



EXECUTIVE SUMMARY

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted Order No. 2006-0003, a General Waste Discharge Requirement (WDR) for all publicly owned sanitary sewer collection systems in California with more than one (1) mile of sewer pipe. The goal of Order No. 2006-0003 is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSOs) by requiring that:

1. In the event of an SSO, all feasible steps be taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
2. If an SSO occurs, it must be reported to the SWRCB using an online reporting system developed by the SWRCB.
3. All publicly owned collection system agencies with more than 1 mile of sewer pipe in the State must develop a Sewer System Management Plan (SSMP).

This critical component of Order No. 2006-0003 is the development of a Sewer System Management Plan (SSMP). As described in the WDR, an SSMP must contain eleven specific elements that encompass the planning, operations, maintenance, and engineering efforts that an agency undertakes in order to limit SSOs in its sanitary sewer system. In addition, the SSMP provides a mechanism for measuring the effectiveness of existing and future efforts so that an agency's efforts to prevent SSOs can be continuously improved. The eleven elements required in the SSMP include the following:

1. SSMP Development Plan and Schedule
2. Goals and Organization Structure
3. Legal Authority
4. Operation and Maintenance Program
5. Design and Performance Standards
6. Overflow Emergency Response Program
7. Fats, Oils and Grease Control Program
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

SAWPA has developed an SSMP for the Inland Empire Brine Line (formerly known as SARI) that meets the requirements of the WDR. Just as importantly, this SSMP has been developed to be a valuable reference tool for SAWPA staff and its operators and contractors. The SSMP is designed to allow staff to update and access, as reference, any of the sections contained therein.



SAWPA has been proactive in its management of the Brine Line, and over the years has developed and implemented a series of ordinances, specifications, and programs to protect the capacity of the Brine Line, serve customers and member agencies, and minimize SSOs and accidents. In addition, SAWPA staff recognized that the development of the SSMP was an opportunity to update and revise these programs while adding new ones as required. As a result, the SSMP for the Brine Line documents and centralizes existing and ongoing management programs in addition to delivering new programs for the management of the Brine Line. SAWPA has been developing Geographic Information System tools to assist in managing the SSMP. The specific GIS tools include modules to manage USA DigAlert tickets, status of air release and blow off valves, status of sealed maintenance access structures, maintenance access structure inspections, as well as a work order tracking tool.

A description of the elements found in the Brine Line SSMP follows below.

SSMP Development Plan and Schedule

SAWPA's Development Plan and Schedule for the Brine Line SSMP was submitted to the SAWPA Commission, as required by the WDR, on November 13, 2007 under Commission Memorandum No. 6069. The General Manager and the Executive Manager for Engineering and Operations were named as the Legally Responsible Officials (LROs) per Section J of the WDR. The LROs are responsible for completing the monthly on-line spill reports as well as for certifying that all elements of the SSMP have been completed.

The SAWPA Commission adopted the SSMP at a Public Hearing on April 21, 2009. Since its adoption, SAWPA has been making updates to the SSMP as required. This version of the SSMP incorporates all changes made to date.

Goals and Organization Structure

The primary goal of this SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the Brine Line system, in order to reduce and prevent Sanitary Sewer Overflows (SSO's), as well as mitigate any SSO's that do occur. Accordingly, the SSMP satisfies the requirements of SWRCB Order No. 2006-0003 (WDR) and Order No. 2008-0002-EXEC.

In addition, the Brine Line SSMP has been developed to implement and support SAWPA's strategic goals. SAWPA maintains the following strategic goals as the owner and operator of the Brine Line:

1. Facilitate water supply through groundwater desalting and protecting watershed resources
2. Manage and operate the Brine Line system in an environmentally and sustainable way
3. Provide adequate capacity for existing and projected future customers
4. Continue to improve Brine Line system planning and operations

In order to implement and support these strategic goals, the Brine Line SSMP lists several short-term SSMP-specific goals to be implemented and monitored over the next five years.



Legal Authority

The Brine Line SSMP demonstrates that SAWPA has the necessary legal authority to:

1. Prevent illicit discharges into its sanitary sewer system.
2. Require that sewers and connections be properly designed and constructed.
3. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by SAWPA.
4. Limit the discharge of Fats, Oils, and Grease (FOG) and other debris that may cause blockages.
5. Enforce any violation of its sewer ordinances.

SAWPA's legal authority to effectively own and operate the Brine Line and comply with the WDR derives from the following documents. Primary legal authority is derived from *Ordinance No. 7*, with the other documents implementing that legal authority and passing it through to member agencies and customers:

- *Ordinance No. 7, An Ordinance Establishing Regulations for the Use of the Inland Empire Brine Line*
- Sewer System Standard Drawings and Specifications
- Member Agency Agreements
- Discharge Permits
- *SAWPA Easement Summary*

Operation and Maintenance Program

SAWPA's Operation and Maintenance Program satisfies the following requirements:

1. An up-to-date map of the sanitary sewer system, showing all gravity line segments and maintenance access structures, pressure pipes and valves.
2. Routine preventive operation and maintenance activities by staff.
3. A rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency.
4. Training on a regular basis for staff in sanitary sewer system operations and maintenance.
5. Equipment and replacement part inventories, including identification of critical replacement parts.

During the SSMP development process, SAWPA, Western Municipal Water District (WMWD), and Inland Empire Utilities Agency (IEUA) staff recognized the need to systematically document the preventative maintenance activities already being performed, to add some activities to the list being performed, and to better document the training required for these activities. The result of this recognition was the development of:

- Standard Operating Procedures (SOPs) for preventative maintenance



- Brine Line-specific training for staff performing maintenance on the Brine Line
- Standardized log and record sheets for preventative maintenance
- GIS tools to assist in tracking Brine Line assets

The SOPs and training guidelines needed for the Brine Line have been identified, and are currently under development. In addition, the Brine Line Geographic Information System (GIS) has been updated into a utility-based system that will allow the GIS to serve as the primary data location for preventative maintenance and future asset management functions.

Design and Performance Standards

SAWPA's Design and Performance Provisions provide that the Brine Line has

1. Design and construction standards and specifications for the installation of new sanitary sewer systems; and for the rehabilitation and repair of existing sanitary sewer systems.
2. Procedures and standards for inspecting and testing the installation of new sewers, and for rehabilitation and repair projects.

The standards and procedures required by the WDR are contained in the Standard Drawings developed previously by SAWPA, and in the Standard Technical Provisions developed as part of the SSMP development process.

Overflow Emergency Response Program

SAWPA has developed and implemented an overflow emergency response plan that provides:

1. Proper notification procedures so that primary responders and regulatory agencies are informed of all Sanitary Sewer Overflows (SSOs) in a timely manner
2. A program to ensure an appropriate response to all overflows
3. Procedures which ensure prompt notification to appropriate regulatory agencies and other potentially affected entities
4. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities
5. 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

SAWPA developed the Brine Line Overflow Emergency Response Program previously, and provides desktop training once per year. The program was updated to account for the notification procedures of Order No. 2008-0002-EXEC as part of the SSMP development process.

Fats, Oils and Grease Control Program

SAWPA's FOG Control Program helps reduce the amount of Fats, Oils and Grease discharged to the Brine Line by including:

1. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area, and a list of acceptable disposal facilities.



2. Legal authority to prohibit discharges to the system and identify measures to prevent SSO's and blockages caused by FOG.
3. Requirements to install grease removal devices, design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.
4. Authority to inspect grease producing facilities, enforcement authorities, and sufficient staff to inspect and enforce the FOG ordinance.
5. Identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.
6. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified.
7. Implementation of a plan and schedule for a public education outreach program that promotes proper disposal of FOG.

Ordinance No. 7 and the Member Agency Agreements provide the legal authority that SAWPA requires to limit discharge of FOG into the Brine Line. Discharge permits and agreements with domestic dischargers to the Brine Line pass this authority on to customers. WMWD and IEUA staff have identified FOG-susceptible areas of the Brine Line for increased maintenance and monitoring.

System Evaluation and Capacity Assurance Plan

SAWPA has prepared and implemented a System Evaluation and Capacity Assurance Plan to ensure that there is adequate 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. SAWPA's System Evaluation and Capacity Assurance Plan encompasses the following components:

1. Evaluation of Brine Line hydraulics.
2. Establishment of design criteria.
3. Quantification of existing and future predicted discharges into the Brine Line.
4. Development of possible capacity enhancement measures.

The primary component of SAWPA's capacity assurance plan is the hydraulic model of the Brine Line. Since its development in 2006, the model has been updated by SAWPA staff to include the latest flow and infrastructure information. The model is regularly updated as required to serve as a capacity evaluation tool.

Monitoring, Measurement, and Program Modifications

SAWPA's Monitoring, Measurement, and Program Modifications are designed to:

- (1) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities
- (2) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP
- (3) Assess the success of the preventative maintenance program



- (4) Update program elements, as appropriate, based on monitoring or performance evaluations
- (5) Identify and illustrate SSO trends, including: frequency, location, and volume.

This program is accomplished through a spreadsheet that lists all of the SSMP specific goals established by SAWPA for the Brine Line. The spreadsheet maintains the person responsible for each goal as well as the data required for measurement of each goal. The data is to be compiled once per year for analysis of success and modification of goals and programs where necessary.

SSMP Program Audits

SAWPA is required to conduct periodic internal audits, appropriate to the size of the Brine Line 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 will focus on evaluating the effectiveness of the SSMP and SAWPA's compliance with the SSMP requirements identified in Section D, 13 of SWRCB Order No. 2006-0003, including the identification of any deficiencies in the SSMP and steps to correct them.

A spreadsheet has been developed to track the trends displayed in the monitoring data compiled every year. This spreadsheet will form the quantitative basis of the audit report required of SAWPA.

Communication Program

SAWPA has communicated on a regular basis with interested parties, including member agencies, on the implementation and performance of this SSMP. Where necessary, member agencies and Brine Line customers were contacted for input and data during the development of the SSMP. Member agencies have reviewed the SSMP and provided input.

SAWPA made a Draft version of the SSMP available to the public, allowed time for review, and invited public comments at a General Managers meeting on April 14, 2009, thereby allowing for public input.

The SSMP will undergo review and revision through internal audits every two (2) years and external audits every five (5) years. The results of these audits will be provided to member agencies and will be available to the public on SAWPA's website (www.sawpa.org). Additionally, SAWPA's website presents information about on-going efforts to manage and maintain the Brine Line.