>
<td>117° 15' 09.15&quot;</td>
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Figure 2: Posting and Sampling Locations Overview

Site 1: Magnolia Avenue Bridge at San Diego River
River Sampling Site
Site 2: Cuyamaca Street Bridge at San Diego River
River Sampling Site

Site 3: Olive Lane Bridge at Forester Creek
River Sampling Site, River Basin Sign Posting Location

Site 4: Carlton Oaks Golf Course
River Sampling Site, River Basin Posting Location
Site 5: West Hills Parkway Bridge at San Diego River
River Sampling Site, River Basin Posting Location

Site 6: Kumeyaay Lake
River Basin Posting Location

Site 7-9: Old Mission Dam
River Sampling Site, River Basin Posting Location
Site 10: San Diego Mission Road at San Diego River
River Sampling Site, River Basin Posting Location

Site 11: Fashion Valley Road at San Diego River
River Sampling Site, River Basin Posting Location

Site 12: Ocean Beach/Dog Beach
Ocean Sampling Site, Basin Posting Location
### 3.2 River/Beach Sign Posting List

<table>
<thead>
<tr>
<th>No.</th>
<th>Location</th>
<th>Date</th>
<th>Technician</th>
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<tr>
<td>1</td>
<td>Olive Lane at Forester Creek</td>
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<td>2</td>
<td>Carlton Oaks Golf Course Pond</td>
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<td>4</td>
<td>West Hills Parkway at San Diego River</td>
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<tr>
<td>5</td>
<td>Old Mission Dam (Upstream)</td>
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<td>6</td>
<td>Old Mission Dam</td>
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<td>7</td>
<td>Old Mission Dam (Downstream)</td>
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<td>8</td>
<td>Kumeyaay Lake</td>
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<td>9</td>
<td>Old Mission Road at San Diego River</td>
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<tr>
<td>10</td>
<td>Fashion Valley Road at San Diego River</td>
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<tr>
<td>11</td>
<td>Dog Beach</td>
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<td>21</td>
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</table>
Collection System Collaborative Benchmarking Group

*Best Practices For*

SSOPRP

Sanitary Sewer Overflow Prevention And Response Plan
Collection System Collaborative Benchmarking Group

*Best Practices For*

**SSOPRP**
Sanitary Sewer Overflow Prevention And Response Plan
Dear Wastewater Collection System Colleagues,

This Sanitary Sewer Overflow Prevention and Response Plan (SSOPRP) was developed as a guideline only. The purpose of the SSOPRP is to assist public agencies in developing their own SSOPRP to minimize and eliminate preventable Sanitary Sewer Overflows (SSO’s).

The plan represents the Collection System Collaborative Benchmarking Group’s effort to interpret the current regulatory requirements for preventing, responding to, mitigating, and reporting SSO’s in California.

The following agency’s representatives worked on the development of this Best Practices SSOPRP Guideline:

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Sanitation District #1

Roger Ham
Andy Morrison
Union Sanitary District

Adel Hagekhalil
Chair, Collaborative Benchmarking Group
Six public wastewater utilities with responsibilities for the operation and maintenance of wastewater collection systems agreed in 1998 to come together to compare and improve their performance through the use of metrics, process benchmarking and the development of best practices for various elements of the maintenance, operation and management of the wastewater collection system. These seven agencies are:

- Central Contra Costa Sanitary District
- City of Los Angeles
- City of San Diego
- Orange County Sanitation District
- Sacramento County Sanitation District No. 1
- Union Sanitary District

The first best practice manual was developed in 2001 for Hydroflush sewer cleaning of small diameter sewers. This is the second best practice manual that has been developed to meet the increasing need to effectively respond to and prevent sanitary sewer overflows (SSO's).

The use of this best practice along with previous best practices is the sole responsibility of the agency using it. These practices are intended as guidance and need to be evaluated and tailored for site-specific needs and conditions of each agency and system, as well as any mandatory regulatory requirements.

The individual authors and contributing agencies of this best practices make no warranties and/or guarantees, express or implied, as to the fitness, application and/or use of these best practices.

Adel Hagekhalil — Project Manager
Patrick Hassey — Chief Editor
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<td>3. Acronym Definitions</td>
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<td>4. Sanitary Sewer Overflow Prevention Plan</td>
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<td>5. Sanitary Sewer Overflow Response Plan</td>
<td>19</td>
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<td>6. Exfiltration</td>
<td>27</td>
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<tr>
<td>7. References</td>
<td>28</td>
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<td>8. Attachments</td>
<td>29</td>
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<tr>
<td>Regulatory References</td>
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<tr>
<td>Benchmarking Metrics</td>
<td>39</td>
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<td>Sample Mutual Aid Agreement</td>
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<td>9. Index</td>
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\(^1\) Reproduced with permission from Brown and Caldwell
1. **Purpose**

The purpose of this document is to provide a guideline for the development and implementation of a Sanitary Sewer Overflow Prevention and Response Plan (SSOPRP) that will protect public health and the environment.

**Goals:**

- Prevent the occurrence of preventable and chronic SSO’s
- Protect public health and safety
- Prevent adverse impacts to the environment, waterways of the state, and their beneficial uses
- Achieve timely and expeditious response to reports of all potential SSO’s

**Objectives:**

- Eliminate preventable SSO’s
- Minimize adverse impacts of SSO’s
- Ensure corrective action is taken in a timely manner
- Identify and implement measures to prevent the occurrence of preventable and chronic SSO’s
- Ensure compliance with current regulatory requirements
- Document and define procedures to address SSO prevention and response
- Provide uniform, clear, and consistent SSO prevention and response
2. Term Definitions

**SSO:** A Sanitary Sewer Overflow (SSO) is the discharge of any amount of untreated sewage from a collection system before it reaches a treatment plant. SSO’s can occur at many different locations within the wastewater collection system. These locations include, but are not limited to, pump stations, maintenance holes, broken pipes, clean-outs, siphons, air relief valves and diversion structures. SSO’s can discharge to public and/or private property because of a pump stations failure or a blocked or surcharged private or municipal sewer.

**Stoppage:** Any obstruction in the sewer that impacts the flow of wastewater. Also referred to as blockage.

**Dry weather SSO:** An SSO that is caused by a blockage primarily due to grease, roots or debris, a capacity deficiency, or a pump station failure. A dry weather SSO is not caused by excessive rain entering the sewer system.

**Blockage caused SSO:** An SSO that is caused by a blockage mainly due to grease, roots, debris or vandalism.

**Wet weather SSO:** An SSO that is caused by excessive wet weather flow, which is mainly due to inflow and/or infiltration (I/I), that overtaxes the system’s normal design capacity.

**Inflow:** Water (mainly runoff) discharged to a sewer system, including service connections, from sources including but not limited to the following: roof leaders, cellar, yard and area drains, crushed laterals, foundation drains, cooling water discharge, drains from springs and swampy areas, maintenance hole covers, summit maintenance hole plugs, cross connections from storm and combined sewers, tide gate leakage, catch basin laterals, storm water, surface runoff, street wash water, or drainage.\(^2\)

**Infiltration:** The water entering a sewer system and service connections from the ground, through means including, but not limited to, defective pipes, pipe joints, connections, or maintenance hole walls.\(^3\)

---

\(^2\) Water Environment Federation – Manual of Practice FD-17
\(^3\) Ibid
Term Definitions (Continued…)

**Capacity caused SSO:** An SSO that is caused by a lack of sewer or pump station capacity to convey wastewater during dry or wet weather conditions.

**Preventable SSO:** SSO’s that could have been avoided if appropriate preventative or corrective actions were taken, including all repeat and chronic SSO’s.

**Unpreventable SSO:** SSO’s that are beyond the control of the system operator. These include, but are not limited to, SSO’s caused by vandalism, earthquakes, water main breaks, acts of nature, and contractor error.

**Exfiltration:** The leakage of sewage from buried collection systems that may not be detectable by Closed Circuit Television inspection.
3. Acronym Definitions

**SSO:** Sanitary Sewer Overflow

**SSOPRP:** Sanitary Sewer Overflow Prevention and Response Plan

**SSOPP:** Sanitary Sewer Overflow Prevention Plan

**SSORP:** Sanitary Sewer Overflow Response Plan

**I/I:** Inflow and/or Infiltration

**FOG:** Fats, Oils and Grease

**POTW:** Publicly Owned Treatment Works

**NPDES:** National Pollutants Discharge Elimination System

**CMOM:** Capacity, Management, Operation and Maintenance

**SCADA:** Supervisory Control and Data Acquisition

**CCTV:** Closed Circuit Television

**OES:** Governor’s Office of Emergency Services

**RWQCB:** Regional Water Quality Control Board

**EPA:** Environmental Protection Agency

**FPE:** Food Producing Establishment
4. Sanitary Sewer Overflow Prevention Plan (SSOPP)

I. Introduction

A. This prevention plan was developed as a guideline for sewer agencies to use in eliminating the causes of preventable SSO’s in their sanitary sewer systems.

B. This plan will assist agencies in improving operational efficiency, reducing mitigation costs related to SSO’s, and protecting public health and the environment.

II. Failure Analysis

A. Failure analysis is a structured approach to SSO data collection and analysis. It is used to identify and prioritize system deficiencies in order to devise a corrective action plan to prevent future SSO’s. Failure analysis consists of the following elements:

1. Analysis of the system’s past SSO’s and stoppage records

2. Development of a table that shows the breakdown of number and volume of SSO’s and stoppages

   a. Break down table by criteria such as:
      
      - Cause
      - Size of pipe (focus on six and eight inch pipe, which are prone to blockages)
      - Commercial, residential, or industrial area
      - Time of year/season
      - Weather conditions at time of stoppage
      - Any other appropriate criteria as dictated by site-specific conditions

   b. Analyze, tabulate, and graph data by year and cause (or other site-specific criteria) to evaluate trends.

   c. Use the latest three to five years of data.
### Sample Failure Analysis Tables

#### Sample Failure Analysis Table – SSO's (by cause)

<table>
<thead>
<tr>
<th>SSO Causes</th>
<th>Number</th>
<th>%</th>
<th>Volume</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pipe Blockages</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fats, Oils and Grease (FOG)</td>
<td></td>
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<tr>
<td>Mainline Roots</td>
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<tr>
<td>Debris</td>
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<tr>
<td>Rocks</td>
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<tr>
<td>Roots from Private Laterals (Cut Roots)</td>
<td></td>
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<tr>
<td>Vandalism</td>
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<tr>
<td><strong>Pipe Breaks</strong></td>
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<tr>
<td>Gravity Sewers</td>
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<tr>
<td>Force Mains</td>
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<td></td>
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<tr>
<td>Construction Damage</td>
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<td></td>
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<tr>
<td><strong>Pumping Plant Failure (Power Outage)</strong></td>
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<td><strong>Pumping Plant Failure (Component Failure)</strong></td>
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<td><strong>Capacity Caused (Dry Weather)</strong></td>
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<tr>
<td><strong>Capacity Caused (Wet Weather)</strong></td>
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<tr>
<td><strong>Others</strong></td>
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#### Sample Failure Analysis Table – Stoppages (by cause)

<table>
<thead>
<tr>
<th>Stoppage Causes</th>
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<th>Volume</th>
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<tr>
<td><strong>Pipe Blockages</strong></td>
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<tr>
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<td>Roots</td>
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<td>Debris</td>
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<td>Rocks</td>
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<td>Vandalism</td>
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<td><strong>Pipe Breaks</strong></td>
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<td>Gravity Sewers</td>
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<td>Construction Damage</td>
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<tr>
<td><strong>Others</strong></td>
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</table>
3. Benchmarking for performance measurement
   a. Track and normalize, by pipe diameter, the number of SSO’s and stoppages per year per 100 miles of sewer.
   b. Use this data to compare your performance to that of other agencies.

III. Prevention Practices

A. Preventative Maintenance – Prevention Practices

1. Focused cleaning on pipeline “hot spots” (High Frequency Maintenance)
   a. Frequency depends on severity of blockage and potential of recurrence.
   b. Ability to access sewers may impact schedule.
   c. Seasonal scheduling may be effective in minimizing potential for SSO recurrence.

2. Pump station maintenance
   a. Maintenance to prevent consequences resulting from power outages
      1) Schedule routine preventative maintenance and inspection of the backup power and electrical systems. Exercise equipment during scheduled maintenance activities to verify adequate operation of system and alarms, and train staff on applicable preventative maintenance procedures.
      2) Identify key replacement components and maintain adequate inventory of critical components.
b. Maintenance to prevent component failure

1) Perform routine preventative maintenance and inspection of all systems and components. Maintain, exercise and test all systems and components routinely.

2) Conduct routine wet well cleaning.

3) Identify key replacement components and maintain adequate inventory of critical components.

B. Proactive Maintenance – Prevention Practices

1. Pipeline maintenance

   a. System-wide cleaning of the entire system based on a set frequency

      1) A 5 to 10 year cleaning cycle is common amongst agencies, but frequency should be based on site-specific conditions and parameters, especially for small diameter local systems.

      2) A more aggressive schedule could be implemented to achieve the first cycle.

   b. System-wide visual inspection based on a set frequency

      1) Conduct inspection from the surface of maintenance holes.

      2) Frequency is set based on site-specific needs, conditions, and parameters.

   c. Annual failure analysis of a set percentage (such as 2%) of sewer reaches based on using the largest number of corrective and maintenance work orders.

   d. CCTV inspection to assess system needs and verify cleaning effectiveness.
2. Pump station maintenance

   a. Maintenance to prevent consequences resulting from power outages

      1) Estimate retention time and provide on-site stationary power backup for all pumping plants with limited retention time at peak flow based on agency’s risk criteria. Identify low points in the system where overflows may occur due to pump station failure.

      2) Locate, store and secure mobile power generators at key geographical locations to ensure adequate response times.

      3) Identify the proper generator for each pump station.

      4) Develop “pump around” plans, redundant power sources and/or dual barrel mains for each facility. Utilize auxiliary equipment and components.

      5) Utilize a simplified telemetry system or a more complex SCADA system, as site-specific conditions and needs dictate.

   b. Maintenance to prevent component failure

      1) Ensure pump redundancy.

      2) Utilize a simplified telemetry system or a more complex SCADA system, as site-specific conditions and needs dictate.

      3) Standardize, as much as possible, the size and type of equipment to allow for exchange and ease of troubleshooting and repair.
C. Focused – Prevention Practices

1. FOG control program:
   - Collect and evaluate sewer system stoppage and overflow data to characterize FOG problems areas (residential, commercial, or both)
   - Develop and implement a source control program for residential customers and food producing facilities that will address the FOG problem areas identified. Each jurisdiction will have a unique program tailored to their specific needs. Below are some various options that may be used when developing a comprehensive FOG program.

a. FOG control options for residential customers:
   1) Implementation of Best Management Practices
      a) Place cooking grease in container.
      b) Dispose of grease in solid waste receptacle, or as recommended by your local solid waste agency.
   2) Conduct ongoing outreach efforts, using educational materials such as:
      - Brochures
      - Videos
      - Public Service Announcements
      - Agency Web site

b. FOG control options for commercial food producing establishments:
   - Conduct on-going outreach efforts using educational materials (e.g. fact sheets, posters, videos, etc.)
   - A mechanism to track collection and disposal of grease (manifest verification and submission)
   - Enforcement authority and compliance measures
   - Permitting
   - Routine inspection
   - Enforcement authority and compliance measures

---

4 Best Management Practices for Grease Prevention was reproduced with permission from Brown and Caldwell.
c. Refer SSO’s caused by FOG to source control group for investigation and follow-up.

2. Chemical Root Control Program:
Develop and implement for areas of high density root growth and locations where accessibility is difficult for traditional preventative maintenance activities.

A Chemical Root Control Program consists of:
   a. Identification of those areas where standard maintenance practices are not cost effective due to the rapidity and density of root growth within laterals and mains
   b. Introduction of chemicals to identified problem areas designed to eliminate intrusive root growth, preferably for a period of three years or more
   c. Providing public outreach material to educate the public on areas to avoid planting deep root plants and trees

3. Corrosion Control Program:
Develop and implement in locations where, due to corrosion, no other maintenance activity is cost effective and/or other maintenance activity is sufficient to prevent corrosion from occurring.

A Corrosion Control Program consists of:
   a. Identification of locations where corrosion is occurring
   b. Identification of the type of corrosion occurring
   c. Identification of the cause of corrosion
   d. Application of appropriate chemicals to provide structural protection and reduce the rate of corrosion. Such chemicals could include but are not limited to:
      - Magnesium Hydroxide Solution
      - Caustic Soda Solution
      - Hypochlorite
      - Peroxide
      - Nitrates
      - Iron salts
4. Vandalism Prevention Program:
Develop and implement where vandalism has caused an SSO, is likely to cause an SSO, or would cause a catastrophic financial and/or environmental impact in the event of an SSO.

A Vandalism Prevention Program consists of:

a. Locking down maintenance hole covers to discourage vandalism where practical
b. Immediately refer to appropriate governmental agencies to investigate and prosecute the vandals
c. Providing ongoing education and outreach efforts stating reasons for not putting inappropriate materials into maintenance holes

D. Rehabilitation – Prevention Practices

1. Rehabilitation programs are developed and implemented when deemed a preferable option to preventative or proactive maintenance, focused – prevention practices, and replacement. The purpose of rehabilitation is to increase the operating efficiency and extend the life of the sewer system.

2. Rehabilitation projects are initiated in response to major structural deficiencies that have caused or are likely to cause SSO’s and stoppages. Such structural deficiencies include, but are not limited, to:
   - Major pipe breaks
   - Inadequate pipe slopes
   - Inadequate hydraulic capacity
   - Offset joints
   - Significant root intrusion
   - Extensive line sags

3. Activities constituting rehabilitation include but are not limited to:
   - Pipe bursting
   - Slip lining
   - No-Dig technology implementation
   - Extensive pipe and/or maintenance hole replacement
   - Pump station modification
4. Projects are established and prioritized based on findings from initial failure analysis and/or when follow-up CCTV inspection of sewers indicates that crews have been unable to adequately clean or restore pipe to an acceptable diameter.

5. In general, maintenance and operations (M&O) sections have insufficient resources to undertake a substantial rehabilitation project. For this reason, rehabilitation projects are generally assigned to engineering sections and contracted out on a project-by-project basis as capital improvement programs using a separate funding source.

E. Construction Activities – Prevention Practices

1. Require the development and implementation of an SSO Prevention and Response Plan by the contractor.

2. Require contractor to verify locations of all sewer mains and private laterals prior to construction, especially for directional drilling activities.

3. Ensure that all service connections have been re-established. Conduct CCTV inspections, smoke testing or dye testing.

4. Ensure redundancy in any mechanical bypass system.

5. Charge contractor appropriate fines to recapture agency’s full cost burden caused by contractor error, including costs associated with response, cleanup, and fines incurred by the agency.

F. Capacity (Wet Weather) – Prevention Practices

1. Develop and implement a flow monitoring program in conjunction with any capital improvement planning efforts.

2. Collect and analyze field data from maintenance staff.

3. Track new connections versus available sewer capacity.

4. Conduct system planning based on growth and changes that occur in residential, commercial and industrial connections.
5. Identify and prioritize relief and upgrade projects. Implement these projects either through a fast track process or as part of the normal capital improvement program based on severity of problem and condition.

6. Conduct I/I assessment and reduction program as necessary per the agency’s specific site conditions and needs. Identify I/I sources, including illegal connections and defects. Utilize smoke testing, dye testing and/or CCTV inspections to locate defects.

7. Utilize hydraulic modeling, if necessary and practical, to assess the system under different conditions and to identify deficiencies.

G. Performance Measurements – Prevention Practices

1. Identify and document internal staff responsibilities for implementing and tracking prevention measures and practices. Maintain a reporting system.

2. Establish training frequency and schedule regular training of staff on the SSOPP, its goals and objectives.

3. Implement regular review and assessment (self audit) of prevention plans and effectiveness of implementation measures and identify necessary improvements.

4. Adjust the SSOPP as necessary to minimize or eliminate the potential for the occurrence and recurrence of SSO’s.
5. **Sanitary Sewer Overflow Response Plan (SSORP)**

I. **Introduction**

   A. This response plan was developed as a guideline for sewer agencies to use in identifying the resources needed to contain, mitigate, and clean up SSO’s.

   B. This plan will assist agencies in establishing an effective SSO response procedure to minimize the risk to public health and the environment posed by an SSO.

II. **Ensure availability, state of readiness and emergency preparedness of essential resources for the agency**

   A. Standardize sewer cleaning and response equipment.

   B. Maintain emergency equipment such as backup generators, a vacuum tanker, bypass pumps of different sizes, 2,000 ft of quick connect pipe, an assortment of four, six, and eight inch fittings, sand bags, bag plugs, rubber mats for catch basin sealing and warning signs.

   C. Train staff and ensure availability of stand-by personnel.

   D. Secure contracts to acquire additional equipment, if needed.

   E. Establish contracts to acquire cleanup and construction services on an emergency basis (on-call emergency contracts).

   F. Ensure access to accurate, updated maps.

   G. Develop support or mutual aid agreements with neighboring agencies. A sample of such an agreement is provided as Attachment E.

III. **Implement clear mechanisms and procedures for receiving, documenting, assessing and addressing information regarding a potential SSO.**

   A. Ensure 24-hour coverage.

   B. Partner with other departments and agencies to detect and notify you of a potential SSO when detected (especially police and fire). Conduct joint training exercises.
C. Perform ongoing residential education and outreach efforts. Develop and disseminate educational materials such as:

- Brochures and Public Service Announcements
- Advertisements for hotline numbers
- Agency’s web site

D. Protocols for identifying SSO’s are outlined in the following table:

<table>
<thead>
<tr>
<th>Activity Element</th>
<th>Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance and Inspection</td>
<td>Notification by customers or other agencies</td>
</tr>
<tr>
<td></td>
<td>Visual inspections</td>
</tr>
<tr>
<td></td>
<td>Flow monitoring</td>
</tr>
<tr>
<td></td>
<td>Receiving water monitoring</td>
</tr>
<tr>
<td></td>
<td>Trend analysis</td>
</tr>
<tr>
<td></td>
<td>Maintenance/Cleaning</td>
</tr>
<tr>
<td>Hydraulic Capacity</td>
<td>Flow monitoring</td>
</tr>
<tr>
<td></td>
<td>Capacity analysis</td>
</tr>
<tr>
<td></td>
<td>Modeling</td>
</tr>
<tr>
<td>Structural</td>
<td>CCTV</td>
</tr>
<tr>
<td></td>
<td>Smoke testing</td>
</tr>
</tbody>
</table>

E. Implement clear guidelines and procedures for dispatching the necessary resources to respond, investigate, and mitigate potential SSO’s.

1. Utilize tracking system. Dispatch the nearest crew to the SSO incident location.

2. Track response time. Goal should be less than 60 minutes, 24/7, based on current EPA expectations.6

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6 USEPA Region IX’s comments on the Santa Ana RWQCB’s Draft Waste Discharge Requirements for the collection system (Dated, December 14, 2001)
IV. Respond to the SSO incident. Implementation sequence is based on site-specific needs, regulatory requirements, and expectations.

A. Perform SSO investigation and assessment


2. Call for additional backup support as required.

3. Identify receiving waters and watercourses that may be impacted (normally dispatcher and/or supervisor responsibility).

4. Perform preliminary notification of appropriate agencies as necessary.

5. Capture baseline sample from receiving waters upstream of overflow if necessary.

B. Provide adequate traffic control as necessary for workers’ protection and public safety.

C. Establish containment of SSO. This includes, but is not limited to, the following actions:

1. Plug catch basin outlets or use rubber mats to cover catch basin inlet.

2. Use sandbags or containment barriers.

3. Excavate to establish containment, if necessary.

4. Initiate containment in downstream storm drains and plug downstream storm drain outlet to capture SSO, if possible.
D. Correct SSO causes

1. Trace sewers downstream to find dry maintenance hole.

2. Set up at dry maintenance hole to relieve the upstream pipe blockage if possible. In exceptional cases, you may have to set up at a wet maintenance hole.

3. Follow standard operating procedures for cleaning.

4. Capture and remove material flowing from the blockage. Assess the material to determine cause of SSO.

5. If unable or having difficulty in removing/clearing the stoppage, request immediate assistance with the establishment of bypass pumping and CCTV support to determine problem.

6. The goal is to contain the SSO and eliminate it as quickly as possible.

E. Perform final volume estimate

1. Establish and utilize your agency’s approved standardized templates, tables, and or pictures to estimate SSO volume.

2. Refer to Attachment D for sample templates.

F. Cleanup

1. Collect solid and liquid materials.

2. Wash down area while containing and capturing wash down water. If area is sensitive, disinfect impacted area if requested by the local public health agency. It may be necessary to establish proper containment is in place to prevent any of the disinfected water from reaching the receiving water.

3. Conduct cleanup of impacted storm drain in compliance with the storm water NPDES permit.

4. If an SSO is on private property and is caused by the agency’s sewer, follow agency’s procedures for cleanup and consult with local public health agency as needed.
G. Sample receiving waters

1. Provide initial sampling of receiving waters.

2. Re-sample and compare against baseline to ensure the SSO contamination, if detectable, has been mitigated.

H. Provide notification and report

1. Maintain regularly updated notification and reporting contact list. The list should include internal and external contacts.

2. Notify local public health/environmental agencies.

3. Notify OES and RWQCB as required.

4. Notify local water agency if a water supply may have been impacted.

5. Notify State Fish & Game as required.

6. Notify interested environmental groups as required.

7. Notify neighboring schools as required.

8. Notify media as required by your agency’s media plan.

9. Post warning signs to protect public health and safety in conjunction with local public health agencies.

10. This procedure may vary among agencies depending on the agency’s site-specific reporting requirements.
I. Document the incident

1. Take pictures (preferably digital or at a minimum disposable cameras)

2. Complete and submit the Field Report (hard copy). The Field Report should include a clear chronology of the following information:
   
   - Date
   - Location of SSO and stoppage
   - Pipe size
   - Crew
   - Time when call was received and time when SSO started (If unknown, use the time when the call was received as a minimum).
   - Time when crew arrived at scene and action taken
   - Time when SSO ceased
   - Time when cleanup was completed and the incident was over
   - Estimate the total volume. Include the volume that was contained and returned to the system and the volume that was released to the environment. Also include an estimate of the volume that may have reached any receiving water and the name of that receiving water.
   - Identify the probable cause of the SSO.
   - Document the notifications you made including the OES incident number as applicable.
   - Include a brief statement of site specific mitigation measures that were made per your agency’s requirements.

3. Incorporate Field Report into information management system for record keeping and trend tracking.
V. Post-Response Activities

A. Conduct an SSO post incident investigation to identify necessary corrective actions, including interim mitigation efforts.

B. Possible follow-up actions, such as the following:
   1. Clean and perform proofing to assure adequate pipe diameter.
   2. CCTV evaluation if other defects are likely
   3. Add sewer to schedule for high frequency maintenance or adjust frequency if indicated.
   4. Recommend replace/rehabilitate sewer if needed.

C. Implement corrective actions:
   1. If SSO is caused by a lack of capacity during wet weather conditions, document the storm event and conduct analysis of system to determine point source mitigation relief or upgrade needs.
   2. Replace/rehabilitate sewer if needed
   3. Recommend new equipment needs

VI. Training

A. Conduct regular training of M&O staff and other agency-wide departments as needed on the SSORP.

B. Regularly conduct scheduled, unannounced emergency preparedness field and tabletop exercises. Coordinate exercises with other emergency response agencies.

C. Develop and implement mutual aid agreements with neighboring agencies including identifying available equipment and resources. Refer to Attachment E for a sample agreement. Conduct joint exercises.

D. Work with regulatory agencies routinely to ensure collaborative compliance.
VII. Performance Measurement Practices

A. Conduct regular Self Audit. Implement regular system performance tracking and effectiveness analysis.

B. Analyze past SSO’s (Failure Analysis). Perform trend analysis and a performance evaluation.

C. Benchmark with other sewer agencies of similar size to compare performance and identify improvement opportunities.
6. **Exfiltration**

Exfiltration is the leakage of sewage from buried collection systems that may not be detectable by CCTV inspection through major cracks, offset joints, joint gaps, cracked wet wells, or other system defects. Potential defects that may contribute to exfiltration should be documented when discovered for engineered solutions to minimize exfiltration when warranted. Repairs should be planned and scheduled based on priority and potential harm to public health and to the environment.

Trench zone soil monitoring for indicator bacteria is a method for detecting potential problems. The benchmarking group may undertake a future task to offer guidance on this issue.
7. References

The regulations and legislative bills listed below were referred to in the writing of this Best Practices Manual for SSOPRP. Agencies using this manual as a guideline to develop their own sanitary sewer overflow prevention and response plan should review these regulatory requirements and any updates since the writing of this manual:

a. California Code of Regulations, Title 23, Section 2250
b. California Fish and Game Code, Chapter 2, Article 1, Section 5650
c. California Health and Safety Code, Division 5, Chapter 6, Article 2, Sections 5410-5415, 5460-5462
d. California Water Code (Porter Cologne Act) Section 13271
e. Clean Water Act
f. Wastewater POTW NPDES permit
g. MS4 NPDES permit
h. Administrative or court orders, if any
i. Proposed federal regulations for SSO control (prohibition, notification, and CMOM)
j. Related assembly bills such as AB 411, SB 709, and AB 285 when funded (Refer to latest updates)
k. Latest edition on the Uniform Plumbing Code (UPC)
8. Attachments

A. Regulatory References:
   - California Health and Safety Code – Section 5410-5416
   - California Water Code – Section 13271
   - California Code of Regulations – Section 2250
   - California Fish and Game Code – Section 5650-5656

B. Benchmarking Metrics

C. Sample - Specifications for SSO Prevention and Response Plan for
   Construction Projects

D. Sample – Templates for SSO Volume Estimation

E. Sample – Mutual Aid Agreement

F. Best Management Practices for Grease Prevention

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CALIFORNIA HEALTH AND SAFETY CODE
SECTION 5410-5416

5410. As used in this chapter:
    (a) "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature.
    (b) "Person" as used in this article also includes any city, county, district, the state or any department or agency thereof.
    (c) "Waters of the state" means any water, surface or underground, including saline waters, within the boundaries of the state.
    (d) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.
    (e) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects: (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses. "Pollution" may include "contamination."
    (f) "Nuisance" means anything which: (1) 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, and (2) 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, and (3) occurs during, or as a result of, the treatment or disposal of wastes.
    (g) "Regional board" means any California regional water quality control board created pursuant to Section 13201 of the Water Code.

5411. No person shall discharge sewage or other waste, or the effluent of treated sewage or other waste, in any manner which will result in contamination, pollution or a nuisance.

5411.5. (a) Any person who, without regard to intent or negligence, causes or permits any sewage or other waste, or the effluent of treated sewage 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 waters of the state, as soon as that
person has knowledge of the discharge, shall immediately notify the
local health officer or the director of environmental health of the
discharge.

(b) Any person who fails to provide the notice required by this
section is guilty of a misdemeanor and shall be punished by a fine of
not less than five hundred dollars ($500) nor more than one thousand
dollars ($1,000), or imprisonment for less than one year, or both
the fine and imprisonment.

(c) The notification required by this section shall not apply to a
discharge authorized by law and in compliance with waste discharge
requirements or other requirements established by the appropriate
regional water quality control board or the State Water Resources
Control Board.

5412. Whenever the state department or any local health officer
finds that a contamination exists, the department or officer shall
order the contamination abated, as provided in this chapter.

5412.5. (a) Any person who, without regard to intent or negligence,
causes or permits any sewage or other waste, or the effluent of
treated sewage 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 waters of the state that may cause
contamination of waters used for a water-contact sport, as defined in
Section 24155, shall reimburse the local health officer or the
director of environmental health for the necessary and actual costs
incurred to mitigate the threat of contamination and to protect the
health and safety of the public.

(b) The governing body of the county shall establish the amount of
payment at a level sufficient to pay the necessary and reasonable
costs incurred by the local health officer or environmental health
director administering this section and Section 5411.5.

(c) For the purposes of this section "mitigate" includes, but is
not limited to, actions taken by the local health officer or the
director of environmental health in the affected tributaries and
waters used for a water-contact sport to investigate the waste
discharge, to collect and analyze water samples to determine the
areas of contamination, to close or restrict use, to post closure
signs, and to notify the public of closures or restrictions.

(d) This section shall not apply to discharge authorized by law
and in compliance with waste discharge requirements or other
requirements established by the appropriate regional water quality
control board or the State Water Resources Control Board.
5413. Whenever the state department finds that a pollution or nuisance does, in fact, exist, such condition shall be immediately referred by the department to the proper regional board for action, together with any recommendations for correction. Upon request of a regional board the state department shall inspect and report to the board on any technical factors involved in any condition of pollution or nuisance.

5414. With respect to any condition of contamination, the state department may accept the action of any state, county, or municipal officer or agency having jurisdiction over the matter as sufficient.

5415. No provision in this chapter is a limitation on any of the following:
   (a) The authority of a city or county to adopt and enforce additional regulations not in conflict with this chapter imposing additional conditions, restrictions, or limitations relating to the disposal of sewage or other waste.
   (b) The authority of any city or county to declare, prohibit, and abate nuisances.
   (c) The authority of a state agency in the enforcement or administration of any provision of law which it is specifically permitted or required to enforce or administer.
   (d) The right of any person to maintain at any time any appropriate action for relief against any private nuisance as defined in the Civil Code or for relief against any contamination or pollution.
   (e) The authority of a city or county to adopt and enforce regulations relating to the use of recycled water in accordance with Chapter 7 (commencing with Section 13500) of Division 7 of the Water Code.
CALIFORNIA WATER CODE
SECTION 13271

13271. (a) (1) Except as provided by subdivision (b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the state, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the state, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the state toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.16) of Chapter 7 of Division 1 of Title 2 of the Government Code.

(2) The Office of Emergency Services shall immediately notify the appropriate regional board and the local health officer and administrator of environmental health of the discharge. The regional board shall notify the state board as appropriate.

(3) Upon receiving notification of a discharge pursuant to paragraph (2), the local health officer and administrator of environmental health shall immediately determine whether notification of the public is required to safeguard public health and safety. If so, the local health officer and administrator of environmental health shall immediately notify the public of the discharge by posting notices or other appropriate means. The notification shall describe measures to be taken by the public to protect the public health.

(b) The notification required by this section shall not apply to a discharge in compliance with waste discharge requirements or other provisions of this division.

(c) Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine of not more than twenty thousand dollars ($20,000) or imprisonment for not more than one year, or both. Except where a discharge to the waters of this state would have occurred but for cleanup or emergency response by a public agency, this subdivision shall not apply to any discharge to land which does not result in a discharge to the waters of this state.

(d) Notification received pursuant to this section or information obtained by use of that notification shall not be used against any person providing the notification in any criminal case, except in a prosecution for perjury or giving a false statement.
(e) For substances listed as hazardous wastes or hazardous material pursuant to Section 25140 of the Health and Safety Code, the state board, in consultation with the Department of Toxic Substances Control, shall by regulation establish reportable quantities for purposes of this section. The regulations shall be based on what quantities should be reported because they may pose a risk to public health or the environment if discharged to ground or surface water. Regulations need not set reportable quantities on all listed substances at the same time. Regulations establishing reportable quantities shall not supersede waste discharge requirements or water quality objectives adopted pursuant to this division, and shall not supersede or affect in any way the list, criteria, and guidelines for the identification of hazardous wastes and extremely hazardous wastes adopted by the Department of Toxic Substances Control pursuant to Chapter 6.5 (commencing with Section 25100) of Division 20 of the Health and Safety Code. The regulations of the Environmental Protection Agency for reportable quantities of hazardous substances for purposes of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. Sec. 9601 et seq.) shall be in effect for purposes of the enforcement of this section until the time that the regulations required by this subdivision are adopted.

(f) The state board shall adopt regulations establishing reportable quantities of sewage for purposes of this section. The regulations shall be based on the quantities that should be reported because they may pose a risk to public health or the environment if discharged to ground or surface water. Regulations establishing reportable quantities shall not supersede waste discharge requirements or water quality objectives adopted pursuant to this division. For purposes of this section, "sewage" means the effluent of a municipal wastewater treatment plant or a private utility wastewater treatment plant, as those terms are defined in Section 13625, except that sewage does not include recycled water, as defined in subdivisions (c) and (d) of Section 13529.2.

(g) Except as otherwise provided in this section and Section 8589.7 of the Government Code, a notification made pursuant to this section shall satisfy any immediate notification requirement contained in any permit issued by a permitting agency. When notifying the Office of Emergency Services, the person shall include all of the notification information required in the permit.
CALIFORNIA CODE OF REGULATIONS
2250. Reportable Quantity for Sewage.

(a) For the purposes of Section 13271 of the Water Code, a reportable quantity for sewage is defined to be any unauthorized discharge of 1,000 gallons or more.

(b) For the purposes of Section 13271, an unauthorized discharge is defined to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal systems.
CALIFORNIA FISH AND GAME CODE
SECTION 5650-5656

5650. (a) Except as provided in subdivision (b), it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:
   (1) Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance.
   (2) Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill, or factory of any kind.
   (3) Any sawdust, shavings, slabs, or edgings.
   (4) Any factory refuse, lime, or slag.
   (5) Any cocculus indicus.
   (6) Any substance or material deleterious to fish, plant life, or bird life.
   (b) This section does not apply to a discharge or a release that is expressly authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement pursuant to Section 13263 of the Water Code or a waiver issued pursuant to subdivision (a) of Section 13269 of the Water Code issued by the State Water Resources Control Board or a regional water quality control board after a public hearing, or that is expressly authorized pursuant to, and in compliance with, the terms conditions of a federal permit for which the State Water Resources Control Board or a regional water quality control board has, after a public hearing, issued a water quality certification pursuant to Section 13160 of the Water Code. This section does not confer additional authority on the State Water Resources Control Board, a regional water quality control board, or any other entity.
   (c) It shall be an affirmative defense to a violation of this section if the defendant proves, by a preponderance of the evidence, all of the following:
      (1) The defendant complied with all applicable state and federal laws and regulations requiring that the discharge or release be reported to a government agency.
      (2) The substance or material did not enter the waters of the state or a storm drain that discharges into the waters of the state.
      (3) The defendant took reasonable and appropriate measures to effectively mitigate the discharge or release in a timely manner.
   (d) The affirmative defense in subdivision (c) does not apply and may not be raised in an action for civil penalties or injunctive relief pursuant to Section 5650.1.
   (e) The affirmative defense in subdivision (c) does not apply and
may not be raised by any defendant who has on two prior occasions in the preceding five years, in any combination within the same county in which the case is prosecuted, either pleaded nolo contendere, been convicted of a violation of this section, or suffered a judgment for a violation of this section or Section 5650.1. This subdivision shall apply only to cases filed on or after January 1, 1997.

(f) The affirmative defense in subdivision (c) does not apply and may not be raised by the defendant in any case in which a district attorney, city attorney, or Attorney General alleges, and the court finds, that the defendant acted willfully.

5650.1. (a) Every person who violates Section 5650 is subject to a civil penalty of not more than twenty-five thousand dollars ($25,000) for each violation.

(b) The civil penalty imposed for each separate violation pursuant to this section is separate, and in addition to, any other civil penalty imposed for a separate violation pursuant to this section or any other provision of law.

(c) In determining the amount of any civil penalty imposed pursuant to this section, the court shall take into consideration all relevant circumstances, including, but not limited to, the nature, circumstance, extent, and gravity of the violation. In making this determination, the court shall consider the degree of toxicity and volume of the discharge, the extent of harm caused by the violation, whether the effects of the violation may be reversed or mitigated, and with respect to the defendant, the ability to pay, the effect of any civil penalty on the ability to continue in business, any voluntary cleanup efforts undertaken, any prior history of violations, the gravity of the behavior, the economic benefit, if any, resulting from the violation, and any other matters the court determines justice may require.

(d) Every civil action brought under this section shall be brought by the Attorney General upon complaint by the department, or by the district attorney or city attorney in the name of the people of the State of California, and any actions relating to the same violation may be joined or consolidated.

(e) In any civil action brought pursuant to this chapter in which a temporary restraining order, preliminary injunction, or permanent injunction is sought, it is not necessary to allege or prove at any stage of the proceeding that irreparable damage will occur if the temporary restraining order, preliminary injunction, or permanent injunction is not issued, or that the remedy at law is inadequate.

(f) After the party seeking the injunction has met its burden of proof, the court shall determine whether to issue a temporary
restraining order, preliminary injunction, or permanent injunction without requiring the defendant to prove that it will suffer grave or irreparable harm. The court shall make the determination whether to issue a temporary restraining order, preliminary injunction, or permanent injunction by taking into consideration, among other things, the nature, circumstance, extent, and gravity of the violation, the quantity and characteristics of the substance or material involved, the extent of environmental harm caused by the violation, measures taken by the defendant to remedy the violation, the relative likelihood that the material or substance involved may pass into waters of the state, and the harm likely to be caused to the defendant.

(g) The court, to the maximum extent possible, shall tailor any temporary restraining order, preliminary injunction, or permanent injunction narrowly to address the violation in a manner that will otherwise allow the defendant to continue business operations in a lawful manner.

(h) All civil penalties collected pursuant to this section shall not be considered fines or forfeitures as defined in Section 13003 and shall be apportioned in the following manner:

(1) Fifty percent shall be distributed to the county treasurer of the county in which the action is prosecuted. Amounts paid to the county treasurer shall be deposited in the county fish and wildlife propagation fund established pursuant to Section 13100.

(2) Fifty percent shall be distributed to the department for deposit in the Fish and Game Preservation Fund. These funds may be expended to cover the costs of legal actions or for any other law enforcement purpose consistent with Section 9 of Article XVI of the California Constitution.
Attachment B – Benchmarking Metrics

For maintenance activities\(^8\)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning, % system/yr</td>
<td>29.9%</td>
</tr>
<tr>
<td>Root removal, % system/yr</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pump station service, no/ps/yr</td>
<td>123.8</td>
</tr>
<tr>
<td>Flow monitoring, % system/yr</td>
<td>20.5%</td>
</tr>
<tr>
<td>Manhole inspection, % system/yr</td>
<td>19.2%</td>
</tr>
<tr>
<td>Smoke testing, % system/yr</td>
<td>7.5%</td>
</tr>
<tr>
<td>CCTV, % system/yr</td>
<td>6.7%</td>
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<tr>
<td>Private sector inspection, % system/yr</td>
<td>10.8%</td>
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<tr>
<td>Manhole rehabilitation, % complete</td>
<td>43.4%</td>
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<tr>
<td>Mainline rehabilitation, % complete</td>
<td>38.7%</td>
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<tr>
<td>Relief construction, % complete</td>
<td>55.9%</td>
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<tr>
<td>Private I/I removal, % complete</td>
<td>51.3%</td>
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</table>

For Performance Measures

<table>
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<tr>
<th>Performance Measure</th>
<th>Mean</th>
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</thead>
<tbody>
<tr>
<td>Pipe failures, number/mi.yr</td>
<td>0.041</td>
</tr>
<tr>
<td>SSOs, number/mi.yr (reportable only)</td>
<td>0.045</td>
</tr>
<tr>
<td>SSOs, number/mi.yr (All SSOs) – All agencies</td>
<td>0.21</td>
</tr>
<tr>
<td>SSOs, number/mi.yr (All SSOs) – Large agencies</td>
<td>0.27</td>
</tr>
<tr>
<td>Complaints, number/mi.yr</td>
<td>4.010</td>
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<tr>
<td>Pump station failure, number/ps.yr</td>
<td>0.06</td>
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<tr>
<td>Peak hour flow/ADF ratio</td>
<td>2.409</td>
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<tr>
<td>Peak month flow/ADF ratio</td>
<td>1.3</td>
</tr>
</tbody>
</table>

An example of how to interpret this Benchmarking Metrics Chart according to ASCA/EPA “Optimization of Collection Systems Maintenance Frequency and System Performance Report” is: The first indicated activity states that in a survey of all the collection system agencies evaluated, the average collection system agency cleaned 29.9% of their system each year.

\(^8\) “Optimization of Collection System Maintenance Frequencies and System Performance,” ASCE/EPA, February 1999. EPA Corporate Agreement #CX 824902-01-0
Attachment C - Specifications for SSO Prevention and Response Plans in Construction Projects (SAMPLE)

1. General:

a. The CONTRACTOR shall observe and comply with the AGENCY’s policy of “ZERO SPILLS.”

b. The CONTRACTOR shall be in full charge and be responsible for the job site, the construction work of this contract, and subject to the directions of the Project Engineer/Agency Representative, or the INSPECTOR.

c. The CONTRACTOR shall observe and comply with all Federal, State, and local laws, ordinances, codes, orders, and regulations, which in any manner affect the conduct of the work, specifically as it relates to sewage spills.

d. The CONTRACTOR shall be fully responsible for preventing sewage spillage, containing any sewage spillage, recovery and legal disposal of any spilled sewage, any fines, penalties, claims and liability arising from negligently causing a sewage spillage and any violation of any law, ordinance, code, order, or regulation as a result of the spillage.

e. The CONTRACTOR shall exercise care not to damage existing public and private improvements or interrupt existing services and/or facility operations which may cause a sewage spill. Any reasonably anticipated utility and/or improvement, which is damaged by the CONTRACTOR, should be immediately repaired at the expense of the CONTRACTOR. In the event that the CONTRACTOR damages an existing utility, interrupts an existing service, which causes a sewage spill, the CONTRACTOR shall immediately notify the AGENCY representatives. The CONTRACTOR shall request and obtain from the Project Engineer/Agency Representative an emergency roster of the designated AGENCY representatives with their respective phone numbers, pager numbers, and cellular phone numbers. The CONTRACTOR shall take all measures necessary to prevent further damage or service interruption, and to control, contain and clean up the resultant impacts of the damage, service interruption and any resulting sewage spill(s) as mentioned in Section 1.f below.
f. Prior to the start of construction, the CONTRACTOR shall develop and submit to the Project Engineer/Agency Representative, for review and approval, a written Spill Response Plan. The Spill Response Plan shall be developed to respond to any construction related sewage spill. This includes (but is not limited to):

1) Identifying all nearby waterways, channels, catch basins and entrances to underground existing storm drains and furnishing all of the necessary materials, supplies, tools, equipment, labor and other services.

2) The CONTRACTOR shall make arrangements for an emergency response unit comprised of emergency response equipment and trained personnel to be immediately dispatched to the job site in the event of sewage spill(s).

3) The CONTRACTOR shall develop and include an emergency notification procedure, which includes an emergency response roster with telephone numbers and arrangements for backup personnel and equipment and an emergency notification roster of the designated AGENCY representatives. The CONTRACTOR shall designate a primary and secondary representative and include their respective phone numbers, pager numbers, and cellular phone numbers. The CONTRACTOR's representatives shall be accessible and available at all times to respond immediately to any construction related emergency.

g. When called for in the plans and/or specifications, or if sewer bypass is needed to construct the project, the CONTRACTOR shall continuously monitor the flow levels downstream and upstream of the construction location to detect any possible failure that may cause a sewage backup and spill. The CONTRACTOR shall include the means and methods of monitoring the flow in their Spill Response Plan.

h. In case of a sewage spill, the CONTRACTOR shall act immediately without instructions from the AGENCY, to control the spill and take all appropriate steps to contain it in accordance with their Spill Response Plan. The CONTRACTOR shall immediately notify the AGENCY representatives of the spill and all actions taken. The CONTRACTOR shall, within three working days from the occurrence of the spill, submit to the Project Engineer/Agency
Representative a written confirmation describing the following information related to the spill:

- the nature and volume
- the date and time
- the duration
- the cause
- the type of remedial and/or clean up measures taken and the date and time of implementation
- the corrective and/or preventive actions taken
- the water body impacted and results of any necessary monitoring
- the location on Thomas Guide map

Requests for additional compensation for the handling of the spill shall be submitted to the Project Engineer/Agency Representative as a construction claim. The CONTRACTOR shall assure the validity, accuracy, and correctness of the claim under penalty of perjury. The Project Engineer/Agency Representative may institute further corrective actions, as deemed necessary, to fully comply with existing law, ordinance, code, order or regulation. The CONTRACTOR shall be responsible for all costs incurred for the corrective actions.

i. It shall be the CONTRACTOR's responsibility to assure that all field forces, including subcontractors, know and obey all safety and emergency procedures, including the Spill Response Plan, to be maintained and followed at the job site.

2. Sewer Bypass:

a. The CONTRACTOR shall provide temporary means to maintain and handle the sewage flow in the existing system as required to complete the necessary construction.

b. The CONTRACTOR shall prepare and submit a detailed bypass plan to the Engineer for approval of the Project Engineer/Agency Representative and the facility OWNER before the bypass is installed.

c. The CONTRACTOR shall size the bypass system to handle the peak flow of the system. The CONTRACTOR shall include a 100% backup in the bypass system. The CONTRACTOR shall utilize the
backup system to mitigate any additional wet weather flows, perform the necessary maintenance and repairs on the bypass system, and exercise and ensure the operability of the backup system. Each pump, including the backup pumps, shall be a complete unit with its own suction and discharging pumping. The CONTRACTOR shall operate the backup bypass system for a minimum of 25% of the time on a weekly basis. The backup bypass system shall be fully installed, operational, and ready for immediate use.

d. Prior to the full operation of the bypass system, the CONTRACTOR shall demonstrate to the satisfaction of the Project Engineer/Agency Representative and INSPECTOR that both the primary and backup bypass systems are fully functional and adequate, and shall certify the same, in writing, in a manner acceptable to the Project Manager/Agency Representative.

e. The CONTRACTOR shall provide one dedicated fuel tank for every single pump/generator, if fuel/generator driven pumps are used. The CONTRACTOR shall provide a fuel level indicator outside each fuel tank. The CONTRACTOR shall continuously (while in use) monitor the fuel level in the tanks and ensure that the fuel level does not drop below a level equivalent to two hours of continuous bypass system operation. The CONTRACTOR shall take the necessary measures to ensure the fuel supply is protected against contamination. This includes but is not limited to fuel line water traps, fuel line filters, and protecting fuel storage from precipitation.

f. The CONTRACTOR shall provide an emergency standby power generator if electric power driven pumps are used.

g. The CONTRACTOR shall continuously (while in use) monitor the operation of the bypass system and all impacted facilities. The CONTRACTOR shall submit their monitoring procedure and frequency as part of their bypass plan. The CONTRACTOR shall maintain a log of the monitoring in a manner acceptable to the Project Engineer or Agency Representative and INSPECTOR.

h. The CONTRACTOR shall continuously monitor the flow levels downstream and upstream of the bypass to detect any possible failure that may cause a sewage backup and spill. The CONTRACTOR shall include the means and methods of monitoring the flow in their Spill Response Plan.
i. The CONTRACTOR shall routinely inspect and maintain the bypass system, including the backup system. The CONTRACTOR shall submit as parts of their bypass plan their maintenance procedures and frequency. The CONTRACTOR shall maintain a log of all pertinent inspection, maintenance and repair records in a manner acceptable to the Project Engineer/Agency Representative and INSPECTOR.

j. All costs associated with sewer bypass requirements listed above (Section 2-a through i) shall be included in the Bid Item "Sewer Bypass System."

3. Additional Insurance Requirements:

The CONTRACTOR shall obtain and maintain an additional insurance coverage for Pollution Liability with limits and requirements to be set forth in the General Instruction and Information for Bidders. The limits and requirements for Pollution Liability shall be in an amount sufficient to cover potential losses from sudden and accidental pollution. All costs associated with the requirements for Sewage Spill Prevention and Response Requirements, including additional insurance, shall be included in the prices for other related bid items. However, CONTRACTOR will be required to submit, with their bid, a cost breakdown for the items set forth by the "Sewage Spill Prevention and Response Requirements."
## TABLE 'A'

**ESTIMATED SSO FLOW OUT OF M/H WITH COVER IN PLACE**

<table>
<thead>
<tr>
<th>Height of</th>
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<th>24&quot; COVER</th>
<th>36&quot; COVER</th>
</tr>
</thead>
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<tr>
<td>spout above M/H rim</td>
<td>S S O FLOW</td>
<td>size in which these flows are possible</td>
<td>S S O FLOW</td>
</tr>
<tr>
<td>H in inches</td>
<td>in gpm</td>
<td>in MGD</td>
<td>H in inches</td>
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**Disclaimer:**

This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.
The formula used to develop Table A measures the maximum height of the water coming out of the maintenance hole above the rim. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is unseated and slightly elevated on a 24" casting. The maximum height of the discharge above the rim is 5 ¼ inches. According to Table A, these conditions would yield an SSO of 185 gallons per minute.

FLOW OUT OF M/H WITH COVER IN PLACE

This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.
TABLE 'B'  
ESTIMATED SSO FLOW OUT OF M/H WITH COVER REMOVED

<table>
<thead>
<tr>
<th>Water Height above M/H frame</th>
<th>S SO FLOW size in which these flows are possible</th>
<th>Min. Sewer Flow Q</th>
<th>Water Height above M/H frame</th>
<th>S SO FLOW size in which these flows are possible</th>
<th>Min. Sewer Flow Q</th>
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<td>H in inches</td>
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<td>in MGD</td>
<td>H in inches</td>
<td>in gpm</td>
<td>in MGD</td>
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</table>

Disclaimer:
This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.
The formula used to develop Table B for estimating SSO’s out of maintenance holes without covers is based on discharge over curved weir -- bell mouth spillways for 2” to 12” diameter pipes. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is off and the flow coming out of a 36” frame maintenance hole at one inch (1”) height will be approximately 660 gallons per minute.

FLOW OUT OF M/H WITH COVER REMOVED (TABLE "B")

This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.
Note: This chart is based on a 7/8 inch diameter pick hole

Disclaimer: This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.
The formula used to develop Table C is $Q = C_c V A$, where $Q$ is equal to the quantity of the flow in gallons per minute, $C_c$ is equal to the coefficient of contraction (.63), $V$ is equal to the velocity of the overflow, and $A$ is equal to the area of the pick hole.\(^9\) If all units are in feet, the quantity will be calculated in cubic feet per second, which when multiplied by 448.8 will give the answer in gallons per minute. (One cubic foot per second is equal to 448.8 gallons per minute, hence this conversion method).

Example Overflow Estimation:

The maintenance hole cover is in place and the height of water coming out of the pick hole seven-eighths of an inch in diameter (7/8") is 3 inches (3"). This will produce an SSO flow of approximately 4.7 gallons per minute.

FLOW OUT OF VENT OR PICK HOLE (TABLE "C")

This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

\(^9\) Velocity for the purposes of this formula is calculated by using the formula $h = \frac{v^2}{2G}$, where $h$ is equal to the height of the overflow, $v$ is equal to velocity, and $G$ is equal to the acceleration of gravity.
Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

City of San Diego Metropolitan Wastewater Department

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.
Attachment E - Sample Mutual Aid Agreement

This agreement is made and entered into as of _________________________, by and among EAST BAY MUNICIPAL UTILITY DISTRICT, DUBLIN-SAN RAMON SERVICES DISTRICT, UNION SANITARY DISTRICT, ORO LOMA SANITARY DISTRICT, CITY OF HAYWARD, CITY OF LIVERMORE, and CITY OF SAN LEANDRO, all of said public agencies being herein referred to collectively as “the parties.”

In consideration of mutual covenants and agreements hereinafter set forth, the parties agree to provide mutual assistance in wastewater system emergencies as follows:

ARTICLE I – DEFINITION OF EMERGENCY AND REQUEST FOR ASSISTANCE.
A wastewater emergency is a major equipment or process failure or supply shortage or other plant disruption which is or is likely to be beyond the capability of the services, personnel, equipment, supplies and facilities of the party requesting assistance.

The party rendering assistance is hereinafter referred to as LENDER, the party receiving assistance is hereinafter referred to as BORROWER. Request for emergency assistance under this agreement shall be directed to the general manager or chief executive officer of LENDER or his designated representative.

ARTICLE II – GENERAL NATURE OF ASSISTANCE. Assistance will generally be in the form of resources such as equipment, supplies, and personnel. Assistance shall be given only when LENDER determines that its own needs can be met even while rendering assistance. A potential LENDER shall not be held liable for failing to provide assistance. A potential LENDER has the absolute discretion to decline to provide any requested assistance. Resources are to be made available on a loan basis, with repayment terms, to be agreed upon, varying with the type of resource. The parties agree to provide each other up-to-date information from time to time on their resources that may be available for assistance.

ARTICLE III – LOANS OF EQUIPMENT. Use of equipment such as service equipment, construction equipment, pumps, or maintenance trucks shall be at LENDER’s current equipment rate and subject to the following conditions:
a) At the option of the LENDER, loaned equipment may be loaned with an operator.

b) Loaned equipment shall be returned immediately to LENDER when the LENDER requests it or when emergency is over, whichever is sooner.

c) BORROWER shall, at its own expense, supply all fuel, lubrication and maintenance for loaned equipment.

d) LENDER’s costs related to the transportation, handling and loading/unloading of equipment shall be chargeable costs to BORROWER.

e) Loaned equipment if damaged or lost by BORROWER shall be repaired or replaced by BORROWER to the satisfaction of the LENDER.

ARTICLE IV – EXCHANGE OF SUPPLIES. BORROWER shall reimburse LENDER in kind or at actual replacement costs plus handling charges, at LENDER’s option, for use of expendable or non-returnable supplies such as chemicals, pipes cut to size, etc.

Other supplies and reusable items such as valves, fittings, etc., which are returned to LENDER in a clean, damage-free condition shall not be charged to the BORROWER and no rental fee will be charged; otherwise, they shall be treated as expendable supplies.

ARTICLE V – PERSONNEL. LENDER may make such employees as are willing to participate available to BORROWER at full LENDER’s cost, i.e. equal to the employee’s current salary or hourly wage plus fringe benefits and overhead. BORROWER shall reimburse LENDER for all such cost upon invoice.

Costs to feed and house loaned personnel, if necessary, shall be chargeable to and paid by BORROWER. An employee “borrowed” pursuant to this agreement shall, to the extent possible, work under the supervision of his/her own employer for purposes of Worker’s Compensation.

ARTICLE VI – MODIFICATIONS AND OTHER PROVISIONS. Any provision of this agreement may be modified, altered or rescinded by mutual written agreement of all the parties, attached to and incorporated in this agreement.
This agreement is not transferable or assignable, in whole or in part, and is subject to cancellation at any time as to any party upon written notice delivered or mailed to each of the other parties.

IN WITNESS WHEREOF, the parties hereto have executed ___ copies of this agreement as of the day and year first herein above written by their respective officer thereunto duly authorized.

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________

Dated: 
Agency ________________________________
By ________________________________
Title ________________________________
Fats, oil and grease (FOG) can be managed effectively in the food service industry to minimize adverse impacts on municipal wastewater systems and the environment. Municipal pretreatment staff and food service industry workers have developed Best Management Practices (BMPs) that, when implemented, will minimize the adverse impacts of FOG. This chapter summarizes these BMPs, and other important information, including the reason for BMPs, the benefit of BMPs to the food industry, and inspection tips for municipal pretreatment staff to determine if the BMPs are being implemented.

Train Kitchen Staff

<table>
<thead>
<tr>
<th>BMP</th>
<th>Train kitchen staff and other employees about how they can help ensure BMPs are implemented.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>People are more willing to support an effort if they understand the basis for it.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>All of the subsequent benefits of BMPs will have a better chance of being implemented.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Talk to the establishment manager about the training program that he/she has implemented.</td>
</tr>
</tbody>
</table>

Post “No Grease” Signs

<table>
<thead>
<tr>
<th>BMP</th>
<th>Post “No Grease” signs above sinks and on the front of dishwashers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>Signs serve as a constant reminder for staff working in kitchens.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>These reminders will help minimize grease discharge to the traps and interceptors and reduce the cost of cleaning and disposal.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Check appropriate locations for “No Grease” signs.</td>
</tr>
</tbody>
</table>

Use water temperatures less than 140 degrees Fahrenheit

---

10 This Best Management Practices document has been reproduced with permission from Brown and Caldwell. The origin of the document can be found as chapter 3 of “Fats, Oil, and Grease Best Management Practices Manual: Pollution Prevention and Compliance Information for Publicly-Owned Treatment Plants” produced by Brown and Caldwell for the Oregon Association of Clean Water Agencies. For more information, visit the Oregon Association of Clean Water Agencies web site at www.oracwa.org.
### Use Water Temperatures Below 140°F

**BMP**

Use water temperatures less than 140 degrees Fahrenheit in all sinks, especially the pre-rinse sink before the mechanical dishwasher.

The mechanical dishwasher requires a minimum temperature of 160 degrees Fahrenheit, but the Uniform Plumbing Code (UPC) prohibits discharging the dishwater into grease traps.

**Reason For**

Temperatures in excess of 140 degrees Fahrenheit will dissolve grease, but the grease can re-congeal or solidify in the sanitary sewer system as the water cools.

**Benefit to food producing establishment**

The food producing establishment will reduce its costs for the energy – gas or electric – for heating the water.

**Pretreatment Inspection Tips**

Check boiler or hot water heater discharge temperature.

Measure the temperature of the hot water being discharged from the closest sink.

### Use a Three-Sink Dishwashing System

**BMP**

Use a three-sink dishwashing system, which includes sinks for washing, rinsing, and sanitizing in a 50 to 100 ppm bleach solution. Water temperatures are less than 140 degrees Fahrenheit.

**Reason For**

The three-sink system uses water temperatures less than 140 degrees Fahrenheit where a mechanical dishwasher requires a minimum of 160 degrees Fahrenheit.

Note: The UPC prohibits the discharge of dishwasher water to grease traps.

**Benefit to food producing establishment**

The food producing establishment will reduce its costs for the energy – gas or electric – for heating the water for the mechanical dishwasher and for operating the dishwasher.

**Pretreatment Inspection Tips**

Measure the temperature of the hot water at the three-sink system.
Recycle Waste Cooking Oil

<table>
<thead>
<tr>
<th>BMP</th>
<th>Recycle waste cooking oil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>There are many waste oil recyclers throughout Oregon. This is a cost recovery opportunity.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>The food producing establishment will be paid for the waste material and will reduce the amount of garbage it must pay to have hauled away.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Obtain the name of the recycler used.</td>
</tr>
<tr>
<td></td>
<td>Review recycling records.</td>
</tr>
<tr>
<td></td>
<td>Confirm records with the recycler.</td>
</tr>
</tbody>
</table>

“Dry Wipe” Pots, Pans, and Dishware Prior to Dishwashing

<table>
<thead>
<tr>
<th>BMP</th>
<th>“Dry Wipe” pots, pans, and dishware prior to dishwashing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>The grease and food that remains in pots, pans, and dishware will likely go to the landfill. By “dry wiping” and disposing in garbage receptacles, the material will not be sent to the grease traps and interceptors.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>This will reduce the amount of material going to grease traps and interceptors, which will require less frequent cleaning, reducing maintenance costs.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Observe dishwashing practices.</td>
</tr>
</tbody>
</table>

---

11 Oregon is mentioned here because the original document from which this Best Management Practices was taken was produced for the Oregon Association of Clean Water Agencies. Agencies outside of the state of Oregon should research the availability of waste oil recycling services in their own state.
Dispose of Food Waste by Recycling and/or Solid Waste Removal

<table>
<thead>
<tr>
<th>BMP</th>
<th>Dispose of food waste by recycling and/or solid waste removal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>Some recyclers will take food waste for animal feed. In the</td>
</tr>
<tr>
<td></td>
<td>absence of such recyclers, the food waste can be disposed</td>
</tr>
<tr>
<td></td>
<td>as solid waste in landfills by solid waste haulers.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>Recycling food wastes will reduce the cost of solid waste</td>
</tr>
<tr>
<td></td>
<td>disposal.</td>
</tr>
<tr>
<td></td>
<td>Solid waste disposal of food waste will reduce the frequency</td>
</tr>
<tr>
<td></td>
<td>and cost of grease trap and interceptor cleaning.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Inspect grease traps and interceptors for food waste</td>
</tr>
<tr>
<td></td>
<td>accumulation.</td>
</tr>
<tr>
<td></td>
<td>Confirm the recycler or solid waste removal company with the</td>
</tr>
<tr>
<td></td>
<td>establishment manager.</td>
</tr>
</tbody>
</table>

Witness All Grease Trap or Interceptor Cleaning and Maintenance

| BMP                                      | Witness all grease trap or interceptor cleaning and           |
|                                          | maintenance activities to ensure that the device is properly  |
|                                          | operating.                                                   |
| Reason For                               | Grease trap/interceptor haulers and recyclers may take        |
|                                          | shortcuts. If the establishment manager inspects the         |
|                                          | cleaning operation and ensures it is consistent with the      |
|                                          | procedures in "Grease Trap and Interceptor Maintenance"      |
|                                          | they are more assured of getting full value for their money.  |
| Benefit to food producing establishment   | The establishment will ensure it is getting value for the cost |
|                                          | of cleaning the grease trap or interceptor. Otherwise the     |
|                                          | establishment may be paying for cleaning more often than      |
|                                          | necessary.                                                   |
| Pretreatment Inspection Tips              | None.                                                        |

---

### Clean Undersink Grease Traps Weekly

<table>
<thead>
<tr>
<th><strong>BMP</strong></th>
<th>Clean under-sink grease traps weekly. If grease traps are more than 50 percent full when cleaned weekly, the cleaning frequency needs to be increased.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason For</strong></td>
<td>Under-sink grease traps have less volume than grease interceptors. Weekly cleaning of under-sink grease traps by the establishment’s own maintenance staff will reduce the cost of cleaning the grease interceptor. If the establishment does not have a grease interceptor, the under-sink grease trap is the only means of preventing grease from entering the sanitary sewer system. If the grease trap is not providing adequate protection, the local sewer agency may require installation of a grease interceptor.</td>
</tr>
<tr>
<td><strong>Benefit to food producing establishment</strong></td>
<td>This will extend the length of the cleaning cycle for grease interceptors that the establishment maintains.</td>
</tr>
<tr>
<td><strong>Pretreatment Inspection Tips</strong></td>
<td>Visually inspect the contents of the under-sink grease trap. Inspect cleaning records.</td>
</tr>
</tbody>
</table>
Clean Grease Interceptors Routinely

**BMP** | Clean grease interceptors routinely.
---|---
**Reason For** | Grease interceptors must be cleaned routinely to ensure that grease accumulation does not cause the interceptor to operate poorly.

The cleaning frequency is a function of the type of establishment, the size of the interceptor, and the volume of flow discharged by the establishment.

**Benefit to food producing establishment** | Routine cleaning will prevent plugging of the sewer line between the food producing establishment and the sanitary sewer system. If the line plugs, the sewer line may back up into the establishment, and the business will need to hire someone to unplug it.

**Pretreatment Inspection Tips** | Interceptor should have no more than 1/3 the depth as grease, AND Interceptor should have no more than 1/4 the depth as sediment, AND

No more than 25 percent of the depth should be a combination of grease (top) and sediment (bottom).

Keep a Maintenance Log

**BMP** | Keep a maintenance log.
---|---
**Reason For** | The maintenance log serves as a record of the frequency and volume of cleaning the interceptor. It is required by the pretreatment program to ensure that grease trap/interceptor maintenance is performed on a regular basis.

**Benefit to food producing establishment** | The maintenance log serves as a record of cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce cost.

**Pretreatment Inspection Tips** | Inspect maintenance log.

Provide the establishment with a sample maintenance log if it does not have one.

Confirm the maintenance log with the grease hauler identified.
Cover Outdoor Grease and Oil Storage Containers

<table>
<thead>
<tr>
<th><strong>BMP</strong></th>
<th>Cover outdoor grease and oil storage containers. Some local jurisdictions will have BMPs in place for stormwater also.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason For</strong></td>
<td>Uncovered grease and oil storage containers can collect rainwater. Since grease and oil float, the rainwater can cause an overflow onto the ground. Such an overflow will eventually reach the stormwater system and nearby streams.</td>
</tr>
<tr>
<td><strong>Benefit to food producing establishment</strong></td>
<td>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream. Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</td>
</tr>
<tr>
<td><strong>Pretreatment Inspection Tips</strong></td>
<td>Observe storage area for signs of oil and grease. Inspect containers for covers. Remove covers to ensure containers have not overflowed and do not have excess water.</td>
</tr>
</tbody>
</table>
Locate Grease Dumpsters and Storage Containers Away from Storm Drain Catch Basins

<table>
<thead>
<tr>
<th>BMP</th>
<th>Locate grease dumpsters and storage containers away from storm drain catch basins.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>The farther away from the catch basin, the more time someone has to clean up spills or drainage prior to entering the storm drain system. Be aware of oil and grease dripped on the ground while carrying waste to the dumpster, as well as oil and grease that may “ooze” from the dumpster.</td>
</tr>
<tr>
<td>Benefit to food producing establishment</td>
<td>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream. Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</td>
</tr>
<tr>
<td>Pretreatment Inspection Tips</td>
<td>Observe storage area for signs of oil and grease. Inspect the closest catch basin for signs of accumulated grease and oil.</td>
</tr>
</tbody>
</table>
Use Absorbent Pads or Other Material in Storm Drain Catch Basins

| BMP                                                                 | Use absorbent pads or other material in the storm drain catch basins if grease dumpsters and containers must be located nearby.  
Do not use free flowing absorbent materials such as “kitty litter” or sawdust. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason For</td>
<td>Absorbent pads and other materials can serve as an effective barrier to grease and oil entering the storm drain system.</td>
</tr>
</tbody>
</table>
| Benefit to food producing establishment                             | The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.  
Discharge of grease and oil to the storm drain might also result in legal penalties or fines. |
| Pretreatment Inspection Tips                                        | Check for the nearest catch basin and drainage paths for signs of grease and oil.  
Require absorbent pads if the basin is within 20 feet of grease dumpsters or containers, or if there are signs of grease in the catch basin at any distance.  
Do not permit the use of free flowing absorbent material such as “kitty litter.” |
### Use Absorbent Pads or Other Material to Clean Up Spilled Material

| **BMP** | Use absorbent pads or other material to clean up spilled material around outdoor equipment, containers or dumpsters.  
Do not use free flowing absorbent materials such as “kitty litter” or sawdust that can be discharged to the storm drain system. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason For</strong></td>
<td>Absorbent pads or materials can help clean up grease and oil that is spilled on the ground and prevent it from flowing to the storm drain system.</td>
</tr>
</tbody>
</table>
| **Benefit to food producing establishment** | The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.  
Discharge of grease and oil to the storm drain might also result in legal penalties or fines. |
| **Pretreatment Inspection Tips** | If grease and oil are observed on the ground in the storage area, recommend the use of absorbents to minimize movement of the grease and oil.  
Do not permit the use of free flowing absorbent material such as “kitty litter.” |
**Routinely Clean Kitchen Exhaust System Filters**

<table>
<thead>
<tr>
<th><strong>BMP</strong></th>
<th>Routinely clean kitchen exhaust system filters.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason For</strong></td>
<td>If grease and oil escape through the kitchen exhaust system, it can accumulate on the roof of the establishment and eventually enter the storm drain system when it rains.</td>
</tr>
<tr>
<td><strong>Benefit to food producing establishment</strong></td>
<td>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream. Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</td>
</tr>
<tr>
<td><strong>Pretreatment Inspection Tips</strong></td>
<td>Inspect roof (if safely accessible) for signs of oil and grease. Require a maintenance schedule and records for cleaning exhaust filters. Cleaning is usually by washing, which will discharge the grease to the interceptor where it can be controlled.</td>
</tr>
</tbody>
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Hydroflush Cleaning (2001)

Wastewater Certification Study Guides From CWEA:

Collection System Maintenance Certification Study Guides (Grades I-IV)
Plant Maintenance Certification Study Guides (Grades I & IV)
Mechanical Technologist Certification Study Guides (Grades II-III)
Electrical/Instrumentation Study Guides (Grades II-III)
Laboratory Analyst Certification Study Guides (Grades I-IV)
Environmental Compliance Inspector Certification Study Guides (Grades I-II)
Industrial Waste Treatment Plant Operator Certification Study Guide
Wastewater Treatment Plant Operator Certification Study Guides (Grades I-V)

Other CWEA Publications

Biosolids Manual of Good Practice
Laboratory Procedures and Chemistry for Wastewater Operators

To order books please visit www.cwea.org or call us at 510-382-7800
SEWER LIFT STATION (SLS) CONTINGENCY PLAN

Padre Dam Municipal Water District
9300 Fanita Parkway
Santee, CA 92072

April 2019
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Section 1: Introduction

The District’s Pump Station Contingency Plan is organized with a general response procedure and then each station has a detailed description of the response activities related to each specific station. In the District’s Sewer System Management Plan, or SSMP, Section 6 Overflow Emergency Response Plan, standard spill response activities are described and will be followed. This document is aimed at the lift stations and identifies the specific responses needed to continue operations when a station is down due to electrical failure, pump failure, or other problems.

Section 2: Contingency Plan for Station Failure

The typical operation of each station varies with each site having between two and eighteen pump cycles per day on average. Listed within this report are the spill appearance points for each station as well as a peak wet weather flow, which is based on a 2.4 peaking factor on an average dry weather flow.

Included in this manual are photographs of each station and the surrounding area. These photographs are labeled with the spill appearance points, storm drain locations and other important information.

Should a station fail, resulting in a release of sewage, District staff will respond and document the spill and contact the appropriate agencies. A copy of the contact list for these agencies is included in this document. The Construction and Maintenance Crew Supervisor will typically be responsible for contacting these agencies and documenting the spill event.

Section 3: Notification of Problems

In the case of a lift station station failure where the station cannot pump, the System Operators would be notified via the SCADA system’s many alarm set-points. These alarms include the following:

- High Wet Well Alarm
- Power Failure Alarm
- High High Wet Well Alarm
- Communications Failure Alarm
- High Wet Well Float Alarm
- Pump Failure Alarm

Other notifications can often come from the customers who live next to our facilities. The District has reached out to the customers in the past and asked that they report any unusual events, noises or issues that they may see with our facilities. The lift stations are also posted with signs that display the District’s name, station name, as well as the District’s phone number that is answered 24 hours a day.
Section 4: Response to Failures

Upon receipt any of the alarms, the System Operator analyzes the SCADA data and determines what the response should be. If warranted, the Construction and Maintenance Crew Supervisor would be called to respond to the station. As he/she is responding, he/she would call crews to respond with a vacuum truck. Alarms are set at points in which there is time between the detected failure and an actual sewer spill.

Upon arrival, crews would install barriers in order to prevent flow into storm drains. Sand bags are stored at each lift station for quick access and response to spills. Additional sand bags are stored in the operations yard and can be delivered to the sites as needed. For storm drain locations and spill appearance points, see photographs following each section that identifies and labels the inlets and ultimate destination where crews would respond to clean up any spilled sewage.

To maintain service to our customers reliant on lift stations, a vacuum truck would be dispatched to the station to pump out the wet well in order to maintain normal operating levels. The station would be monitored by staff using the SCADA system if available, and monitored by visual inspections if SCADA is not operable. While the station is down, the District’s Pump Technicians would troubleshoot the station to determine the cause of the failure and determine a repair plan.

Section 5: Resolution of Failures

The District has relationships with several local pump and equipment suppliers. The District is also a member of the Interagency Shared Services Program. This consists of several local water and sewer agencies that have a Memorandum of Understanding (MOU) between them that allows for the sharing of staff and equipment. This program has been used with success many times in the past. Some equipment that is available consists of Vactor trucks, pumps, generators, etc. An electronic copy of the Shared Services Program is kept on the District’s intranet page for staff to view and use when needed. There are also hard copies in the various work groups.

Section 6: Equipment/Staff Needed

Key staff have been identified that will respond to any problems reported at a lift station. Depending on the severity of the failure, a response may consist of a Pump Technician only, or it could entail an entire compliment of sewer maintenance crews, Vactor crews, Electricians, Supervisors and Pump Technicians.
Section 7: Sewer Lift Stations

7.1 High Rise Way (Woodside Meadows) SLS

Station: High Rise Way (Woodside Meadows) SLS
Address: 8292 High Rise Way, Santee, CA 92071
Year Built: 1985
Map Page: 1231 H5

Spill Appearance Address: 8292 High Rise Way
Spill Appearance Point: Manhole #9994
Wet Well Diameter: 6 ft.
Spill Appearance Rim El: 571 ft.
Wet Well Floor Elevation: 558 ft.
System Capacity: 3,576 gallons
Force Main Length: 856 ft.
Force Main Diameter: 4 in PVC
Number of Connections: 17
Peak Flow Rate: 2.75 GPM
Average Flow Rate: 1.15 GPM
Minimum Detention Time: 1,300 minutes, .9 Days
Average Detention Time: 3,109 minutes, 2.1 Days

Typical operation of this station consists of approximately two (2) pumping cycles per day. During each cycle, approximately 824 gallons are pumped approximately 856 feet through a four-inch PVC force main to manhole 2081. This manhole is located south west of the lift station at the intersection of High Rise Way and Canyon Park Drive.

This station has a High Wet Well Alarm set at 568 ft. Spillage from manhole 9994 occurs at an elevation of 571 ft. This early warning system gives staff a reasonable amount of time to respond to failures.

If the station is spilling, the storm drain inlet adjacent to the lift station will be blocked off with sandbags. A Vactor truck will be dispatched to the area to start vacuuming sewage off of the street. Pump Technicians will be sent to troubleshoot and find the cause of the failure. They will assess the station and immediately start repairs. Critical spare parts are held in the District’s inventory and can be accessed with little delay. If parts are needed from vendors, a call would be placed to secure such parts.

In a worst-case scenario, this station has low enough flows that it could be monitored by staff and a Vactor truck could be used to pump the station down on an as needed basis. This would continue until repairs could be completed.
High Rise Way Sewer Lift Station
8292 High Rise Way
Sewer Lift Station (SLS) Contingency Plan
Padre Dam Municipal Water District
Revised April 2019

High Rise Way SLS

Storm Drain Inlet (Lowest Elev.)

Manhole # 2085
7.2 Mission Creek SLS

Station: Mission Creek SLS
Address: 201 River Park Drive, Santee, CA 92071
Year Built: 1993
Map Page: 1231 C5

Spill Appearance Address: 201 River Park Drive (manholes in street)
Spill Appearance Point: Manholes 2439, 2440, 2441
Wet Well Diameter: 12 ft.
Spill Appearance Rim El: 330 ft.
Wet Well Floor Elevation: 312 ft.
System Capacity: 62,348 gallons
Force Main Length: 1,110 ft.
Force Main Diameter: 6 in. PVC
Number of Connections: 354
Peak Flow Rate: 109.07 GPM
Average Flow Rate: 45 GPM
Minimum Detention Time: 572 minutes, .4 Days
Average Detention Time: 1,372 minutes, .95 Days

Typical operation of this station consists of approximately eighteen (18) pumping cycles per day. During each cycle, approximately 3,636 gallons are pumped approximately 1,110 feet through a six-inch PVC force main to manhole 2460. This manhole is located at the intersection of Winter Creek Place and River Park Drive.

This station has a High Wet Well Alarm set at 319 ft. Spillage from manholes 2439, 2440 and 2441 occur at an elevation of 330 ft. This early warning system gives staff a reasonable amount of time to respond to failures.

If the station is spilling, the storm drain inlets on River Park Drive that are directly in front of the lift station and the inlet across the street will be blocked off with sandbags. A Vactor truck will be dispatched to the area to start vacuuming sewage off of the street. Pump Technicians will be sent to troubleshoot and find the cause of the failure. They will assess the station and immediately start repairs. Critical spare parts are held in the District's inventory and can be accessed with little delay. If parts are needed from vendors, a call would be placed to secure such parts.

In a worst-case scenario, this station has low enough flows that it could be monitored by staff and multiple Vactor trucks could be used to pump the station down on an as needed basis. This method could be used on a short term basis. If the station is incapacitated for a longer period of time, District staff would use the District’s pump or rent pumps and piping in order to bypass pump the station. One option would be to lay temporary piping from the station to the manhole 2460. The second option would be to disconnect piping inside of the station and connect the temporary pump to the permanent discharge piping and place the suction hoses into the wet well. This determination would be made at the time of failure.
Discharge Piping

Mission Creek SLS

Pump #1

Pump #2
7.3 Woodside Avenue (JAWS) SLS

Station: Woodside Avenue SLS
Address: 11486 Woodside Ave., Santee, CA 92071
Year Built: 2000 (Upgrade)
Map Page: 1231 G4

Spill Appearance Address: 11486 Woodside Ave.
Spill Appearance Point: Cleanout on north end of station
Wet Well Diameter: 6 ft.
Spill Appearance Rim El: 365 ft.
Wet Well Floor Elevation: 358 ft.
System Capacity: 1,493 gallons
Force Main Length: 112 ft.
Force Main Diameter: 4 in. ABS
Number of Connections: 2
The Peak Flow Rate: 1.27 GPM
Average Flow Rate: .53 GPM
Minimum Detention Time: 1,176 minutes, .82 Days
Average Detention Time: 2,817 minutes, 1.9 Days

Typical operation of this station consists of nine (9) pumping cycles per day. During each cycle approximately 85 gallons are pumped approximately 112 feet through a four-inch ABS force main to manhole 8663. This manhole is located south of the station on Woodside Avenue.

This station has a High Wet Well Alarm set at 363 ft. Spillage from the clean out on the north side of the station occurs at an elevation of 365 ft. This early warning system gives staff a reasonable amount of time to respond to failures.

This station has only two connections. If the station is spilling, the driveway to the west of the station will be blocked off with sandbags. A Vactor truck will be dispatched to the area to start vacuuming sewage off of the street. Pump Technicians will be sent to troubleshoot and find the cause of the failure. They will assess the station and immediately start repairs. Critical spare parts are held in the District’s inventory and can be accessed with little delay. If parts are needed from vendors, a call would be placed to secure such parts.

In a worst-case scenario, this station has low enough flows that it could be monitored by staff and a Vactor truck could be used to pump the station down on an as needed basis. This would continue until repairs could be completed.
Woodside Ave (JAWS) SLS

Spill Path

Sewer Lift Station (SLS) Contingency Plan
Padre Dam Municipal Water District
Revised April 2019
### 7.4 Sky Ranch SLS

<table>
<thead>
<tr>
<th>Station:</th>
<th>Sky Ranch SLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>7288 Ocotillo St., Santee, CA 92071</td>
</tr>
<tr>
<td>Year Built:</td>
<td>2010</td>
</tr>
<tr>
<td>Map Page:</td>
<td>1231 H7</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Spill Appearance Address:</th>
<th>7279 Ocotillo Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill Appearance Point:</td>
<td>Manhole #3345</td>
</tr>
<tr>
<td>Wet Well Diameter:</td>
<td>7 ft.</td>
</tr>
<tr>
<td>Spill Appearance Rim El:</td>
<td>1040 ft.</td>
</tr>
<tr>
<td>Wet Well Floor Elevation:</td>
<td>1027 ft.</td>
</tr>
<tr>
<td>System Capacity:</td>
<td>5820 gallons</td>
</tr>
<tr>
<td>Force Main Length:</td>
<td>550 ft.</td>
</tr>
<tr>
<td>Force Main Diameter:</td>
<td>4 in.</td>
</tr>
<tr>
<td>Number of Connections:</td>
<td>5</td>
</tr>
<tr>
<td>Peak Flow Rate:</td>
<td>5.95 GPM</td>
</tr>
<tr>
<td>Average Flow Rate:</td>
<td>2.48 GPM</td>
</tr>
<tr>
<td>Minimum Detention Time:</td>
<td>978 minutes, .68 Days</td>
</tr>
<tr>
<td>Average Detention Time:</td>
<td>2,346 minutes, 1.6 Days</td>
</tr>
</tbody>
</table>

Typical operation of this station consists of three (3) pumping cycles per day. During each cycle, approximately 1,000 gallons are pumped approximately 550 feet through a four-inch force main to manhole 3346. This manhole is located north of the lift station in the cul-de-sac at 7279 Ocotillo Street.

This station has a High Wet Well Alarm set at 1,031 ft. Spillage from manhole 3345 occurs at an elevation of 1,040 ft. This early warning system gives staff a reasonable amount of time to respond to failures.

The station utilizes make-up water that is added to trigger a pumping cycle at predetermined times. This make-up water is used to offset odor issues that have arisen due to the small number of homes served by this system.

Upon a failure, the make-up water would be shut off. If the station is spilling, the storm drain at the south end of the street will be blocked off with sandbags. A Vactor truck will be dispatched to the area to start vacuuming sewage off of the street. Pump Technicians will be sent to troubleshoot and find the cause of the failure. They will assess the station and immediately start repairs. Critical spare parts are held in the District's inventory and can be accessed with little delay. If parts are needed from vendors, a call would be placed to secure such parts.

In a worst-case scenario, this station has low enough flows that it could be monitored by staff and a Vactor truck could be used to pump the station down on an as needed basis. This would continue until repairs could be completed.
Sky Ranch Sewer Lift Station

Storm Drain Inlet (Lowest Elev.)

Manhole #3344 (Spill Appearance point)
Sky Ranch SLS Drainage Easement

Storm Drain Inlet (Lowest Elev.)

Manhole #3344 (Spill Appearance Point)
7.5 Influent Pump Station (IPS)

Station: Influent Pump Station
Address: 9120 Carlton Oaks Drive, Santee, CA 92071
Year Built: 1966
Map Page: 1231 A5

Spill Appearance Address: 9200 Inwood Drive (Carlton Oaks Country Club)
Spill Appearance Point: Manholes 2574, 56, 54, 2988, 2989
Wet Well Diameter: 42x9x14.5 ft.
Spill Appearance Rim El: 314 ft.
Wet Well Floor Elevation: 293 ft.
System Capacity: 198,531 gallons
Force Main Length: 16,610 ft.
Force Main Diameter: 20 in. HDPE
Number of Connections: Numerous
The Peak Flow Rate: 4,858 GPM (7 MGD)
Average Flow Rate: 1,388 GPM (2 MGD)
Minimum Detention Time: 41 minutes
Average Detention Time: 143 minutes

Typical operation of this station consists of variable frequency drives running pumps 24 hours a day. Should this station fail, time is of the essence. The District owns a large diesel powered portable pump that would be connected to the IPS. The IPS has multiple bypass connections that will be utilized for emergency bypassing or for bypassing the station for routine maintenance.

This station has a High Wet Well Alarm set at 302 ft. Spillage from manholes 56, 54, 2574, 2988 and 2989 occurs at an elevation of approximately 314 ft. All of the manholes that spill are located on the Carlton Oaks Golf Course which is south west of the IPS and Operations yard.

Upon failure, staff would be dispatched to the sewer diversion structures at Carlton Hills and Walmart. They would set the diversion stop logs in place so that all flow is directed to the County of San Diego’s sewer system. The District currently has one automated diversion structure on Cottonwood Drive. The command would be sent via the District’s SCADA system to divert flow to the County’s system.

There is a table attached that gives approximate detention times of the IPS wet well and piping. Depending on the incoming flow rate, there can be anywhere between 32 minutes at peak wet weather flows to 191 minutes at nighttime low flows.

The station is set up with a 500 kW emergency diesel generator. The generator is fed fuel through a day tank that pulls the fuel from the District’s underground storage tank. This tank is never allowed to have less than 3,000 gallons of fuel in it.

The next redundant system for the IPS is the bypass piping connection. The pump for this connection is stored in the District’s operations yard which allows for a quick response and set up. Crews would bring the pump to the south end of the IPS and begin connecting suction piping to the pump. The suction end of this piping could either be submerged into the IPS wet well or
into one of five manholes located upstream of the IPS. Discharge piping is also located in the operations yard and various fitting and pipe lengths are on hand.

A second pump would be rented from one of the vendors listed in this manual (see page 37, Pump Rental Contacts) and set up as a redundant backup. The temporary bypass pumping operation would be manned 24 hours a day by District staff while repairs are completed on the IPS.

Staff would be dispatched to the golf course with equipment to clean up any spill debris. Vactor trucks, backhoes and any other necessary equipment would be made available for cleanup efforts.

Pump Technician Operators and Electricians will troubleshoot and find the cause of the failure. They will assess the station and immediately start repairs. Critical spare parts are held in the District's inventory and can be accessed with little delay. If parts are needed from vendors, a call would be placed to secure such parts.
**Section 8: Station Detention Capacities**

Gallons per CF: 7.48  
Peak Flow Factor: 2.4

### 8.1 High Rise Way SLS

Number of Connections: 17

**Table 8.1.1 Station Capacity**

<table>
<thead>
<tr>
<th>DIAMETER</th>
<th>% OF SQ</th>
<th>LENGTH/DEPTH (FT)</th>
<th>VOLUME (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Line</td>
<td>6 IN</td>
<td>0.785</td>
<td>164</td>
</tr>
<tr>
<td>1 Manhole</td>
<td>5 FT</td>
<td>0.785</td>
<td>4</td>
</tr>
<tr>
<td>Wet Well</td>
<td>6 FT</td>
<td>0.785</td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL VOLUME (GAL):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 8.1.2 Pump Cycles**

<table>
<thead>
<tr>
<th>GALLONS/FT</th>
<th>PUMP CYCLE</th>
<th>GALLONS/CYCLE</th>
<th>CYCLES/DAY</th>
<th>FLOW (GPD)</th>
<th>FLOW (GPM)</th>
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</thead>
<tbody>
<tr>
<td>211</td>
<td>3.90</td>
<td>824</td>
<td>2</td>
<td>1,649</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>PEAK FLOW (GPM): 2.75</strong></td>
</tr>
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</table>

**Table 8.1.3 Detention Time**

<table>
<thead>
<tr>
<th>VOLUME (GAL)</th>
<th>FLOW (GPM)</th>
<th>MINUTES</th>
<th>HOURS</th>
<th>DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>3,576</td>
<td>1.15</td>
<td>3,110</td>
<td>51.8</td>
</tr>
<tr>
<td>Peak</td>
<td>3,576</td>
<td>2.75</td>
<td>1,300</td>
<td>21.7</td>
</tr>
</tbody>
</table>

### 8.2 Mission Creek SLS

Number of Connections: 250

**Table 8.2.1 Station Capacity**

<table>
<thead>
<tr>
<th>DIAMETER</th>
<th>% OF SQ</th>
<th>LENGTH/DEPTH (FT)</th>
<th>VOLUME (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Line</td>
<td>6 IN</td>
<td>0.785</td>
<td>421</td>
</tr>
<tr>
<td>Gravity Line</td>
<td>8 IN</td>
<td>0.785</td>
<td>2,602</td>
</tr>
<tr>
<td>68 Manholes</td>
<td>5 FT</td>
<td>0.785</td>
<td>4</td>
</tr>
<tr>
<td>Wet Well</td>
<td>12 FT</td>
<td>0.785</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>TOTAL VOLUME (GAL):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8.2.2  Pump Cycles

<table>
<thead>
<tr>
<th>GALLONS/FT</th>
<th>PUMP CYCLE</th>
<th>GALLONS/CYCLE</th>
<th>CYCLES/DAY</th>
<th>FLOW (GPD)</th>
<th>FLOW (GPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>846</td>
<td>4.30</td>
<td>3,636</td>
<td>18</td>
<td>65,445</td>
<td>45.45</td>
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</table>

PEAK FLOW (GPM): 109.07

Table 8.2.3  Detention Time

<table>
<thead>
<tr>
<th></th>
<th>VOLUME (GAL)</th>
<th>FLOW (GPM)</th>
<th>DETENTION TIME</th>
<th>HOURS</th>
<th>DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>62,348</td>
<td>45.45</td>
<td>1,372</td>
<td>22.9</td>
<td>0.95</td>
</tr>
<tr>
<td>Peak</td>
<td>62,348</td>
<td>109.07</td>
<td>572</td>
<td>9.5</td>
<td>0.40</td>
</tr>
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</table>

8.3  Woodside Ave (JAWS) SLS

Number of Connections: 2

Table 8.3.1  Station Capacity

<table>
<thead>
<tr>
<th></th>
<th>DIAMETER</th>
<th>% OF SQ</th>
<th>LENGTH/DEPTH (FT)</th>
<th>VOLUME (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Line</td>
<td>4 IN</td>
<td>0.785</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Wet Well</td>
<td>6 FT</td>
<td>0.785</td>
<td>7</td>
<td>1,480</td>
</tr>
</tbody>
</table>

TOTAL VOLUME (GAL): 1,493

Table 8.3.2  Pump Cycles

<table>
<thead>
<tr>
<th>GALLONS/FT</th>
<th>PUMP CYCLE</th>
<th>GALLONS/CYCLE</th>
<th>CYCLES/DAY</th>
<th>FLOW (GPD)</th>
<th>FLOW (GPM)</th>
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</thead>
<tbody>
<tr>
<td>211</td>
<td>0.40</td>
<td>85</td>
<td>9</td>
<td>761</td>
<td>0.53</td>
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</tbody>
</table>

PEAK FLOW (GPM): 1.27

Table 8.3.3  Detention Time

<table>
<thead>
<tr>
<th></th>
<th>VOLUME (GAL)</th>
<th>FLOW (GPM)</th>
<th>DETENTION TIME</th>
<th>HOURS</th>
<th>DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>1,493</td>
<td>0.53</td>
<td>2,817</td>
<td>46.95</td>
<td>1.96</td>
</tr>
<tr>
<td>Peak</td>
<td>1,493</td>
<td>1.27</td>
<td>1,176</td>
<td>19.6</td>
<td>0.82</td>
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</table>
### 8.4 Sky Ranch SLS

Number of Connections: 5

#### Table 8.4.1 Station Capacity

<table>
<thead>
<tr>
<th>DIAHTER</th>
<th>% OF SQ</th>
<th>LENGTH/DEPTH (FT)</th>
<th>VOLUME (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Line</td>
<td>6 IN</td>
<td>0.785</td>
<td>217</td>
</tr>
<tr>
<td>3 Manholes</td>
<td>5 FT</td>
<td>0.785</td>
<td>4</td>
</tr>
<tr>
<td>Wet Well</td>
<td>7 FT</td>
<td>0.785</td>
<td>13</td>
</tr>
</tbody>
</table>

TOTAL VOLUME (GAL): 5,820

#### Table 8.4.2 Pump Cycles

<table>
<thead>
<tr>
<th>GALLONS/FT</th>
<th>PUMP CYCLE</th>
<th>GALLONS/ CYCLE</th>
<th>CYCLES/ DAY</th>
<th>FLOW (GPD)</th>
<th>FLOW (GPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>288</td>
<td>3.10</td>
<td>892</td>
<td>4</td>
<td>3,568</td>
<td>2.48</td>
</tr>
</tbody>
</table>

PEAK FLOW (GPM): 5.95

#### Table 8.4.3 Detention Time

<table>
<thead>
<tr>
<th>VOLUME (GAL)</th>
<th>FLOW (GPM)</th>
<th>MINUTES</th>
<th>DETENTION TIME</th>
<th>HOURS</th>
<th>DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>5,820</td>
<td>2.48</td>
<td>2,347</td>
<td>39.1</td>
<td>1.63</td>
</tr>
<tr>
<td>Peak</td>
<td>5,820</td>
<td>5.95</td>
<td>978</td>
<td>16.3</td>
<td>0.68</td>
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### 8.5 Influent Pump Station (IPS)

#### Table 8.5.1 Station Capacity

<table>
<thead>
<tr>
<th>DIAHTER</th>
<th>% OF SQ</th>
<th>LENGTH/DEPTH (FT)</th>
<th>VOLUME (GAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity Line</td>
<td>30 IN</td>
<td>0.785</td>
<td>515</td>
</tr>
<tr>
<td>Gravity Line</td>
<td>27 IN</td>
<td>0.785</td>
<td>403</td>
</tr>
<tr>
<td>Gravity Line</td>
<td>24 IN</td>
<td>0.785</td>
<td>3,495</td>
</tr>
<tr>
<td>Gravity Line</td>
<td>15 IN</td>
<td>0.785</td>
<td>3,525</td>
</tr>
<tr>
<td>30 Manholes</td>
<td>5 FT</td>
<td>0.785</td>
<td>4</td>
</tr>
<tr>
<td>Wet Well</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

TOTAL VOLUME (GAL): 198,531
### Table 8.5.2  Spill Table for IPS Flows

<table>
<thead>
<tr>
<th>VOLUME (GAL)</th>
<th>FLOW (MGD)</th>
<th>FLOW (GPM)</th>
<th>TIME TO SPILL (MIN)</th>
<th>TIME TO SPILL (HOUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>198,531</td>
<td>1.5</td>
<td>1,042</td>
<td>191</td>
<td>3.2</td>
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<tr>
<td>198,531</td>
<td>2.0</td>
<td>1,389</td>
<td>143</td>
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</tr>
<tr>
<td>198,531</td>
<td>2.5</td>
<td>1,736</td>
<td>114</td>
<td>1.9</td>
</tr>
<tr>
<td>198,531</td>
<td>3.0</td>
<td>2,083</td>
<td>95</td>
<td>1.6</td>
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<tr>
<td>198,531</td>
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<tr>
<td>198,531</td>
<td>4.0</td>
<td>2,778</td>
<td>71</td>
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<tr>
<td>198,531</td>
<td>5.0</td>
<td>3,472</td>
<td>57</td>
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<tr>
<td>198,531</td>
<td>6.0</td>
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<td>198,531</td>
<td>7.0</td>
<td>4,861</td>
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<td>0.7</td>
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<tr>
<td>198,531</td>
<td>8.0</td>
<td>5,556</td>
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<td>0.6</td>
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<tr>
<td>198,531</td>
<td>9.0</td>
<td>6,250</td>
<td>32</td>
<td>0.5</td>
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## Section 9: Mission Gorge Pipelines/Facilities Contact List

<table>
<thead>
<tr>
<th>CONTACT</th>
<th>TITLE</th>
<th>PHONE</th>
<th>CELL</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADRE DAM MUNICIPAL WATER DISTRICT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>CITY OF SAN DIEGO</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CITY OF EL CAJON</td>
<td>After Hours (24 Hours)</td>
<td>Police Dispatch / Duty Person</td>
<td>619-579-3311</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COUNTY OF SAN DIEGO</td>
<td>After Hours (24 Hours)</td>
<td>Duty Person</td>
<td>858-565-5255</td>
<td></td>
</tr>
</tbody>
</table>
Section 10: Pump Rental Contacts Sheet

<table>
<thead>
<tr>
<th>BUSINESS</th>
<th>CONTACT NAME</th>
<th>OFFICE</th>
<th>CELL</th>
<th>FAX</th>
<th>AFTER HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQUIPMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 11: Sewer Spill Contacts

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>CONTACT NAME</th>
<th>PRIMARY PHONE</th>
<th>ALT PHONE</th>
<th>CONTACT PHONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Category 1 SSO: discharge of any volume that reaches surface water or a tributary drainage channel or MS4 and is not fully recovered from a dedicated infiltration basin prior to reaching surface waters

EMAIL NOTICE TO REGIONAL BOARD (R9SSO@waterboards.ca.gov)
Date and time that Regional Board, OES, and SD Hazmat were notified. Attach any appropriate reference numbers.

Category 2 SSO: discharge of 1,000 gallons or more that does not reach surface water, drainage channel, or MS4

Category 3 SSO: all other discharges.

PLSD: discharge resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee’s sanitary sewer system or from other private sewer assets.
Spill Reported

Call Address: __________________________________________

Caller Name: __________________________________________ Phone: __________________________

Call Date: _____ / _____ / _____ Time: _____ : _____ □ a.m. □ p.m. Call received by: ______________________

Caller Interview / Spill Start Time Notes

Is Sewage Spilling?  □ YES □ NO

From Where? □ MANHOLE  □ PLCO  □ WET WELL  □ NO  □ TWO-WAY C/O  □ INSIDE BUILDING

Time Caller noticed spill: ______ : ______ □ a.m. □ p.m. □ N/A

Time Caller observed NO SPILL occurring: _____ : _____ □ a.m. □ p.m. □ N/A

Comments: __________________________________________

____________________________________________________

Ask Caller to describe spill: __________________________________________

____________________________________________________

On-Site Response

□ a.m. □ p.m. Spill verified by PDMWD: _____ : _____ □ a.m. □ p.m.

Interview #1

Name/Address: _________________________________________ Time observed spill: _____ : _____ □ a.m.

Observation/Description: __________________________________________

____________________________________________________

Interview #2

Name/Address: _________________________________________ Time observed spill: _____ : _____ □ a.m.

Observation/Description: __________________________________________

____________________________________________________

Attempt to interview at least two (2) others in addition to the caller. If nobody is available, document attempts (by address or passer-by).

Updated April 2019
### Spill Location

<table>
<thead>
<tr>
<th>Spill observed from:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manhole ID _______</td>
<td>Lift Station ____________________</td>
<td></td>
</tr>
<tr>
<td>Cleanout Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Address:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

---

<table>
<thead>
<tr>
<th>Spill destination:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>Paved Surface</td>
</tr>
<tr>
<td>Storm Drain</td>
<td>Street/Curb/Gutter</td>
</tr>
<tr>
<td>Unpaved</td>
<td>Water</td>
</tr>
</tbody>
</table>

Did spill reach:  

- Drainage Channel
- Surface Water
- Storm Drain System

If yes, was spill fully recovered?  

- YES
- NO

When did spill enter the waterway?  

- :  a.m.  p.m.  N/A

Spill type:  

- Private/PLSD
- SSO

*SSO Category will be determined by the Wastewater Supervisor.*

### Spill Rate Notes

*If mainline is blocked, inspect FIRST MANHOLE DOWNSTREAM of blockage and note flow rate below.*

<table>
<thead>
<tr>
<th>Flow rate:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No flow in channel</td>
<td>Trickle flow in channel</td>
</tr>
</tbody>
</table>

Depth of flow in channel:  inches  

- a.m.

Time:   :  p.m.

Describe how measurement was taken:

---

### Cause of Spill

<table>
<thead>
<tr>
<th>Failed at:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainline</td>
<td>Lower Lateral</td>
</tr>
<tr>
<td></td>
<td>Upper Lateral</td>
</tr>
<tr>
<td></td>
<td>Force Main</td>
</tr>
<tr>
<td></td>
<td>Lift Station Wet Well</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spill Cause:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roots</td>
<td>Fats, Oils, Grease</td>
</tr>
<tr>
<td></td>
<td>Debris</td>
</tr>
<tr>
<td></td>
<td>Vandalism</td>
</tr>
<tr>
<td></td>
<td>Capacity</td>
</tr>
<tr>
<td></td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Lift Station Failure</td>
</tr>
</tbody>
</table>

Other:  

Spill Cause to be determined by CCTV inspection *(Attach TV Report to this form)*

---

Reported By:  

---

Updated April 2019
Spill Containment

Containment Implemented: ______:______ □ a.m. □ p.m.
Containment Measures:________________________________________
________________________________________
________________________________________
________________________________________

Reported By: ________________________

Clean Up

Cleanup begins: ______:______ □ a.m. □ p.m. Cleanup complete: ______:______ □ a.m. □ p.m.
Gallons used for cleanup: ______ Gallons recovered: ______ Water Dechlorinated: □ yes □ no
Describe Clean Up Operations: __________________________________________
________________________________________
________________________________________
________________________________________

Reported By: ________________________

Other Important Milestones

Contacted Supervisor: ______:______ □ a.m. □ p.m. __________________________
Requested Additional Personnel/Equip: ______:______ □ a.m. □ p.m. __________________________
Operator Arrival Time: ______:______ □ a.m. □ p.m. __________________________
Blockage Removed: ______:______ □ a.m. □ p.m. __________________________
Spill End Time: ______:______ □ a.m. □ p.m. __________________________
________________________________________
________________________________________
________________________________________

Reported By: ________________________
Reporting

If spill reached surface waters:

**Cal-OES (State):** 800-852-7550

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

Control Number Provided by Cal-OES: _________________________

**Regional Water Quality Control Board:** 619-521-3362 (After Hours 858-822-8344)

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

**San Diego County DEH:** 619-338-2284

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

*Also contacted:*

**City of Santee:** 619-258-4100

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

**Other:** ________________________________

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

**Other:** ________________________________

Call Time: _____ : _____ □ a.m. □ p.m.    Call by: _____________________

Name of person contacted: ________________________________    □ Left Message

*Reference SSMP Section 6 and Appendix A-3, State of California Water Resources Control Board Order No. WQ 2013-0058-EXEC for additional reporting requirements. Conduct water quality sampling within 48 hours after initial SSO notification if 50,000 gallons or more spilled to surface waters.*
Additional Notes


Response Crew

__________________________
__________________________
__________________________
__________________________
Grease Clogs
The Sewer

No de Grasa
y Aceite en el
desagüe del fregadero

Food waste from cookware and plates goes in the trash, not down the drain.

Tire las sobras de las ollas, sartenes y platos en la basura, no en el desagüe del fregadero.

Disconnect or minimize the use of garbage disposals.

Desconecte o haga uso mínimo del triturador de basura.

Use a fine mesh screen in sink drains to catch solids: (1/8 or 3/16 inch).

Para que las sobras no se vayan en el desagüe del fregadero, use un filtro de malla fina (1/8 o 3/16 pulgadas).

Dispose of liquid grease and oil in a waste container for recycling.

Heche la grasa y aceite en un envase especial para que sea reciclado.

Inspect grease traps at least monthly and clean regularly.

Inspeccione las atrapadoras de grasa por lo menos una vez al mes y límpielas con regularidad.

Information & Training
Industrial Code Compliance
619-258-4653
Email codecompliance@padre.org
Dear Business Owner/Manager:

The build-up of grease in sewer system pipes is the most frequent cause of sewage overflows and backups and the resulting sewer repairs, property damage, beach closures and health code violations.

A primary source of grease in the sewer system is food service establishments that do not properly dispose of food scraps, meat fats, lard and cooking oil, butter and margarine, sauces and dairy products. Fats, Oils and Grease (FOG) that are washed down sink and floor drains will congeal in the sewer.

To prevent this problem, Padre Dam works directly and proactively with the food service establishments connected to our sewer system. Padre Dam’s FOG Control Program will:

- Require an *Industrial Wastewater Discharge Permit for Food Establishments*
- Introduce owners and staff to FOG Best Management Practices (BMPs)
- Train staff on the proper handling and disposal of FOG
- Enforce the installation and maintenance of grease traps and interceptors
- Enforce the maximum allowable FOG discharge limit of 300 mg/L and pH limit levels.

Padre Dam will take sewer discharge samples and conduct on-site inspections of food service establishments initially, and at least annually, to assure each establishment’s compliance with the FOG Control Program.

Please find enclosed an application and information package for an *Industrial Wastewater Discharge Permit for Food Establishments. Please complete and return the application within 10 days in the envelope provided.*

If you have any questions about the FOG Control Program, please don’t hesitate to contact us.

Industrial Code Compliance
619-258-4653
# Food Establishment Wastewater Discharge Permit Application

## Company

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Owner/Operator Name</th>
<th>Application Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

## Contact Information

<table>
<thead>
<tr>
<th>Service Address</th>
<th>Billing/Mailing Address</th>
<th>Property Management Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>City, State &amp; Zip</th>
<th>City, State &amp; Zip</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>On-Site &amp; Emergency Contact Name</th>
<th>Billing Account Contact Name</th>
<th>City, State &amp; Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Telephone</th>
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<table>
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<tr>
<th>Email</th>
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</table>

## Type of Food Establishment

<table>
<thead>
<tr>
<th>RETAIL</th>
<th>WHOLESALE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

- Grocery/ Specialty Store
- Restaurant/Deli/Bakery
- Institutional Kitchen
- Other

<table>
<thead>
<tr>
<th>RETAIL</th>
<th>WHOLESALE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- Fruits/Vegetables
- Meat/Dairy
- Bakery
- Other

Briefly Describe On-Site Operations, Processes or Manufacturing

## Wastewater Discharge Points

<table>
<thead>
<tr>
<th>Work Area</th>
<th>Restrooms</th>
<th>Washing That Will Occur</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Sinks</td>
<td># Urinals</td>
<td>Washing of Foodstuffs</td>
</tr>
<tr>
<td># Garbage Disposals</td>
<td># Toilets</td>
<td>Washing of Dishes</td>
</tr>
<tr>
<td># Dishwashers</td>
<td># Floor Drains</td>
<td>Washing of Process Equipment</td>
</tr>
<tr>
<td># Ice Machines</td>
<td></td>
<td>Washing of Work Area</td>
</tr>
<tr>
<td># Floor Drains</td>
<td></td>
<td>Pre-Rinse or Dry Station Used to Remove Food Waste Prior to Rinsing Dishes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Wastewater Discharge Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

## Grease Traps and Interceptors

<table>
<thead>
<tr>
<th>Grease Trap/Interceptor Size</th>
<th>Oil Recycling Barrel Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grease Hauler Name</th>
<th>Oil Hauler Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grease Hauler Telephone</th>
<th>Oil Hauler Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

## Authorization

<table>
<thead>
<tr>
<th>Authorization</th>
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</tr>
</tbody>
</table>
The following certification statement must be signed by an authorized representative as the designated signatory authority for the facility. The authorized representative may be:

a. A general partner or proprietor, if the applicant is a partnership or sole proprietorship.

b. A responsible corporate director or manager, if the applicant is a corporation.

c. A responsible director or manager if the applicant is a governmental or non-profit institution.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that qualified personnel properly gathered and evaluated the information submitted. I am aware that there are significant penalties for submitting false information or not disclosing known violations. The information in this application is, to the best of my knowledge, accurate and complete.

________________________________________________________________________
Printed Name

________________________________________________________________________
Title

________________________________________________________________________
Signature    Date

Submit Application To:

Industrial Code Compliance
Padre Dam Municipal Water District
P.O. Box 719003, Santee, CA 92072-9003
9120 Carlton Oaks Drive, Santee, CA 92071

Questions:

Code Compliance
T  619-258-4653
F  619-449-9537
E  codecompliance@padre.org
APPENDIX G-3
Sample Wastewater Discharge Permit
FOOD ESTABLISHMENT
Wastewater Discharge Permit
(Must be Posted in Work Area)

Terms and Conditions
The intent of the program is to eliminate the discharge of excess grease and oil into the wastewater collection system, to minimize the potential of formation of blockages to the flow of wastewater as a result of grease accumulations and to eliminate sewage spills that may result from such blockages.

1. All food handling facilities including, but not limited to, restaurants, delis, ice-cream parlors, commercial kitchens, etc. desiring to discharge wastewater into the District's sewer system shall obtain a Food Establishment Wastewater Discharge (FEWD) Permit from the District.

2. All food handling facilities shall install a grease pretreatment device approved by Padre Dam to remove grease from wastewater prior to discharge and maintained using the 25% rule. (Cannot exceed 25% Fats, Oils, Grease and Solids)

3. All food handling facilities shall provide a collection drum or container to segregate all oils, greases, and greasy solids. No collected grease shall be introduced into any drainage pipeline or public sewer system.

4. Wastewater discharges from food establishments into the sewer system cannot exceed a concentration of 300 mg/L of grease and oil, pH or any other discharge limitations, unless special permit provisions are approved by Padre Dam.

5. All new grease interceptors shall be designed, constructed and installed in accordance with the California Plumbing Code, Title 24, Part 5 (current version) and shall have a sampling access point located downstream of the interceptor.

6. All food handling facilities shall submit an annual report to Padre Dam that provides the results of periodic measurements of its discharge, chemical analysis of oil and grease content (if required), grease pre-treatment device cleaning and maintenance, and documentation of delivery of all grease and oil to a recycling or disposal contractor or facility. Documentation shall be in the form of a manifest, or a receipt which identifies the date and volume, name of waste, address, phone, and contact person from the licensed transporter, contractor or facility.

7. Access to the facility shall be granted to Padre Dam staff to conduct unannounced facility inspections, collect discharge samples, review manifests, kitchen BMP’s, and verify compliance with all terms and conditions of this Permit. A qualified representative for the food handling facility shall be available during this process.

8. All food handling facilities shall notify Padre Dam's Industrial Compliance Division at 619.258.4653 of any
   a. Sale, lease, or transfer of the operation for which the permit was issued
   b. Changes to a grease removal device(s).
   c. Remodels, additions, alterations or repairs.

Authorization
The above named Permit Holder is hereby authorized to discharge wastewater to the community sewer, subject to compliance with the above terms and conditions, Padre Dam Rules & Regulations, Section 6.7. Padre Dam may amend this Permit to include revisions prior to its expiration.

Industrial Code Compliance
619-258-4653
APPENDIX G-4
Fats, Oil & Grease Best Management Practices
# Fats, Oil & Grease Best Management Practices

1. Train all staff on these Best Management Practices (BMPs)

2. Post “No Grease” signs above sinks and on the front of dishwashers.

3. “Dry Wipe” pots, pans and kitchen equipment, before cleaning.

4. Maintain a routine grease trap cleaning schedule.

5. Check grease interceptor solids depth routinely. The combined thickness of the floating grease and the bottom solids should not be more than 25% of the total depth.

6. Collect and recycle waste cooking oils.

7. Use absorbent paper under fryer baskets.

8. Use absorbents such as cat litter or paper towels to pick up oil and grease spills before mopping.

9. Do not use emulsifiers or solvents other than typical dishwashing detergents.

Questions:
Industrial Code Compliance
619-258-4653
codecompliance@padre.org
FATS, OILS AND GREASE CONTROL
PROGRAM TOOL KIT

September 2006

1 Photo courtesy of Monterey Regional Water Pollution Control Agency
Cooking grease in wastewater discharged from apartment buildings, homes, restaurants, and hotels is causing fats, oil, and grease (FOG or grease) blockages in sewer lines. These grease blockages, located in either the property owner’s sewer lateral or the public agency’s sanitary sewer system, can cause back-ups into kitchens or basements, or can lead to sanitary sewer overflows (SSOs) which can cause untreated sewage to flow onto streets and travel to storm drains, creeks, and other surface waters. SSOs have become the focus of many large lawsuits and a Report to Congress by the EPA in 2004. This has made the control of grease blockages a high priority for the EPA and many states which are now requiring municipalities to adopt FOG Control Programs that include controlling the FOG discharge from restaurants.

In September 2005, Connecticut issued a General Permit requiring restaurants and other food service establishments to install grease interceptors. In May 2006, California adopted a state law to reduce SSOs that requires each sewer agency to adopt a FOG Control Program and to regulate restaurants and other food service establishments. Other states have adopted or are considering similar regulations.

The National Restaurant Association supports efforts to reduce grease blockages and SSOs which will protect the environment and help keep restaurant drain lines clear. As with any new environmental program, we also have a concern that some new regulations may negatively impact restaurants without substantial benefit in reducing grease blockages.

This paper has been developed to provide State Restaurant Associations and individual restaurants with a general understanding of the FOG blockage problem, new FOG control regulations, logical FOG control practices, and guidance for evaluating FOG control requirements. This Tool Kit should be used by State Associations and individual restaurants to work together with sewering agencies to develop logical and technically based FOG Control Programs that are effective and fair.
Due to new State regulations, EPA enforcement, or SSO lawsuits, your local sewer agency may have already contacted your restaurant to explain their FOG Control Program or to issue your restaurant a wastewater discharge permit. You may have been asked to install a grease interceptor or grease trap. At the very least, you have probably been issued a flyer or poster encouraging you to reduce your FOG discharge through kitchen Best Management Practices (BMPs) such as scraping plates or recycling your fryer grease.

The following grease control program elements may soon be required for your restaurant, if they haven’t been required already:

**PERMITS** Some agencies are issuing or are requiring restaurants to apply for a wastewater discharge permit in order to regulate their grease discharge. This allows the agency to spell out the restaurant’s responsibilities, but the permitting process can be very complicated and burdensome for both the agency and the restaurant. The National Restaurant Association recognizes that some agencies may choose to permit restaurants, but the permits should be simple and straightforward. Many agencies have developed a brief and easy to understand permit that refers to an agency’s ordinance or other policy documents. This permit process works well for the agency and the restaurant.

**IMPLEMENTATION OF KITCHEN BEST MANAGEMENT PRACTICES (BMPS)** Although many restaurants have already implemented Kitchen Best Management Practices (BMPs) to prevent grease from being discharged down the drains, some agencies are requiring restaurants to implement specific Kitchen BMPs as a condition of their FOG Control Program. The National Restaurant Association supports BMPs that will prevent grease blockages; however, the BMPs should be practical and cost effective.

**GREASE CONTROL DEVICE INSTALLATION REQUIREMENTS** Grease control devices have been in use for years at many restaurants. However, many agencies are looking to require more restaurants to install grease control devices. Although these devices are a logical requirement for many restaurants, the National Restaurant Association is concerned that some agencies may require restaurants that discharge little or no grease to unnecessarily install expensive grease control devices.

**GREASE CONTROL DEVICE CLEANING AND MAINTENANCE REQUIREMENTS** Grease control devices must be cleaned or maintained regularly in order to function properly. Quarterly cleaning is sufficient for most conventional grease interceptors and weekly cleaning or maintenance is sufficient for most grease traps and grease removal devices, particularly if Kitchen BMPs are implemented. However, some agencies are requiring mandatory monthly cleaning of conventional grease interceptors or daily cleaning or maintenance of grease traps or grease removal devices. This is excessive at a vast majority of restaurants. The National Restaurant Association recognizes that more frequent cleaning or maintenance may be warranted for specific restaurants, but this should only be a requirement if there is evidence to justify these frequencies.

**WASTEWATER DISCHARGE–OIL AND GREASE CONCENTRATION LIMIT REQUIREMENT** Some agencies are sampling and analyzing the wastewater discharge from restaurants (or their grease control devices) and requiring that the wastewater contain less than a prescribed concentration limit of oil and grease. Oil and grease limits can vary from 100 milligrams per liter (mg/L) to 500 mg/L. These limits can also be stated as parts per million (ppm). Because the laboratory test used for this analysis measures both emulsified and non-emulsified oil and grease, these limits are not a true indication of the effectiveness of grease control devices or the grease blockage potential of the restaurant discharge. For this reason, many agencies are moving away from oil and grease limits and relying instead on inspection of grease control devices or the grease blockage potential of the restaurant discharge. The National Restaurant Association does not support oil and grease limits, but does support any monitoring efforts by agencies that provide a true indication of the impact of grease discharges by restaurants.
KITCHEN BEST MANAGEMENT PRACTICES (BMPs)

There are many ways in which restaurants can prevent or reduce the amount of grease that is discharged into kitchen drains. Based on researching Kitchen BMPs throughout the country, the National Restaurant Association has prepared the following list of helpful Kitchen BMPs that are considered practical and cost effective for most restaurants:

1. **KEEP GREASE OUT OF THE DRAINS/COLLECT AND RENDER YELLOW GREASE**
   Prevent pouring excess oil or grease down the drain. This “yellow grease” should be collected and rendered. The more yellow grease that is collected and rendered, the less grease that ends up in drains, or in grease interceptors or grease traps.

2. **SCRAPE GREASE AND FOOD FROM PLATES AND COOKWARE BEFORE WASHING**
   Using gloves or rubber spatulas, grease and greasy food scraps should be scraped off plates and cookware before washing. This material should be added to the trash or recycled as part of a food waste recycling program.

3. **USE DRAIN SCREENS**
   Using drain screens, particularly on sink drains, will prevent much of the grease and greasy food particles from ending up in the drains.

4. **WIPE UP GREASE SPILLS BEFORE USING WATER**
   Grease spills and grease drippings should be wiped up with a paper or cloth towel or through the use of other adsorbent materials such as kitty litter before using water to minimize the amount of grease ending up in the drains.

5. **LIMIT GARBAGE DISPOSAL USE TO NON-GREASY FOOD MATERIALS**
   For restaurants that have garbage disposals, they should be limited to processing non-greasy food materials such as lettuce in food preparation areas to minimize the amount of grease ending up in the drains.

6. **EMPLOYEE TRAINING**
   Employees must be trained to implement the kitchen BMPs and/or to properly clean out grease control devices such as grease traps.

* Photos 1, 2 and 4 courtesy of East Bay Municipal Utility District.
BENEFITS TO THE RESTAURANT OF IMPROVING FOG CONTROL

Whether a restaurant is part of a FOG control program or not, improved FOG control provides multiple benefits for restaurants:

<table>
<thead>
<tr>
<th>FOG Control Practice</th>
<th>Benefit</th>
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<tbody>
<tr>
<td>Improved Kitchen BMPs (less grease down the drain)</td>
<td>• Reduced drain line blockages and cleaning</td>
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<td>• Reduced cost of drain line cleaning and jetting</td>
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<td>• Reduced SSOs</td>
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<td>• Reduced odors</td>
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<td>• Reduced non-renderable waste grease generation</td>
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<tr>
<td>Increased cleaning or maintenance of grease control devices</td>
<td>• Reduced drain line blockages and cleaning</td>
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<td>• Reduced SSOs</td>
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<td>• Reduced odors</td>
</tr>
<tr>
<td>Overall compliance with the FOG control program</td>
<td>• Avoidance of non-compliance fees or fines</td>
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<tr>
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<td>• Benefit the environment and the community</td>
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Most agencies consider the requirement to install grease control devices to be the most important part of their FOG control program. The general thinking is that even if Kitchen BMPs are not fully implemented, the grease control device(s) will capture the grease and protect the sewer. Sewer use ordinances based on national plumbing codes provide the authority for agencies to require certain restaurants to install grease control devices. However, determining which restaurants require grease control devices and which grease control device(s) is the most appropriate for a specific restaurant provides a challenge for every agency.

Requirements for New Restaurants

Most new restaurants are required to install a grease control device to prevent grease from flowing into the agency’s sanitary sewer system. This is a logical requirement for new restaurants that are expected to discharge grease due to their menu or kitchen fixtures. Examples include restaurants that prepare significant quantities of steak, pork, chicken, fish, pasta, soup, or fried food using grills, fryers, rotisseries, woks, and tilt kettles. Conversely, many new restaurants should not be required to install a grease control device if they are not expected to discharge much grease due to their menu or kitchen fixtures. For example, the requirement to install a conventional grease interceptor is most likely unnecessary for sandwich shops, coffee shops, juice shops and other non-grease generating restaurants.

Concerning these new non-grease generating restaurants, some sewer ing agencies believe that they should require the installation of conventional grease interceptors. This requirement may be due to the agency’s concern that the next owner or tenant may convert the business into a restaurant that will discharge a significant amount of grease. The National Restaurant Association recognizes this concern and encourages sewer ing agencies to not require the current restaurant to incur the cost of installing and maintaining a conventional grease interceptor for grease that may or may not be discharged by a future restaurant. One logical solution is to require these new restaurants to plumb the kitchen waste piping separately from the sanitary waste piping and to provide outdoor space for a conventional grease interceptor in case a retrofit is needed in the future. Indoor grease control devices may also be installed in the restaurant, if space is not available outside.

Requirements for Existing Restaurants

Many existing restaurants already have grease control devices installed. If these devices are properly maintained, they should provide sufficient grease control and no other devices should be needed for these restaurants in most cases. Due to new grease control requirements in many areas of the country, existing restaurants without grease control devices are being required to install a grease control device(s). However, many agencies are “grandfathering” (i.e., removing or postponing the requirement) existing restaurants due to the potential significant cost of purchasing the device or retrofitting the facility. Logical reasons why some agencies may not “grandfather” certain existing restaurants and may require grease removal devices are: 1) when a significant remodel occurs; 2) non-adherence to FOG Control Program requirements; or 3) discharging to a portion of the sewer system that has a history of grease blockages.

Plumbing and Sizing Requirements

Grease control device plumbing and sizing requirements vary throughout the United States based on differing plumbing codes and agency preferences. The National Restaurant Association is planning to provide more information in this area through future literature or on our Web site.
CLEANING AND/OR MAINTENANCE OF GREASE CONTROL DEVICES

CONVENTIONAL GREASE INTERCEPTORS

Conventional grease interceptors operate by gravity separation. Given sufficient space and time, floating grease and settled solids separate from the kitchen wastewater and slowly accumulate in the interceptor (see the figure below).

For the interceptor to perform correctly, the floating grease and settled solids must be removed before they accumulate beyond a certain level to avoid clogging the plumbing in the interceptor or significantly reducing the overall space in the interceptor, which affects the ability of the interceptor to separate the waste material from the wastewater. The standard maintenance level for floating grease and settled solids accumulation is “The 25% Rule.” According to “The 25% Rule,” if the combined accumulation of floating grease and or settled solids exceeds 25% of the capacity of the interceptor, the interceptor must be cleaned (pumped) by a waste hauler. The “25% Rule” or a similar standard has been adopted and is now being enforced by many sewering agencies around the country.

Many agencies require that conventional grease interceptors be cleaned at a mandatory minimum frequency to prevent the over-accumulation of floating grease and settled solids. Minimum quarterly cleaning is perhaps the most common requirement, but some agencies require more frequent cleaning (e.g., monthly cleaning). Although more frequent cleaning may be appropriate for some restaurants with unusually high grease discharge, this is likely overkill for a vast majority of restaurants.

It is important that conventional grease interceptors be pumped out completely when they are cleaned. Otherwise the settled solids will accumulate and eventually clog the internal plumbing in the interceptor. At the very least, the decay of the solids over time will generate hydrogen sulfide gas and unpleasant odors (rotten egg smell). Many agencies require that conventional grease interceptors be fully pumped out every time due to these concerns.

GREASE TRAP

Grease traps also operate by gravity separation; however, grease traps use a flow control device and baffles to allow the separation of floating FOG and settled solids in a much smaller tank (see the figure below).

Like a conventional grease interceptor, in order for a grease trap to perform correctly, the floating FOG and settled solids must be removed regularly. However, since grease traps are significantly smaller than conventional grease interceptors, the necessary frequency of cleaning is much greater. Minimum weekly cleaning is required by some agencies. Some restaurants may have to clean out their grease trap more often than weekly due to unusually high grease discharge from specific fixtures. It is reasonable for most restaurants to conduct weekly checks or cleaning of the grease trap to ensure proper operation.

Grease trap cleaning is typically conducted by restaurant staff; however, some agencies require that pumping companies conduct the cleaning. This is problematic for most restaurants since the cost of using a pumping company for such a frequent basic cleaning practice may discourage the restaurant from cleaning the grease trap as often as it is needed.

1 Grease Removal Devices (GRDs) are very similar to grease traps in terms of their size and how they separate the oil and grease from the wastewater. Due to their automatic grease removal design, grease removal devices do not require as much cleaning as grease traps, but they typically require more frequent maintenance.
National Restaurant Association

FATS, OILS AND GREASE CONTROL
PROGRAM TOOL KIT

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Environmental Engineering & Contracting, Inc. (EEC)
FOG control consultant for agencies, industry, and commercial businesses, provided technical support for this Tool Kit.

501 Parkcenter Drive
Santa Ana, CA 92705
(714) 667-2300
Fax: (714) 667-2310
www.eecworld.com
APPENDIX G-6

Padre Dam Municipal Water District Grease Trap / Interceptor Cleaning Record
Padre Dam Municipal Water District
GREASE TRAP/INTERCEPTOR CLEANING RECORD

Facility Name: ___________________________ Service Company: ___________________________

Address: ___________________________ Address: ___________________________

Telephone: ___________________________ Telephone: ___________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Cleaned by</th>
<th>Site Rep or Witnessed by</th>
<th>Gallons Pumped</th>
<th>Grease Disposal Site Address</th>
<th>Remarks-Condition of Interceptor Device</th>
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Padre Dam Municipal Water District
GREASE WASTE HAULER STANDARDS

The Food Establishment Wastewater Discharge (FEWD) Permit Program has compiled the following list of standards to help your business comply with (FEWD) Permit Program discharge requirements and grease removal equipment maintenance requirements. These standards promote pollution prevention by minimizing Fats, Oils, and Grease (FOG) discharge into the sewer collection system.

GREASE INTERCEPTORS

REQUIREMENTS

No decanted water from the pumping truck is to be discharged into a grease interceptor, prior to or after pumping. Such practice is strictly prohibited.

Open all grease interceptor manhole covers for inspection, including the sample box, if present. Pump the sample box clean when FOG is found in the sample box. Report this condition on the check list left at the establishment with a recommendation to increase the pumping frequency, if no other cause for discharge is found.

Pump all FOG and food matter from interceptor chambers, including solids or sludge which may be at the bottom of each chamber; specifically at the bottom of standpipes. FEWD will at times require a complete pump out to facilitate inspection and flow testing.

Scrape off all built-up grease or solids on the interceptor walls and baffle and remove from the interceptor.

Inspect all tees and standpipes for plugging or excess build-up, clean off the build-up and remove it from the interceptor.

Inspect all tees, standpipes and baffles for damage and integrity; report deficiencies on the check list left at the establishment.

FEWD Permit Program Standards consider a grease interceptor to be full and ready for pumping when the non-water contents (FOG, food matter, etc.) and of the interceptor reach 25% of the total interceptor capacity, or as defined by manufacturer specifications. This may vary in some cases.

All interceptor entries are Confined Space Entry. Refer to CAL-OSHA requirements.

Report all conditions such as surcharge, straws, napkins, towels, plastic or excess food matter found in the interceptor on the checklist left at the establishment.

Report any manhole frames not tightly fastened to the interceptor on the checklist left at the establishment.
GREASE TRAPS

REQUIREMENTS

Remove all material inside the grease trap. Skimming is strictly prohibited, unless specifically required by the FEWD Permit Program in writing.

Remove the baffle and rinse to remove any solids from the baffle and trap.

Re-install the baffle with the vertical wall at the inlet side.

Inspect the internal vent for any plugging and remove any obstruction.

FEWD Permit Program Standards consider grease traps to be full and ready for cleaning with the following grease and/or oil layer:

- 20 GPM/40LBS – 2” to 2 ⅛”
- 25 GPM/50LBS – 2” to 2 ⅜”
- 35 GPM/70LBS – 2 ⅜” to 3”
- 50 GPM/100LBS – 3” to 3 ⅜”

The above numbers do not take into account food or other matter.

Inspect the grease traps' integrity; report any leaking, overflowing or lack of an internal baffle on the checklist left at the establishment.

Report any excess FOG, food matter, straws, or foreign matter found in the grease trap on the checklist left at the establishment.
Padre Dam Municipal Water District
Santee Lakes Recreation Preserve
Rules and Regulations
January 16, 2019
# SECTION 1  PURPOSE AND ENFORCEMENT OF RULES AND REGULATIONS

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SECTION 1   PURPOSE AND ENFORCEMENT OF RULES AND REGULATIONS
   Introduction and Purpose; Restrictions, Wrongful Acts, and Enforcement; and
   Description of Terms

1.1 INTRODUCTION

The District is governed, pursuant to the Municipal Water District Law of 1911 (California Water Code, Section 71000 et seq.) as a result of an election held on November 8, 1955. Padre Dam provides water, recycled water, sewer, and recreational services. Water service is provided to the City of Santee, portions of El Cajon, and the eastern unincorporated areas of Lakeside, Flinn Springs, Harbison Canyon, Blossom Valley, Alpine, Dehesa, and Crest. Sewer service is provided to the City of Santee, portions of El Cajon, and unincorporated areas of the County of San Diego.

The District is a public agency governed by a five-member Board of Directors, each representing a geographic area within the District (called Divisions). Directors are elected by the voters within their respective divisions to serve staggered, four-year terms. Regular Board meetings are held on the first and third Wednesday of each month at 3:30 pm in the Board Room at the District’s Customer Service Center. All meetings are open to the public.

1.2 PURPOSE OF DISTRICT RULES AND REGULATIONS

The purpose of these Rules and Regulations is to set forth the terms and conditions under which Padre Dam Municipal Water District provides potable and recycled water and sewer services to its customers.

These Rules and Regulations are to regulate the affairs of the District so as to provide safe and reliable services to customers at the lowest possible cost, and to ensure that such costs are equitably distributed among those benefitted.

The Board of Directors shall have the right to interpret these Rules and Regulations, and to rule on any point of contention which is not specifically covered herein.

These Rules and Regulations, shall be maintained on file at the District’s Customer Service Center, and copies shall be available to the public upon request.

1.3 AMENDMENTS TO RULES AND REGULATIONS

The Board of Directors may amend the Rules and Regulations by adopting an ordinance.

1.4 RESTRICTIONS, WRONGFUL ACTS, AND ENFORCEMENT

The District is authorized under California statutes to establish and enforce its Rules and Regulations, and to enforce certain laws and restrictions referenced herein.

Civil Code Sections 1882-1882.6 permits the District to file a civil action for damages for the unauthorized
taking of District water, illegal or unauthorized connections to any facilities owned or used by the District, or interference with District property or facilities; and permits the recovery of three times the amount of actual damage, plus the costs of suit and reasonable attorney's fees.

Any violation of these Rules and Regulations shall be cause for the Board of Directors to apply such penalties as may be provided by law, or to take any other action as deemed appropriate, including the discontinuance of potable water, recycled water, sewer, or recreational service.

1.4.1 **Wrongful Acts Subject to Penalties**

The following acts are considered violations of State law, and are subject to penalties imposed by the District. Many offenses are misdemeanors under the laws of California for which the offender may be criminally prosecuted.

No person shall:

a) Divert or cause to be diverted any District water or sewage flow without authorization or consent of the District;

b) Make or cause to be made any connection or re-connection to facilities owned or used by the District, in order to obtain water, sewer, or recycled water service without authorization or consent of the District;

c) Prevent any meter or other device used in determining the charge for service from accurately performing its measuring functions by tampering or any other means;

d) Tamper with any property or facilities owned or used by the District to provide potable or recycled water service, or sewer service;

e) Use or receive direct benefit from the District's facilities with knowledge or reason to believe that the diversion of water, or the tampering or unauthorized connection with District water or sewer facilities existed at the time of such use, or that the use or receipt of benefit was without authorization or consent of the District; or

f) Cause damage to any water, sewer, or recycled water facility or related appurtenances above or below ground intentionally, or by carelessness or neglect.

g) Take water from any District Facility or District authorized metering device without District permission.

1.4.2 **Damages and Penalties**

1.4.2.1 **Theft of Water**

(a) Water theft is prohibited. Each act of water theft constitutes a misdemeanor.

(b) The taking of water from any fire hydrant, blow-off valve, or other District Facility or connection to a District facility, to which a District authorized metering device has not been installed by the District is considered water theft. Water theft is the taking of water by any means without paying
the District charges or by tampering with District property.

(c) The District will report any theft of water to the appropriate prosecuting agency and press for prosecution of said activity pursuant to the Penal Code.

(d) In addition to pursuing criminal penalties, the District, upon discovering a theft of water or tampering with District property, may also pursue the following remedies or other remedies available at law or equity:

1) Turn off water service to correct the violation;
2) Confiscate any equipment or tools used to accomplish the water theft that are attached to District property. Said equipment shall be held by the District until fines and other charges are paid;
3) Charge the customer or perpetrator a civil fine of $1,000 for each occurrence, which amount is a reasonable estimation of the damages that the District suffers for an act of water theft.

(e) Payment shall be received by the District prior to water service being restored.

1.4.2.2 General Damages and Appeal Process

Except as otherwise specified by statute, any person who commits any of the wrongful acts (the offender) may be charged three times the amount of actual damages sustained by the District and be subject to penalty or penalties. District staff shall calculate the amount of damages and/or penalty or penalties to be imposed on the offender, and shall send a bill to the offender for payment of the damages and/or penalty or penalties. The calculation of the amount of the damages and/or penalty or penalties may be appealed by the offender to the District.

Any offender desiring to contest the validity or accuracy of the calculation of the damages and/or penalty or penalties shall submit a written appeal to the District’s Board of Directors Secretary, within 14 days of the mailing date of the bill. The written request shall state the reasons for contesting the validity of the damages and/or penalty or penalties in question and shall include any documents or other evidence that the offender wishes to be considered in his or her appeal.

Upon receiving a timely appeal, a hearing date will be established by the Board Secretary. A notice of the hearing shall be mailed to the offender at least 10 calendar days before the date established for the hearing. The hearing shall be conducted by the CEO/General Manager or his or her authorized designee. If the customer is not able to appear at the appointed day and time of the hearing, the CEO/General Manager or his or her authorized designee may make a decision based on all available information, and no other customer hearing will be scheduled. The decision of the CEO/General Manager or his or her authorized designee shall be final and no further appeals on the disputed damages and/or penalty or penalties may be made by the offender to the District. Notice of the determination by the CEO/General Manager or his or her authorized designee shall be mailed to the customer within 10 calendar days of such determination and shall indicate whether the appeal has been denied or granted in whole or in part and set forth the terms and conditions for the decision, if any.

The provisions of Section 1094.6 of the Code of Civil Procedure of the State of California shall be applicable to judicial review of the decision of the CEO/General Manager’s or his or her designee.
1.4.3 Unauthorized Use of a Locked Meter

In the event a customer or any other person takes water from a locked meter without permission or tampers with any lock, the District may:

1) Turn off the water service.
2) Charge the customer three times the value of the water taken from the locked meter.
3) Charge the customer for the damage to a District lock or clip. Refer to Fees and Charges for current charges.

An investigation shall be conducted within 48 hours after discovery of water taken from a locked meter, to verify that the meter remains locked. In the event a meter shows usage on the second investigation, the meter shall be removed and the curb stop locked. The customer shall be charged three times the value of the water taken from the locked meter.

Before the meter will be replaced and service reestablished, the customer shall deposit twice the average monthly water bill, plus the standard meter reinstallation fee, in addition to a service call charge and an amount representing any damage to District property.

All charges relating to termination of service shall be borne by the party having responsibility for the water account. Charges related to the reestablishment of the service shall be borne by the party requesting service.

1.4.4 Service for Individual Property Ownership

No customer may use water upon any tract of land not included in his or her application for service. Each individual property ownership must be served by a separate meter unless otherwise approved by the District.

Delivery of water by one property owner to another property shall terminate the right to water service and service may be discontinued after 10 day’s advance notification of such violation, until the violation is corrected.

1.4.5 Unauthorized Regulation of Water or Sewage Flow

No person except authorized employees of the District will be permitted to turn on or turn off water at any connection, or to open or close any gate valve or other device for regulating the flow or measurement of water, sewage, or recycled water.

1.4.6 Resale of Water or Sewer Service; Meters and Submeters for Multi-Unit Structures

No retail customer shall enter into any contract or agreement to resell any portion of the water or sewer service to which he or she is entitled without the specific authorization of the Board.

Notwithstanding the above, as a condition of new water service, each newly constructed multiunit residential structure or newly constructed mixed-use residential and commercial structure for which an application for one or more water service connections is submitted after January 1, 2018, shall measure the quantity of water supplied to each individual residential dwelling unit, unless exempt under applicable
law. The owner of the structure shall install individual meters or submeters that comply with all laws and regulations governing the approval of meter types or the installation, maintenance, reading, billing, and testing of meters, including, but not limited to, the California Plumbing Code and California Water Code.

If the owner of a mobile home park, trailer park, apartment building, or other multi-unit structure or development installs a separate meter or submeter for each unit, the owner may sell water purchased from the District to occupants of each such unit, under the following conditions:

   a) The rate charged shall not exceed an equal proration of the District’s commodity rate, pumping energy, and system charges during the same period, or such other amount allowed to be charged under Civil Code Section 1954.201 et seq.;

   b) Except as otherwise provided by law or District policy, the owner shall read all submeters;

   c) The property owner shall comply with all state, federal, and local provisions of law applicable to the sale, distribution, and use of water.

1.4.7   Liability for Maintenance or Damages (private property)

The District assumes no responsibility for the delivery of water or disposal of sewage through private pipelines, or for any damage resulting from operation of such pipelines. The property owner is solely responsible for maintenance and repair of water and sewer lateral pipelines connecting to the District’s system.

The connection between the water main and the water meter box, including the water meter, are owned and maintained by the District.

For regulations on repairs to the lateral, see Rules and Regulations Sections 4.1.4.7.1   Service Interruption

The District shall make every reasonable effort to notify customers in advance of any interruption of the water supply, or sewage collection, except in emergency circumstances. However, the District disclaims any liability for damages sustained to customer-owned water or sewer facilities such as booster pumps, water heaters, or solar equipment. The District also disclaims responsibility for damages to privately owned plumbing and other fixtures that may result from an emergency interruption of water supply, change in water pressure, or sewage collection.

1.4.7.2   Steam Boilers and Hot Water Tanks

The District disclaims liability for safety of steam boilers or hot water tanks on the premises of any customer. All hot water equipment shall be installed in conformity with the applicable plumbing code. When water is used to supply a steam boiler, its owner must supply a tank of sufficient capacity into which the service pipe will discharge a water supply for at least 12 hours.
1.4.8 **Right of Inspection and Access**

Employees and agents of the District shall have unrestricted access to all premises during reasonable hours to inspect facilities for the purpose of protection of the District, its customers, inspection of grease traps and grease interceptors, inspection of backflow devices, public health, and to enforce the provisions of these Rules and Regulations, as necessary. Access shall not be blocked for any reason, including, but not limited to: construction, landscaping, storage, or any other permanent alteration to the property.

1.4.9 **Public Access to Customer Records Restricted**

The names and addresses, and any other data collected by the District regarding customers or property owners within the District, including computerized geographical information and project development files, shall not be available to the public except to the extent required by law.

1.5 **REFERENCES TO CALIFORNIA CODE SECTIONS**

**Section 1**

1.4 (Enforcement) Civil Code Sections 1882 - 1882.6
1.4.1 (Protection) Penal Code Section 498 - Stealing Water; taking water without authority or by making unauthorized connections.
1.4.1 (Protection) Penal Code Section 625 - Taking water after works have closed or meter is sealed.
1.4.1 (Protection) Penal Code Section 592 - Interfering with or damaging pipelines or conduits.
1.4.1 (Protection) Penal Code Section 607 - Damaging tanks, flumes, reservoirs or other water storage and transmission facilities.
1.4.1 (Protection) Penal Code Section 624 - Breaking, digging, obstruction or injuring water pipes and related appurtenances.
1.4.1 (Protection) Health and Safety Code Section 117000 - Bathing or swimming in reservoirs, lakes, etc.
1.4.1 (Protection) Penal Code Section 374.2 - Malicious discharge, dumping, depositing substance capable of causing substantial damage or harm in public sewer facilities.
1.4.2.1 (Damages) Civil Code 1671; Penal Code 498; Water Code 71601
1.4.2.2 (Damages) Civil Procedure Code Section 1094.6
1.4.3 (Enforcement) Water Code 71601; Civil Code 1882.1
1.4.4 (Enforcement) Water Code 71601

**Section 2**

Open - Unused

**Section 3**

3.2.3 (Security) California Code of Civil Procedure Section 995.660(a)

**Section 4**

4.1.3 (Water Availability) 42 U.S.C. 1437f; Government Code Sections 65589.7, 66473.7; Health & Safety Code Sections 50052.5, 50053
4.4.4 (CWA Fees) California County Water Authority Act, Chapter 45,
Section 5

5.1.4 (Conservation) Water Code Section 375 et seq.
5.1.5 (Conserv. Proc.) Water Code Section 350
5.1.5.3 (Conserv. Enf.) Water Code Section 372
5.1.6 (Conserv. Proc.) Water Code Section 350
5.1.7.2 (Conserv. Proc.) Water Code Section 350
5.1.7.3 (New Connections) Water Code Section 356
5.1.8.1 (Conserv. Proc.) Water Code Section 350
5.1.8.3 (Conserv. Enf.) Water Code Section 372
5.1.11 (Enforcement) Water Code Section 377
5.4.2 (Cross-Connections) 17 California Code of Regulations Sections 7583-7605
5.4.3 (Survey & Inspection) 17 California Code of Regulations Section 7584(b)
5.4.4 (Backflow Prevention) 17 California Code of Regulations Section 7584(c)
5.4.5 (Backflow Testing) 17 California Code of Regulations Section 7584(e)

Section 6

6.5.2 (Standards) Environmental Protection Agency under Title 40, CFR, Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act"
6.6.3.5 (Discharges) 40 Code of Federal Regulations Section 403.5

Section 7

7.2 (Policy) Refer to this section for all codes

Section 8

8.4.6 (Liens) California Water Code Sections 72100 and 72102
8.4.8 (Bankruptcy) Federal Bankruptcy Act (P.L. 95-598)

Section 9

9.2.1 (Authority) California Water Code Section 71660
9.2.2 (Enforcement) California Water Code Section 71660
1.6 DEFINITIONS OF GENERAL TERMS

The following definitions include general terms used throughout these Rules and Regulations. Other specialized terms are defined within the sections in which they appear.

"Apartment" - A service classification for a multiple-dwelling housing structure having more than one residential unit under a single ownership.

"Applicant" - Any person, business firm, corporation, or governmental agency that applies for water, sewer, or recycled water service.

"Billing Period" - Each "billing period" consists of a consumption period, billing preparation period, and a billing date. The consumption periods are generally 30 days. The billing period will generally begin and end on the same day of the month, but may vary due to weekends and holidays.

“Biochemical oxygen demand (BOD)” - The rate at which microorganisms use the oxygen in water or wastewater while stabilizing decomposable organic matter under aerobic conditions. In decomposition, organic matter serves as food for bacteria and energy results from its oxidation. BOD measurements are used as a measure of the organic strength of wastes in water.

"Blow-Off Assembly" - A device installed on a water main in order to allow the controlled release of water, usually located at a low elevation point or at the end of a pipeline.

"Board" - The "Board" refers to the elected Board of Directors, which is the governing board of Padre Dam Municipal Water District.

"Capacity Fees" - Amounts charged for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged. Amounts charged for public facilities in existence are based on the depreciated value of the existing capital facilities. Such fees are described as charges for water storage, distribution, transmission, and pumping capacity, and charges for sewer collector, plant, trunk, and metro capacity.

"Capital Expansion Fund" - A fund used by the District for the expansion of major facilities of the water system (storage, pumping, transmission and distribution facilities) and the sewer system (collection, truck, pumping, treatment, and discharge facilities.) These funds are generally made up from capacity fees.

"Collection Lines (Collector)" - The District’s sewer collection pipelines, up to and including those measuring eight inches in diameter, to which the sewer service laterals are connected.

"Commercial Service" - A non-residential service classification for customers conducting a retail or wholesale business or offering some type of service to the public.

"Condominium / Townhome" - A residential service classification for an individually-owned unit in a building of multiple dwellings, or on land owned in common.

“Connection Fee” - See Installation Fee.
"Cross-Connection" - Any unprotected physical connection or arrangement of pipes or fixtures between the District's potable water system and any other potential water contamination (such as wastewater, recycled water, industrial processing, etc.).

"Customer" - Any person, firm, association, corporation, or governmental agency supplied with water, sewer, recycled water, or recreational service by the District.

“Customer Accounts Officer” – The General Manager or any designated person representing the District in the customer appeals process.

"Developer" - Any person, firm, association, corporation, or governmental agency required by the District to install a capital improvement addition to the water system, the sewage collection system, or the recycled water system.

"Distribution Main" - A water distribution pipeline measuring up to and including 10 inches in diameter, which is used to distribute water to customers, and to which water service assembly is connected.

"District" - Padre Dam Municipal Water District or its General Manager or his/her designee.

"Domestic Service" - Water or sewer service provided to single-family dwellings, apartments, condominiums, commercial businesses that furnish lodging by the operation and maintenance of motels, mobile home parks, or by rental of any property for lodging purposes. Domestic service also refers to any residential service for which no other classification is specified.

"Equivalent Dwelling Unit (EDU)" - A measurement of water usage or sewage disposal equal to that required to serve an average urban single-family dwelling with a lot size of less than one half acre.

"General Manager" - References to the General Manager of the District shall also refer to any designated representative to whom authority has been delegated by the General Manager.

"Improvement District" - An area within the District's general boundary, established as a political division or for special accounting purposes.

"Inclining Block Rates" - A water rate structure established to encourage water conservation by charging a higher commodity rate for greater than average consumption, calculated on the basis of water use allowances for specific service classifications.

"Industrial Service" - A non-residential service classification usually designated for a manufacturing or processing business.

"Installation Fees" - Fees charged for the physical facilities necessary to make a water connection or sewer connection, including, but not limited to, meters, meter boxes, and pipelines from the property to a water distribution line or sewer main, and does not exceed the estimated reasonable cost of labor, materials, and equipment for installation of those facilities.

"Irrigation Service" - A water service classification designated to supply water for outdoor landscape areas.
“**Lateral**” - A pipeline extending between the customer’s service connection located at the property line, road right-of-way, or boundary of the District's easement, and the District's water main or sewer collection line.

“**Meter**” - Any device used for the purpose of measuring quantities of water or sewage flow.

“**Metro**” – Metro is the City of San Diego Metropolitan Wastewater System. The District has purchased capacity within the Metro system for purposes of transportation and treatment of wastewater generated within the District.

“**Mobile Home Park**” - A residential service classification for a designated community of manufactured homes zoned for such use.

“**Motel**” - A residential service classification for a multiple-unit complex consisting of rooms rented to the public for overnight use by the day, week, or month.

“**Multiple-Family**” - Dwellings consisting of more than one residential unit, such as apartments, townhomes, and condominiums.

“**Notice of Completion**” - A document used by the District to indicate that a capital improvement project has met all construction, easement, and record drawing requirements sufficiently to be accepted by the District as part of its water, sewer, or recycled water infrastructure.

“**Nursing Home**” - A residential service classification for businesses licensed to provide professional nursing care for persons who are unable to care for themselves.

“**Person**” - Any individual, partnership, entity, firm, association, corporation, or public agency, including the State of California and the United States of America.

“**Plant**” - A facility provided directly by, or contracted with the District to process raw sewage and produce effluent acceptable by regulatory agencies for discharge. Also see "Water Reclamation Facility."

“**Potable Water**” - Water that has been sufficiently treated to meet drinking water standards contained in Title 17 of the California Code of Regulations and the California Safe Drinking Water Act.

“**Private Plumbing**” - The customer's water pipe system extending from the discharge side of the water meter, and/or sewer pipeline extending from the road right-of-way or the boundary of the District's easement, to the point of consumers use.

“**Pump Station**” - An installation of pumps, valves, electrical equipment, and related appurtenances necessary to lift water or sewage to a higher elevation.

“**Recycled Water**” - Water or wastewater that has been sufficiently treated to meet California Code of Regulations, Title 22, Div 4, Chapter 3 "Water Reclamation Criteria" regulations for irrigation, industrial, and body contact water sport uses, but not suited for drinking.

“**Reduced Pressure (RP) Backflow Prevention Device**” - An apparatus that prevents the flow of potentially contaminated water into either the potable or recycled water system. Such devices must be designed with at least two check valves allowing flow in one direction only, equipped with an automatic differential
relief valve located between the check valves, shut-off valves on each side of the check valve assemblies, and a test valve.

"Rest Home" - A residential service classification for a business licensed for the care of individuals.

"Return to Sewer" Percentage (RTS) - An estimated percentage of wastewater that is returned to the sewer system for all types of service classifications, except single family residential accounts. These percentages are estimated by the District and are for billing purposes only.

"Rooming House" - A residential service classification for a single-family dwelling in which rooms are rented and occupied as living quarters.

"RV Park" - A residential service classification for a park having rental spaces for overnight occupancy by recreational vehicles, usually by the day, week, or month.

"Service Area" – An area within the District’s general boundary established as a geographical location identifier.

"Service Assembly" - The pipe and fittings located between the District's water pipeline and the water meter. Also referred to as a lateral.

"Service Classifications" - Categories of property served by the District, as specified on the basis of the land use designation or purpose.

"Single-Family Dwelling" - A residential service classification for homes built for occupancy by not more than one family or a congregate residence for 10 or less persons.


"Standby Charge" - A fee levied by the San Diego County Water Authority and/or the Southern California Metropolitan Water District which is included on a tax bill, paid by the owner to guarantee access to a water supply.

"Storage Facility" - A steel tank or concrete structure used for storage of a reserve water supply to meet system demands for residential, commercial, industrial uses, and fire flow for a specified period of time.

"Suspended Solids" - Any insoluble material contained as a component of wastewater, and capable of separation from the liquid portion of said wastewater by laboratory filtration, as determined by the appropriate testing procedure and Standard Methods for the Examination of Water and Wastewater.

"System Charge" - An amount paid by the customer for the active water service account to use the District’s water system.

"Townhome" - See "Condominium / Townhome".

"Transmission Main" - A water pipeline measuring 12 inches or greater in diameter, which transports large quantities of water within the water system, and to which a water service assembly may be connected.
"Trunk Line" - The District's sewer pipelines measuring 10 inches or greater in diameter to which sewer laterals may be connected. Pump stations and force mains are considered to be part of the sewer trunk line system.

"Water" - For purposes of these Rules and Regulations, the term "water" can be generally understood to mean either potable water or recycled water.

"Water Recycling Facility" - A wastewater treatment plant that processes raw sewage and produces effluent acceptable for reuse in recreational lakes, a live stream, or a recycled water supply.
List of Ordinance Amending Rules and Regulations:

Ord. 98-03, adopted 4/28/98

Ord. 2001-18, adopted 11/27/01, effective January 2002, Section 1.6

Ord. 2012-04, adopted 7/18/12, effective 7/19/12, rewrite of Rules & Regs Sections 1, 2, and 4-9.

Ord. 2013-05, adopted 12/4/13, effective 1/1/14, Annual Policy Review

Ord. 2014-04 adopted 11/19/04, effective 1/1/15, Annual Policy Review

Ord 2017-01 adopted 2/1/17, effective immediately, Annual Policy Review

Ord 2019-01 adopted 01/16/19, effective immediately, amending Section 1.4.6 re: individual metering/submetering to comply with SB 7; Section 1.4.7, Liability for Maintenance or Damages (private property) – Revised to resolve conflict with Section 4.11.6 and 4.11.7
## SECTION 6  SEWER COLLECTION SYSTEM

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Section 6  **SEWER COLLECTION SYSTEM**  
Regulation of Wastewater Discharge and Facilities

6.1  **GENERAL PROVISIONS**

6.1.1  **Administration**

The District constructs, owns and operates sewer and wastewater facilities to serve domestic, industrial, and commercial customers. The following provisions apply to wastewater discharges within the District's boundaries, and to other discharges from tributaries to the District's wastewater facilities.

The District shall administer, implement, and enforce these provisions and all applicable regulations. The District shall establish procedures necessary for the administration of these regulations, and may modify such procedures as conditions require and may be amended only by ordinance of the Board of Directors of the District.

6.1.2  **Penalties for Violations**

The District shall enforce these regulations in accordance with the following provisions:

6.1.2.1  **Public Nuisance**

Discharge of wastewater in any manner that is in violation of these regulations, or any order issued by the District as authorized herein, is hereby declared a public nuisance and shall be corrected or abated as directed by the District. Any person creating such a public nuisance is guilty of a misdemeanor and may be referred for criminal prosecution.

6.1.2.2  **Injunction**

Whenever a discharge of wastewater is found to be in violation of these provisions, or otherwise causes or threatens to cause a condition of contamination, pollution, or nuisance, the District may petition the Superior Court for the issuance of a temporary restraining order, preliminary injunction, permanent injunction, or all, as may be appropriate to restrain such discharge.

6.1.2.3  **Falsifying Information**

The District shall consider it a violation of these regulations for any person to knowingly falsify any statement, representation, record, report, plan, or other document filed with the District; or to tamper with or knowingly render inaccurate any monitoring device or method required under these regulations. Such person shall be subject to penalties for violation of these regulations.

6.1.2.4  **Termination of Sewer Service**

In addition to other statutes or rules authorizing termination of service for delinquency in payment for sewer service, the District may revoke any Industrial Wastewater Discharge Permit issued pursuant to
these regulations. The District may also terminate the sewer service to any property, if a violation of any provision of this section is found to exist, or if any wastewater discharge into the District’s sewer system causes or threatens to cause a condition of contamination, pollution, or nuisance.

When deemed necessary for the preservation of public health or safety, or for the protection of public or private property, the District may suspend or terminate sewer service to any person using the sewer system in a manner endangering the public health or safety, or public or private property. If such endangerment shall be imminent, the District may act immediately to suspend sewer service without notice or warning to said discharger. In terminating service, the District may sever all pertinent connections to the public sewer.

6.1.2.5 Penalties

a) The District may, at its sole discretion, direct its General Counsel to seek, in San Diego County Superior Court, civil penalties against any person who violates any provision of these regulations regarding use of the sewer system, or conditions of their Industrial or Food Establishment Wastewater Discharge Permit; or who discharges wastewater that causes pollution; or who violates any cease-and-desist order, prohibition, effluent limitation, or national pretreatment standard for wastewater discharge.

b) The District may, at its sole discretion, direct its General Counsel to seek criminal penalties for any intentional violation of any provision of these regulations regarding use of the sewer system, or conditions of their Industrial or Food Establishment Wastewater Discharge Permit, or who discharges wastewater that causes pollution; or who violates any cease-and-desist order, prohibition, effluent limitation, or national pretreatment standard for wastewater discharge.

6.1.2.6 Cost Recovery

A person violating any of these provisions, or who discharges wastewater that causes a deposit, obstruction, damage, or any other impairment to the District’s sewer system shall become liable for all expense, loss, or damage sustained by the District by reason of such violation or discharge.

Any person violating these provisions, or who discharges wastewater though a privately owned sewer lateral (PLSD), will be responsible for the clean-up and remediation of the discharge and affected areas. If the discharger is non-responsive or uncooperative, the District may clean-up and remediate the wastewater discharge. The party responsible for the violation will be charged for the actual labor, materials and equipment used.

In addition to such penalties, the District may recover reasonable attorneys’ fees, court costs, court reporters’ fees and other expenses of litigation by means of an appropriate lawsuit or other remedy against the person or discharger found to have violated these regulations or any Industrial or Food Establishment Wastewater Discharge Permit issued.
6.1.3 **Notice and Appeal Procedure**

Any notice required to be given by the District under these regulations regarding wastewater discharge shall be in writing, and shall be served in person or by registered or certified mail. If served by mail, the notice shall be sent to the last address known to the District. Where the address is unknown, service may be made upon the owner of record of the property involved.

Notice shall be deemed to have been given at the time of deposit, postage prepaid, in a receptacle regularly serviced by the United States Postal Service.

Any person found to be violating any provision of these rules and regulations shall be served by the District with written notice stating the nature of the violation. Within 30 days after the date of the notice, unless the General Manager determines that a shorter time is necessary due to the nature of the violation, correction of a violation or a plan for the satisfactory correction thereof shall be submitted to the District.

If the violation is not corrected, or a satisfactory correction plan is not submitted within the specified time, the District may order such person to show cause for enforcement action not to be taken. The District may propose any enforcement action reasonably necessary to abate the violation.

6.1.4 **Time Limits**

Any time limit provided in any written notice or in any provision of these regulations may be extended only by a written directive of the District.

6.1.5 **District's Right of Inspection**

Adequate identification shall be provided by the District for its inspectors and other authorized personnel, who shall identify themselves upon entering any property for inspection purposes.

The District, at its discretion, shall be permitted to inspect the premises of any facility involved directly or indirectly with the discharge of wastewater into the sewer system, and shall take samples of any such wastewater discharge, for the purpose of ensuring that such facilities are maintained and operated properly and are adequate to comply with the provisions of these regulations. Access to such facilities shall be given to authorized personnel of the District at all reasonable times, including those occasioned by emergency conditions.

These facilities shall include but not be limited to sewer pipelines, wastewater pumping stations, pollution control plants, industrial processing activities, food establishments, and other operations discharging grease, oil, or other constituents at levels that may cause sewer blockages, any facilities that generate, convey, and pretreat industrial wastewater, and all similar wastewater facilities.

The owner or operator of a wastewater facility to be inspected shall promptly remove any permanent or temporary obstruction to ready access, at the written or verbal request of the District, and such obstruction shall not be replaced.

The District shall have the right to inspect and copy pertinent records of an industrial wastewater discharger relating to wastewater discharge or pretreatment operations, including inventories, chemical
usage, material sources, hazardous materials manifests and disposal records, treatment and operations log books, and materials invoices.

6.2 SYSTEM REGULATIONS

6.2.1 Purpose of Regulating Use of Sewer Service System

The purpose of this section is to provide:

a) The maximum public benefit from the District's sewer collection system through adequate regulation of its use and the discharge of wastewater into the system,

b) Equitable distribution of the District's costs among the users, and

c) Procedures for complying with wastewater discharge requirements placed upon the District by other regulatory bodies.

6.1.2 Scope of Sewer Collection System Regulations

This section shall be interpreted in accordance with the definitions set forth herein, and its provisions shall apply to the direct or indirect discharge of all waste into the District's sewer system.

This section also provides for regulation of:

a) The quantity and quality of discharged wastes,

b) The degree of any waste pretreatment required,

c) The approval of plans for sewer facility construction,

d) The issuance of permits for industrial wastewater discharge and food establishment wastewater discharge, and the fixing of fees and charges for such permits, and

e) The establishment of penalties for violation of these rules and regulations.

6.2.3 Conditions for Wastewater Disposal

Wastewater discharged to the District Sewer shall not:

a) Damage structures,

b) Create nuisances such as odors,

c) Menace public health,
6.2.4 Wastewater Recycling and Reuse

The District is committed to a policy of wastewater recycling and reuse, in order to provide an alternate source of water supply, and reduce overall costs of wastewater treatment and disposal. The recycling of wastewater through secondary and tertiary treatment processes may necessitate more stringent quality requirements for wastewater dischargers than those required by agencies which regulate the District.

6.2.5 Industrial Wastewater Discharge

The District must comply with stated policies of the Federal government and meet increasingly higher standards for recycled water quality. Accordingly, this section provides for the regulation of industrial wastewater dischargers, and establishes quantity and quality limitations on industrial wastewater discharges. The District also establishes methods of cost recovery from processing any wastewater discharges that impose inequitable collection, treatment, or disposal costs on the District.

The District encourages industrial wastewater dischargers to establish recovery and reuse procedures designed to meet their specific discharge limitations, rather than rely upon general procedures designed solely to meet wastewater discharge standards. Such methods shall provide for beneficial reuse of otherwise wasted resources of industrial wastewater treatment wherever feasible.

Optimum use of the District’s wastewater facilities may require certain industrial wastewater to be discharged during periods of low flow in the sewer system. Periods of low flow are defined as the hours between 10 pm and 6 am. Periods of high flow are defined as the hours between 8 am and 8 pm.

6.3 DEFINITIONS OF WASTEWATER TERMS


B. Other terms not herein defined are defined as being the same as set forth in the latest adopted applicable editions of the California Codes applicable to building construction adopted pursuant to
the California Building Standards Law or as set forth in the Federal Water Pollution Control Act, the Porter-Cologne Water Quality Control Act, or any order issued pursuant thereto, if so defined.

C. Subject to the foregoing provisions, the meaning of various terms as used in this section shall be as follows:

**“Best Management Practices (BMPs)”** – Any program, process, operating method, schedule of activities, prohibitions of practices or measure that controls, prevents, removes, or reduces an unwanted waste stream.

**“BOD”** - Biochemical Oxygen Demand as determined by procedures in Standard Methods.

**“Change in Operations”** - Any change in the ownership, food types, or operational procedures that have the potential to increase the amount of FOG generated and/or discharged by Food Service Establishments in an amount that alone or collectively causes or creates a potential for SSOs to occur.

**“COD”** - Chemical Oxygen Demand as determined by procedures in Standard Methods.

"**Discharger**" - Any person who discharges or causes a discharge of wastewater directly or indirectly to a public sewer. Responsible party.

**“District”** – Padre Dam Municipal Water District

**“District Sewer”** - A sewer system owned and operated by the District.

**“Domestic Wastewater”** - The liquid and water-borne wastes derived from humans in dwelling units, said wastes being of such character as to permit satisfactory disposal into a public sewer or private disposal system without special treatment.

**“Effluent”** - Customer’s sewage flow or wastewater discharge into District’s sewer collection system, or discharge of treated wastewater from District’s Recycled Water Facility.

**“Existing source”** - A wastewater discharger in existence on the effective date of the ordinance establishing this section of these Rules and Regulations.

**“FOG”** – Fats, Oils and Greases. Any substance such as a vegetable or animal product that is used in, or is a byproduct of, the cooking or food preparation process, and that turns or may turn viscous or solidifies with a change in temperature or other conditions.

**“FOG Control Program Manager”** - The individual designated by the District to administer the FOG Control Program. The FOG Control Program Manager is responsible for all determinations of compliance with the program, including approval of discretionary variances and waivers.

**“Food Establishment”** – Food facilities defined in California Retail Food Code (commencing with Health and Safety Code section 113700), and any commercial entity within the boundaries of the District, operating in a permanently constructed structure such as a room, building, or place, or portion thereof, maintained, used, or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for sale to other entities, or for consumption by the public, its members or
employees, and which has any process or device that uses or produces FOG, or grease vapors, steam, fumes, smoke or odors that are required to be removed by a Type I or Type II hood, as defined in the California Retail Food Code. A limited food preparation establishment is not considered a Food Service Establishment when engaged only in reheating, hot holding or assembly of ready to eat food products and as a result, there is no wastewater discharge containing a significant amount of FOG. A limited food preparation establishment does not include any operation that changes the form, flavor, or consistency of food.

“Food Establishment Wastewater Discharge (FEWD) Permit” - A permit issued by the District subject to the requirements and conditions established by the District authorizing the permittee or discharger to discharge wastewater into the District’s facilities or into sewer facilities which ultimately discharge into a District facility.

“Garbage/Food Grinder” - Any device installed in the plumbing or sewage system for the purpose of grinding food waste or food preparation by products for the purpose of disposing it in the sewer system.

“Grease Interceptor” – A multi-compartment device that is constructed in different sizes and is generally required to be located, according to the California Plumbing Code, underground between a Food Service Establishment and the connection to the sewer system. These devices primarily use gravity to separate FOG from the wastewater as it moves from one compartment to the next. These devices must be cleaned, maintained, and have the FOG removed and disposed of in a proper manner on regular intervals to be effective.

“Grease Trap” – A grease control device that is used to serve individual fixtures and have limited effect and should only be used in those cases where the use of a grease interceptor or other grease control device is determined to be impossible or impracticable.

"Grease Removal/Control Device" or “GRD”. - Any grease interceptor, grease trap or other mechanism, device, or process, which attaches to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap or collect or treat FOG prior to it being discharged into the sewer system. “Grease Removal/Control Device” may also include any other proven method to reduce FOG subject to the approval of the District.

"Industrial Discharger” - An industry that discharges wastewater that can be classified in one of four categories according to the type and source of discharge.

"Industrial Wastewater" - All wastewater, excluding domestic wastewater, that results from any production, manufacturing, processing, institutional, commercial, service, agricultural, or other similar activities and operations including wastes of human origin similar to domestic wastewater originating in the facility.

“Industrial Wastewater Discharge Permit” – A permit issued to an industrial wastewater discharger pursuant to these regulations.

“Inspector” - A person authorized by the District to inspect any existing or proposed wastewater generation, conveyance, processing, and disposal facilities.
“Manifest” - That receipt which is retained by the generator of wastes for disposing recyclable wastes or liquid wastes as required by the District. A copy of all manifests must be kept onsite for a period of at least one year from the date on the manifest.

"Mass Emission Rate" - The weight of material discharged to a public sewer during a given time interval.

“NPDES” - The National Pollutant Discharge Elimination System established pursuant to Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq.

“Permittee” - A person who has received a FEWD or Industrial Wastewater Discharge Permit to discharge wastewater into the District's sewer facilities subject to the requirements and conditions established by the District.

“PLSD” – Private Lateral Sewer Discharge; a discharge of wastewater through a privately owned sewer lateral.

“Responsible Party” - business owner, property owner, property management, water and/or sewer account holder, waste discharger, or resident at a commercial or residential property.

“Sampling Vault” – The last point downstream on a grease trap or interceptor that is specially constructed to allow inspection and sampling of effluent prior to discharge.

"Self-Monitoring Program" - The procedure by which the industrial discharger measures, samples, analyzes, and reports the quantity and quality of wastewater discharge and its compliance or non-compliance with the FEWD and/or Industrial Wastewater Discharge Permit requirements.

"Sludge" - Precipitated solid matter separated from liquid wastewater during the sewage treatment process.

“SSO” – Sanitary Sewer Overflow

"Standard Methods" - The procedures for sampling and testing wastewater described in the current edition of Standard Methods for the Examination of Water and Wastewater, as published by the American Public Health Association, the American Water Works Association, and the Water Environment Federation.

"Suspended Solids" - Any insoluble material contained as a component of wastewater, and capable of separation from the liquid portion of said wastewater by laboratory filtration, as determined by the appropriate testing procedure or procedures in Standard Methods.

"Treatment Facilities" - Structures, equipment and related appurtenances actually used in the processing or recycling of wastewater.

“25 percent Rule” - Requirement for grease interceptors to be maintained such that the combined FOG and solids accumulation does not exceed 25 percent of the design hydraulic depth of the grease interceptor. This is to ensure that the minimum hydraulic retention time and required available hydraulic volume is maintained to effectively intercept and retain FOG discharged to the sewer system.
"**Waste**" - The content of wastewater and any and all other such materials, including liquid, solid, gaseous, or radioactive substances of human or animal origin or other source associated with human habitation; or useless byproducts resulting from any producing, manufacturing, or processing operation of any nature, including such substances placed within any containers prior to and for the purpose of disposal.

"**Wastewater**" - Waste and water, whether treated or untreated, discharged into or permitted to enter a public sewer.

"**Wastewater Characteristics**" - Measurements of wastewater constituents, and other properties including volume, flow rate, and other properties that define, classify, or measure the quantity and quality of wastewater.

"**Wastewater Constituents**" - The individual chemical, physical, bacteriological, microbiological, or radiological constituents of wastewater, and such other properties that define, classify, or measure the quality of wastewater.

"**Wastewater System or Facilities**" - Any and all structures, equipment and related appurtenances used for collecting, conveying, pumping, treating, and disposing of wastewater.

"**Weir**" - A device placed in the wastewater flow to divert and/or measure the flow rate.

Note: Commonly used symbols for chemical elements are used throughout this section.

### 6.4 INDUSTRIAL WASTEWATER

#### 6.4.1 Categories of Industrial Wastewater

**Category 1** - Industries that discharge wastewater generated from a process that is subject to EPA Categorical Standards.

**Category 2** - Industries engaged in activities resulting in the discharge of toxic wastewater or other wastewater that is not regulated by the EPA, including but not limited to the following activities:

- a) Treatment, storage, and disposal of hazardous wastes (TSDF's)
- b) Manufacturing of chemical or microbiological products
- c) Formulation of solvents, lubricants, paints, or inks
- d) Industrial laundries
- e) Processing of Ag or Ag/Cr based photo-sensitive materials
- f) Cleaning of boat hulls, large metal fabrications, or salvage
- g) Radiator repair, auto body sanding, or furniture stripping
h) Silk-screen, offset, or lithographic printing

i) Chemical laboratory work

j) Cleaning vehicle engines, chassis, or other parts

k) Cleaning parts in a non-automotive machine shop by solvent, hot caustic, jet washer, pressure spray, or steam cleaning

**Category 3** - Industries discharging non-toxic wastewater, including but not limited to industries:

a) Discharges common in household wastes

b) Laundering linens and non-industrial clothing

c) Vehicle exterior body washing

d) Food establishments and industries with a potential FOG discharge that do not otherwise fall within Category 1 or 2.

**Category 4** - Industries using chemicals that are not discharged with wastewater into the District's sewer system.

### 6.4.2 Industrial Wastewater Discharge Permits

Any person, commercial or industrial customer, municipality, sanitation district, or governmental agency proposing to discharge industrial wastewater into a District sewer shall obtain an Industrial Wastewater Discharge Permit from the District. Such industrial wastes shall include all wastewater regulated by Federal or State of California mandates, or local or District ordinances, or discharges which interfere with the operation and maintenance of the sewer system and wastewater treatment facilities. Industrial wastewater dischargers will be responsible for payment of all applicable fees prior to authorization of industrial wastewater discharge. Industrial Wastewater Discharge Permit fees may be the responsibility of any of the following associated with the discharge; Industrial wastewater discharger, property owner, property management company, tenant, or account holder.

The District has a cooperative agreement with the City of San Diego for administering Industrial Wastewater Discharge Permits. Industrial Wastewater Discharge Permit applications are processed by the City of San Diego and upon issuance are routed through the District to the Permittee. The City of San Diego also provides monitoring services to check for compliance with Industrial Wastewater Discharge permits.
6.4.2.1 Industrial Wastewater Discharge Permit Requirements

The Industrial Wastewater Discharge Permit for Industrial Wastewater Discharge may require:

a) Limitation of the volume discharged;
b) Restriction of peak flow discharges;
c) Pretreatment of industrial wastewater prior to discharge;
d) Discharge of certain wastewater only to specified sewers of the District;
e) Relocation of the point of discharge;
f) Prohibition of discharge of certain wastewater constituents;
g) Restriction of discharge to certain hours of the day;
h) Payment of additional charges to defray increased costs of the District created by the wastewater discharge; and
i) Such other conditions as may be required to achieve a reduction or elimination of industrial waste.

No person shall discharge industrial wastewater in excess of the quantity or quality limitations set by the Industrial Wastewater Discharge Permit for Industrial Wastewater Discharge. Anyone desiring to discharge wastes or use wastewater facilities that are not in conformance with terms of the Industrial Wastewater Discharge Permit must apply to the District for an amendment to the Industrial Wastewater Discharge Permit.

6.4.2.2 Discharge Standard Limitations

All industrial discharges into the District's sewer system shall comply, at a minimum, with the effluent discharge standards or limitations described in this Section. The District may require more stringent effluent discharge standards, or may apply special permit provisions, with concurrence of the Board of Directors.

6.4.2.3 Special Industrial Wastewater Discharge Permit Provisions

The customer may appeal in writing to the District for relief of the foregoing effluent standards for Category 2 or Category 3 industrial wastewater discharge. The District may grant an appeal if the following criteria can be demonstrated:

a) That the discharger is unable to meet the District's effluent standards by means of reasonable modifications to the discharging facility;
b) That the requested variance will not directly impact the operation of any District wastewater treatment plant, cause the wastewater or sludge of such plant to violate applicable requirements, or harm plant facilities or personnel; and

c) That the easing of any effluent standards will not violate any Federal pretreatment requirements.

6.4.2.4 **Industrial Wastewater Self-Monitoring Discharge Reporting Provisions**

The District may require any industrial wastewater discharger to file periodic self-monitoring discharge reports. Such reports may include but are not limited to the type of process used, volume of discharge, exact point of sampling, rates of flow, mass emission rate, production quantities, hours of operation, or other information relating to the generation of wastewater, including wastewater constituents and characteristics. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site, even though they may not normally be discharged.

The District may also require industrial wastewater dischargers to provide baseline monitoring reports, compliance time schedule reports, and final compliance reports. Dischargers may be required to provide results of periodic measurements and self-monitoring reports of their discharge, including chemical analyses and flow.

6.4.3 **Industrial Wastewater Discharge Application and Permit**

6.4.3.1 **Application Information Requirements**

Applicants for Industrial Wastewater Discharge Permits shall complete and file an application form, which shall be accompanied by all applicable fees.

The applicant may be required to submit for evaluation, the following information:

a) Name, address, and Standard Industrial Classification number of applicant;

b) Name of person responsible for payment of fees, which person may be the industrial wastewater discharger, property owner, property management company, tenant, account holder, or responsible party.

c) Volume of wastewater to be discharged;

d) Wastewater constituents and characteristics including, but not necessarily limited to effluent standard limitations and prohibited substances, as determined by a laboratory approved by the District;

e) Time and duration of discharge;

f) Average and 30-minute peak wastewater flow rates, including daily, monthly, and seasonal variation, if any;

g) Description of activities, facilities, and plant operations on the premises, including all materials, processes, and types of materials which are being or could be discharged; and
h) Any other information deemed necessary by the District in order to evaluate the application.

**6.4.3.2 Application Review and Approval**

The District will review the application, and may require the applicant to provide additional information in order to complete the review. Additionally, the District may require an on-site inspection of the wastewater discharge system, pretreatment systems, and any other systems relating to the wastewater discharge.

Upon final approval, the District will issue an Industrial Wastewater Discharge Permit to all Category 2 and Category 3 industrial dischargers within the service area of the District, subject to terms and conditions provided.

**6.4.3.3 Industrial Wastewater Discharge Permit Conditions**

Industrial Wastewater Discharge Permits shall be subject to all provisions of this section and all other regulations, user charges, and fees established by the District. The conditions of Industrial Wastewater Discharge permits shall be uniformly enforced by the District in accordance with provisions of this section and all applicable local, State, and Federal regulations.

Industrial Wastewater Discharge Permits issued by the District do not authorize the commission of any act causing injury to the property of another, nor do they protect the discharger from any liabilities under Federal, State, or local laws, nor do they guarantee the discharger a capacity right in the District's sewer system.

A copy of the Industrial Wastewater Discharge Permit shall be maintained at the discharger's business location, so as to be available at all times to its personnel.

The terms and conditions of the Industrial Wastewater Discharge Permit may be subject to modification by the District in accordance with any applicable Federal, State or local law or regulation. Except for modifications required to protect the public health, safety or welfare, which may be required immediately, the discharger shall be informed of any proposed changes in the Industrial Wastewater Discharge Permit at least 30 days prior to the effective date of change. Any modifications or new conditions in the Industrial Wastewater Discharge Permit shall include a reasonable time schedule for compliance.

**6.4.3.4 Duration of Industrial Wastewater Discharge Permits**

Industrial Wastewater Discharge Permits for Industrial Wastewater Discharge shall be issued for a specified period not to exceed five years. It is the responsibility of the Permittee to ensure renewal of the Industrial Wastewater Discharge Permit prior to expiration.
6.4.3.5 **Industrial Wastewater Discharge Permits not Transferrable**

Industrial Wastewater Discharge Permits are not transferrable. Any sale, lease, transfer, or assignment of the premises or operation, for which an Industrial Wastewater Discharge Permit was issued, shall require a new Industrial Wastewater Discharge Permit. An Industrial Wastewater Discharge Permit shall be issued only for a specific use or operation and any new or modified conditions of operation may require an amended or new Industrial Wastewater Discharge Permit.

6.4.3.6 **Revocation of Industrial Wastewater Discharge Permit**

The District may revoke the Industrial Wastewater Discharge Permit of any discharger who is found to be in violation of this section of the Rules and Regulations or any applicable local, State, or Federal regulations. An Industrial Wastewater Discharge Permit may also be revoked on the basis of the following reasons:

a) Failure to factually report the wastewater constituents and characteristics of its discharge;

b) Failure to report significant change in operations;

c) Refusal to grant reasonable access to the premises for the purpose of inspection or monitoring; or

d) Violation of a condition of the Industrial Wastewater Discharge Permit;

e) Failure to pay service charges, penalties, fines, or other outstanding liabilities;

f) Violation of any provision in this Section.

6.4.3.7 **Industrial Wastewater Discharge Permit Fees**

A fee will be charged to and collected annually from all Category 1, 2, and 3 dischargers. The fee is established to cover the annual expense of inspecting and sampling industrial wastewater discharge. The fee will be established and subject to modification by ordinance of the Board of Directors. Prior to any change in the established fee by an ordinance of the Board, a notice of such proposed change shall be posted and published by the District, in accordance with the California Government Code. *Refer to Section 10 of these Rules and Regulations regarding fees and charges for the amount of the Industrial Wastewater Discharge Permit fee.*

The City of San Diego levies fees for the monitoring and testing program (Section 6.4.2) and bills Permittee directly.
6.5 INDUSTRIAL WASTEWATER MONITORING AND RECORD KEEPING REQUIREMENTS

6.5.1 Industrial Wastewater Self-Monitoring Facilities

Under terms of an Industrial Wastewater Discharge Permit, the District may require the discharger to install and maintain a self-monitoring facility for the purpose of measuring flow rate and total volume, and sampling the discharge for chemical or biological analysis.

The monitoring and sampling facility shall be constructed in accordance with the District's requirements, and shall be completed within 90 days following written notification by the District, unless a time extension is granted.

Such facility shall consist of a calibrated flume, weir, flow meter, or similar measuring device, and automatic proportional flow sampling equipment and/or automatic analysis and recording equipment.

In lieu of wastewater flow measurement, the District may accept records of water usage, and may determine peak and average flow rates for the specific industrial wastewater discharge by computing an adjusted flow volume on the basis of suitable factors.

6.5.1.1 Location of Monitoring Facilities

Industrial wastewater discharge monitoring facilities shall be situated on the discharger's premises. However, when such a location would be impractical or cause undue hardship on the user, the District may allow the facility to be constructed in the public street or sidewalk area. Such facility shall not be obstructed by landscaping or parked vehicles, and shall be subject to approval by the local zoning and land use agency.

6.5.1.2 Self-Monitoring Reports

Dischargers who must take periodic measurements of industrial wastewater flows and constituents shall provide the minimum number of measurement reports required, and according to the schedule established in the Industrial Wastewater Discharge Permit. Each report shall contain the date, signature, title, and these words: “I declare under penalty of perjury that the foregoing is true and correct.”

6.5.1.3 District Access to Monitoring Facilities

Industrial wastewater dischargers who are required to provide monitoring facilities shall allow the District or its representatives ready access at reasonable times to all parts of their premises for purpose of sampling or performing any necessary duties. All sampling, analysis, and flow measurement procedures, equipment, results, and records shall be subject to inspection by the District at all reasonable times.

The District shall have the right to install on the discharger's premises any devices necessary to conduct sampling or metering operations. Dischargers shall allow entry of District personnel, upon presentation of suitable identification.
6.5.2 Standards and Guideline Resources

All flow measurements, sampling, analysis, and reporting shall be performed in accordance with applicable procedures approved by the District, and approved by the Environmental Protection Agency under Title 40, CFR, Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act," as amended at a laboratory certified for such testing by the State Department of Health Services.

The industrial discharger is referred to the following resources for selection, installation, calibration, and operation of flow measurement devices and sampling technique:


e) "Standard Methods for the Examination of Water and Wastewater".

The Federal Regulations for Industrial Wastewater and Pretreatment requirements are contained in Title 40CFR, Part 403.

6.5.3 Retention of Industrial Wastewater Discharge Records

All dischargers subject to terms of an Industrial Wastewater Discharge Permit shall retain and preserve all records and books, including any and all summaries thereof, which relate to monitoring, sampling, and chemical analysis conducted by or on behalf of such discharger in connection with its industrial wastewater discharge. Such records shall include all related documents, memoranda, reports, correspondence, and computer data, and shall be retained for a period of not less than three years.

All records pertaining to matters subject to any administrative action, or other enforcement or litigation activities initiated by the District, shall be retained and preserved by the discharger until all such activities are concluded, and until all periods of limitation relating to any and all appeals have expired.
6.6  INDUSTRIAL WASTEWATER DISCHARGE REQUIREMENTS

6.6.1  Pretreatment of Industrial Wastewater

Dischargers shall ensure that wastewater to be discharged is acceptable under the limitations established before discharging to any public sewer.

Any facilities required to pretreat wastewater to a level acceptable to the District shall be provided and maintained at the sole expense of the discharger. Detailed plans, compliance schedules, and operating procedures shall be submitted to the District for review and approval prior to construction of the facility.

The approval of such plans and operating procedures will in no way relieve the discharger from the responsibility of modifying the facility, in order to produce an effluent acceptable under the provisions of this section. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and approved by the District. No discharger shall increase the quantity of water used in their process of doing business, or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with any local, State, or Federal discharge standard.

The District shall have the authority to impose on any industrial wastewater discharger appropriate compliance schedules for installation of specific pretreatment equipment, filing of reports, and achievement of specific discharge conditions, including target parameter concentrations.

6.6.2  Protection from Accidental Discharge

6.6.2.1  Safeguards Required

Each industrial wastewater discharger shall provide safeguards and protection from accidental discharge of prohibited materials or other substances regulated by this section. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the discharger’s sole expense.

6.6.2.2  Accidental Discharge Procedures

In the case of an accidental discharge, it is the responsibility of the Permittee to immediately notify the District. The notification shall include location of discharge, type of waste, the concentration and volume, and corrective actions taken.

Within five days following an accidental discharge, the discharger shall submit to the District a detailed written report, describing the cause of the discharge and the measures to be taken to prevent similar future occurrences. Such notification shall not relieve the discharger of any expense, loss, damages, or other liability which may be incurred as a result of damage to the wastewater systems, fish kills, or any other damage to persons or property; nor shall such notification relieve the Permittee of any fines, civil penalties, other liability, or other reporting requirements which may be imposed by this Section or other applicable law, including but not limited to the reporting requirements in Water Code section 13271 and 13272.

A notice shall be permanently posted in a prominent place on the premises of the discharger, advising employees who may cause, allow, or observe any accidental discharge of proper emergency notification procedures.
6.6.3 **Prohibited Discharge Substances**

The concentration or amount of any constituent considered as excessive or unreasonable will be determined by the results of technical evaluation and the actions of regulatory agencies. The list of regulated constituents indicates specific limits, as currently established. Constituents listed without specific limits are wastes that may be subject to future regulation.

6.6.3.1 **Pretreatment Standards for Facilities Existing Prior to 7-15-82**

This subsection applies to any industrial wastewater discharger who was discharging on or before 7/15/82.

a. Category I Industries, except for Job Shops and Independent Printed Circuit Board Manufacturers must achieve the following pretreatment standards:

<table>
<thead>
<tr>
<th>Pollutant or pollutant property</th>
<th>Concentration Milligrams per liter (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum for any one day</td>
</tr>
<tr>
<td>Cadmium (T)</td>
<td>0.69</td>
</tr>
<tr>
<td>Chromium (T)</td>
<td>2.77</td>
</tr>
<tr>
<td>Copper (T)</td>
<td>3.38</td>
</tr>
<tr>
<td>Lead (T)</td>
<td>0.69</td>
</tr>
<tr>
<td>Nickel (T)</td>
<td>3.98</td>
</tr>
<tr>
<td>Silver (T)</td>
<td>0.43</td>
</tr>
<tr>
<td>Zinc (T)</td>
<td>2.61</td>
</tr>
<tr>
<td>Cyanide (T)</td>
<td>1.20</td>
</tr>
<tr>
<td>Total Toxic Organics (TTO)</td>
<td>2.13</td>
</tr>
</tbody>
</table>

Note: T=Total

b. Alternatively, for industrial facilities with cyanide treatment, upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph above.

<table>
<thead>
<tr>
<th>Pollutant or pollutant property</th>
<th>Concentration Milligrams per liter (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum for any one day</td>
</tr>
<tr>
<td>Cyanide (A)</td>
<td>0.86</td>
</tr>
</tbody>
</table>

No user introducing wastewater pollutants into the Padre Dam System under the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.

c. An existing source submitting a certification in lieu of monitoring must implement the toxic organic management plan approved by Padre Dam.
d. An existing source subject to this subpart shall comply with a daily maximum pretreatment standard for Total Toxic Organics (TTO) of 4.57 mg/L.

6.6.3.2 New Source Performance Standards

This subsection applies to any industrial wastewater discharger who began discharging after 7/15/82.

a. Category I Industries must achieve the following performance standards:

<table>
<thead>
<tr>
<th>NSPS</th>
<th>Concentration, Milligrams per liter (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollutant or pollutant property</td>
<td>Maximum for any one day</td>
</tr>
<tr>
<td>Cadmium (T)</td>
<td>0.11</td>
</tr>
<tr>
<td>Chromium (T)</td>
<td>2.77</td>
</tr>
<tr>
<td>Copper (T)</td>
<td>3.38</td>
</tr>
<tr>
<td>Lead (T)</td>
<td>0.69</td>
</tr>
<tr>
<td>Nickel (T)</td>
<td>3.98</td>
</tr>
<tr>
<td>Silver (T)</td>
<td>0.43</td>
</tr>
<tr>
<td>Zinc (T)</td>
<td>2.61</td>
</tr>
<tr>
<td>Cyanide (T)</td>
<td>1.20</td>
</tr>
<tr>
<td>Total Toxic Organics (TTO)</td>
<td>2.13</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>52</td>
</tr>
<tr>
<td>TSS</td>
<td>60</td>
</tr>
<tr>
<td>pH</td>
<td>(1)</td>
</tr>
</tbody>
</table>

(1) Within 6.0 to 9.0

(T) = Total

b. Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and Padre Dam, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

<table>
<thead>
<tr>
<th>Pollutant or pollutant property</th>
<th>Concentration, Milligrams per liter (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollutant or pollutant property</td>
<td>Maximum for any one day</td>
</tr>
<tr>
<td>Cyanide (A)</td>
<td>0.86</td>
</tr>
</tbody>
</table>

c. No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

d. An existing source submitting a certification in lieu of monitoring must implement the toxic organic management plan approved by Padre Dam.
6.6.3.3 **Pretreatment Standards for New Sources (PSNS)**

This subsection applies to any industrial wastewater discharger who began discharging after 7/15/82.

a. Category I Industries that introduce pollutants into the Padre Dam System must achieve the following pretreatment standards for new sources (PSNS):

<table>
<thead>
<tr>
<th>Pollutant or pollutant property</th>
<th>Concentration, Milligrams per liter (mg/L)</th>
<th>Maximum for any one day</th>
<th>Monthly Average Shall not exceed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (T)</td>
<td>0.11</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Chromium (T)</td>
<td>2.77</td>
<td>1.71</td>
<td></td>
</tr>
<tr>
<td>Copper (T)</td>
<td>3.38</td>
<td>2.07</td>
<td></td>
</tr>
<tr>
<td>Lead (T)</td>
<td>0.69</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Nickel (T)</td>
<td>3.98</td>
<td>2.38</td>
<td></td>
</tr>
<tr>
<td>Silver (T)</td>
<td>0.43</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>Zinc (T)</td>
<td>2.61</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>Cyanide (T)</td>
<td>1.20</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>Total Toxic Organics (TTO)</td>
<td>2.13</td>
<td>-----</td>
<td></td>
</tr>
</tbody>
</table>

Note: (T) = Total

b. Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and Padre Dam, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

<table>
<thead>
<tr>
<th>Pollutant or pollutant property</th>
<th>Concentration, Milligrams per liter (mg/L)</th>
<th>Maximum for any one day</th>
<th>Monthly Average Shall not exceed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyanide (A)</td>
<td>0.86</td>
<td>0.32</td>
<td></td>
</tr>
</tbody>
</table>

c. No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

d. An existing source submitting a certification in lieu of monitoring must implement the toxic organic management plan approved by Padre Dam.
6.6.3.4 Standard Maximum Effluent Concentrations

All Category 1, 2 and 3 industries must meet the following maximum effluent concentrations:

**STANDARD MAXIMUM EFFLUENT CONCENTRATIONS**

<table>
<thead>
<tr>
<th>CONSTITUENT</th>
<th>Units</th>
<th>Value</th>
<th>CONSTITUENT</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD (1)</td>
<td>mg/L (3)</td>
<td>1000</td>
<td>Manganese</td>
<td>mg/L</td>
<td>3.0</td>
</tr>
<tr>
<td>TSS (2)</td>
<td>mg/L</td>
<td>1000</td>
<td>MBAS (5)</td>
<td>mg/L</td>
<td>1.5</td>
</tr>
<tr>
<td>Ammonia</td>
<td>mg/L</td>
<td>50.0</td>
<td>Mercury</td>
<td>mg/L</td>
<td>2.0</td>
</tr>
<tr>
<td>Antimony</td>
<td>mg/L</td>
<td>2.0</td>
<td>Nickel</td>
<td>mg/L</td>
<td>4.1</td>
</tr>
<tr>
<td>Arsenic</td>
<td>mg/L</td>
<td>2.0</td>
<td>Nitrogen, Nitrate as N</td>
<td>mg/L</td>
<td>45</td>
</tr>
<tr>
<td>Barium</td>
<td>mg/L</td>
<td>10.</td>
<td>Nitrogen, Total as N</td>
<td>mg/L</td>
<td>60</td>
</tr>
<tr>
<td>Beryllium</td>
<td>mg/L</td>
<td>2.0</td>
<td>Oil and Grease</td>
<td>mg/L</td>
<td>300</td>
</tr>
<tr>
<td>Boron</td>
<td>mg/L</td>
<td>2.0</td>
<td>Phenol</td>
<td>mg/L</td>
<td>25</td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>400</td>
<td>Phosphorus, Total as P</td>
<td>mg/L</td>
<td>30</td>
</tr>
<tr>
<td>Chlorinated Hydrocarbons</td>
<td>mg/L (4)</td>
<td>ND</td>
<td>Selenium</td>
<td>mg/L</td>
<td>2.0</td>
</tr>
<tr>
<td>Chlorine Residual</td>
<td>mg/L</td>
<td>100</td>
<td>Sodium (percent)</td>
<td>%</td>
<td>60%</td>
</tr>
<tr>
<td>Color</td>
<td>units</td>
<td>100</td>
<td>Sulfate</td>
<td>mg/L</td>
<td>500</td>
</tr>
<tr>
<td>Flash Point</td>
<td>°F</td>
<td>&gt;140°F</td>
<td>Sulfide (dissolved)</td>
<td>mg/L</td>
<td>1.0</td>
</tr>
<tr>
<td>Iron</td>
<td>mg/L</td>
<td>3.0</td>
<td>Thallium</td>
<td>mg/L</td>
<td>2.0</td>
</tr>
<tr>
<td>Lead</td>
<td>mg/L</td>
<td>0.03</td>
<td>TDS (6)</td>
<td>mg/L (7)</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

(1) BOD: Biochemical Oxygen Demand
(2) TSS: Total Suspended Solids
(3) mg/L: Milligrams per Liter
(4) ND: Non-detectable
(5) MBAS: Methylene Blue Active Substance
(6) TDS: Total Dissolved Solids
(7) Not more than 300 mg/L greater than the monthly average concentrations in the domestic water supplied by the District.

6.6.3.5 General Requirements

Unless approval has been obtained from the District, no person shall discharge or cause to be discharged into a public sewer which directly or indirectly connects to the District’s sewer system, the following:

a) Any liquid, solid or gaseous substance that would cause or tend to cause flammable or explosive conditions in the wastewater system.

b) Any liquid, solid, or gaseous substance containing toxic or poisonous solids, liquids, or gases in such quantities that alone or in combination with other substances may create a health hazard for humans, animals, or the local environment, and may interfere detrimentally with wastewater treatment processes, or may cause a public nuisance, or cause any hazardous condition to occur in the wastewater system.
c) Any matter having a pH factor lower than 5.5 or greater than 10.0, or having any corrosive or other detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel, or may cause damage to structures, equipment, or other physical facilities of the wastewater system.

d) Any solids or viscous substances or other matter of such quality, size, or quantity that may obstruct the wastewater flow in the sewer, or may be detrimental to proper wastewater treatment plant operations.

e) Any storm water, ground water, street drainage, subsurface drainage, roof drainage, yard drainage, water from outdoor fountains, ponds or lawn sprays, or any other outdoor collected water.

f) Any discharge having a temperature higher than 150 degrees Fahrenheit (65 degrees Celsius), or a temperature that causes the influent to the wastewater treatment plant to exceed 85 degrees Fahrenheit (30 degrees Celsius).

g) Any discharge that create odors.

h) Any discharge containing over 1.0 mg/L of dissolved sulfides, iron, pickling wastes, or plating solutions.

i) Any discharge with a pH factor high enough to cause alkaline incrustation on sewer walls.

j) Any discharge releasing, promoting, or causing the promotion of toxic gases.

k) Any discharge requiring an excessive quantity of chlorine or other chemical compound to be used for disinfection purposes.

l) Any deionized water, steam condensate, distilled water, or single-pass cooling water.

m) Any radioactive discharge, except under the following circumstances:
   i) When the discharger is authorized to use radioactive materials by the State Department of Health or other governmental agency empowered to regulate the use of radioactive materials; and
   ii) When the matter is discharged in strict conformity with current California Radiation Control Regulations (California Administrative Code, Title 17), and the Nuclear Regulatory Commission regulations and recommendations for safe disposal; and
   iii) When the discharger is in compliance with all rules and regulations of all other applicable regulatory agencies.

n) Any discharge producing excessive discoloration in the wastewater treatment plant effluent.
o) Any toxic materials, including but not limited to all heavy metals, cyanide, phenols, chlorinated hydrocarbons, and other organic compounds, unless limited to a concentration that complies with all local, State, and Federal discharge limitations, and does not interfere with the operation of the wastewater facilities.

p) Any wastes having BOD concentrations greater than 5,000 mg/L or COD concentrations greater than 10,000 mg/L or non-decomposable organic contents.

q) Any excessive amounts of organic phosphorous type compounds.

r) Any waste containing substances that may precipitate, solidify, or become viscous at temperatures between 50 and 85 degrees Fahrenheit.

s) Any waste producing excessive discolouration of wastewater or treatment plan effluent.

t) Any water added for purposes of diluting wastes which would otherwise exceed applicable maximum concentration limitations.

u) Any waste prohibited by Federal standards from being discharged to the sewer system.

v) Any other wastes that may be specifically prohibited by the District.

w) No user subject to the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

6.6.4 **Garbage Grinders Limitations**

Discharges from garbage grinders, except that for discharges which are generated in preparation of food normally consumed on the premises, shall not be discharged into the sewer. The District may issue a FEWD or Industrial Wastewater Discharge Permit for other specific garbage grinder uses, on condition that the discharger undertakes whatever self-monitoring is required to determine the equitable sewer service charges, based upon the waste constituents and characteristics.

Such grinders must shred the waste to a degree that all particles will be carried freely under normal flow conditions prevailing in the District's sewer system. Garbage grinders shall not be used for grinding plastic, paper products, inert materials, or garden refuse for discharge to the sewer system.

6.6.5 **Point of Discharge Limitations**

Discharge of any substances directly into a manhole or an opening into a sewer pipeline other than a sewer lateral connection approved by the District is prohibited, unless an Industrial Wastewater Discharge Permit for such direct discharges has been obtained from the District, upon written application and payment of applicable charges and fees.
6.6.6 Prohibition of Discharge from Septic Tank Pump Trucks

Dumping or discharging into the District’s sewer system, or into facilities discharging directly or indirectly into the sewer system, any materials from a vacuum truck, septic tank or "cesspool" pump truck or other liquid waste transport truck, including the contents of a septic tank, seepage pit, interceptor, or cesspool, and any industrial or other liquid wastes is prohibited.

6.6.7 Excessive Industrial Wastewater Discharges

Industrial wastewater discharges shall not exceed the limitations allowed by the discharger’s Industrial Wastewater Discharge Permit or the amounts reported to the District. If measurements or other investigations reveal an excessive flow rate, flow quantity, or chemical oxygen demand, or the presence of excess suspended solids, the discharger shall be subject to assessment of delinquent sewer service charges, modification of future charges, and amendment of the Industrial Wastewater Discharge Permit in addition to any other remedy available to the District.

The findings of the District shall be confirmed by a minimum of two additional 24 hour flow samples and flow measurements obtained by the District, with the cost of sampling and analysis borne by the discharger. Such data, together with any other relevant information obtained by the District or presented by the discharger, shall be used to establish accurate measurements, as required to determine the proper amount of future sewer service charges and the delinquent charges to be assessed.

Additionally, the discharger shall apply to the District for an amended FEWD or Industrial Wastewater Discharge Permit, adjusting the terms accordingly.

In the absence of other evidence, a discharger who violates terms of an existing FEWD or Industrial Wastewater Discharge Permit shall be presumed to have been discharging at the determined values of the constituent or constituents in question over the preceding three years, or since the District's previous verification of quantity parameters, whichever period is shorter.

6.6.8 Wastewater Facilities Capacity

If the District lacks sufficient capacity in its wastewater facilities, the District may require existing industrial wastewater dischargers to restrict their discharge until additional capacity becomes available. The District may refuse service in locations where the District’s available capacity is not adequate to accommodate the proposed quantity or quality of such discharge.

Persons desiring to establish an operation which would discharge industrial wastewater into the District's wastewater treatment facilities may request the District to recommend suitable areas.

6.7 WASTEWATER DISCHARGE FROM FOOD ESTABLISHMENTS

6.7.1 Food Establishment Wastewater Discharge (FEWD) Permits

The intent of the program is to facilitate the maximum beneficial public use of the District’s sewer services and facilities while preventing the discharge of excess grease and oil into the wastewater collection system, to minimize the potential of formation of blockages to the flow of wastewater as a result of grease accumulations and to eliminate sewage spills that may result from such blockages.
All food establishments including, but not limited to, restaurants, delis, ice-cream parlors, commercial kitchens, etc. desiring to discharge wastewater into the District’s sewer system shall obtain a Food Establishment Wastewater Discharge (FEWD) Permit from the District.

6.7.2 **Subject to Industrial Wastewater Limitations**

Wastewater discharged into the District’s sewer system from establishments engaged in preparing food for public consumption shall be subject to the limitations for Industrial Wastewater Discharge, as set forth earlier in these Rules and Regulations, including but not limited to Section 6.3.2 (Penalties for Violations) and 6.3.3 (Notice and Appeal Procedure), and such other conditions and requirements as may be specified in the Food Establishment Wastewater Discharge Permit.

The FEWD permit for discharging wastewater from a food establishment shall be subject to all provisions of this section and all other regulations, user charges and fees, as established by ordinance of the Board of Directors of the District.

Food establishments which do not discharge FOG to the sanitary sewer system may be exempt from FEWD Permit requirements that include the installation of a Grease Removal Device (GRD). This exemption is at the sole discretion of the District and the establishments are still subject to inspection and other FEWD Permit requirements.

6.7.3 **FEWD Permit Requirements**

The Food Establishment Wastewater Discharge Permit may require pretreatment of wastewater prior to discharge, restriction of peak flow discharges, discharge of certain wastewater only to specified sewers of the District, or relocation of the point of discharge. Such requirements may also include prohibition of discharge of certain wastewater components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased costs of the District created by the wastewater discharge, and such other conditions as may be required to achieve the purpose of this section.

Discharge of industrial wastewater in excess of the quantity or quality limitations or other requirements set by the Food Establishment Wastewater Discharge Permit is prohibited.

6.7.4 **Applications for Food Establishment Discharge Permits**

Applicants of a Food Establishment Wastewater Discharge Permit shall complete and file with the District an application in the form prescribed by the District.

6.7.4.1 **Information Requirements**

The applicant may be required to submit, for evaluation, the following information:

a) Name and address of applicant;

b) Service and site address;
c) Volume of wastewater to be discharged;

d) Name and address of property owner or lessor and the property manager where the Food Service Establishment is located.

e) Time of daily food preparation operations;

f) Description of food preparation, type, and number of meals served, clean-up procedures, dining room capacity, number of employees, and size of kitchen; and

g) Applicants may be required to submit site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, FOG control device, grease interceptor or other pretreatment equipment and appurtenances by size, location, and elevation for evaluation.

h) Any other information deemed necessary by the District to evaluate the application.

6.7.4.2 Application Review and Approval

The District will review the FEWD Permit application, and may require the applicant to provide additional information in order to complete the review. Additionally, the District may require an on-site inspection of the wastewater discharge system, pretreatment systems, and any other systems relating to the wastewater discharge.

Upon final approval and payment of the FEWD Permit fee(s), the District will issue a Food Establishment Wastewater Discharge (FEWD) Permit, subject to terms and conditions of these Rules and Regulations. Refer to Sections 6.4 and 10.8.2 for fee information.

6.7.4.3 Duration of FEWD Permits

FEWD Permits shall be issued for a specified period not to exceed five years. A FEWD permit may be valid for less than a year or may be issued to expire on a specific date. It is the responsibility of the Permittee to ensure renewal of the FEWD Permit prior to expiration.

6.7.4.4 Terms and Conditions of FEWD Permits

The terms and conditions of the Food Establishment Wastewater Discharge Permit may be subject to modification by the District, in accordance with any changes in the discharge standard limitations or the prohibited discharge substances described. Except for modifications required to protect the public health, safety or welfare, which may be required immediately, the discharger shall be informed of any proposed changes in the FEWD Permit at least 30 days prior to the effective date of change. Any modifications or new conditions in the FEWD Permit shall include a time schedule for compliance as determined by the District.
6.7.4.5  **FEWD Permits not Transferrable**

Any sale, lease, transfer, or assignment of the premises or operation for which a Food Establishment Wastewater Discharge Permit was issued shall be reported to the District prior to the change and shall require a new FEWD Permit.

A FEWD Permit shall be issued only for a specific use or operation, and any new or modified conditions of operation shall require an amended or new permit.

6.7.4.6  **Revocation of FEWD Permit**

The District may revoke the FEWD Permit of any discharger who is found to be in violation of this section of the Rules and Regulations. A Food Establishment Wastewater Discharge Permit may also be revoked on the basis of the following violations:

   a) Failure to install grease pretreatment devices as required by the FEWD Permit;

   b) Failure to fulfill reporting requirements or pretreatment maintenance as required by the permit;

   c) Refusal to grant reasonable access to the premises for the purpose of inspection or monitoring;

   d) Violation of a condition of the FEWD Permit;

   e) Establishment causes interference, sewer blockages, or SSOs within the District’s collection or treatment system;

   f) Failure to make timely payment of all amounts owed to the District for user charges, fees, or any other fees imposed pursuant to this ordinance;

   g) Knowingly provides a false statement, representation, record, report, or other document to the District;

   h) Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or sample collection method;

   i) Failure to comply with the terms and conditions of FEWD Permit suspension or CSA;

   j) Discharges effluent to the District’s sewer system while FEWD permit is suspended.

6.7.4.7  **Compliance Schedule Agreement (CSA)**

   a) Upon determination that a Permittee is in noncompliance with the terms and conditions specified in its FEWD Permit or any provision of this Section, or needs to construct and/or acquire and install a grease control device or grease interceptor, the FOG Control Program Manager may require the Permittee to enter into a CSA.
b) The issuance of a CSA may contain terms and conditions including but not limited to requirements for installation of a grease control device, grease interceptor and facilities, submittal of drawings or reports, audit of waste hauling records, best management and waste minimization practices, payment of fees, or other provisions to ensure compliance with this Section.

c) The FOG Control Program Manager shall not enter into a CSA until such time as all amounts owed to the District, including user fees, noncompliance sampling fees, or other amounts due are paid in full, or an agreement for deferred payment secured by collateral or a third party, is approved by the FOG Control Program Manager.

d) If compliance is not achieved in accordance with the terms and conditions of a CSA during its term, the FOG Control Program Manager may issue an order suspending or revoking the FEWD Permit.

6.7.5 Food Establishment Wastewater Discharge Requirements

6.7.5.1 Grease Removal

The food establishment discharger/responsible party shall ensure that wastewater is acceptable for discharge into the District's sewer system in accordance with the limitations established.

Each discharger/responsible party shall install a grease removal device, of a type approved by the District, to remove grease from wastewater prior to discharge. Such device shall be located on the waste line leading from areas where grease may be introduced into the sewer system such as sinks, drains, appliances, and other fixtures or equipment used in food preparation or the cleanup process. The GRD shall be installed at a location where it shall be at all times easily accessible for inspection, cleaning, and removal of accumulated grease. GRD sizing and installation shall conform to the current edition of the Uniform Plumbing Code.

Grease interceptors shall be constructed in accordance with the design approved by the FOG Control Program Manager and shall have a minimum of two compartments with fittings designed for grease retention. Access manholes, with a minimum diameter of 24 inches, shall be provided directly over each grease interceptor chamber, crossover tee, and sanitary tee. The access manholes shall extend at least to finished grade and be designed and maintained to prevent water inflow or infiltration. The manholes shall also have readily removable covers to facilitate inspection, grease removal, and wastewater sampling activities. Sampling vaults must be installed with every grease interceptor.

Each discharger or responsible party shall also provide a collection drum or other container for the purpose of physically segregating all oils, greases, and greasy solids. No such collected grease shall be introduced into any drainage pipeline or public sewer system. The use of additives, directly or indirectly to the plumbing or sewer system, to emulsify grease and/or oil, is specifically prohibited.

The FEWD Permit holder shall develop and implement Best Management Practices (BMPs) to minimize the discharge of FOG to the sanitary sewer system. These procedures are for the food establishments personnel to perform maximum segregation of oils, greases, and greasy solids, which shall be collected in a drum or container prior to discharging of washing or cleaning wastewater into the sewer system. Drain screens shall be installed on all drainage pipes in food preparation areas. Grease removal devices shall be
maintained in efficient operating condition by means of periodic removal of accumulated grease. Dischargers shall be responsible for the proper removal and disposal of material captured from grease removal devices, and from collection drums used for segregating oils, greases, and greasy solids. Decanting or discharging of removed waste back into the grease interceptor, for the purpose of reducing the volume to be hauled, is prohibited.

6.7.5.2 Grease Removal Device (GRD) Maintenance and Record Keeping

The 25 Percent Rule requires that the depth of FOG along with the depth of settleable solids in a trap or interceptor shall be less than 25 percent of the total operating depth of the grease removal device. The operating depth is determined by measuring the internal depth from the outlet water elevation to the bottom of the compartment.

Maintenance of the GRD shall be performed as frequently as necessary to protect the sanitary sewer system against accumulation of FOG. Maintenance shall be performed as determined by inspection and application of the 25 Percent Rule, at intervals specified in the FEWD Permit or at the following intervals, whichever is more often.

1) Interceptors shall be pumped, at a minimum, on a quarterly basis (Every 90 days).

2) Grease traps shall be pumped, at a minimum, on a twice monthly basis (Every 15 days). Grease traps shall be maintained in efficient operating conditions by removing accumulated grease on a daily basis.

3) Oversized and undersized grease removal devices may be required to be pumped more frequently due to inefficiency, lack of proper flow, or other conditions subject to the limitations for Industrial Wastewater Discharge such as high or low pH.

4) Dishwashers and food waste disposal units shall not be connected to or discharged into any grease trap.

5) Grease traps shall be inspected periodically (at a minimum, at the time of pump-out) to check for leaking seams and pipes, and for effective operation of the baffles and flow regulating device. Grease traps and their baffles shall be maintained free of all caked-on FOG and waste. Removable baffles shall be removed and cleaned during the maintenance process.

The discharger shall keep records of grease removal device cleaning, maintenance, and grease removal and report on such maintenance annually and upon request to the District. The report shall provide documentation of delivery of all grease and oil to a recycling or disposal contractor or facility. Documentation shall be in the form of a manifest from the transporter or receipt which identifies the date, volume, type of waste, address, phone, and contact person with the contractor or facility.

Dischargers shall make the records available to District inspectors during normal business hours. Records shall be kept by the facility for a period of not less than three years. Property owners of commercial properties or their official designee(s) shall be ultimately responsible for the installation and maintenance of the GRD.
6.7.5.3 **Food Establishment Wastewater Monitoring Reports**

Each food establishment required to hold a Food Establishment Wastewater Discharge Permit may be required to provide the results of periodic measurements of its discharge, which is to include chemical analysis of oil and grease content and/or any other constituents as deemed necessary by the District.

6.7.5.4 **Discharge Limits**

All dischargers of wastewater from food establishments into the District's sewer system shall comply at a minimum with the following effluent discharge limitations, unless special provisions are approved in accordance with this section by the District.

**Standard Maximum Effluent Concentrations**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grease and Oil</td>
<td>300.0 mg/L</td>
</tr>
</tbody>
</table>

6.7.5.5 **Special FEWD Permit Provisions for Food Establishments**

The Customer may appeal in writing to the District for relief of the foregoing effluent standard or treatment requirements for a food establishment wastewater discharge if the following criteria can be demonstrated:

a) The discharger is unable to meet the District's effluent standard by means of reasonable modifications to the discharging facility; and

b) The requested variance will not directly or indirectly impact the operation of any District wastewater treatment plant, cause the wastewater or sludge of such plant to violate local, State, or Federal requirements, or harm plant facilities or personnel.

The District will review the application and forward recommendations for special permit provisions to the Board of Directors.

6.7.5.6 **Compliance with FOG Control Program**

Compliance with the FOG control program shall be evaluated based on the following criteria:

1) Implementation of Best Management Practices (BMPs).
2) Grease Removal Device kept in compliance with the 25 Percent Rule.
3) Regularly scheduled maintenance of the GRD.
4) Documentation and record keeping showing proper disposal.
5) Documentation of employee education and training.
6) Conditions of the FEWD Permit have been met.
In addition to any other remedy available to the District, establishments which are not in compliance with the FOG control program may be subject to a re-inspection fee following a compliance schedule agreement to bring the establishment into compliance and any other fees associated with the compliance schedule agreement. All fees, charges and penalties are due by the responsible party as determined by the District.

6.7.5.7  Employee Training

1) Employees of the food service establishment shall be trained on:

   a) How to “dry wipe” pots, pans, dishware, and work areas before washing to remove FOG.

   b) How to properly dispose of food waste and solids in enclosed plastic bags prior to disposal in trash bins or containers to prevent leaking and odors.

   c) The location and use of absorption products to clean under fryers, and other locations where grease may be spilled or dripped.

2) Training shall be documented and employee signatures retained indicating each employee’s attendance and understanding of the practices.

3) Training records shall be available for review at any reasonable time by the District inspector.

6.8  VALIDITY OF PROVISIONS CONTAINED IN THIS SECTION

If any provision contained in this section or the application thereof to any person or circumstance is held to be invalid, the remainder of the provisions and the application of such provisions to other persons or circumstances shall not be affected thereby.
List of Ordinance amending Section 6:

Ord. No. 2000-09, effective January 2001

Ord. 2012-04 adopted 7/18/12, effective 7/19/12, rewrite of Rules & Regs Sections 1, 2, and 4-9.

Ord. 2013-05, adopted 12/4/13, effective 1/1/14, Annual Policy Review

Ord. 2014-04 adopted 11/19/14, effective 1/1/15, Annual Policy Review

Ord. 2016-02 adopted 2/3/16, effective immediately, Annual Policy Review

Ord. 2019-01 adopted 01/16/19, effective immediately, minor changes part of Annual Policy Review
APPENDIX G-9

Fats, Oils and Grease Trap Locations and Hot Spots Map
Padre Dam Municipal Water District began conducting biennial audits of the SSMP utilizing this template in calendar year 2016. In addition to filing out this template, the following tasks, at a minimum shall be performed:

1. Compare the records from the Computerized Maintenance and Management System (CMMS) of record, to the data reported to the California Integrated Water Quality System (CIWQS). Review performance metrics tracked by the District versus previous years to identify trends.

2. Review condition assessment data and rehabilitation strategies with the Assistant Operations Manager and Construction and Maintenance Supervisor.

3. Review records from previous internal audits, to ensure noted deficiencies have been addressed.

4. Review preventative maintenance schedules, response to SSOs, and mitigation of SSO causes.

5. Review SSO Emergency Response Plan and identify improvements if needed.

6. Identify accomplishments in improving the collection system.

7. Record all findings during the audit process on the attached SSMP Program Audit Template. This template will be the final audit report. This report will be kept on file along with other relevant SSMP documents.
PDMWD SSMP Program Audit

Date: 4/22/2019
Date of last SSMP Program Audit: 12/21/2017

Audit Team:

1. Director of Operations and Water Quality………………… PAUL CLARKE
2. Director of Operations (AWP)…………………………... KYLE SWANSON
3. Construction & Maintenance Crew Supervisor……… RICH SCHULTZ
4. Engineering Manager…………………………………... MICHAEL HINDE
5. Other(s)…………………………………………………

Summary

The purpose of this Audit is to document the identified areas of strength and deficiency in the management, operation and maintenance of the sewer collection system for 2014 - 2018.

This review is separated into two sections: Section 1 - Monitoring and Measurement, and Section 2 - SSMP Compliance and Effectiveness. This review is completed as part of the monitoring measurement, program modifications and audit process as described in SSMP sections 9 and 10, respectively.

The following describes a brief summary of the findings (i.e. improvement opportunities) from this audit:

Items to address if applicable:

1. Corrective actions planned before your next SSMP Internal Program Audit to address the top SSO causes experienced since your last SSMP Internal Program Audit

2. Describe top three challenges the District faces and corresponding initiative(s) to be implemented before your next SSMP Internal Program Audit to better operate, maintain and manage all parts of the sanitary sewer system

3. Describe challenges and the plan’s effectiveness at communication with the public on development, implementation and performance of its SSMP.

Section 1 - Monitoring and Measurement

This section includes collecting and summarizing the necessary data to evaluate the performance of the collection system based on the key performance indicators presented in section 9 of the SSMP and listed below:

- Number of SSOs
  i. Per year and category
  ii. Dry weather
  iii. Per year by cause
- Annual miles of sewer flushing/cleaning
- Actual versus scheduled cleaning
• Annual miles of CCTV
• System rehab and repairs made
• Annual record of pump station maintenance work orders

1.1 Number of SSOs

The District’s SSOs are summarized in Tables 1, 2, and 3 for years 2014 - 2018 and are illustrated in the corresponding Figures A1, A2, A3 and A4.
<table>
<thead>
<tr>
<th>SSID #</th>
<th>Category*</th>
<th>Date</th>
<th>Appearance Point</th>
<th>Y/N</th>
<th>Cause of SSO</th>
<th>Spill Volume to reach surface water (gal)</th>
<th>Spill Volume Recovered (gal)</th>
<th>Spill Volume (gal)</th>
<th>Dry Weather Y/N</th>
<th>Specified &quot;Other&quot; or which pump station</th>
<th>Mitigated Effect of Spill</th>
<th>Corrective Action Taken</th>
<th>Property owner notified</th>
<th>Spill Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>803850</td>
<td>PLSD</td>
<td>2/11/2014</td>
<td>Inside Building</td>
<td>Y/N</td>
<td>Debris</td>
<td>200</td>
<td>0</td>
<td>200</td>
<td>Y</td>
<td>Debris Rags</td>
<td>X X X X X X X X</td>
<td>The discharge was contained to the two residents, a private contractor was hired to clean and disinfected the affected areas. All spilled water was captured and returned to the sewer system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>804848</td>
<td>PLSD</td>
<td>2/18/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>Y</td>
<td>Debris Rags</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; industrial property; concrete driveway, curb and gutter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>804848</td>
<td>PLSD</td>
<td>2/23/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>Y</td>
<td>Debris General</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; asphalt and concrete driveway.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>805111</td>
<td>PLSD</td>
<td>3/21/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>Y</td>
<td>Other Unknown</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; single family home; spill occurred on concrete driveway and flowed onto asphalt curb and gutter. Blockage unknown. Plumber arrived later to clear blockage after Padre Dam staff had left.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>805716</td>
<td>PLSD</td>
<td>4/17/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>187</td>
<td>0</td>
<td>187</td>
<td>Y</td>
<td>Debris Rags</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; Commercial Property; spill took place on sidewalk, curb and gutter and entered the storm drain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>807572</td>
<td>PLSD</td>
<td>7/9/2014</td>
<td>Manhole</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>132</td>
<td>0</td>
<td>132</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Roots removed with flushing truck.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>807946</td>
<td>PLSD</td>
<td>7/24/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>32</td>
<td>3</td>
<td>29</td>
<td>Y</td>
<td>Debris Rags</td>
<td>X X X X X X X X</td>
<td>Crews stopped the spill by removing the water from the lateral with a vac truck and began clean up of the sidewalk, curb and gutter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>809016</td>
<td>PLSD</td>
<td>6/21/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>12</td>
<td>0</td>
<td>12</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; cleanout located in front yard of house; surface was dirt and patches of weeds and grass.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>809774</td>
<td>PLSD</td>
<td>10/2/2014</td>
<td>Inside Building</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>40</td>
<td>0</td>
<td>40</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Roots removed with flushing truck. Sewer system backed up into a house located on Walnut Tree Ln in El Cajon.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>810592</td>
<td>PLSD</td>
<td>11/4/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Crews removed water from the lateral with a vac truck.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>810868</td>
<td>PLSD</td>
<td>11/23/2014</td>
<td>Manhole</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>137</td>
<td>0</td>
<td>137</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Roots removed with flushing truck.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>812104</td>
<td>PLSD</td>
<td>12/5/2014</td>
<td>Manhole, Upper Lateral (Private)</td>
<td>Y/N</td>
<td>Construction/Contractor</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>Y</td>
<td>Plastic pipe plug</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; senior living facility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>812106</td>
<td>PLSD</td>
<td>12/22/2014</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>27</td>
<td>0</td>
<td>27</td>
<td>Y</td>
<td>Debris General</td>
<td>X X X X X X X X</td>
<td>Cleanup to be performed by property owner; unknown volume of water recovered.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>812058</td>
<td>PLSD</td>
<td>3/4/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>60</td>
<td>0</td>
<td>60</td>
<td>Y</td>
<td>Debris General</td>
<td>X X X X X X X X</td>
<td>Upper private lateral; public park owned by the City of SanTEE.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>814126</td>
<td>PLSD</td>
<td>2/19/2015</td>
<td>Manhole</td>
<td>Y/N</td>
<td>FOG</td>
<td>2,232</td>
<td>0</td>
<td>2,232</td>
<td>Y</td>
<td>FOG</td>
<td>X X X X X X X X</td>
<td>Crews removed water from the spilling manhole with a vac truck; Padre Dam staff removed the blockage and assisted the City of SanTEE with cleanup and disinfection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>814074</td>
<td>PLSD</td>
<td>2/22/2015</td>
<td>Inside Building</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>138</td>
<td>0</td>
<td>138</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Crews removed with flushing truck; water that had spilled on the floor was cleaned up by the residents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>814574</td>
<td>PLSD</td>
<td>3/7/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Debris</td>
<td>702</td>
<td>0</td>
<td>702</td>
<td>Y</td>
<td>FOG</td>
<td>X X X X X X X X</td>
<td>Property owner notified; Spill occurred in the bathroom and hallway of 9619 Hobbywood Rd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>814732</td>
<td>PLSD</td>
<td>3/18/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y/N</td>
<td>Root Intrusion</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Y</td>
<td>Root Intrusion</td>
<td>X X X X X X X X</td>
<td>Single Family Home; spill was from a cleanout located at the top of a dirt embankment. The spill was contained to the back yard of the property.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>814472</td>
<td>PLSD</td>
<td>4/8/2015</td>
<td>Other Sewer System Structure</td>
<td>Y/N</td>
<td>Debris</td>
<td>19</td>
<td>0</td>
<td>19</td>
<td>Y</td>
<td>Debris Rags</td>
<td>X X X X X X X X</td>
<td>Crews assisted with cleanup and instructed restaurant staff to stop using water. The owner called a plumber, who removed the blockage.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Sanitary Sewer Overflow (SSO) Description and Corrective Action Taken

Spill Response Activities

- **Spill Description**
  - The spill surfaced in two residential locations. The first home flooded in the garage and flowed out to the side/backyard. The second home had two bathrooms, a hallway and a bedroom that were flooded.
  - Crews removed water from the lateral with a vac pump station and returned it to the sewer system.
  - The discharge was contained to the two residents, a private contractor was hired to clean and disinfect the affected areas. All spilled water was captured and returned to the sewer system.
  - Roots removed with flushing truck.
  - Crews stopped the spill by removing the water from the lateral with a vac truck and began clean up of the sidewalk, curb and gutter.
  - Water was removed from the spilling manhole with a vac truck; Padre Dam staff removed the blockage and assisted the City of SanTEE with cleanup and disinfection.
  - Crews removed water from the lateral with a vac truck. The owner was responsible for the cleanup, and was instructed to call a plumber to clear the blockage.
  - Crews removed water from the cleanout, contained the runoff with a dirt berm, and cleaned up the water in the street.
  - Crews assisted with cleanup and instructed restaurant staff to stop using water. The owner called a plumber, who removed the blockage.

**Notes:**
- The spill occurred at a restaurant from the grease trap. Water spilled from the grease trap onto a concrete containment area and then to an asphalt driveway.
- Crews removed water from the lateral with a vac pump station and returned it to the sewer system.
- Crews removed water from the lateral with a vac pump station and returned it to the sewer system.
- Crews assisted with cleanup and instructed restaurant staff to stop using water. The owner called a plumber, who removed the blockage.
Table 1: Sanitary Sewer Overflow (SSO) Description and Corrective Action Taken

<table>
<thead>
<tr>
<th>SSID</th>
<th>Category (a)</th>
<th>Date</th>
<th>Appearance Point</th>
<th>Cause of SSO</th>
<th>Spill Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>814637</td>
<td>PLSD</td>
<td>4/16/2015</td>
<td>Grease Trap (Private)</td>
<td>Y 7 6 1 FOG</td>
<td>Sand bags placed at the curb to contain flow from reaching the storm drain; private company performed cleanup and disposal of parking lot and storm drain.</td>
</tr>
<tr>
<td>81669</td>
<td>PLSD</td>
<td>6/29/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 2,234 1,534 700 FOG</td>
<td>Responded to spill, notified shopping center of spill; stop flow from entering storm drain, removed blockage.</td>
</tr>
<tr>
<td>816464</td>
<td>3</td>
<td>5/29/2015</td>
<td>Manhole</td>
<td>Y 4 4 0</td>
<td>Re-established lateral connection to main.</td>
</tr>
<tr>
<td>816884</td>
<td>PLSD</td>
<td>7/20/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 12 12 0 FOG</td>
<td>Two spill points; the manhole for the grease trap and the cleanout north of the manhole. Spill was contained to the paved parking lot of Weinerschnitzel restaurant.</td>
</tr>
<tr>
<td>817396</td>
<td>PLSD</td>
<td>7/24/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 135 135 0 FOG</td>
<td></td>
</tr>
<tr>
<td>818096</td>
<td>PLSD</td>
<td>9/12/2015</td>
<td>Manhole</td>
<td>Y 3,440 0 3,440 FOG</td>
<td>All spill response was handled by the City of Santee. Padre Dam found out about the spill later, assisted in estimating the spill volume, and reported the PLSD.</td>
</tr>
<tr>
<td>818370</td>
<td>PLSD</td>
<td>9/23/2015</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 464 8 466 FOG</td>
<td>Crews responded with flushing truck and flushed the main. The blockage was located in the lateral and needed to be removed by a plumber. Parking lot cleanup was performed by Padre Dam staff.</td>
</tr>
<tr>
<td>819689</td>
<td>PLSD</td>
<td>10/1/2015</td>
<td>Inside Building or Structure</td>
<td>Y 35 1 0 Other</td>
<td>Crews washed down and vacuumed up washdown water and contaminated debris.</td>
</tr>
<tr>
<td>821102</td>
<td>PLSD</td>
<td>1/9/2016</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 23 23 0 Root Intrusion</td>
<td>Sand bags placed in the gutter; homeowner was instructed on how to clean up and to call a plumber to remove the blockage.</td>
</tr>
<tr>
<td>824676</td>
<td>PLSD</td>
<td>8/8/2016</td>
<td>Inside Building or Structure</td>
<td>Y 43 43 0 Root Intrusion</td>
<td>Padres alarm crews flushed main to eliminate potential blockages and inspected. The customer was instructed to contact a plumber.</td>
</tr>
<tr>
<td>824976</td>
<td>PLSD</td>
<td>5/13/2016</td>
<td>Inside Building or Structure</td>
<td>Y 30 30 0 Root Intrusion</td>
<td>The customer was advised to contact a plumber to remove the blockage from the lateral and inspect the damage.</td>
</tr>
<tr>
<td>836310</td>
<td>PLSD</td>
<td>6/29/2016</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 98 0 0</td>
<td>Padre Dam instructed customer to stop using water; waited for plumber to arrive and clear the blockage.</td>
</tr>
<tr>
<td>831646</td>
<td>PLSD</td>
<td>12/16/2016</td>
<td>Grease Trap (Private)</td>
<td>Y 7 0 0 FOG</td>
<td>The owner was responsible for the cleanup.</td>
</tr>
<tr>
<td>835038</td>
<td>PLSD</td>
<td>4/24/2017</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 57 67 0 Root Intrusion</td>
<td>Spill occurred in front yard of the single family residence.</td>
</tr>
<tr>
<td>837287</td>
<td>PLSD</td>
<td>7/16/2017</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 500 0 500 Debris</td>
<td>Sand bags placed around storm drain; Phil's BBQ was advised to contact a restoration company to perform the cleanup. Padre Dam assisted with the cleanup.</td>
</tr>
<tr>
<td>843323</td>
<td>PLSD</td>
<td>11/10/2017</td>
<td>Lateral Clean Out (Private)</td>
<td>Y 25 17 8</td>
<td>Upper private lateral from single family home; spill reached paved surface, street curb and gutter, unspared surface.</td>
</tr>
</tbody>
</table>

Notes: CIWQS = Combined Sewer Overflow; Y/N = Yes/No; Specified “Other” or which pump station; Cleanup by City of Santee (Y/N) + Storm Drain (Y/N) + Residential (Y/N) + Commercial (Y/N) + Industrial (Y/N) + Recycled Water (Y/N).
Table 1: Sanitary Sewer Overflow (SSO) Description and Corrective Action Taken

<table>
<thead>
<tr>
<th>SSO ID #</th>
<th>CIWQS</th>
<th>Category(a)</th>
<th>Date</th>
<th>Appearance Point</th>
<th>Spill Volume Recovered (gal)</th>
<th>Spill Volume to reach surface water (gal)</th>
<th>Cause of SSO</th>
<th>Specify &quot;Other&quot; or which pump station</th>
<th>Other Enforcement Agency Notified</th>
<th>Spill Response Activities</th>
<th>Corrective Action Taken</th>
<th>Spill Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>841806</td>
<td>PLSD</td>
<td>1</td>
<td>11/21/2017</td>
<td>Manhole</td>
<td>Y</td>
<td>820</td>
<td>820</td>
<td>0 FOG</td>
<td>X</td>
<td>Returned Portion of Spill to Sanitary Sewer System</td>
<td>Returned All Spill to Sanitary Sewer System</td>
<td>The spill was caused by a combination of root intrusion and grease. It occurred in the southeast end of the parking lot of Arbor Apartment Complex and spilled over street, curb and gutter, and paved surface.</td>
</tr>
<tr>
<td>842790</td>
<td>2</td>
<td>12/13/2017</td>
<td>Manhole</td>
<td>Y</td>
<td>5,075</td>
<td>1,071</td>
<td>0</td>
<td>FOG</td>
<td>X</td>
<td>X X X X X X</td>
<td>Returned Portion of Spill to Sanitary Sewer System</td>
<td>Spill occurred in Manhole #1939 located in Mission Trails Park. The majority of the spill occurred on the dirt road within Mission Trails Regional Park.</td>
</tr>
<tr>
<td>846669</td>
<td>3</td>
<td>3/30/2018</td>
<td>Inside Building or Structure</td>
<td>Y</td>
<td>36</td>
<td>36</td>
<td>0</td>
<td>Construction/Contractor</td>
<td>Pipe Structural problem/Failure</td>
<td>X</td>
<td>Returned Portion of Spill to Sanitary Sewer System</td>
<td>Returned All Spill to Sanitary Sewer System</td>
</tr>
<tr>
<td>846672</td>
<td>PLSD</td>
<td>4/16/2018</td>
<td>Lateral Clean Out (Private)</td>
<td>Y</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>Root Intrusion</td>
<td>X X X X X X</td>
<td>Padre Dam crews cleaned the driveway, sidewalk and gutter</td>
<td>Upper private lateral; single family home; spill exited a cleanout, crossed a sidewalk down the driveway to the gutter and into a storm drain.</td>
<td></td>
</tr>
<tr>
<td>849081</td>
<td>PLSD</td>
<td>8/5/2018</td>
<td>Other Sewer System Structure</td>
<td>Y</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>FOG</td>
<td>X X X X X</td>
<td>Padre Dam crews cleaned the gutter and contained the water.</td>
<td>Upper private lateral; single family home; sewer flowed from property cleanout down the driveway into the gutter to the storm drain.</td>
<td></td>
</tr>
<tr>
<td>853394</td>
<td>PLSD</td>
<td>11/26/2018</td>
<td>Lateral Clean Out (Private)</td>
<td>Y</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>Debris General</td>
<td>Padre Dam crews cleaned the gutter and contained the water.</td>
<td>Debris backed up in private lateral of single family home; sewer flowed from property cleanout down the driveway into the gutter to the storm drain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>854404</td>
<td>PLSD</td>
<td>12/8/2018</td>
<td>Lateral Clean Out (Private)</td>
<td>Y</td>
<td>40</td>
<td>40</td>
<td>0</td>
<td>Root Intrusion</td>
<td>X X X X</td>
<td>Padre Dam crews cleaned the gutter and contained the water.</td>
<td>Upper private lateral; single family home; sewer flowed from private lateral cleanout, halfway up a private concrete driveway.</td>
<td></td>
</tr>
<tr>
<td>854748</td>
<td>3</td>
<td>12/20/2018</td>
<td>Lower Lateral (Private)</td>
<td>Y</td>
<td>167</td>
<td>167</td>
<td>0</td>
<td>Debris Wipes/Non-Dispersables</td>
<td>Padre Dam crews cleaned the gutter and contained the water.</td>
<td>The spill was discharging from two property line cleanouts due to a blockage in the 6&quot; gravity mainline; flowed into the curb and gutter.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Category 1 SSO: discharge of any volume that reaches surface water or a tributary drainage channel or MS4 and is not fully recovered from a dedicated infiltration basin prior to reaching surface waters
Category 2 SSO: discharge of 1,000 gallons or more that does not reach surface water, drainage channel, or MS4
Category 3 SSO: All other discharges
PLSD SSO = "Private Lateral Sewer Discharge" discharge resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee’s sanitary sewer system or from other private sewer assets
Table 2: Number of SSOs and Spill Volumes for 2014 - 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>PLSD</th>
<th>Total SSOs</th>
<th>Dry Weather SSOs</th>
<th>Total Spill Volume (gal)</th>
<th>Total Recovered (gal)</th>
<th>Total Volume to reach surface waters (gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>9</td>
<td>13</td>
<td>13</td>
<td>795</td>
<td>727</td>
<td>29</td>
</tr>
<tr>
<td>2015</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>12</td>
<td>14</td>
<td>14</td>
<td>9,483</td>
<td>4,150</td>
<td>4,597</td>
</tr>
<tr>
<td>2016</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>201</td>
<td>96</td>
<td>-</td>
</tr>
<tr>
<td>2017</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6,487</td>
<td>1,975</td>
<td>508</td>
</tr>
<tr>
<td>2018</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>257</td>
<td>253</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>1</td>
<td>8</td>
<td>34</td>
<td>43</td>
<td>43</td>
<td>17,223</td>
<td>7,201</td>
<td>5,136</td>
</tr>
</tbody>
</table>

Figure A1: Number of SSOs by Year per Category

![Number of Spills per Year by Category](image)
Table 3: Summary of SSOs by Cause for 2014 - 2018

<table>
<thead>
<tr>
<th>Cause</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Total SSOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOG</td>
<td>-</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Root Intrusion</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Debris</td>
<td>6</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Pump Station Failure</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vandalism</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Construction/Contractor</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total SSOs</strong></td>
<td>13</td>
<td>14</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>43</td>
</tr>
</tbody>
</table>

Figure A2: Number of SSOs per Year by Cause

![Number of SSOs per Year by Cause](Q:\Projects\Design\218030_SSMP\Update2019\Docs\Reports\Appendix H_Audit Template\218030_SSMP Program Audit 2014-2018.xlsx)

Figure A3: SSO Failure by Cause

![SSO Failure by Cause](Q:\Projects\Design\218030_SSMP\Update2019\Docs\Reports\Appendix H_Audit Template\218030_SSMP Program Audit 2014-2018.xlsx)
Another metric for the District is to evaluate the locations of the SSOs. Figure H-2 found attached shows the historical SSOs by location including by category and spill cause.

### 1.2 Summary of Preventative Maintenance

The following table provides a summary of the Districts preventative maintenance activities with respect to the sewer system.

#### Table 4: Annual Summary Sewer Flushing and CCTV and Manhole Inspections

<table>
<thead>
<tr>
<th>Year</th>
<th>Linear Feet of Collection System Flushed/Cleaned</th>
<th>% to 605,000 LF Goal</th>
<th>Linear Feet of Collection System Inspected</th>
<th>% to 72,000 LF Goal</th>
<th>Number of Manholes Inspected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>611,933</td>
<td>101%</td>
<td>40,056</td>
<td>56%</td>
<td>2,981</td>
</tr>
<tr>
<td>2015</td>
<td>726,318</td>
<td>120%</td>
<td>24,830</td>
<td>34%</td>
<td>3,350</td>
</tr>
<tr>
<td>2016</td>
<td>780,990</td>
<td>129%</td>
<td>57,200</td>
<td>79%</td>
<td>3,871</td>
</tr>
<tr>
<td>2017</td>
<td>714,386</td>
<td>118%</td>
<td>86,123</td>
<td>120%</td>
<td>3,223</td>
</tr>
<tr>
<td>2018</td>
<td>667,427</td>
<td>110%</td>
<td>114,305</td>
<td>159%</td>
<td>3,073</td>
</tr>
</tbody>
</table>

#### Table 5: Lift Station Inspections

<table>
<thead>
<tr>
<th>Lift Station Name</th>
<th>Number of Times Inspected</th>
<th>Number of SSOs Caused by Pump Station Failure for</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Rise Way</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Mission Creek</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Woodside Avenue</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Sky Ranch</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Influent Pump Station</td>
<td>DAILY</td>
<td>DAILY</td>
</tr>
</tbody>
</table>

Provide narrative explanation with respect to sewer flushing and CCTV maintenance program, manhole and lift station inspections. Is the District maintaining goals; what were actual vs. scheduled? Is the District seeing any correlation with reduction in SSOs? Provide explanation for trends (i.e. reduction in linear feet of CCTV due to reduction in staffing, equipment failure or out to maintenance, etc.).

---

Annual goal for sewer flushing is 605,000 feet and is regularly exceeded. Goals for CCTV are being met in the most recent years. There have been some issues with the CCTV truck and equipment that results in some down time. Staff do a great job to catch up by dedicating more time to the CCTV in order to get back on track while keeping the flushing numbers on track.
1.3 Sewer System Repairs

Provide a description of additions and improvements made to the sanitary sewer collection system; also a narrative explanation as to how these were discovered (during preventative maintenance, SSO, complaint, etc.) or if they were planned CIP projects. This will be beneficial for SSMP effectiveness evaluation.

In-house sewer system repair numbers have dropped off slightly due to CIP projects capturing a large number of areas in need of repairs. Most pipe discrepancies are found via CCTV program.

### 1.3.1 Pipeline

#### Table 6: Annual Summary of Pipeline Repairs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Repairs</th>
<th>Number of Lateral Repairs</th>
<th>Brief Description of Repairs Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>11</td>
<td>12</td>
<td>Repairing cracks, holes, and broken connections</td>
</tr>
<tr>
<td>2015</td>
<td>10</td>
<td>4</td>
<td>Repairing cracks, holes, and broken connections</td>
</tr>
<tr>
<td>2016</td>
<td>21</td>
<td>5</td>
<td>Repairing cracks, holes, and broken connections</td>
</tr>
<tr>
<td>2017</td>
<td>26</td>
<td>2</td>
<td>Repairing cracks, holes, and broken connections</td>
</tr>
<tr>
<td>2018</td>
<td>12</td>
<td>3</td>
<td>Repairing cracks, holes, and broken connections</td>
</tr>
</tbody>
</table>

### 1.3.2 Manholes

#### Table 7: Annual Summary of Manhole Rehabilitation and Repairs

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Manhole Rehabilitations</th>
<th>Number of Manhole Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2015</td>
<td>64</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>2017</td>
<td>77</td>
<td>15</td>
</tr>
<tr>
<td>2018</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>
1.3.3 Pump Station Maintenance Work Orders

### Table 8: Annual Summary of Pump Station Maintenance Repairs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Repairs</th>
<th>Brief Description of Repairs Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>XX</td>
<td>INSERT DESCRIPTION</td>
</tr>
<tr>
<td>2015</td>
<td>XX</td>
<td>INSERT DESCRIPTION</td>
</tr>
<tr>
<td>2016</td>
<td>XX</td>
<td>INSERT DESCRIPTION</td>
</tr>
<tr>
<td>2017</td>
<td>XX</td>
<td>INSERT DESCRIPTION</td>
</tr>
<tr>
<td>2018</td>
<td>XX</td>
<td>INSERT DESCRIPTION</td>
</tr>
</tbody>
</table>

1.3.4 Sewer System Additions and Improvements for Years 2014 - 2018

Description of additions and improvements completed (at least past two years) and planned for the upcoming reporting year. In addition to the summary table above, Appendix C of the SSMP contains a figure showing the locations of future wastewater collection system projects.

Multiple Manholes have been rehabilitated during the period and several hundred feet of sewer mains have been re-lined to extend their life. Engineering staff have awarded contracts for several more CIPP jobs (annually) and manhole rehabilitation (every other year schedule). A recently completed diversion structure project allows operations staff a quicker and safer option when flow needs to be diverted.
### 1.4 FOG Program

#### Table 9: Annual Summary of FOG Program Compliance

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Inspections</th>
<th>Number of Violations</th>
<th>Number of SSOs Caused by FOG</th>
<th>Education Outreach Activities Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>301</td>
<td>0</td>
<td>0</td>
<td>YES</td>
</tr>
<tr>
<td>2015</td>
<td>293</td>
<td>0</td>
<td>0</td>
<td>YES</td>
</tr>
<tr>
<td>2016</td>
<td>256</td>
<td>0</td>
<td>0</td>
<td>YES</td>
</tr>
<tr>
<td>2017</td>
<td>269</td>
<td>1</td>
<td>0</td>
<td>YES</td>
</tr>
<tr>
<td>2018</td>
<td>325</td>
<td>2</td>
<td>0</td>
<td>YES</td>
</tr>
</tbody>
</table>

### 1.5 Customer Complaints

The table below provides a summary of the Customer Complaints received by the District from 2014 - 2018. The complaints have been categorized based on the descriptions provided. Also, Figure H-3 found attached shows the customer complaints by location including by category and year.

#### Table 10: Summary of Customer Calls

<table>
<thead>
<tr>
<th>Year</th>
<th>Blockage</th>
<th>Backup</th>
<th>In-Home Backup</th>
<th>Odor</th>
<th>Roots</th>
<th>Pipe Damage</th>
<th>Concern/Request</th>
<th>Vactor Truck</th>
<th>Contractor/Construction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>13</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>2015</td>
<td>6</td>
<td>8</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>2016</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2017</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>2018</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>26</td>
<td>6</td>
<td>40</td>
<td>13</td>
<td>8</td>
<td>18</td>
<td>20</td>
<td>3</td>
<td>153</td>
</tr>
</tbody>
</table>
## Section 2 - SSMP Compliance and Effectiveness

### Element 1: Goals

**SSMP Compliance:**
- [ ] In Compliance
- [ ] Not in Compliance
- [ ] N/A Justification:  INSERT JUSTIFICATION

**How SSMP element is being implemented?** (Narrative explanation)

SSO frequencies have been infrequent during the audit period. All spills are cleaned up by District Staff to the best of our ability. We are often the first responders to PLSD spills and assist with the cleanup when customers cannot or do not respond to our requests.

**Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)**

Healthy funding for O&M and CIP activities ensures that O&M goals are met on a regular basis and CIP projects are completed as well. Staffing levels are adequate. A Five Year Business Plan was adopted for 2018-2022, which includes revised goals for sewer cleaning and CCTV.

**Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance**

None identified.

**Corrective Actions for identified deficiencies**
(smaller incremental steps that can be implemented before next audit)

None identified.
Element 2: Organization

SSMP Compliance:

- ☐ In Compliance
- ☐ Not in Compliance
- ☐ N/A   Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

Chain of command is effective in communicating throughout the organization and during a spill event. Staff are trained on what to do, who to contact, and how to react during spills.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Information flows freely during events. A back up data submitter has been added to CIWQS to provide redundancy to reporting responsibilities.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

Corrective Actions for identified deficiencies (smaller incremental steps that can be implemented before next audit)

None identified.
Element 3: Legal Authority

SSMP Compliance:

- [ ] In Compliance
- [ ] Not in Compliance
- [ ] N/A Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? ( Narrative explanation)

Rules and Regulations provide clear guidance for legal authority.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

District annually updates the Rules and Regulations and we can update anytime if it is urgent.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

Some PLSD customers are hard to reach and can be non-responsive. One strategy is to include a PLSD specific item in the Rules and Regulations that clarifies the District can directly charge a non-responsive customer for the clean-up of a PLSD.

Corrective Actions for identified deficiencies
(smaller incremental steps that can be implemented before next audit)

Work on language for the next Rules and Regulations update.
Element 4: Operation and Maintenance Program

SSMP Compliance:
- ☑ In Compliance
- □ Not in Compliance
- □ N/A

Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

5-Year Business Plan and Budget is the guiding document that establishes goals for the sewer department. This plan is based on our Master Plan. CIP program prioritizes projects on an annual basis. Staff purchased a "JetScan" camera that can video sections of sewer while attached to a Vactor nozzle. This gives staff a much quicker look at the interior of pipes. Staff also utilizes smart covers at specific locations in the collection systems to monitor for problems. Ongoing testing is in progress.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Goals are being achieved on an annual basis. Additionally, a new Vactor truck was added to the fleet in 2014, replacing an older Vactor.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

Corrective Actions for identified deficiencies
(smaller incremental steps that can be implemented before next audit)

None identified.
Element 5: Design and Performance Provisions

SSMP Compliance:

- [ ] In Compliance
- [ ] Not in Compliance
- [ ] N/A

Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

Padre Dam is an active participant in the San Diego Water Agencies’ Standards (SDWAS) and follows the design guidelines. District Engineers and Inspectors ensure that projects are constructed to the District’s standards.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Continued participation in the SDWAS ensures that staff are up to date on current issues and products on the market. Continued training at various vendor fairs and trade organizations helps keep staff informed as well.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

Corrective Actions for identified deficiencies
(smaller incremental steps that can be implemented before next audit)

None identified.
## Element 6: Overflow Emergency Response Plan

### SSMP Compliance:
- [ ] In Compliance
- [ ] Not in Compliance
- [ ] N/A

**Justification:** INSERT JUSTIFICATION

### How SSMP element is being implemented? (Narrative explanation)

Notifications procedures are thorough and detailed. Staff are familiar with who to call and how to respond. Emergency response training is conducted in the Sewer Group on a regular basis. After each SSO and PLSD, each event is evaluated to ensure we responded in the most efficient manner possible and changes are made when necessary.

### Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Additional hands on training should be conducted to provide staff with more real life experiences.

### Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

### Corrective Actions for identified deficiencies
(smaller incremental steps that can be implemented before next audit)

None identified.
Element 7: Fats, Oils and Grease (FOG) Control Program

SSMP Compliance:

- [x] In Compliance
- [ ] Not in Compliance
- [ ] N/A

Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

Our public outreach includes a page on the District website containing information and tools to educate the public on ways to prevent FOG related SSOs. Additionally all commercial/food industry facilities are inspected at a minimum of once per year to ensure compliance with all District issued permit conditions.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

FOG program is very effective and all goals are being met.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

Corrective Actions for identified deficiencies (smaller incremental steps that can be implemented before next audit)

None identified.
Element 8: System Evaluation and Capacity Assurance Plan

SSMP Compliance:

☐ In Compliance  
☐ Not in Compliance  
☐ N/A  Justification:  INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

Siphon assessment was recently completed to assess the condition and capacity of the trans river siphon. Engineering has since scheduled this pipeline for a future project.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Carollo Engineers conducted an update to the Sewer Hydraulic Model Calibration and System Analysis in 2018, which updated much of the existing design criteria, a result of lower sewer flows being seen due to California’s drought conditions and more efficient plumbing fixtures.

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

The report identified areas in need of upsizing to meet future demands. Engineering staff regularly consider capacity increases for the CIP list of projects, and reprioritize CIP projects and budgets annually.

Corrective Actions for identified deficiencies  
(smaller incremental steps that can be implemented before next audit)

Prioritize and schedule projects for design and construction.
## Element 9: Monitoring Measurement and Program Modifications

### SSMP Compliance:
- [ ] In Compliance
- [ ] Not in Compliance
- [ ] N/A  Justification: **INSERT JUSTIFICATION**

### How SSMP element is being implemented? (Narrative explanation)

*See earlier worksheets.*

### Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

**N/A**

### Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

**N/A**

### Corrective Actions for identified deficiencies  
(smaller incremental steps that can be implemented before next audit)

**N/A**
Element 10: SSMP Internal Audits

SSMP Compliance:
☑ In Compliance
☐ Not in Compliance
☐ N/A Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

The last Audit was conducted in 2017 after all 2015-2016 data was gathered. This Audit includes available information from 2014 through 2018 (5-years)

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

N/A

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

N/A

Corrective Actions for identified deficiencies (smaller incremental steps that can be implemented before next audit)

N/A
Element 11: Communication Program

SSMP Compliance:

- [x] In Compliance
- [ ] Not in Compliance
- [ ] N/A  Justification: INSERT JUSTIFICATION

How SSMP element is being implemented? (Narrative explanation)

Program is available on District website, along with UWMP, CFMP, CIP, Five Year Business Plan. FOG program is available on the website as well. District Compliance Administrator regularly inspects businesses and educates them on best practices.

Effectiveness of implementing SSMP element (i.e. what is working well, what needs improvement)

Review of District material to ensure they are up to date and relevant

Identified Deficiencies, issues that may lead to non-compliance, areas of non-compliance

None identified.

Corrective Actions for identified deficiencies
(smaller incremental steps that can be implemented before next audit)

None identified.