



**DESERT  
WATER  
— AGENCY —**

SANITARY SEWER MANAGEMENT PLAN (SSMP)

WDID No. 7SSO11440

Desert Water Agency  
Engineering Department  
May 2026

Any comments on this plan can be submitted to [SSMP-Comments@DWA.ORG](mailto:SSMP-Comments@DWA.ORG)

## TABLE OF CONTENTS

### SEWER SYSTEM MANAGEMENT PLAN UPDATE SUMMARY

|                                                                     |    |
|---------------------------------------------------------------------|----|
| SEWER SYSTEM MANAGEMENT PLAN GOALS .....                            | 1  |
| Introduction.....                                                   | 1  |
| Background.....                                                     | 1  |
| Sanitary Sewer Collection System.....                               | 2  |
| System Overview .....                                               | 2  |
| Dream Homes Collection System.....                                  | 2  |
| Date Palm Lift Station Collection System.....                       | 3  |
| Cathedral Canyon Lift Station Collection System.....                | 3  |
| ORGANIZATION .....                                                  | 4  |
| LEGAL AUTHORITY .....                                               | 5  |
| OPERATIONS AND MAINTENANCE PROGRAM.....                             | 6  |
| Sanitary System Maps.....                                           | 6  |
| Preventive Operation and Maintenance Activities .....               | 6  |
| Training.....                                                       | 6  |
| Equipment Inventory .....                                           | 6  |
| DESIGN AND PERFORMANCE PROVISIONS .....                             | 7  |
| Design Criteria and Construction Standards and Specifications ..... | 7  |
| Procedures and Standards .....                                      | 7  |
| SPILL EMERGENCY RESPONSE PLAN .....                                 | 7  |
| SEWER PIPE BLOCKAGE CONTROL PROGRAM.....                            | 8  |
| SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS..... | 9  |
| System Evaluation and Condition Assessment.....                     | 9  |
| Capacity Assessment and Design Criteria .....                       | 9  |
| Prioritization of Corrective Action .....                           | 10 |
| MONITORING, MEASUREMENTS, AND PLAN MODIFICATIONS .....              | 10 |
| SSMP PROGRAM INTERNAL AUDITS .....                                  | 11 |
| COMMUNICATION PROGRAM .....                                         | 11 |

Any comments on this plan can be submitted to [SSMP-Comments@DWA.ORG](mailto:SSMP-Comments@DWA.ORG)

## EXHIBITS

Exhibit 1 – Agency Boundary Map

Exhibit 2 – Collection System Map

## APPENDICES

Appendix A – SWRCB Order No. 2022-0103 DWQ

Appendix B – DWA Organizational Chart and Contact Information

Appendix C – DWA Regulations Governing Sewer Service

Appendix D – DWA Sanitary Sewer Construction Specifications

Appendix E – DWA Sanitary Sewer Construction Standard Drawings

Appendix F – Internal Report Audit History

Appendix G – DWA Board of Directors Approval of SSMP Update

## ATTACHMENTS

Attachment 1 – Sewer Preventive Maintenance Program (SPMP)

Attachment 2 – Spill Emergency Response Plan (SERP)

# SEWER SYSTEM MANAGEMENT PLAN 2026 UPDATE SUMMARY

Desert Water Agency's SSMP has been effective in minimizing spills as written and implemented. As such, only minor updates such as personnel titles and contact information, sewer system maps, and system statistics have been made to the plan.

## SEWER SYSTEM MANAGEMENT PLAN GOALS

To satisfy the criteria of **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 1**; included as Appendix “A” herein. The goals of the Desert Water Agency’s SSMP are as follows:

- To properly manage, operate, and maintain all portions of the Agency’s wastewater collection system.
- To reduce the frequency of and prevent SSOs.
- To contain and mitigate the impacts that are associated with any SSO that may occur.
- To provide adequate capacity to convey the peak wastewater flows.
- To meet all applicable regulatory notification and reporting requirements.

## INTRODUCTION

The purpose of this Sewer System Management Plan (SSMP) is to assure that the Desert Water Agency (Agency) properly manages, operates, and maintains all parts of its wastewater collection system to prevent sanitary sewer overflows (SSOs), as well as mitigate any overflows that may occur. The SSMP will be updated on a schedule as defined in SWRCB Order No. 2022-0103 DWQ. In addition, Internal audits will occur on a schedule as defined in SWRCB Order No. 2022-0103 DWQ.

## BACKGROUND

Desert Water Agency was formed as a groundwater management agency in the western Coachella Valley in 1961 by the State of California through the enactment of special legislation. The Agency is a public agency of the state of California and its responsibilities and duties are governmental and public in nature. The Agency is led by a publicly elected, five-member Board of Directors who are responsible for making guiding policy decisions as representatives of the public.

The Agency serves a three hundred twenty-five (325) square mile area that includes parts of Cathedral City, Palm Springs, and Desert Hot Springs, as well as certain unincorporated areas of Riverside County (Refer to Exhibit 1 for Boundary Map). In 1968, the Agency began providing retail water service to its customers in Palm Springs and Cathedral City.

In 1976, the Agency gained authority from the Local Agency Formation Committee to provide sanitary sewer collection service within its service area. The Agency developed a master plan for collecting sewage within portions of Cathedral City, and in 1979 initiated construction of its sewage collection system. The approximate population served by sewer system is 8,100.

## **SANITARY SEWER COLLECTION SYSTEM**

The Agency's sanitary sewer collection area is limited to its boundary within the City of Cathedral City (Refer to Exhibit 2 for Collection Systems Map). Up-to-date maps of the sanitary sewer system will be made available to State and Regional Water Board staff upon request. The sewer effluent is conveyed to and treated by either the City of Palm Springs or the Coachella Valley Water District. The approximate population of sewer service that is conveyed to the City of Palm Springs is 2,300; the approximate population of sewer service that is conveyed to the Coachella Valley Water District is 5,800.

## **SYSTEM OVERVIEW**

The total length of sewer owned, operated, and maintained by the Agency is 30 miles, this includes: approximately 29 miles of gravity sewer mainline, and 1 mile of pressurized force mains. Within the Agency's boundary, sewage conveyed to the City of Palms Springs flows via gravity main. Sewage conveyed to Coachella Valley Water District flows via gravity mains and is pumped through two separate lifts stations and force mains into the Coachella Valley Water District Sewer System; one lift station is in the Date Palm Lift Station Collection System, and one lift station is in the Cathedral Canyon Lift Station Collection System.

The Agency owns, operates, and maintains the sewer system within the public Right-of-Way, including lower sewer laterals. The Agency has no responsibility in the maintenance and operation of the upper lateral (customer's sewer system beyond the point of ownership by the Agency). The Agency prohibits any connection between a public or private storm water system and the sewer system.

## **DREAM HOMES COLLECTION SYSTEM**

The Dream Homes Collection System provides service for the Dream Homes neighborhood in the western portion of the City of Cathedral City. Said area is bounded on the north by San Mateo Drive, on the south by Mission Drive and Ramon Road, on the west by San Joaquin Drive, and on the east by San Diego Drive. Sewage from the Dream Homes is conveyed by gravity sewer mains to an existing sewer system manhole owned and operated by Palm Springs. The sewage is then conveyed by Palm Springs, sewer system to the wastewater treatment plant located in Palm Springs. Within this collection system the percentage of residential, commercial, and industrial serviced connections is: 99% residential, 1% commercial and industrial.

### **DATE PALM LIFT STATION COLLECTION SYSTEM**

The Date Palm Lift Station Collection System provides service for the Cathedral City Cove neighborhood and the Cathedral City Downtown Core area, both of which are located in the southern portion of the City of Cathedral City. The Cathedral City Cove neighborhood is bounded on the north by Highway 111, on the south by Foothill Road, on the west by an existing wash/storm drain channel, and on the east by an existing wash/storm drain channel. The Cathedral City Downtown Core area is bounded on the north by the existing flood control channel, on the south by Highway 111, on the west by an existing wash/storm drain channel, and on the east by Date Palm Drive. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Date Palm Lift Station. The station then pumps the sewage to a gravity sewer system manhole owned and operated by the Coachella Valley Water District (CVWD). The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities. Within this collection system the percentage of residential, commercial and industrial serviced connections is: 87% residential, 13% commercial and industrial.

### **CATHEDRAL CANYON LIFT STATION COLLECTION SYSTEM**

The Cathedral Canyon Lift Station Collection System provides service for areas west of Cathedral Canyon Drive and south of the Whitewater River channel in the City of Cathedral City, to include, but is not limited to, portions of the Cathedral Canyon Country Club, The District housing tract, and the Target Shopping Center. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Cathedral Canyon Lift Station. The station then pumps the sewage to a drop manhole owned and operated by CVWD on the north side of the Whitewater River Channel. The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities. Within this collection system the percentage of residential, commercial and industrial serviced connections is: 87% residential, 13% commercial and industrial.

## ORGANIZATION

The Agency is led by a publicly elected, five-member Board of Directors who are responsible for making guiding policy decisions as representatives of the public. The Assistant General Manager is the Legally Responsible Official as defined in **Section 5.1 of SWRCB Order No. 2022-0103 DWQ**. All Agency work is performed under the direction of the General Manager.

To satisfy the criteria of **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 2**; included as Appendix “A” herein. The following parties are identified as responsible for the indicated areas, as outlined below:

### **GENERAL MANAGER**

Will ensure that the Agency’s SSMP is implemented and administered by Agency personnel.

### **ASSISTANT GENERAL MANAGER**

Will ensure that the Agency’s SSMP is implemented and administered by Agency personnel in the absence of the General Manager and reports directly to the General Manager. The Engineering Manager, Construction Superintendent, and Safety and Training Specialist report directly to the Assistant General Manager.

### **ENGINEERING MANAGER**

As authorized by the Agency’s Board of Directors, the Engineering Manager is responsible for reporting all certified data to the State Water Resources Control Board’s (SWRCB’s) online database system. As directed by the Assistant General Manager or General Manager, the Engineering Manager will report all SSOs to SWRCB and other agencies if applicable. All complaints shall be directed to the Engineering Manager.

### **CONSTRUCTION SUPERINTENDENT**

Will direct maintenance crews to ensure that the Agency’s SSMP is followed to prevent SSOs and to mitigate damage if a SSO occurs.

### **SAFETY AND TRAINING SPECIALIST**

Will ensure that all Agency employees are trained on the potential hazards when working on a sanitary sewer system, including scheduling, assigning, and determining and verifying all necessary training. The Safety and Training Specialist will also be responsible for maintaining all training records. The Safety and Training Specialist will be responsible for documenting any private or public damage caused by a SSO.

An organizational chart is provided in Appendix “B”, demonstrating the hierarchy of the Agency and respective responsibilities; the organizational chart also contains contact information.

For additional information on Chain of Communications for reporting spills and receipt of complaints or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, refer to the Agency's Spill Emergency Response Plan (SERP), Attachment 2 herein.

### LEGAL AUTHORITY

The Desert Water Agency is an independent special district created by a special act of the state legislature contained in chapter 100 of the appendix of the California Water Code. As established by said legislature, DWA, through Ordinances and Resolutions adopted by the Board of Directors, possess the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Agency;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

Through the Agency's most recent Ordinance for Regulations Governing Sewage Service, the Agency possesses the necessary legal authority required by **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 3**; included as Appendix "A" herein. The Agency's most current Ordinance for Regulations Governing Sewer Service is provided in Appendix "C".

The Agency is also regulated by several agencies including the Environmental Protection Agency, State Water Quality Control Board and Regional Water Quality Control Board, pursuant to the provisions of Federal and State Law.

## OPERATIONS AND MAINTENANCE PROGRAM

The Desert Water Agency's Operation and Maintenance Program addresses the mandatory SSMP provisions, as required in **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 4**; included as Appendix "A" herein.

### **SANITARY SYSTEM MAPS**

Up-to-date maps of the sanitary sewer system, showing all gravity line segments, manholes, lift stations, force mains, and valves is managed by the Agency's Engineering Department, using Computer Aided Drafting (CAD) and Graphical Information System (GIS) software. This system is updated as required, with a yearly audit by the Engineering Manager and the Construction Superintendent to ensure that the maps are current. Said maps of the sanitary sewer system will be made available to State and Regional Water Board staff upon request. Refer to the Communication Program Section herein for specific contact information.

### **PREVENTIVE OPERATION AND MAINTENANCE ACTIVITIES**

The Agency's Sewer Preventative Maintenance Program outlines routine preventative operation and maintenance activities by staff, to include grease trap inspection program, flushing and cleaning program, and lift station inspection. The Agency's Sewer Preventative Maintenance Program (SPMP) is included as Attachment 1.

### **TRAINING**

Training of Agency personnel is scheduled and documented by the Safety and Training Specialist. Training includes safety meetings and field exercises.

### **EQUIPMENT INVENTORY**

Equipment, supplies, and spare materials are stored onsite at the Agency's Operation Center. Inventory is managed by the warehouse manager; an audit of all inventory items is conducted every year.

## DESIGN AND PERFORMANCE PROVISIONS

The Agency's Sewer Design and Construction Standards and Sewer Standard Drawings have been implemented for several years which meet or exceed the requirements of **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 5**; included as Appendix "A" herein.

## DESIGN CRITERIA AND CONSTRUCTION STANDARDS AND SPECIFICATIONS

The design and construction standards and specifications for the installation of new sanitary sewer systems, sewer lift stations, and other appurtenances are specified in the Agency's Sanitary Sewer Construction Specifications and the Agency's Sanitary Sewer Standard Drawings. The Agency utilizes said Construction Specifications and Standard Drawings, in addition to staff engineers and consultants to rehabilitate and repair the existing sanitary sewer system. The Agency's Sanitary Sewer Construction Specifications are included as Appendix "D".

## PROCEDURES AND STANDARDS

The procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects are specified in the Agency's Sanitary Sewer Construction Specifications. Said standards are reviewed periodically by the Engineering Manager to ensure that the documents meet regulatory requirements. The Agency's Sanitary Sewer Construction Specifications and Sanitary Sewer Construction Standard Drawings are included as Appendix "D" and "E", respectively.

## SPILL EMERGENCY RESPONSE PLAN

The Desert Water Agency Spill Emergency Response Plan (SERP) addresses the mandatory provisions outlined in **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 6**; included as Appendix "A" herein.

The elements of the SERP include:

- Notification procedures so that primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- A program to ensure appropriate response to all overflows;
- Procedures to ensure that appropriate staff are aware of and follow the Overflow Response Plan;
- Procedures to address emergency operations;
- Training program to ensure staff follows the Overflow Response Plan

The SERP is included in this document as Attachment 2.

## SEWER PIPE BLOCKAGE CONTROL PROGRAM

Based on flushing, cleaning, and grease trap inspections of the Agency's sewer system, fats, oils, grease, rags, and debris is not a current problem, and the Agency has determined that a Sewer Pipe Blockage Control Program is not necessary.

The Agency has a schedule of public education and outreach activities to promote proper disposal of pipe-blocking substances. The outreach activities include yearly television spots, bill inserts, social media outreach, and in-person events.

The Agency maintains the sewer system per the Agency's Sewer Preventative Maintenance Program (SPMP for Collections Systems and Lift Stations). The Agency's most current SPMP is provided in Attachment 1.

The Agency has the legal authority per the Agency's Regulations Governing Sewer Service to prohibit discharges to the system and identify measures to prevent spills and blockages. The Agency's most current Ordinance for Regulations Governing Sewer Service is provided in Appendix "C".

All proposed and current connections to the sewer system are evaluated for the potential to transfer Fats, Oils and Grease (FOG) into the system. Any connection where FOG may be an issue is required to install an interceptor/separator at the customer's expense. The Agency keeps records of the size of each interceptor/separator.

Per the Agency's SPMP, the interceptor/separators are checked monthly for temperature and thickness. If the interceptor/separator is outside of Agency specifications, the customer will be advised to pump the interceptor/separator. Per the Regulations Governing Sewer Service, if the customer fails to pump the interceptor, service will be discontinued.

The Agency keeps records of any sanitary sewer sections that may build up fats, oils, grease, rags, and debris at a faster rate than others; those sections are cleaned more frequently. The Agency has implemented source measures, wherein Agency staff periodically inspects sewer customers.

If it is determined by Agency staff that fats, oils, grease, rags, and debris has become a problem, a Sewer Pipe Blockage Control Program will be developed immediately, to satisfy the requirements outlined in **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 7**; included as Appendix "A" herein.

## SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

The Desert Water Agency's routinely evaluates and assess the system conditions. When additions to the sanitary sewer system are proposed, the design for each addition to the sewer system is evaluated to determine the impact to the existing sanitary sewer system. The Agency prioritizes corrective actions to the sanitary sewer system and proposes a yearly capital improvement plan to address any necessary corrective actions. This section will address the items outlined in **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 8**; included as Appendix "A" herein.

### SYSTEM EVALUATION AND CONDITION ASSESSMENT

The Agency maintains the sewer system per the Agency's Sewer Preventative Maintenance Program (SPMP for Collections Systems and Lift Stations). The Agency's most current SPMP is provided in Attachment 1.

### CAPACITY ASSESSMENT AND DESIGN CRITERIA

In 1972, a wastewater master facility plan was developed by the Agency, providing design criteria for the Agency's sewer service area. The plan was re-evaluated in 1996, confirming that the 1972 plan was still applicable. Since 1996, approximately 95 % of the facilities have been installed within the area, with most of the work occurring between 2005 and 2010. The master facility plan meets the requirements outlined in **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 8**; included as Appendix "A" herein. The Agency will monitor flows as connections increase, to include:

- Evaluate the system for capacity problems and identify areas that may require improvements.
- Establish steps to eliminate potential capacity related overflows, to include Capital Improvement Project prioritization requirements.

The Agency continues to monitor the hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that contribute to spill events;
- The appropriate design for storm or wet weather events that cause or contribute to spill events;
- The capacity of key system components; and
- Major sources contribute to the peak flows associated with sewer spills.

The capacity assessment considers:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;
- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events because of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

#### PRIORITIZATION OF CORRECTIVE ACTION

The findings of the condition assessments and capacity assessments are used to prioritize corrective actions. Prioritization considers the severity of the consequences of potential spills.

#### MONITORING, MEASUREMENTS, AND PLAN MODIFICATIONS

With the established programs created by the Agency, the Engineering Department will utilize the documentation to meet the requirements set by **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 9**; included as Appendix “A” herein.

The Agency will:

- Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- Assess the success of the preventative maintenance program;
- Update program elements, as appropriate, based on monitoring or performance evaluations; and
- Identify and illustrate SSO trends, including frequency, location, and volume.

## SSMP PROGRAM INTERNAL AUDITS

The Agency shall satisfy the requirements set by **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 10;** included as Appendix “A” herein. As a minimum conduct an internal audit to evaluate the following:

- The effectiveness of the SSMP;
- The Agency’s compliance with the SSMP requirements; and
- Identification of any deficiencies in the SSMP and steps to correct them.

The audit shall be conducted by the Agency’s Engineering Manager, Construction Superintendent, and Safety and Training Specialist. Upon completion of each audit, a report shall be prepared and kept on file.

Appendix “F” contains a table of plan revisions updates and audits performed.

## COMMUNICATION PROGRAM

To satisfy the requirements set by **SWRCB Order No. 2022-0103 DWQ, Attachment D: Sewer System Management Plan – Required Elements, Section 11;** included as Appendix “A” herein. And, to communicate with the public on the development, implementation, and performance of the SSMP, the Agency will make the SSMP available to the public on its website at [www.dwa.org/ssmp](http://www.dwa.org/ssmp). The public is invited to comment on the SSMP at any time via email at [SSMP-Comments@DWA.ORG](mailto:SSMP-Comments@DWA.ORG) or by calling DWA at (760) 323-4971.

The website will be the primary source for public information and input on the SSMP. The website will provide the public with the ability to review and comment on the SSMP and the SSMP performance reports, and any updates as needed. DWA’s Engineering Department will review the SSMP on an as need basis for necessary revisions or updates. The website is advertised on all DWA’s customer and stakeholder communication materials.

The Agency is in regular communication with Palm Springs (Owner of the Palm Springs Wastewater Treatment Plant and Collection System), Veolia Water (Operator of the Palm Springs Wastewater Treatment Plant and Collection System), and Coachella Valley Water District.

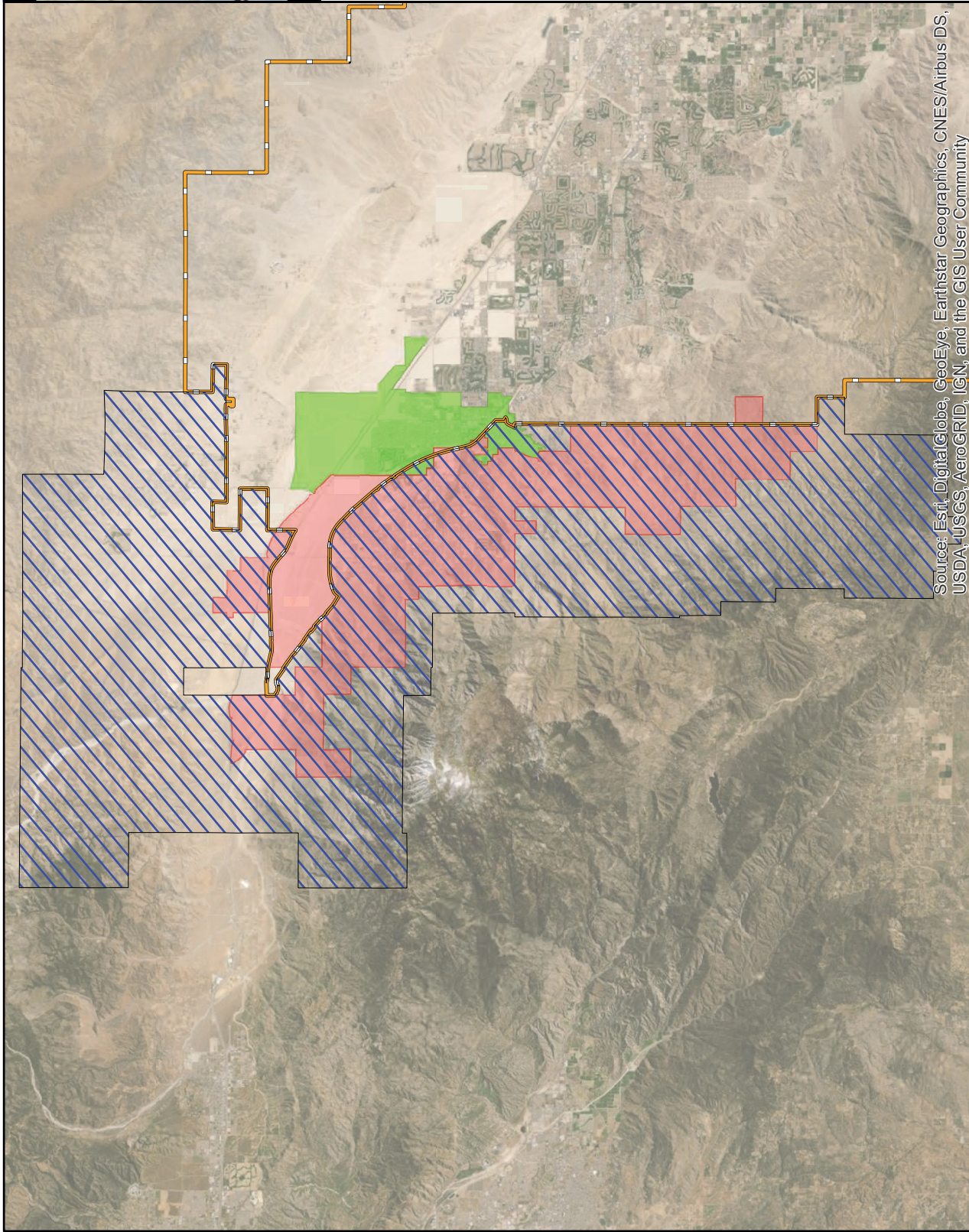
This page is intentionally left blank.

## EXHIBITS

EXHIBIT 1 – AGENCY BOUNDARY MAP

EXHIBIT 2 – COLLECTION SYSTEM MAP

This page is intentionally left blank.







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Location**



Sources: Esri, HERE, Garmin, USGS, Intermap, Mexico INCREMENTAL, INRCam, Esri

**Legend**

-  Desert Water Agency Boundary
-  Coachella Valley Water District Boundary
-  City of Palm Springs Boundary
-  Cathedral City Boundary

**DESERT WATER**  
  
**Desert Water Agency**  
 1200 Gene Autry Trail South  
[www.dwa.org](http://www.dwa.org)  
 Ph. (760) 323-4971  
 Fx. (760) 325-6505

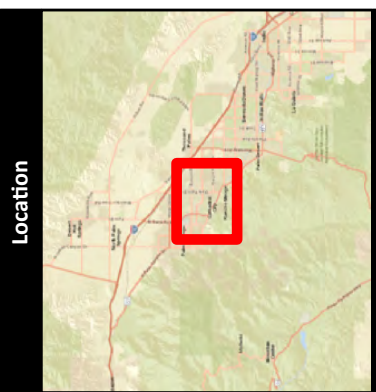
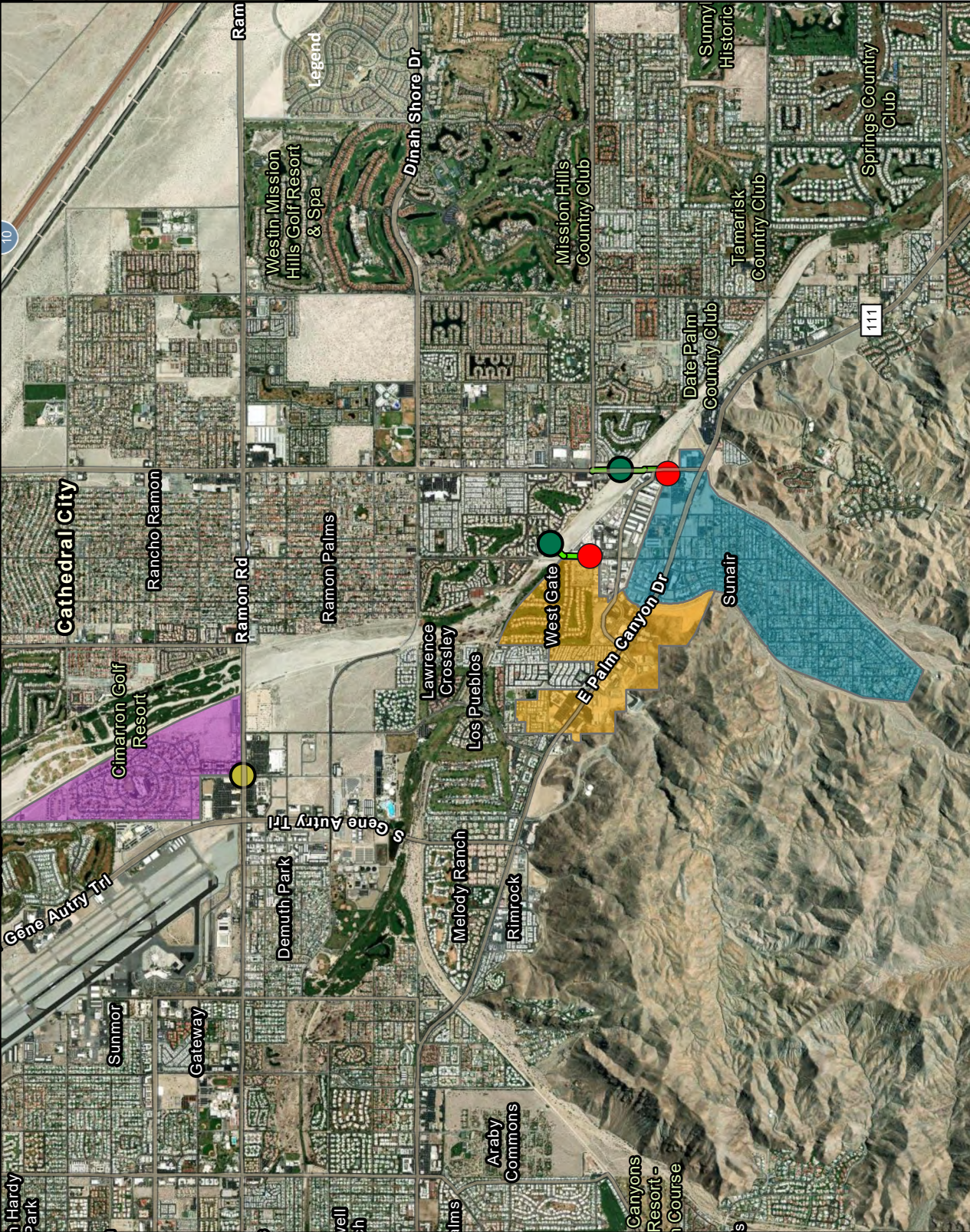


This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or planning purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

**Exhibit 1  
 Boundary Map**

File Name: Boundary Map.mxd  
 Date Updated: Wed 02/15/2012 2:59:19 Information for RWQCD Report Project Drawings (ArcGIS Maps) (Boundary Map)  
 Updated By: map  
 Department: DWA Engineering

This page is intentionally left blank.



- Location**
- Legend**
- Sewer Lift Station
  - Coachella Valley Water District Connection Points
  - City of Palm Springs Connection Point
  - Sewer Force Main
  - Cathedral Canyon Lift Station Collection System
  - Dream Homes Collection System
  - Date Palm Lift Station Collection System

**Desert Water Agency**  
 1200 Gene Autry Trail South  
[www.dwa.org](http://www.dwa.org)  
 Ph. (760) 323-4971  
 Fx. (760) 325-6505



**Exhibit 2**  
**Collection Systems Map**

File Name: Sewer System Management.mxd  
 File Location: I:\Projects\GIS\Projects\Lower Management  
 Date Updated: 1/26/2011 10:23:00 AM  
 Updated By: jbracks  
 Department: DWA Engineering

This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or planning purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

This page is intentionally left blank.

## APPENDICES

APPENDIX A – SWRCB ORDER No. 2022-0103 DWQ

APPENDIX B – DWA ORGANIZATIONAL CHART AND CONTACT INFORMATION

APPENDIX C – DWA REGULATIONS GOVERNING SEWER SERVICE

APPENDIX D – DWA SANITARY SEWER CONSTRUCTION SPECIFICATIONS

APPENDIX E – DWA SANITARY SEWER CONSTRUCTION STANDARD DRAWINGS

APPENDIX F – INTERNAL REPORT AUDIT HISTORY

APPENDIX G – DWA BOARD OF DIRECTORS APPROVAL OF SSMP UPDATE

This page is intentionally left blank.

APPENDIX A

*STATE WATER RESOURCES CONTROL BOARD—ORDER No. 2022-0103 DWQ*

This page is intentionally left blank.

**STATE WATER RESOURCES CONTROL BOARD**  
**1001 I Street, Sacramento, California 95814**  
**ORDER WQ 2022-0103-DWQ**  
**STATEWIDE WASTE DISCHARGE REQUIREMENTS**  
**GENERAL ORDER FOR SANITARY SEWER SYSTEMS**

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| This Order was adopted by the State Water Resources Control Board on December 6, 2022.                             |
| This Order shall become effective <b>180 days after the Adoption Date of this General Order</b> , on June 5, 2023. |
| The Enrollee shall comply with the requirements of this Order upon the Effective Date of this General Order.       |

This General 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, protect the Enrollee from liability under federal, state, or local laws, nor create a vested right for the Enrollee to continue the discharge of waste.

**CERTIFICATION**

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on December 6, 2022.

AYE:           Chair E. Joaquin Esquivel  
                  Vice Chair Dorene D'Adamo  
                  Board Member Sean Maguire  
                  Board Member Laurel Firestone  
                  Board Member Nichole Morgan

NAY:           None

ABSENT:       None

ABSTAIN:      None

 for  
\_\_\_\_\_  
Jeanine Townsend  
Clerk to the Board

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

**Table of Contents**

- 1. Introduction ..... 4
- 2. Regulatory Coverage and Application Requirements ..... 5
  - 2.1. Requirements for Continuation of Existing Regulatory Coverage ..... 5
  - 2.2. Requirements for New Regulatory Coverage..... 5
  - 2.3. Regulatory Coverage Transfer ..... 7
- 3. Findings ..... 7
  - 3.1. Legal Authorities ..... 7
  - 3.2. General ..... 11
  - 3.3. Water Quality Control Plans, Policies and Resolutions ..... 14
  - 3.4. California Environmental Quality Act..... 16
  - 3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders ..... 16
  - 3.6. Notification to Interested Parties ..... 17
- 4. Prohibitions ..... 17
  - 4.1 Discharge of Sewage from a Sanitary Sewer System..... 17
  - 4.2. Discharge of Sewage to Waters of the State..... 17
  - 4.3. Discharge of Sewage Creating a Nuisance..... 18
- 5. Specifications..... 18
  - 5.1. Designation of a Legally Responsible Official ..... 18
  - 5.2. Sewer System Management Plan Development and Implementation..... 18
  - 5.3. Certification of Sewer System Management Plan and Plan Updates..... 19
  - 5.4. Sewer System Management Plan Audits ..... 19
  - 5.5. Six-Year Sewer System Management Plan Update..... 21
  - 5.6. System Resilience..... 22
  - 5.7. Allocation of Resources ..... 22
  - 5.8. Designation of Data Submitters..... 22
  - 5.9. Reporting Certification..... 22
  - 5.10. System Capacity ..... 23
  - 5.11. System Performance Analysis ..... 23
  - 5.12. Spill Emergency Response Plan and Remedial Actions ..... 23
  - 5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements ..... 24
  - 5.14. Electronic Sanitary Sewer System Service Area Boundary Map..... 26
  - 5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems ..... 26
  - 5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services ..... 27
  - 5.17. Unintended Failure to Report ..... 27

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

5.18. Duty to Report to Water Boards ..... 27  
5.19. Operation and Maintenance ..... 27  
6. Provisions ..... 27  
6.1. Enforcement Provisions ..... 27  
6.2. Other Regional Water Board Orders ..... 30  
6.3. Sewer System Management Plan Availability ..... 31  
6.4. Entry and Inspection ..... 31

**Table of Attachments**

Attachment A – Definitions .....A-1  
Attachment B – Application for Enrollment .....B-1  
Attachment C - Notice of Termination.....C-1  
Attachment D – Sewer System Management Plan – Required Elements .....D-1  
Attachment E1 – Notification, Monitoring, Reporting and Recordkeeping Requirements .....E1-1  
Attachment E2 – Summary of Notification, Monitoring and Reporting Requirements.....E2-1  
Attachment F – Regional Water Quality Control Board Contact Information ..... F-1

# STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

## 1. INTRODUCTION

This General Order regulates sanitary sewer systems designed to convey sewage. For the purpose of this Order, a sanitary sewer system includes, but is not limited to, pipes, valves, pump stations, manholes, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks. A sanitary sewer system includes:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

Sewage is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system. Sewage contains high levels of suspended solids, non-digested organic waste, pathogenic bacteria, viruses, toxic pollutants, nutrients, oxygen-demanding organic compounds, oils, grease, pharmaceuticals, and other harmful pollutants.

For the purpose of this General Order, a spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Sewage and its associated wastewater spilled from a sanitary sewer system may threaten public health, beneficial uses of waters of the State, and the environment.

This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of this General Order are enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). Through this General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States;
- Comply with specifications, and notification, monitoring, reporting and recordkeeping requirements in this General Order that implement the federal Clean Water Act, the California Water Code (Water Code), water quality control plans (including Regional Water Board Basin Plans) and policies;
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills;
- Eliminate discharges of sewage to waters of the State through effective implementation of a Sewer System Management Plan;
- Monitor, track, and analyze spills for ongoing system-specific performance improvements; and
- Report noncompliance with this General Order per reporting requirements.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one (1) mile or less in length where the State Water Board or a Regional Water Board requires regulatory coverage under this Order; or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Board or a Regional Water Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

For the purpose of this Order, a sanitary sewer system includes only systems owned and/or operated by the Enrollee.

## 2. REGULATORY COVERAGE AND APPLICATION REQUIREMENTS

### 2.1. Requirements for Continuation of Existing Regulatory Coverage

To continue regulatory coverage from previous Order 2006-0003-DWQ under this General Order, **within the 60-days-prior-to the Effective Date of this General Order**, the Legally Responsible Official of an existing Enrollee shall electronically certify the Continuation of Existing Regulatory Coverage form in the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database. The Legally Responsible Official will receive an automated CIWQS-issued Notice of Applicability email, confirming continuation of regulatory coverage under this General Order. All regulatory coverage under previous Order 2006-0003-DWQ will cease on the Effective Date of this Order.

An Enrollee continuing existing regulatory coverage is not required to submit a new application package or pay an application fee for enrollment under this General Order. The annual fee due date for continued regulatory coverage from previous Order 2006-0003-DWQ to this General Order remains unchanged.

A previous Enrollee of Order 2006-0003-DWQ that fails to certify the Continuation of Existing Regulatory Coverage form in the online CIWQS database by the Effective Date of this Order is considered a New Applicant, and will not have regulatory coverage for its sanitary sewer system(s) until:

- A new application package for system(s) enrollment is submitted per section 2.2 (Requirements for New Regulatory Coverage) below; and
- The new application package is approved per section 2.2.2 (Approval of Application Package (For New Applicants Only)).

### 2.2. Requirements for New Regulatory Coverage

No later than 60 days prior to commencing and/or assuming operation and maintenance responsibilities of a sanitary sewer system, a duly authorized representative that

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

maintains legal authority over the public or private sanitary sewer system is required to enroll under this General Order by submitting a complete application package as specified below and as provided in Attachment B (Application for Enrollment Form) of this General Order.

Unless required by a Regional Water Board, a public agency that owns a combined sewer system subject to the Combined Sewer Overflow Control Policy (33 U.S. Code § 1342(q)), is not required to enroll, under this Order, the portions of its sanitary sewer system(s) that collects combined sanitary wastewater and stormwater.

### 2.2.1. Application Package Requirements

The Application for Enrollment package for new applicants must include the following items:

- **Application for Enrollment Form.** The form in Attachment B of this General Order must be completed, signed, and certified by a Legally Responsible Official, in accordance with section 5.1 (Designation of a Legally Responsible Official) of this General Order. If an electronic Application for Enrollment form is available at the time of application, a new applicant shall submit its application form electronically; and
- **Application Fee.** A fee payable to the “State Water Resources Control Board” in accordance with the Fee Schedule in the California Code of Regulations, Title 23, section 2200, or subsequent fee regulations updates.

The application fee for this General Order is based on the sanitary sewer system’s threat to water quality and complexity designations of category 2C or 3C, which is assigned based on the population served by the system. The current Fee Schedule for sanitary sewer systems is listed under subdivision (a)(2) at the following website: [Fee Schedule](https://www.waterboards.ca.gov/resources/fees/water_quality/) ([https://www.waterboards.ca.gov/resources/fees/water\\_quality/](https://www.waterboards.ca.gov/resources/fees/water_quality/)).

### 2.2.2. Approval of Application Package (For New Applicants Only)

The Deputy Director of the State Water Board, Division of Water Quality (Deputy Director) will consider approval of each complete Application for Enrollment package. The Deputy Director will issue a Notice of Applicability letter which serves as approved regulatory coverage for the new Enrollee.

If the submitted application package is not complete in accordance with section 2.2.1 (Application Package Requirements) of this General Order, the Deputy Director will send a response letter to the applicant outlining the application deficiencies. The applicant will have 60 days from the date of the response letter to correct the application deficiencies and submit the identified items necessary to complete the application package to the State Water Board.

### 2.2.3. Electronic Reporting Account for New Enrollee

**Within 30 days after the date of the Approval of Complete Application Package for System Enrollment**, a duly authorized representative for the Enrollee shall obtain a CIWQS Sanitary Sewer System Database user account by clicking the “User Registration” button and following the directions on the [CIWQS Login Page](#)

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

(<https://ciwqs.waterboards.ca.gov>). If additional assistance is needed to establish an online CIWQS user account, contact State Water Board staff by email at [CIWQS@waterboards.ca.gov](mailto:CIWQS@waterboards.ca.gov). The online user account will provide the Enrollee secure access to the online CIWQS database for electronic reporting.

### 2.3. Regulatory Coverage Transfer

Regulatory coverage under this General Order is not transferable to any person or party except after an existing Enrollee submits a written request for a regulatory coverage transfer to the Deputy Director, at least 60 days in advance of any proposed system ownership transfer. The written request must include a written agreement between the existing Enrollee and the new Enrollee containing:

- Acknowledgement that the transfer of ownership is solely of an existing system with an existing waste discharge identification (WDID) number;
- The specific ownership transfer date in which the responsibility and regulatory coverage transfer between the existing Enrollee and the new Enrollee becomes effective; and
- Acknowledgement that the existing Enrollee is liable for violations occurring up to the ownership transfer date and that the new Enrollee is liable for violations occurring on and after the ownership transfer date.

The Deputy Director will consider approval of the written request. If approved, the Deputy Director will issue a Notice of Applicability letter which serves as an approved transfer of regulatory coverage to the new Enrollee.

## 3. FINDINGS

### 3.1. Legal Authorities

#### 3.1.1. Federal and State Regulatory Authority

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States (33 U.S.C. 1251). The Water Code authorizes the State Water Board to implement the Clean Water Act in the State and to protect the quality of all waters of the State (Water Code sections 13000 and 13160).

#### 3.1.2. Discharge of Sewage

A discharge of untreated or partially treated sewage is a discharge of waste as defined in Water Code section 13050(d) that could affect the quality of waters of the State and is subject to regulation by waste discharge requirements issued pursuant to Water Code section 13263 and Chapter 9, Division 3, Title 23 of the California Code of Regulations. A discharge of sewage may pollute and alter the quality of the waters of the State to a degree that unreasonably affects the beneficial uses of the receiving water body or facilities that serve those beneficial uses (Water Code section 13050(l)(1)).

### **3.1.3 Water Boards Authority to Require Technical Reports, Monitoring, and Reporting**

Water Code sections 13267 and 13383 authorize the Regional Water Boards and the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Water Code section 13267(b), authorizes the Regional Water Boards to “require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region... or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires...In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.” Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

The technical and monitoring reports required by this General Order and Attachment E (Notification, Monitoring, Reporting and Recordkeeping Requirements) are necessary to evaluate and ensure compliance with this General Order. The effort to develop required technical reports will vary depending on the system size and complexity and the needs of the specific technical report. The burden and cost of these reports are reasonable and consistent with the interest of the state in protecting water quality, which is the primary purpose of requiring the reports.

Water Code section 13383(a) authorizes the Water Boards to “establish monitoring, inspection, entry, reporting, and recordkeeping requirements... for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.” Section 13383(b) continues, “the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.”

Reporting of spills from privately owned sewer laterals and systems pursuant to section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) of this General Order is authorized by Water Code section 13225(c) and encouraged by the State Water Board, wherein a local agency may investigate and report on any technical factors involved in water quality control provided the burden including costs of such reports bears a reasonable relationship to the need for the report and the benefits to be obtained therefrom. The burden of reporting private spills under section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) is minimal and is outweighed by the benefit of providing Regional Water Boards an opportunity to respond to these spills

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

when an Enrollee, which in many cases has a contractual relationship with the owner of the private system, has knowledge of the spills.

### **3.1.4. Water Board Authority to Prescribe General Waste Discharge Requirements**

Water Code section 13263(i) provides that the State Water Board may prescribe general waste discharge requirements 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 waste discharge requirements than individual waste discharge requirements.

Since 2006, the State Water Board has been regulating over 1,100 publicly owned sanitary sewer systems (See section 3.1.5 (Previous Statewide General Waste Discharge Requirements) of this General Order). California also has a large unknown number of unregulated privately owned sanitary sewer systems. All waste conveyed in publicly owned and privately owned sanitary sewer systems (as defined in this General Order) is comprised of untreated or partially treated domestic waste and/or industrial waste. Generally, sanitary sewer systems are designed and operated to convey waste by gravity or under pressure; system-specific design elements and system-specific operations do not change the common nature of the waste, the common threat to public health, or the common impacts on water quality. Spills of waste from a sanitary sewer system prior to reaching the ultimate downstream treatment facility are unauthorized and enforceable by the State Water Board and/or a Regional Water Board. Therefore, spills from sanitary sewer systems are more appropriately regulated under general waste discharge requirements.

As specified in Water Code sections 13263(a) and 13241, the implementation of requirements set forth in this Order is for 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 Regional Water Board and take into account the environmental characteristics of sewer service areas and 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, costs associated with compliance with these requirements, the need for developing housing within California, and the need to protect sources of drinking water and other water supplies.

### **3.1.5. Previous Statewide General Waste Discharge Requirements**

On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ serving as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260) for inadvertent discharges to waters of the State. Order 2006-0003-DWQ prohibited discharges of untreated or partially treated sewage. Order 2006-0003-DWQ also required system-specific management, operation, and maintenance of publicly owned sewer systems greater than one mile in length.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

To decrease the impacts on human health and the environment caused by sewage spills, the previous Order required enrollees to develop a rehabilitation and replacement plan that identifies system deficiencies and prioritizes short-term and long-term rehabilitation actions. The previous Order also required enrollees to:

1. Maintain information that can be used to establish and prioritize appropriate Sewer System Management Plan activities; and
2. Implement a proactive approach to reduce spills.

The previous Order required Sewer System Management Plan elements for “the proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management.”

On July 30, 2013, the State Water Board amended General Order 2006-0003-DWQ with Order WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Many enrollees of Order 2006-0003-DWQ have already implemented proactive measures to reduce sewage spills. Other enrollees, however, still need technical assistance and funding to improve sanitary sewer system operation and maintenance for the reduction of sewage spills.

### **3.1.6. Existing Memorandum of Agreement with California Water Environment Association**

The California Water Environment Association is a nonprofit organization dedicated to providing water industry certifications, training, and networking opportunities. The Association’s Technical Certification Program provides accredited sanitary sewer system operator certification for collection system operators and maintenance workers.

On February 10, 2016, the State Water Board entered into a collaborative agreement with the Association titled *Memorandum of Agreement Between the California State Water Resources Control Board and the California Water Environment Association - Training Regarding Requirements Set Forth in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The Memorandum sets forth collaborative training necessary for regulated sanitary sewer system personnel to operate and maintain a well operating system and ensure full compliance with statewide sewer system regulations.

On March 15, 2018, the State Water Board and the California Water Environment Association amended the existing Memorandum of Agreement to include collaborative outreach and expand training needs associated with further updates to Water Board regulations for sanitary sewer systems. The State Water Board encourages further Agreement updates as necessary to support improved sewer system operations and the professionalism of collection system operators.

# STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

## 3.2. General

### 3.2.1. Waters of the State

Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

### 3.2.2. Sanitary Sewer System Spill Threats to Public Health and Beneficial Uses

Sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Sewage spills may cause a public nuisance, particularly when sewage is discharged to areas with high public exposure such as streets and surface waters used for drinking, irrigation, fishing, recreation, or other public consumption or contact uses.

More specifically, sanitary sewer spills may:

- Adversely affect aquatic life and/or threaten water quality when reaching receiving waters;
- Inadvertently release trash, including plastics;
- Impair the recreational use and aesthetic enjoyment of surface waters by polluting surface water or groundwater;
- Threaten public health through direct public exposure to bacteria, viruses, intestinal parasites, and other microorganisms that can cause serious illness such as gastroenteritis, hepatitis, cryptosporidiosis, and giardiasis;
- Negatively impact ecological receptors and biota within surface waters; and
- Cause nuisance including odors, closure of beaches and recreational areas, and property damage.

Sanitary sewer system spills may pollute receiving waters and threaten beneficial uses of surface water and groundwater. Potentially threatened beneficial uses include, but are not limited to the following (with associated acronym representations as included in statewide water quality control plans and Regional Water Boards' Basin Plans):

- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2)
- Cold Freshwater Habitat (COLD)
- Warm Freshwater Habitat (WARM)
- Native American Culture (CUL)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Wetland Habitat (WET)
- Agricultural Supply (AGR)
- Estuarine Habitat (EST)

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Commercial and Sport Fishing (COMM)
- Subsistence Fishing (SUB)
- Tribal Tradition and Culture (CUL)
- Tribal Subsistence Fishing (T-SUB)
- Aquaculture (AQUA)
- Marine Habitat (MAR)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Navigation (NAV)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Water Quality Enhancement (WQE)
- Fresh Water Replenishment (FRSH)
- Groundwater Recharge (GWR)
- Inland Saline Water Habitat (SAL)

### 3.2.3. Proactive Sanitary Sewer System Management to Eliminate Spill Causes

Finding 3 of the previous Order, 2006-0003-DWQ, states: “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 [sanitary sewer overflow]. 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.”

Many spills are preventable through proactive attention on sanitary sewer system management using the best practices and technologies available to address major causes of spills, including but not limited to:

- Blockages from sources including but not limited to:
  - Fats, oils and grease;
  - Tree roots;
  - Rags, wipes and other paper, cloth and plastic products; and
  - Sediment and debris.
- Sewer system damage and exceedance of sewer system hydraulic capacity from identified system-specific environmental, and climate-change impacts, including but not limited to:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence.
- Infrastructure deficiencies and failures, including but not limited to:
  - Pump station mechanical failures;
  - System age;
  - Construction material failures;
  - Manhole cover failures;
  - Structural failures; and
  - Lack of proper operation and maintenance.
- Insufficient system capacity (temporary or sustained), due to factors including but not limited to:
  - Excessive and/or increased storm or groundwater inflow/infiltration;
  - Insufficient capacity due to population increase and/or new connections from industrial, commercial and other system users; and
  - Stormwater capture projects utilizing a sanitary sewer system to convey stormwater to treatment facilities for reuse.
- Community impacts, including but not limited to:
  - Power outages;
  - Vandalism; and
  - Contractor-caused or other third party-caused damages.

### 3.2.4. Underground Sanitary Sewer System Leakage

Portions of some sanitary sewer systems may leak, causing underground exfiltration (exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.

Underground exfiltrated sewage may threaten beneficial uses if discharged to waters of the State. Exfiltrated sewage that discharges to groundwater may impact beneficial uses of groundwater and pollute groundwater supply. Additionally, if in close proximity, exfiltrated sewage may enter into a compromised underground drainage conveyance system that discharges into a water of the United States, or into groundwater that is hydrologically connected to (feeds into) a water of the United States, thus potentially causing: (1) a Clean Water Act violation, (2) threat and impact to beneficial uses, and/or (3) surface water pollution.

### **3.2.5. Proactive Sanitary Sewer System Management to Reduce Inflow and Infiltration**

Excessive inflow (stormwater entering) and infiltration (groundwater seepage entering) to sanitary sewer systems is preventable through proactive sewer system management using the best practices and technologies available. The efficiency of the downstream wastewater treatment processes is dependent on the performance of the sanitary sewer system. When the structural integrity of a sanitary sewer system deteriorates, high volumes of inflow and infiltration can enter the sewer system. High levels of inflow and infiltration increase the hydraulic load on the downstream treatment plant, which can reduce treatment efficiency, lead to bypassing a portion of the treatment process, cause illegal discharge of partially treated effluent, or in extreme situations make biological treatment facilities inoperable (e.g., wash out the biological organisms that treat the waste).

### **3.3. Water Quality Control Plans, Policies and Resolutions**

The nine Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. The State Water Board has adopted statewide water quality control plans, policies and resolutions establishing statewide water quality objectives, implementation programs and initiatives.

#### **3.3.1. State Water Board Antidegradation Policy**

On October 28, 1968, the State Water Board adopted Resolution 68-16, titled Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

The continued prohibition of sewage discharges from sanitary sewer systems into waters of the State aligns with Resolution 68-16. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.

#### **3.3.2. State Water Board Sources of Drinking Water Policy**

On May 19, 1988, the State Water Board adopted Resolution 88-63 (amended on February 1, 2006), titled Sources of Drinking Water, establishing state policy that all waters of the State, with certain exceptions, are suitable or potentially suitable for municipal or domestic supply.

#### **3.3.3. State Water Board Cost of Compliance Resolution**

On September 24, 2013, the State Water Board adopted Resolution 2013-0029, titled Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Compliance While Maintaining Water Quality Protection. Through this resolution, the State Water Board committed to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance with regulatory orders while maintaining water quality protection and improving regulatory program outcomes.

### **3.3.4. State Water Board Human Right to Water Resolution**

On February 16, 2016, the State Water Board adopted Resolution 2016-0010, titled Adopting the Human Right to Water as a Core Value and Directing its Implementation in Water Board Programs and Activities, addressing the human right to water as a core value and directing Water Board programs to implement requirements to support safe drinking water for all Californians.

On November 16, 2021, the State Water Board adopted Resolution 2021-0050 titled Condemning Racism, Xenophobia, Bigotry, and Racial Injustice, and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-racism. Among other actions, through Resolution 2021-0050, the State Water Board, in summary as corresponding to this General Order, reaffirms its commitment to its Human Right to Water resolution, upholding that every human being in California deserves safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes. Resolution 2021-0050 provides the State Water Board commitment to:

- Protect public health and beneficial uses of waterbodies in all communities, including communities disproportionately burdened by wastes discharge of waste to land and surface water;
- Restore impaired surface waterbodies and degraded aquifers; and
- Promote multi-benefit water quality projects.

Through Resolution 2021-0050, the State Water Board also commits to expanding implementation of its Climate Change Resolution to address the disproportionate effects of extreme hydrologic conditions and sea-level rise on Black, Indigenous, and people of color communities, prioritizing:

- The right to safe, clean, affordable, and accessible drinking water and sanitation;
- Sustainable management and protection of local groundwater resources;
- Healthy watersheds; and
- Access to surface waterbodies that support subsistence fishing.

On June 7, 2022, the State Water Board adopted a Resolution, titled Authorizing the Executive Director or Designee to Enter into One or More Multi-Year Contracts Up to a Combined Sum of \$4,000,000 for a Statewide Wastewater Needs Assessment, supporting the equitable access to sanitation for all Californians and implementation of Resolutions 2016-0010 and 2021-0050.

This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer systems. Data reported per the requirements of this Order will be used with data from other Water Boards' programs, to further develop criteria and create a statewide risk

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

framework to prioritize critical funding and infrastructure investments for California's most vulnerable populations, including disadvantaged or severely disadvantaged communities with inadequate or failing sanitation systems and threatened access to healthy drinking water supplies.

### **3.3.5. State Water Board Open Data Resolution**

On July 10, 2018, the State Water Board adopted Resolution 2018-0032, titled Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, directing regulatory programs to assure all monitoring and reporting requirements support the State Water Boards' Open Data Initiative.

### **3.3.6. State Water Board Response to Climate Change**

On March 7, 2017, the State Water Board adopted Resolution 2017-0012, titled Comprehensive Response to Climate Change, requiring a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

### **3.4. California Environmental Quality Act**

The adoption of this Order is an action to reissue general waste discharge requirements that is exempt from the California Environmental Quality Act (Public Resources Code section 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., Title 14, section 15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., Title 14, section 15301, to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in sections 15301 and 15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

### **3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders**

The State Water Board, Division of Financial Assistance administers the implementation of the State Water Board financial assistance programs, per Board-adopted funding policies. Among other funding areas, the Division administers loan and grant funding for the planning and construction of wastewater and water recycling facilities per funding program-specific policies and guidelines. Applicants may apply for Clean Water State Revolving Fund low-interest loan, Small Community Wastewater grant funding assistance, and other funding available at the time of application, for some of the costs associated with complying with this General Order.

Funding applicants may obtain further information regarding current funding opportunities, and Division of Financial Assistance staff contact information at the following website: [Financial Assistance Funding - Grants and Loans | California State Water Resources Control Board](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/).

([https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/))

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Section 13477.6 of the Water Code authorizes the Small Community Grant Fund. The Small Community Grant Fund allows the State Water Board to provide grant funding assistance to small, disadvantaged communities and small severely disadvantaged communities that may not otherwise be able to afford a loan or similar financing for projects to comply with requirements of this General Order. The State Water Board also considers loan forgiveness on a disadvantaged community-specific basis.

For disadvantaged communities' wastewater needs, the State Water Board places priority on the funding of projects that address:

- Public health;
- Violations of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits;
- Providing sewer system service to existing septic tank owners; and
- High priority public health and water quality concerns identified by a Regional Water Board.

### **3.6. Notification to Interested Parties**

On January 31, 2022, the State Water Board notified interested parties and persons of its intent to reissue Sanitary Sewer Systems General Order 2006-0003-DWQ by issuing a draft General Order for a 60-day public comment period. State Water Board staff conducted extensive stakeholder outreach and encouraged public participation in the adoption process for this General Order. On March 15, 2022, the State Water Board held a public meeting to hear and consider oral public comments. The State Water Board considered all public comments prior to adopting this General Order.

**THEREFORE, IT IS HEREBY ORDERED**, that pursuant to Water Code sections 13263, 13267, and 13383 this General Order supersedes Order 2006-0003-DWQ, Order WQ 2013-0058-EXEC, and any amendments made to these Orders thereafter, except for enforcement purposes and to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Enrollee shall comply with the requirements in this Order.

## **4. PROHIBITIONS**

### **4.1 Discharge of Sewage from a Sanitary Sewer System**

Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.

### **4.2 Discharge of Sewage to Waters of the State**

Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### 4.3. Discharge of Sewage Creating a Nuisance

Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code section 13050(m) is prohibited.

## 5. SPECIFICATIONS

### 5.1. Designation of a Legally Responsible Official

The Enrollee shall designate a Legally Responsible Official that has authority to ensure the enrolled sanitary sewer system(s) complies with this Order, and is authorized to serve as a duly authorized representative. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system, and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The Legally Responsible Official must have or have direct authority over individuals that:

- Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training and experience.

For example, a sewer system superintendent or manager, an operations manager, a public utilities manager or director, or a district engineer may be designated as a Legally Responsible Official.

The Legally Responsible Official shall complete the electronic [CIWQS "User Registration" form](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>). A Legally Responsible Official that represents multiple enrolled systems shall complete the electronic CIWQS "User Registration" form for each system.

The Enrollee shall submit any change to its Legally Responsible Official, and/or change in contact information, to the State Water Board within 30 calendar days of the change by emailing [ciwqs@waterboards.ca.gov](mailto:ciwqs@waterboards.ca.gov) and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

### 5.2. Sewer System Management Plan Development and Implementation

To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies.

For an existing Enrollee under Order 2006-0003-DWQ that has certified its Continuation of Existing Regulatory Coverage, per section 2.1 (Requirements for Continuation of Existing Regulatory Coverage) of this General Order:

### **Within six (6) months of the Adoption Date of this General Order:**

- The Legally Responsible Official shall upload the Enrollee's existing Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

For a new Enrollee:

### **Within twelve (12) months of the Application for Enrollment approval date:**

- The governing entity of the new Enrollee shall approve its Sewer System Management Plan; and
- The Legally Responsible Official shall certify and upload its Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

### **5.3. Certification of Sewer System Management Plan and Plan Updates**

The Legally Responsible Official shall certify and upload its Sewer System Management Plan and all subsequent updates to the online CIWQS Sanitary Sewer System Database.

### **5.4. Sewer System Management Plan Audits**

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. **Within six months after the end of the required 3-year audit period**, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of this General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators’ input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

A new Enrollee of this General Order (that did not have a sanitary sewer system enrolled in the previous State Water Board Order 2006-0003-DWQ) shall conduct its first internal Sewer System Management Plan audit for the time period between the date of submittal of its certified Sewer System Management Plan and the third subsequent December 31<sup>st</sup> date. The audit report must be submitted into the online CIWQS Sanitary Sewer System Database **by July 1 of the following calendar year.**

See the following tables for clarification:

**Initial Audit Period and Audit Due Date for New Enrollees**

|                | Audit Period                                                                                                                                | Audit Due Date                               |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| New Enrollee   | Certified Sewer System Management Plan Submittal Date through the third subsequent December 31 <sup>st</sup> date                           | July 1 <sup>st</sup> date after audit period |
| <i>Example</i> | <i>Certified Sewer System Management Plan Submittal Date of August 2, 2025<br/>Audit Period of August 2, 2025 through December 31, 2027</i> | <i>July 1, 2028</i>                          |

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

**Initial Audit Period for Transition from 2-Year Audit Required in Previous Order 2006-0003-DWQ to 3-Year Audit Required in this General Order**

|                                                        | Audit Period                                                                                                              | Audit Due Date                                     |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| An Enrollee previously regulated by Order 2006-003-DWQ | A 3-year period starting from the end of last required 2-year Audit Period                                                | Within six months after end of 3-year Audit Period |
| <i>Example</i>                                         | <i>Last required Audit Period start date of August 2, 2021;<br/>Audit Period of August 2, 2021 through August 1, 2024</i> | <i>February 1, 2025</i>                            |

**Three-Year Ongoing Audit Period**

|               | Audit Period                                                        | Audit Due Date                                     |
|---------------|---------------------------------------------------------------------|----------------------------------------------------|
| Each Enrollee | A 3-year period starting from the end of last required Audit Period | Within six months after end of 3-year Audit Period |

**5.5. Six-Year Sewer System Management Plan Update**

At a minimum, the Enrollee shall update its Sewer System Management Plan every six (6) years after the date of its last Plan Update due date. (For an Enrollee previously regulated by Order 2006-0003-DWQ, the six-year period shall commence on the due date identified in section 3.11 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this Order. The Updated Sewer System Management Plan must include:

- Elements required in Attachment D (Sewer System Management Plan – Required Elements) of this Order;
- Summary of revisions included in the Plan update based on internal audit findings; and
- Other sewer system management-related changes.

The Enrollee’s governing entity shall approve the updated Plan. The Legally Responsible Official shall upload and certify the approved updated Plan in the online CIWQS Sanitary Sewer System Database in accordance with section 3.11 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order. During the time period in between Plan updates, the Enrollee shall continuously document changes to its Sewer System Management Plan in a change log attached to the Plan.

## 5.6. System Resilience

The Enrollee shall include and implement system-specific procedures in its Sewer System Management Plan to proactively prioritize: (1) operation and maintenance, (2) condition assessments, and (3) repair and rehabilitation, to address ongoing system resilience, as specified in Attachment D (Sewer System Management Plan – Required Elements) of this General Order.

## 5.7. Allocation of Resources

The Enrollee shall:

- Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and
- Allocate the necessary resources to its sewer system management program for:
  - Compliance with this General Order,
  - Full implementation of its updated Sewer System Management Plan,
  - System operation, maintenance, and repair, and
  - Spill responses.

## 5.8. Designation of Data Submitters

The Legally Responsible Official may designate one or more individuals as a Data Submitter for reporting of spill data. The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online [CIWQS database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>) prior to the individuals establishing a [CIWQS user account](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>) and entering spill data into the online CIWQS Sanitary Sewer System Database.

The Legally Responsible Official shall submit any change to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing [ciwqs@waterboards.ca.gov](mailto:ciwqs@waterboards.ca.gov) and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

## 5.9. Reporting Certification

The Legally Responsible Official shall electronically certify, on the Enrollee's behalf, all applications, reports, the Sewer System Management Plan(s) and corresponding updates, and other information submitted electronically into the online CIWQS Sanitary Sewer System Database, as follows:

*"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."*

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Hardcopy submittals to the State Water Board must be accompanied by the above certification statement.

### 5.10. System Capacity

The Enrollee shall maintain the system capacity necessary to convey: (1) base flows during dry weather conditions, and (2) wet weather peak flows consistent with designated local historic storms. Design storms must take into account system-specific stormwater contributions via inflow and infiltration, and location-specific depth of groundwater and storm frequencies. The Enrollee shall implement capital improvements to provide adequate hydraulic capacity to:

- Meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance element of its Sewer System Management Plan; and
- Prevent system capacity-related spills, and adverse impacts to the treatment efficiency of downstream wastewater treatment facilities.

### 5.11. System Performance Analysis

The Enrollee shall include a running 10-year system performance analysis in its Annual Report. The analysis must include two CIWQS-generated graphs presenting the following information:

#### **Graph 1 – Total Spill Volume per Year:**

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total spill volume, per Spill Category, for each calendar year.

#### **Graph 2 – Total Number of Spills per Year:**

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total number of spills, per Spill Category, for each calendar year.

The current calendar year is the calendar year covered in the Annual Report.

The Enrollee shall generate the graphs in CIWQS, using the existing data in the online CIWQS Sanitary Sewer System Database at the following graph generation link: ([https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso\\_operation\\_report](https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_operation_report)).

### 5.12. Spill Emergency Response Plan and Remedial Actions

For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

**Within six (6) months of the Adoption Date of this General Order**, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### For New Enrollees:

**Within six (6) months of the Application for Enrollment approval date**, the Enrollee shall develop and implement a Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

### **5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements**

The Enrollee shall comply with notification, monitoring, reporting, and recordkeeping requirements in Attachment E1 of this General Order.

#### **5.13.1. Spill Categories**

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

- **Category 1 Spill**

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

### 5.13.2. Annual Report

The Enrollee shall submit an Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

**For new Enrollees: Within 30 days of obtaining a CIWQS account,** a new Enrollee shall submit its initial Annual Report, as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

**5.14. Electronic Sanitary Sewer System Service Area Boundary Map**

**For continuing enrollees, starting on July 1, 2025, and no later than December 31, 2025:**

**For new enrollees – no earlier than July 1, 2025, or within 12 months of the Application for Enrollment approval date, whichever date is later:**

The Legally Responsible Official shall submit, to the State Water Board, geospatial data detailing the locations of the Enrollee’s sanitary sewer system service area boundary, per the required content and specifications in section 3.8 (Electronic Sanitary Sewer System Service Area Boundary Map) of Attachment E1 of this General Order, for each system identified by a WDID number.

An Enrollee of a disadvantaged community that may need assistance developing an electronic map to comply with this requirement, may contact State Water Board staff for assistance at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov).

**5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems**

Within 24 hours of becoming aware of a spill (as described below) from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to report the following observations to the online CIWQS Sanitary Sewer System Database at the following link:

<https://ciwqs.waterboards.ca.gov>:

- A spill equal or greater than 1,000 gallons that discharges (or has a potential to discharge) to a water of the State, or a drainage conveyance system that discharges to waters of the State; **or**
- Any volume of sewage that discharges (or has a potential to discharge) to surface waters.

In the CIWQS module, the Enrollee is encouraged to identify:

- Time of observation;
- Description of general spill location (for example, street name and cross street names);
- Estimated volume of spill;
- If known, general description of spill destination (for example, flowing into drainage channel, flowing directly into a creek, etc.); and
- If known, name of private system owner/operator.

The CIWQS database will make the name and contact information of the entity voluntarily reporting a private spill, accessible to State and Regional Water Board staff only. The CIWQS database will only make information regarding the actual spill, accessible to the public.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### **5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services**

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge to waters of the State:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

### **5.17. Unintended Failure to Report**

If an Enrollee becomes aware that they unintentionally failed to submit relevant facts in any report required in this General Order, the Enrollee shall promptly notify Regional Water Board and State Water Board staff. Regional Water Board contact information is included in Attachment F of this Order. State Water Board staff shall be contacted by email at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) for assistance in formally amending the corresponding report(s) in the online CIWQS Sanitary Sewer System Database.

### **5.18. Duty to Report to Water Boards**

In accordance with Water Code section 13267 and/or section 13383, upon request by the State Water Board Executive Director (or designee) or a Regional Water Board Executive Officer (or designee), the Enrollee shall provide the requested information which the State or Regional Water Board deems necessary to determine compliance with this General Order.

### **5.19. Operation and Maintenance**

To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.

## **6. PROVISIONS**

### **6.1. Enforcement Provisions**

The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy.

#### **6.1.1. Enforceability of Clean Water Act and Water Code Violations**

Noncompliance with requirements of this General Order or discharging sewage without enrolling in this General Order constitutes a violation of the Water Code and a potential

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

violation of the Clean Water Act and is grounds for an enforcement action by the State Water Board or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the Enrollee to administrative civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this General Order or the Clean Water Act may subject the Enrollee to administrative civil liabilities up to \$10,000 a day per violation and additional liability up to \$10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to \$5,000 a day per violation pursuant to Water Code section 13350 or up to \$20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

### **6.1.2. Monetary Penalties**

The Water Code provides the State and Regional Water Boards the authority to pursue formal enforcement actions, including imposing administrative liability and civil monetary penalties, for non-compliance with the requirements of this General Order and violations of the Clean Water Act.

### **6.1.3. Falsifying or Failure to Report**

The Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order, or falsifying any information provided in the technical or monitoring reports is subject to administrative liability and civil monetary penalties. Any person who knowingly fails or refuses to furnish technical or monitoring program reports or falsifies any information provided in reports required by this General Order is subject to criminal penalties.

### **6.1.4. Severability of General Order**

The provisions of this General Order are severable; 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.

### **6.1.5. Indirect Discharges**

In the event that a spill enters into a drainage conveyance system, the Enrollee shall take all feasible steps to prevent discharge of sewage into waters of the State by blocking or redirecting the flow in the drainage conveyance system, removing the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body.

### **6.1.6. Water Boards' Considerations for Discretionary Enforcement**

Consistent with the State Water Board Enforcement Policy, when considering Water Code section 13327 factors, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to contain, control, clean up, and mitigate spills. In assessing the factors, the State Water Board or the applicable Regional Water Board will consider:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- The Enrollee's compliance with this General Order with a focus on compliance with reporting requirements;
- The Enrollee's provision of adequate funding to implement the requirements of this General Order;
- The Enrollee's compliance with providing a complete and updated Sewer System Management Plan;
- The Enrollee's compliance with implementing its Sewer System Management Plan;
- The overall effectiveness of the Enrollee's Sewer System Management Plan with respect to:
  - System management, operation, and maintenance,
  - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent spills (e.g. adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow, etc.),
  - Preventive maintenance (including cleaning, root grinding, and fats, oils, and grease control) and source control measures,
  - Implementation of backup equipment,
  - Inflow and infiltration prevention and control,
  - Appropriate sanitary sewer system capacity to prevent spills, and
  - The Enrollee's responsiveness to stop and mitigate the impact of the discharge;
- The Enrollee's compliance with identifying the cause of the spill;
- The Enrollee's use of available information and observations to accurately estimate the spill volume and identify the affected or potentially affected receiving waters;
- The Enrollee's thoroughness of cleaning up sewage in drainage conveyance systems after the spill(s);
- The Enrollee's use of water quality and biological monitoring and assessment to determine the short-term and long-term impacts to beneficial uses and the environment;
- The Enrollee's follow up actions to improve system performance;
- The Enrollee's implementation of feasible alternatives to prevent spills, such as:
  - Use of temporary storage or waste retention,
  - Reduction of system inflow and infiltration,
  - Collection and hauling of waste to a treatment facility,
  - Prevention of and/ or containment of spills due to a design storm event identified in the Enrollee's Sewer System Management Plan,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Implementation of available equipment, technologies, strategies, and recommended industry practices for maintaining and managing sewer systems to prevent spills, and contain and eliminate discharges to waters of the State; and
- The spill duration and factors beyond the reasonable control of the Enrollee causing the event.

### **6.1.7. Enforcement Discretion Based on Reporting Compliance**

Consistent with the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to comply with spill reporting requirements when determining compliance with Water Code section 13267 and section 13383. When assessing Water Code section 13227 factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's diligence to comply with all reporting requirements in this General Order;
- The use of best available information for the Enrollee's reporting of spill start date and start time in which the release of sewage from the sanitary sewer system initiated;
- The Enrollee's reporting of spill end date, and end time to be the date and time in which the release of sewage from the sanitary sewer system was stopped;
- The Enrollee's diligence to accurately estimate and report spill volumes;
- The Enrollee's subsequent verification and/or updates to initial Draft Spill Reports in accordance with this General Order; and
- The Enrollee's timely certification of required spill reports.

Consistent with Water Code section 13267 and section 13383, the State Water Board or a Regional Water Board may require an Enrollee to report the results of a condition assessment of a specified portion of the Enrollee's sanitary sewer system.

### **6.2. Other Regional Water Board Orders**

It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with federal and state regulations. This Order will not be interpreted or applied:

- In a manner inconsistent with the federal Clean Water Act;
- To authorize a spill or discharge that is illegal under either the Clean Water Act, the Water Code, and/or an applicable Basin Plan prohibition or water quality standard;
- To prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System (NPDES) permit or individual waste discharge requirements superseding an Enrollee's regulatory coverage under this General Order for a sanitary sewer system authorized under the Clean Water Act or Water Code;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- To supersede any more specific or more stringent waste discharge requirements or enforcement orders issued by a Regional Water Board; or
- To supersede any more specific or more stringent state or federal requirements in existing regulation, an administrative/judicial order, or Consent Decree.

### **6.3. Sewer System Management Plan Availability**

The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

### **6.4. Entry and Inspection**

#### **6.4.1. Entry and Availability of Information**

The Enrollee shall allow State and Regional Water Board staff, upon presentation of credentials and other documents as may be required by law, to:

- Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this General Order;
- Have access to and reproduce any records required to be maintained by this General Order;
- Inspect any facility and/or equipment (including monitoring and control equipment), practices, or operations required in this General Order; and
- Sample or monitor substances or parameters for assuring compliance with this General Order, or as otherwise authorized by the Water Code.

#### **6.4.2. Pre-Inspection Questionnaire**

The Enrollee shall provide pre-inspection information to State and Regional Water Board staff through the completion of a Pre-Inspection Questionnaire provided by Water Board staff.

## **ATTACHMENT A - DEFINITIONS**

### **Annual Report**

An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the Enrollee provides a calendar-year update of its efforts to prevent spills.

### **Basin Plan**

A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

### **Beneficial Uses**

The term “Beneficial Uses” is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

### **California Integrated Water Quality System (CIWQS)**

CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

### **Data Submitter**

A Data Submitter is an individual designated and authorized by the Enrollee’s Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

### **Disadvantaged Community**

A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.

For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

### **Drainage Conveyance System**

A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

## Enrollee

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one mile or less in length where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order, or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

## Environmentally Sensitive Area

An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

## Exfiltration

Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

## Flood Control Channel

A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

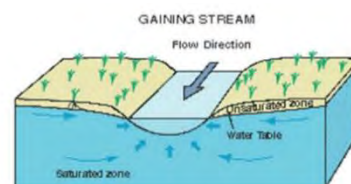
## Governing Entity

A governing entity includes but is not limited to the following:

- A publicly elected governing board, council, or commission of a municipal agency;
- A Department or Division director of a federal or state agency that is not governed by a board;
- A governing board or commission of an organization or association; and
- A private system owner/manager that is not governed by a board.

## Hydrologically Connected

Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)



### **Lateral (including Lower and Upper Lateral)**

A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership.

A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations.

An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

### **Legally Responsible Official**

A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

### **Nuisance**

For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:

- 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;
- 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
- Occurs during, or as a result of, the treatment or disposal of wastes.

### **Private Sewer Lateral**

A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

### **Private Sanitary Sewer System**

A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

### **Potential to Discharge, Potential Discharge**

Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

## **Receiving Water**

A receiving water is a water of the State that receives a discharge of waste.

## **Resilience**

Resilience is the ability to recover from or adjust to adversity or change, and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

## **Sanitary Sewer System**

A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

For purpose of this Order, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

## **Satellite Sewer System**

A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

## **Sewer System Management Plan**

A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

## **Sewage**

Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system.

## **Spill**

A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

## **Training**

Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with this General Order.

**Wash Down Water**

Wash down water is water used to clean a spill area.

**Waste**

Waste, as defined in Water Code section 13050(d), 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, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

**Waste Discharge Identification Number (WDID)**

A waste discharge identification number (WDID) identifies each individual sanitary sewer system enrolled under this General Order. A WDID number is assigned to each enrolled system upon an Enrollee's approved regulatory coverage.

**Waters of the State**

Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

**Waters of the United States**

Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

**Water Quality Objective**

A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

**ATTACHMENT B – APPLICATION FOR ENROLLMENT**

**1. Enrollment Status:** (Mark only one item)

New Enrollee

New Enrollee with previous regulatory coverage under Order 2006-0003-DWQ  
(that failed to certify continuation of coverage in CIWQS per Order 2022-XXXX-DWQ)

Existing WDID Number: \_\_\_\_\_

**2. Applicant Information:**

Legally Responsible Official Submitting Application

First and Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

System Owner/Operator Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

County: \_\_\_\_\_

Sanitary Sewer System Name: \_\_\_\_\_

Regional Water Quality Control Board(s): \_\_\_\_\_

Signature and Date: \_\_\_\_\_

**3. Applicant Type (Check one):**

City     County     State     Federal     Special District

Government Combination     Private     Other Non-governmental Entity

**4. Wastewater Treatment Plant Receiving Sanitary Sewer System Waste:**

Wastewater Treatment Plant Permittee: \_\_\_\_\_

WDID No.: \_\_\_\_\_

**5. Billing Information**

Billing Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Billing Contact Person and Title: \_\_\_\_\_

Phone and Email Address: \_\_\_\_\_

**6. Application Fee:**

The application fee, as required by Water Code section 13260, is based on the daily population served by the sanitary sewer system. See updated [Fee Schedule](https://www.waterboards.ca.gov/resources/fees/water_quality/).  
([https://www.waterboards.ca.gov/resources/fees/water\\_quality/](https://www.waterboards.ca.gov/resources/fees/water_quality/))

Check one of the following and enter fee amount:

Population Served < 50,000 – Total Fee submitted: \$ \_\_\_\_\_

Population Served ≥ 50,000 – Total Fee submitted: \$ \_\_\_\_\_

Make the fee payment payable to the State Water Resources Control Board and mail the complete application package to:

State Water Resources Control Board, Accounting Office  
P. O. Box 1888  
Sacramento, CA 95812-1888

Attention: Statewide Sanitary Sewer System Program

**7. Application Submittal Certification**

*I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge and belief, the information in the submitted application package is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.*

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**ATTACHMENT C - NOTICE OF TERMINATION**

**1. Enrollee Information**

Enrollee Name: \_\_\_\_\_

WDID No: \_\_\_\_\_

Legally Responsible Official Requesting Termination of Coverage: \_\_\_\_\_

First and Last Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

County: \_\_\_\_\_

Sanitary Sewer System Name(s) or Unique Identifier(s): \_\_\_\_\_

Regional Water Quality Control Board(s): \_\_\_\_\_

Signature and Date: \_\_\_\_\_

**2. Basis of Termination**

Explanation of termination, including subsequent regulatory coverage and subsequent owner/operator of enrolled sanitary sewer system, as applicable:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3. Regulatory Coverage Termination Certification**

*I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge: 1) the sanitary sewer system I officially represent is not required to be regulated under the Statewide Waste Discharge Requirements for Sanitary Sewer Systems Order 2022-XXXX-DWQ, and 2) the information submitted in this Notice of Termination is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I understand that the submittal of this Notice of Termination does not release sanitary sewer system agencies from liability for any violations of the Clean Water Act.*

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**For State Water Board Use Only**

Approved for Termination

Denied and Returned to Enrollee

Deputy Director of Water Quality Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Notice of Termination Effective Date: \_\_\_\_\_

**ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS**

**Table of Contents**

1. Sewer System Management Plan Goal And Introduction .....D-2

    1.1. Regulatory Context .....D-2

    1.2. Sewer System Management Plan Update Schedule.....D-3

    1.3. Sewer System Asset Overview .....D-3

2. Organization .....D-3

3. Legal Authority .....D-4

4. Operation And Maintenance Program.....D-4

    4.1. Updated Map of Sanitary Sewer System .....D-4

    4.2. Preventive Operation and Maintenance Activities .....D-4

    4.3. Training .....D-5

    4.4. Equipment Inventory .....D-5

5. Design And Performance Provisions .....D-5

    5.1. Updated Design Criteria and Construction Standards and Specifications.....D-5

    5.2. Procedures and Standards.....D-5

6. Spill Emergency Response Plan.....D-6

7. Sewer Pipe Blockage Control Program.....D-7

8. System Evaluation, Capacity Assurance and Capital Improvements.....D-7

    8.1 System Evaluation and Condition Assessment.....D-7

    8.2. Capacity Assessment and Design Criteria .....D-8

    8.3. Prioritization of Corrective Action .....D-9

    8.4. Capital Improvement Plan .....D-9

9. Monitoring, Measurement and Program Modifications.....D-9

10. Internal Audits.....D-10

11. Communication Program .....D-10

**ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS**

A Sewer System Management Plan (Plan) is a living planning document that documents ongoing local sewer system management program activities, procedures, and decision-making – at the scale necessary to address the size and complexity of the subject sanitary sewer system(s). This Plan may incorporate other programs and other plans by reference, to address short-term and long-term system resilience through:

- Proactive planning and decision-making;
- Local government ordinances;
- Updated operations and maintenance activities and procedures;
- Implementation of capital improvements;
- Sufficient local budget to support staff resources, contractors, equipment, and training; and
- Updated training of staff and contractors.

The Enrollee’s development, update, and implementation of a Sewer System Management Plan addressing the requirements of this Attachment is an enforceable component of this General Order. As specified in Provision 6.1 (Enforcement Provisions) of this General Order, consistent with the Water Code and the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee’s efforts in implementing an effective Sewer System Management Plan to prevent, contain, control, and mitigate spills when considering Water Code section 13327 factors to determine necessary enforcement of this General Order.

This Attachment includes the following required elements that the Enrollee shall address in its Plan and subsequent updates. The Enrollee shall identify any requirement in this Attachment that is not applicable to the Enrollee’s sewer system and shall explain in its Plan why the requirement is not applicable.

**1. SEWER SYSTEM MANAGEMENT PLAN GOAL AND INTRODUCTION**

The goal of the Sewer System Management Plan (Plan) is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee’s sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

The Plan must include a narrative Introduction section that discusses the following items:

**1.1. Regulatory Context**

The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates.

**1.2. Sewer System Management Plan Update Schedule**

The Plan Introduction section must include a schedule for the Enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

**1.3. Sewer System Asset Overview**

The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies);
- Service area boundary;
- Population and community served;
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;
- Structures diverting stormwater to the sewer system;
- Data management systems;
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;
- Estimated number or percent of residential, commercial, and industrial service connections; and
- Unique service boundary conditions and challenge(s).

Additionally, the Plan Introduction section must provide reference to the Enrollee’s up-to-date map of its sanitary sewer system, as required in section 4.1 (Updated Map of Sanitary Sewer System) of this Attachment.

**2. ORGANIZATION**

The Plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

- The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county

health officer, county environmental health agency, and State Office of Emergency Services.)

### **3. LEGAL AUTHORITY**

The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

### **4. OPERATION AND MAINTENANCE PROGRAM**

The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

#### **4.1. Updated Map of Sanitary Sewer System**

An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

#### **4.2. Preventive Operation and Maintenance Activities**

A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors.

The scheduling system must include:

- Inspection and maintenance activities;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
- Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

### **4.3. Training**

In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of this General Order;
- The Enrollee's Spill Emergency Response Plan procedures and practice drills;
- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

### **4.4. Equipment Inventory**

An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

## **5. DESIGN AND PERFORMANCE PROVISIONS**

The Plan must include the following items as appropriate and applicable to the Enrollee's system:

### **5.1. Updated Design Criteria and Construction Standards and Specifications**

Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria.

### **5.2. Procedures and Standards**

Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

**6. SPILL EMERGENCY RESPONSE PLAN**

The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

**7. SEWER PIPE BLOCKAGE CONTROL PROGRAM**

The Sewer System Management Plan must include procedures for the evaluation of the Enrollee’s service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances 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 substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;
- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

**8. SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS**

The Plan must include procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Capacity assessment and design criteria;
- Prioritization of corrective actions; and
- A capital improvement plan.

**8.1 System Evaluation and Condition Assessment**

The Plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Identify and justify the amount (percentage) of its system for its condition to be assessed each year;
- Prioritize the condition assessment of system areas that:
  - Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
  - Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
  - Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;
- Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods;
- Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;
- Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
- Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

### **8.2. Capacity Assessment and Design Criteria**

The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;

- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

### **8.3. Prioritization of Corrective Action**

The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

### **8.4. Capital Improvement Plan**

The capital improvement plan must include the following items:

- Project schedules including completion dates for all portions of the capital improvement program;
- Internal and external project funding sources for each project; and
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies.

## **9. MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS**

The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;
- Monitoring the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

**10. INTERNAL AUDITS**

The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order.

**11. COMMUNICATION PROGRAM**

The Plan must include procedures for the Enrollee to communicate with:

- The public for:
  - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
  - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators of systems that connect into the Enrollee’s system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

**ATTACHMENT E1 – NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS**

**Table of Contents**

1. Notification Requirements ..... E1-3

    1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of  
        Emergency Services ..... E1-3

    1.2. Spill Notification Information ..... E1-4

    1.3. Notification of Spill Report Updates ..... E1-4

2. Spill-Specific Monitoring Requirements ..... E1-5

    2.1 Spill Location and Spread ..... E1-5

    2.2 Spill Volume Estimation ..... E1-5

    2.3. Receiving Water Monitoring ..... E1-5

    2.4. Safety and Access Exceptions ..... E1-8

3. Reporting Requirements ..... E1-8

    3.1. Reporting Requirements for Individual Category 1 Spill Reporting ..... E1-8

    3.2. Reporting Requirements for Individual Category 2 Spill Reporting ..... E1-12

    3.3. Monthly Certified Spill Reporting for Category 3 Spills ..... E1-14

    3.4. Monthly Certified Spill Reporting for Category 4 Spills ..... E1-16

    3.5. Amended Certified Spill Reports for Category 3 Spills ..... E1-16

    3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills ..... E1-16

    3.7. Monthly Certification of “No-Spills” or “Category 4 Spills” and/or “Non-Category 1  
        Lateral Spills” ..... E1-16

    3.8. Electronic Sanitary Sewer System Service Area Boundary Map ..... E1-17

    3.9. Annual Report (Previously termed as Collection System Questionnaire in  
        General Order 2006-0003-DWQ) ..... E1-17

    3.10. Sewer System Management Plan Audit Reporting Requirements ..... E1-19

    3.11. Sewer System Management Plan Reporting Requirements ..... E1-19

4. Recordkeeping Requirements ..... E1-20

    4.1. Recordkeeping Time Period ..... E1-20

    4.2. Availability of Documents ..... E1-20

    4.3. Spill Reports ..... E1-20

    4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills ..... E1-21

    4.5. Sewer System Telemetry Records ..... E1-22

    4.6. Sewer System Management Plan Implementation Records ..... E1-22

    4.7. Audit Records ..... E1-23

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

4.8. Equipment Records..... E1-23  
4.9. Work Orders..... E1-23

## **ATTACHMENT E1– NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS**

The Notification Requirements (section 1), Spill-specific Monitoring Requirements (section 2), Reporting Requirements (section 3) and Recordkeeping Requirements (section 4) in this Attachment are pursuant to Water Code section 13267 and section 13383, and are an enforceable component of this General Order. For the purpose of this General Order, the term:

- Notification means the notifying of appropriate parties of a spill event or other activity.
- Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.
- Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.
- Recordkeeping means the maintaining of information and data in an official records storage system.

Failure to comply with the notification, monitoring, reporting and recordkeeping requirements in this General Order may subject the Enrollee to civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Resources Control Board (State Water Board) to collect sanitary sewer spill information for each spill event and make this information available to the public. Sanitary sewer spill information for each spill event includes but is not limited to: Enrollee contact information for each spill event, spill cause, estimated spill volume and factors used for estimation, location, date, time, duration, amount discharged to waters of the State, response and corrective action(s) taken.

### **1. NOTIFICATION REQUIREMENTS**

#### **1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services**

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Enrollee shall notify the California Office of Emergency Services and obtain a California Office of Emergency Services Control Number as soon as possible **but no later than two (2) hours** after:

- The Enrollee has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

## 1.2. Spill Notification Information

The Enrollee shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

## 1.3. Notification of Spill Report Updates

Following the initial notification to the California Office of Emergency Services and until such time that the Enrollee certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Enrollee shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

## **2. SPILL-SPECIFIC MONITORING REQUIREMENTS**

### **2.1 Spill Location and Spread**

The Enrollee shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
  - The system location where spill originated.  
For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
  - Drainage conveyance system entry locations,
  - The location(s) of discharge into surface waters, as applicable,
  - Extent of spill spread, and
  - The location(s) of clean up.

### **2.2 Spill Volume Estimation**

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

### **2.3. Receiving Water Monitoring**

#### **2.3.1. Receiving Water Visual Observations**

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Discoloration of receiving water, and
- Impact to the receiving water.

### 2.3.2. Receiving Water – Water Quality Sampling and Analysis

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than **18 hours** after the Enrollee's knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment, if sewage discharges to a surface water via a drainage conveyance system; and/or
  - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment;

If the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of this Attachment:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - *E-coli*
  - Enterococcus

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

**2.3.3. Water Quality Analysis Specifications**

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

**2.3.4. Receiving Water Sampling Locations**

The Enrollee shall collect receiving water samples at the following locations.

**Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge**

| Sampling Location | Sampling Location Description                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------|
| DCS-001           | A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water. |

**Receiving Surface Water Sampling (RSW)<sup>1</sup>**

| Sampling Location                           | Sampling Location Description                                                                                                                |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| RSW-001<br>Point of Discharge               | A point in the receiving water where sewage initially enters the receiving water.                                                            |
| RSW-001U:<br>Upstream of Point of Discharge | A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts. |

| Sampling Location                             | Sampling Location Description                                                                                                                  |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| RSW-001D:<br>Downstream of Point of Discharge | A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water. |

<sup>1</sup> The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

**2.4. Safety and Access Exceptions**

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

**3. REPORTING REQUIREMENTS**

All reporting required in this General Order must be submitted electronically to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (https://ciwqs.waterboards.ca.gov), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of this General Order.

The Enrollee shall report any information that is protected by the Homeland Security Act, by email to [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov), with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

**3.1. Reporting Requirements for Individual Category 1 Spill Reporting**

**3.1.1. Draft Spill Report for Category 1 Spills**

**Within three (3) business days** of the Enrollee’s knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;
  - o If a single spill 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 spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry location(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system;
  - o Estimated spill volume remaining within the drainage conveyance system;
11. Description and photographs of all discharge point(s) into the surface water;
12. Estimated spill volume that discharged to surface waters; and
13. Estimated total spill volume recovered.

### 3.1.2. Certified Spill Report for Category 1 Spills

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.1.1 (Draft Spill Report for Category 1 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
  - o The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - o The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
  - o Observed impacts on aquatic life,
  - o Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
  - o Responsible entity for closing/restricting use of water body, and
  - o Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

### **3.1.3. Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water**

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
  - o Complete and detailed explanation of how and when the spill was discovered;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
  - Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
  - Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
  - Detailed description of the spill cause(s);
  - Description of the pipe material, and estimated age of the pipe material, at the failure location;
  - Description of the impact of the spill;
  - Copy of original field crew records used to document the spill; and
  - Historical maintenance records for the failure location.
2. Enrollee's response to the spill:
- Chronological narrative description of all actions taken by the Enrollee to terminate the spill;
  - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
  - Final corrective action(s) completed and a schedule for planned corrective actions, including:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
    - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
- Description of all water quality sampling activities conducted;
  - List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring) of this Attachment;
  - Laboratory results, including laboratory reports;
  - Detailed location map illustrating all water quality sampling points; and
  - Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

### 3.1.4. Amended Certified Spill Reports for Individual Category 1 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

## 3.2. Reporting Requirements for Individual Category 2 Spill Reporting

### 3.2.1. Draft Spill Report for Category 2 Spills

**Within three (3) business days** of the Enrollee's knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;

If a single spill 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 spill appearance point explanation field;

8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry location(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system;
  - o Estimated spill volume remaining within the drainage conveyance system;

- Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and

11. Estimated total spill volume recovered.

### 3.2.2. Certified Spill Report for Category 2 Spills

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.2.1 (Draft Spill Report for Category 2 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
  - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and

14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

### 3.2.3. Amended Certified Spill Reports for Individual Category 2 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

### 3.3. Monthly Certified Spill Reporting for Category 3 Spills

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30<sup>th</sup>). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated:
  - o If a single spill 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 spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry locations(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system; and

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.
- 10. Estimated total spill volume recovered;
- 11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
- 12. Spill end date and time;
- 13. Description of how the spill volume estimations were calculated, including, at minimum:
  - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
- 14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
- 15. System failure location (for example, main, pump station, etc.);
- 16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
- 17. Description of the impact of the spill;
- 18. Whether or not the spill was associated with a storm event;
- 19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
- 20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
  - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
  - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
    - Adjusted schedule/method of preventive maintenance,
    - Planned rehabilitation or replacement of sanitary sewer asset,
    - Inspected, repaired asset(s), or replaced defective asset(s),
    - Capital improvements,
    - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
    - Description of spill response activities,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Spill response completion date, and
- Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;

21. Detailed narrative of investigation and investigation findings of cause of spill.

### 3.4. Monthly Certified Spill Reporting for Category 4 Spills

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

### 3.5. Amended Certified Spill Reports for Category 3 Spills

**Within 90 calendar days of the certified Spill Report due date**, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

**After 90 calendar days**, the Legally Responsible Official shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

### 3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of this Attachment;  
The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.
- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

### 3.7. Monthly Certification of “No-Spills” or “Category 4 Spills” and/or “Non-Category 1 Lateral Spills”

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of this Attachment) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Enrollee has no further spills of any category, in the subsequent calendar month, the Enrollee shall certify “no-spills” for the subsequent calendar month.

If the Enrollee has no spills from its systems during a calendar month, but the Enrollee voluntarily reported a spill from a private lateral or a private system, the Enrollee shall certify “no-spills” for that calendar month.

If the Enrollee has spills from its owned and/or operated laterals during a calendar month, the Enrollee shall not certify “no spills” for that calendar month.

### 3.8. **Electronic Sanitary Sewer System Service Area Boundary Map**

The Legally Responsible Official shall submit, to the State Water Board, an up-to-date electronic spatial map of its sewer system service area boundaries. The map must be in accordance with section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order and the specification provided on the statewide Sanitary Sewer Systems program website. The map must include the location of wastewater treatment facility(ies) that treats the sewer system waste, if in the same sewer service boundary.

By the Effective Date of this General Order, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.

### 3.9. **Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ)**

A new Enrollee shall complete and submit its first certified Annual Report into the online CIWQS Sanitary Sewer System Database, **within 30 days of obtaining a CIWQS account**; Subsequent Annual Reports are due by April 1 of each year.

All enrollees shall update their previous year’s Annual Report, **by April 1 of each year after the Effective Date of this General Order**, for each calendar year (January 1 through December 31).

The Annual Report must be entered directly into the online CIWQS Sanitary Sewer System Database. The Enrollee’s Legally Responsible Official shall certify the Annual Report as instructed in CIWQS;

The Annual Report must address, and update as applicable, the following items:

- Population served;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Updated sewer system service area boundary map, if service area boundary has changed from original map submitted per section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order;
- Number of system operation and maintenance staff:
  - Entry level (less than two years of experience),
  - Journey level (greater than two years of experience),
  - Supervisory level, and
  - Managerial level;
- Number of operation and maintenance staff certified as a certified collection system operator by the California Water Environmental Association (CWEA), with:
  - Corresponding number of certified collection system operator grade levels (Grade I, II, III, IV, and V);
- System information:
  - Miles of system gravity and force mains,
  - Number of upper and lower service laterals connected to system,
  - Estimated number of upper and lower laterals owned and/or operated by the Enrollee,
  - Portion of laterals that is Enrollee's responsibility,
  - Average age the major components of system infrastructure,
  - Number and age of pump stations, and
  - Estimated total miles of the system pipeline not accessible for maintenance;
- Name and location of the treatment plant(s) receiving sanitary sewer system's waste;
- Name of satellite sewer system tributaries;
- Number of system's gravity sewer above or underground crossings of water bodies throughout system;
- Number of force main (pressurized pipe) above or underground crossings of water bodies throughout system;
- Number of siphons used to convey waste throughout the sewer system;
- Miles of sewer system cleaned;
- Miles of sewer system video inspected, or comparable (i.e., video closed-circuit television or alternative inspection methods);
- System Performance Evaluation as specified in section 5.11 (System Performance Analysis) of this General Order;
- Major spill causes (for example, root intrusion, grease deposition);

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- System infrastructure failure points (for example, main, pump station, lateral, etc.);
- Ongoing spill investigations; and
- Actions taken to address system deficiencies.

### 3.10. Sewer System Management Plan Audit Reporting Requirements

The Enrollee shall submit its Sewer System Management Plan Audit and other pertinent audit information, in accordance with section 5.4 (Sewer System Management Plan Audits) of this General Order, to the online CIWQS Sanitary Sewer System Database **by six (6) months after the end of the 3-year audit period.**

If a Sewer System Management Plan Audit is not conducted as required: the Enrollee shall:

- Update the online CIWQS Sanitary Sewer System Database and select the justification for not conducting the Audit; and
- Notify its corresponding Regional Water Board (see Attachment F (Regional Water Quality Control Board Contact Information)) of the justification for the lapsed requirements.

The Enrollee's reporting of a justification for not conducting a timely Audit does not justify non-compliance with this General Order. The Enrollee shall:

- Submit the late Audit as required in this General Order; and
- Comply with subsequent Audit requirements and due dates corresponding with the original audit cycle.

### 3.11. Sewer System Management Plan Reporting Requirements

For an Existing Enrollee previously regulated by Order 2006-0003-DWQ: **Within every six (6) years after the required due date of its last Plan Update**, the Legally Responsible Official shall upload and certify a local governing entity-approved Sewer System Management Plan Update to the online CIWQS Sanitary Sewer System Database. If the electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its updated Sewer System Management Plan posted on its own website.

Order 2006-0003-DWQ required each enrollee to develop its initial Sewer System Management Plan per the following schedule, with required Plan updates at a frequency of 5-years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2009

Between 100,000 and 10,000: August 2, 2009

Between 10,000 and 2,500: May 2, 2010

Less than 2,500: August 2, 2010

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

This Order carries forth the previously-required Plan Update schedule per Order 2006-0003-DWQ. Per the six-year Plan Update frequency required in this Order, the Enrollee shall upload and certify its first Plan Update, to the online CIWQS Sanitary Sewer System Database by the following due dates, with subsequent Plan Updates at the frequency of six years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2025

Between 100,000 and 10,000: August 2, 2025

Between 10,000 and 2,500: May 2, 2026

Less than 2,500: August 2, 2026

For a New Enrollee: **Within twelve (12) months of its Application for Enrollment Approval date**, the Legally Responsible Official of a new Enrollee shall upload and certify a local governing entity-approved Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database. If electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its Sewer System Management Plan posted on its own website. The due date for subsequent 6-year Plan updates, is six (6) years from the submittal due date of the new Enrollee's first Sewer System Management Plan.

### 4. RECORDKEEPING REQUIREMENTS

The Enrollee shall maintain records to document compliance with the provisions of this General Order, and previous General Order 2006-0003-DWQ as applicable, for each sanitary sewer system owned, including any required records generated by an Enrollee's contractor(s).

#### 4.1. Recordkeeping Time Period

The Enrollee shall maintain records of documents required in this Attachment, including records collected for compliance with this General Order, and records collected in accordance with previous General Order 2006-0003-DWQ, for five (5) years.

#### 4.2. Availability of Documents

The Enrollee shall make the records required in this General Order readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request.

#### 4.3. Spill Reports

The Enrollee shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Enrollee responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
  - Date, time, and method of notification,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant's contact information, if available, and
- Final resolution of the complaint;
- Records documenting the steps and/or remedial action(s) undertaken by the Enrollee, using all available information, to comply with this General Order, and previous General Order 2006-0003-DWQ as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Records, in accordance with the Monitoring Requirements in this Attachment.

### **4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills**

An Enrollee must maintain the following records for each individual Category 4 spill and for each individual non-Category 1 Enrollee-owned and/or operated lateral spill, and report in accordance to section 3.6 (Annual Certified Spill Reporting of Category 4 and/or Lateral Spills) of this Attachment.

#### **Recordkeeping of Individual Category 4 Spill Information:**

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
  - Description of drainage conveyance system location,
  - Estimated spill volume fully recovered within the drainage conveyance system, and
  - Estimated spill volume remaining within the drainage conveyance system;
5. Estimated total spill volume exiting the sanitary sewer system;
6. Spill date and start time;
7. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
8. System failure location (for example, main, pump station, etc.);
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of how the volume estimation was calculated, including, at minimum:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
11. Description of implemented system modifications and operating/maintenance modifications.

### **Recordkeeping of Individual Lateral Spill Information:**

1. Date and time the Enrollee was notified of, or self-discovered, the spill;
2. Location of individual spill;
3. Estimated individual spill volume;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
5. Description of how the volume estimations were calculated.

### **Total Annual Spill Information:**

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
  - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
  - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

## **4.5. Sewer System Telemetry Records**

The Enrollee shall maintain the following sewer system telemetry records if used to document compliance with this General Order, and previous General Order 2006-0003-DWQ as applicable, including spill volume estimates:

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

## **4.6. Sewer System Management Plan Implementation Records**

The Enrollee shall maintain records documenting the Enrollee's implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

**4.7. Audit Records**

The Enrollee shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

**4.8. Equipment Records**

The Enrollee shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

**4.9. Work Orders**

The Enrollee shall maintain record of work orders for operations and maintenance projects.

**ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS**

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

**Table E2-1**

**Spill Category 1: Spills to Surface Waters**

| <b>Spill Requirement</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Method</b>                                                                                             |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Notification             | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters:</p> <p>Notify the California Office of Emergency Services and obtain a notification control number.</p>                                                                                                                                                                                                                                                                           | <p>California Office of Emergency Services at:<br/>(800) 852-7550</p> <p>(Section 1 of Attachment E1)</p> |
| Monitoring               | <ul style="list-style-type: none"> <li>• Conduct spill-specific monitoring;</li> <li>• Conduct water quality sampling of the receiving water within <b>18 hours</b> of initial knowledge of spill of 50,000 gallons or greater to surface waters.</li> </ul>                                                                                                                                                                                                                                                                                               | <p>(Section 2 of Attachment E1)</p>                                                                       |
| Reporting                | <ul style="list-style-type: none"> <li>• Submit Draft Spill Report <b>within three (3) business days</b> of the Enrollee’s knowledge of the spill;</li> <li>• Submit Certified Spill Report <b>within 15 calendar days</b> of the spill end date;</li> <li>• Submit Technical Report <b>within 45 calendar days</b> after the spill end date for a Category 1 spill in which <b>50,000 gallons or greater</b> discharged to surface waters; and</li> <li>• Submit Amended Spill Report <b>within 90 calendar days</b> after the spill end date.</li> </ul> | <p>(Section 3.1 of Attachment E1)</p>                                                                     |

**Table E2-2**

**Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                       | <b>Method</b>                                                                                         |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Notification              | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p>                                                                                | <p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p> |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                               | (Section 2 of Attachment E1)                                                                          |
| Reporting                 | <ul style="list-style-type: none"> <li>• Submit Draft Spill Report <b>within three (3) business days</b> of the Enrollee’s knowledge of the spill;</li> <li>• Submit Certified Spill Report <b>within 15 calendar days</b> of the spill end date; and</li> <li>• Submit Amended Spill Report <b>within 90 calendar days</b> after the spill end date.</li> </ul> | (Section 3.2 of Attachment E1)                                                                        |

**Table E2-3**

**Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                           | <b>Method</b>                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Notification              | Not Applicable                                                                                                                                                                                                                                                                                                                                       | Not Applicable                         |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                   | (Section 2 of Attachment E1)           |
| Reporting                 | <ul style="list-style-type: none"> <li>Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within <b>30 calendars days</b> after the end of the month in which the spills occur; and</li> <li>Submit Amended Spill Reports <b>within 90 calendar days</b> after the Certified Spill Report due date.</li> </ul> | (Section 3.3 and 3.5 of Attachment E1) |

**Table E2-4**

**Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Method</b>                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Notification              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Not Applicable                                   |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (Section 2 of Attachment E1)                     |
| Reporting                 | <ul style="list-style-type: none"> <li>If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred.</li> <li>Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1<sup>st</sup> after the end of the calendar year in which the spills occur.</li> </ul> | (Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1) |

**Table E2-5**

**Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Method</b>                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Notification              | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p> <p>Not applicable to a spill of less than 1,000 gallons.</p>                                                       | <p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p> |
| Monitoring                | <p>Conduct visual monitoring.</p>                                                                                                                                                                                                                                                                                                                                                                                                         | <p>(Section 2 of Attachment E1)</p>                                                                   |
| Reporting                 | <ul style="list-style-type: none"> <li>• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1<sup>st</sup> after the end of the calendar year in which the spills occur.</li> <li>• Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.</li> </ul> | <p>(Sections 3.6, 3.7 and 4.4 of Attachment E1)</p>                                                   |

**ATTACHMENT F – REGIONAL WATER QUALITY CONTROL BOARD CONTACT INFORMATION**

This Attachment provides a map, list of counties, and contact information to assist the Enrollee in identifying the corresponding Regional Water Quality Control Board office, for all Regional Water Board notification requirements in this General Order.



**Region 1 -- North Coast Regional Water Quality Control Board:**

Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity counties.

RB1SpillReporting@waterboards.ca.gov or (707) 576-2220

**Region 2 -- San Francisco Bay Regional Water Quality Control Board:**

Alameda, Contra Costa, San Francisco, Santa Clara (Northern most part of Morgan Hill), San Mateo, Marin, Sonoma, Napa, Solano counties.

RB2SpillReports@waterboards.ca.gov or (510) 622-2369

**Region 3 -- Central Coast Regional Water Quality Control Board:**

Santa Clara (most of Morgan Hill), San Mateo (Southern portion), Santa Cruz, San Benito, Monterey, Kern (small portions), San Luis Obispo, Santa Barbara, Ventura (Northern portion) counties.

CentralCoast@waterboards.ca.gov or (805) 549-3147

**Region 4 -- Los Angeles Regional Water Quality Control Board:**

Los Angeles, Ventura counties (small portions of Kern and Santa Barbara counties).

rb4-ssswdr@waterboards.ca.gov or (213) 576-6600

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

**Region 5 -- Central Valley Regional Water Quality Control Board:**

**Rancho Cordova (Sacramento) Office:** Colusa, Lake, Sutter, Yuba, Sierra, Nevada, Placer, Yolo, Napa, (North East), Solano (West), Sacramento, El Dorado, Amador, Calaveras, San Joaquin, Contra Costa (East), Stanislaus, Tuolumne counties.

RB5sSpillReporting@waterboards.ca.gov or (916) 464-3291

**Fresno Office:** Fresno, Kern, Kings, Madera, Mariposa, Merced, and Tulare counties, and small portions of San Benito and San Luis Obispo counties.

RB5fSpillReporting@waterboards.ca.gov or (559) 445-5116

**Redding Office:** Butte, Glen, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Tehama counties.

RB5rSpillReporting@waterboards.ca.gov or (530) 224-4845

**Region 6 -- Lahontan Regional Water Quality Control Board:**

**Lake Tahoe Office:** Alpine, Modoc (East), Lassen (East side and Eagle Lake), Sierra, Nevada, Placer, El Dorado counties.

RB6sSpillReporting@waterboards.ca.gov or (530) 542-5400

**Victorville Office:** Mono, Inyo, Kern (East), San Bernardino, Los Angeles (North East corner) counties.

RB6vSpillReporting@waterboards.ca.gov or (760) 241-6583

**Region 7 -- Colorado River Basin Regional Water Quality Control Board:**

Imperial county and portions of San Bernardino, Riverside, San Diego counties.

RB7SpillReporting@waterboards.ca.gov or (760) 346-7491

**Region 8 -- Santa Ana Regional Water Quality Control Board:**

Orange, Riverside, San Bernardino counties.

RB8SpillReporting@waterboards.ca.gov or (951) 782-4130

**Region 9 -- San Diego Regional Water Quality Control Board:**

San Diego county and portions of Orange and Riverside counties.

RB9Spill\_Report@waterboards.ca.gov or (619) 516-1990

**End of Order 2022-0103-DWQ**

This page is intentionally left blank.

## APPENDIX B

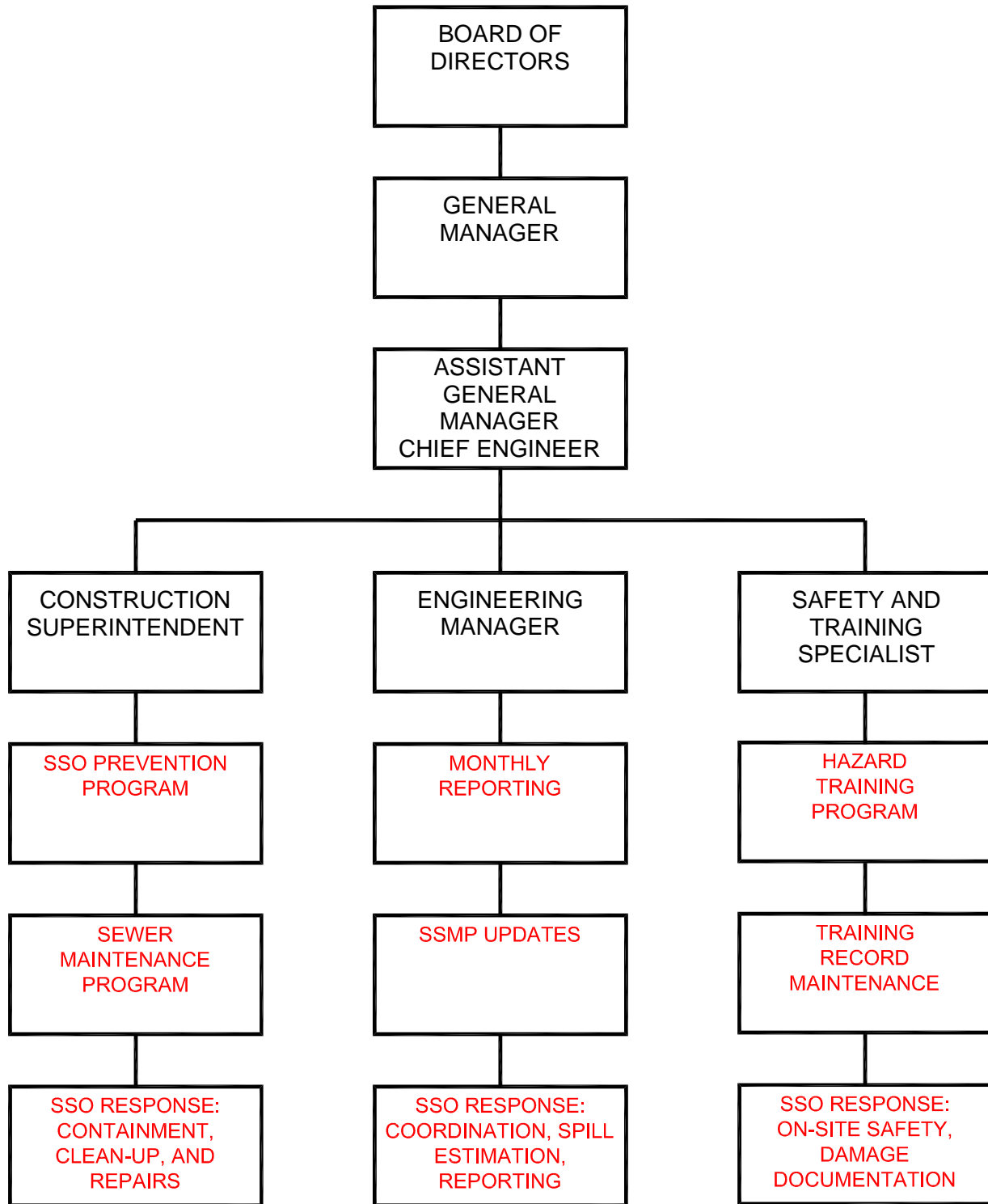
### *DWA ORGANIZATIONAL RESPONSIBILITIES CHART AND CONTACT INFORMATION*

This page is intentionally left blank.

# DESERT WATER AGENCY

## SEWER SYSTEM MANAGEMENT PLAN

### ORGANIZATIONAL CHART



THE ABOVE REFERENCED POSITIONS MAY BE MAY BE CONTACTED BY CALLING  
DESERT WATER AGENCY AT (760) 323-4971

This page is intentionally left blank.

## APPENDIX C

### *DWA REGULATIONS GOVERNING SEWER SERVICE*

This page is intentionally left blank.

**ORDINANCE NO. 71  
DESERT WATER AGENCY**

**REGULATIONS GOVERNING  
SEWER SERVICE**

**EFFECTIVE DATE: February 1, 2020**

ORDINANCE NO. 71

ORDINANCE OF THE BOARD OF DIRECTORS OF  
DESERT WATER AGENCY ADOPTING REGULATIONS  
GOVERNING SEWER SERVICE

Be it ordained that the Board of Directors of Desert Water Agency does hereby adopt the following regulations governing sewer service.

---

---

# REGULATIONS GOVERNING SEWER SERVICE

---

---

|                  |                                  |                                                       |
|------------------|----------------------------------|-------------------------------------------------------|
| <b>SECTION 1</b> | <b>DEFINITION OF TERMS</b>       |                                                       |
|                  | 1-1                              | Agency Definitions..... 1                             |
|                  | 1-2                              | Other Definitions ..... 4                             |
| <b>SECTION 2</b> | <b>AUTHORITY</b>                 |                                                       |
|                  | 2-1                              | General Authority ..... 5                             |
|                  | 2-2                              | Revision of Fees and Charges ..... 5                  |
|                  | 2-3                              | Authority of Inspectors ..... 5                       |
| <b>SECTION 3</b> | <b>SEWER SERVICE</b>             |                                                       |
|                  | 3-1                              | Required Service Connection ..... 6                   |
|                  | 3-2                              | Changes in Customer’s Equipment ..... 6               |
|                  | 3-3                              | Changes in Collection System ..... 6                  |
|                  | 3-4                              | Agency Consent..... 6                                 |
|                  | 3-5                              | Damage to Agency Facilities..... 6                    |
|                  | 3-6                              | Unauthorized Connections ..... 7                      |
|                  | 3-7                              | Responsibility for Private Plumbing Facilities..... 7 |
|                  | 3-8                              | Notification of Change of Ownership ..... 7           |
|                  | 3-9                              | Access to Premises ..... 7                            |
|                  | 3-10                             | Responsibility ..... 7                                |
|                  | 3-11                             | Ownership..... 7                                      |
|                  | 3-12                             | Maintenance..... 7                                    |
|                  | 3-13                             | Replacement ..... 8                                   |
| <b>SECTION 4</b> | <b>SEWER SERVICE CONNECTIONS</b> |                                                       |
|                  | 4-1                              | Application ..... 9                                   |
|                  | 4-2                              | Premises to be Served..... 9                          |
|                  | 4-3                              | Division of Property ..... 9                          |
|                  | 4-4                              | Separate Service Connections ..... 9                  |
|                  | 4-5                              | Approval of Drawings ..... 9                          |
|                  | 4-6                              | Licensed Contractors ..... 9                          |
|                  | 4-7                              | Street Lateral Size..... 9                            |
|                  | 4-8                              | Street Lateral Location ..... 9                       |
|                  | 4-9                              | Installation ..... 10                                 |
|                  | 4-10                             | Cost of Installation..... 10                          |
|                  | 4-11                             | Interceptors /Separators ..... 10                     |
|                  | 4-11.1                           | Interceptor / Separator Surcharge ..... 10            |
|                  | 4-11.2                           | Interceptor / Separator Installation ..... 10         |
|                  | 4-12                             | Plan Checking..... 10                                 |
|                  | 4-13                             | Inspection and Connection ..... 10                    |

**SECTION 5 SEWER EXTENSIONS**

5-1 General Provisions..... 11  
5-1.1 Individual Extensions ..... 11  
5-1.2 Agency Ownership ..... 11  
5-1.3 Specifications..... 11  
5-1.4 Costs ..... 11  
5-1.5 Feasibility ..... 11  
5-1.6 Location ..... 11  
5-1.7 Parallel Mains ..... 11  
5-1.8 Agency Right to Allow Connections..... 12  
5-1.9 Minimum Sizing ..... 12  
5-1.10 Agency Right to Design and Construct ..... 12  
5-1.11 Separate Service Connections ..... 12  
5-2 Types of Extensions..... 12  
5-2.1 General..... 12  
5-2.1.1 Oversizing..... 12  
5-2.1.2 Offtract Improvements ..... 12  
5-2.1.2.1 Main Extension Refund Agreement ..... 12  
5-2.2 By Agency ..... 12  
5-2.3 By Applicant..... 13  
5-3 Inspection..... 13  
5-4 Plan Checking..... 13  
5-5 Design Review..... 13

**SECTION 6 FEES AND CHARGES**

6-1 Capacity Charges ..... 14  
6-1.1 Time of Payment ..... 14  
6-2 Connection Charges (Front Footage Charge)..... 14  
6-2.1 Time of Payment ..... 14  
6-2.2 Exemption..... 14  
6-3 Plan Check Fees..... 14  
6-4 Inspection Fees ..... 14  
6-5 Design Review Fees ..... 14  
6-6 Development Review Charge ..... 14

**SECTION 7 MONTHLY CHARGES**

7-1 Monthly Service Charges ..... 15  
7-1.1 Quantitative Charges ..... 15  
7-1.2 Treatment by Other Entities ..... 15  
7-2 Interceptor / Separator Surcharge ..... 15

|                   |                                                  |                                                 |
|-------------------|--------------------------------------------------|-------------------------------------------------|
| <b>SECTION 8</b>  | <b>CREDIT POLICY</b>                             |                                                 |
|                   | 8-1                                              | Establishing Credit ..... 16                    |
| <b>SECTION 9</b>  | <b>DISCONTINUANCE AND RESTORATION OF SERVICE</b> |                                                 |
|                   | 9-1                                              | Discontinuance of Service ..... 17              |
|                   | 9-1.1                                            | Agency Initiated ..... 17                       |
|                   | 9-1.2                                            | At Customer's Request ..... 17                  |
|                   | 9-2                                              | Restoration of Service ..... 17                 |
|                   | 9-2.1                                            | General Provisions..... 17                      |
|                   | 9-2.2                                            | Unauthorized Provisions..... 17                 |
| <b>SECTION 10</b> | <b>BILLING AND COLLECTION</b>                    |                                                 |
|                   | 10-1                                             | Rendering of Bills..... 18                      |
|                   | 10-2                                             | Proration of Bills ..... 18                     |
|                   | 10-3                                             | Payment of Bills ..... 18                       |
|                   | 10-4                                             | Delinquent Accounts ..... 18                    |
| <b>SECTION 11</b> | <b>REGULATIONS OF WASTE AND WATER</b>            |                                                 |
|                   | 11-1                                             | Discharges ..... 20                             |
|                   | 11-2                                             | Admission of Prohibited Discharges ..... 21     |
|                   | 11-3                                             | Pretreatment..... 21                            |
|                   | 11-4                                             | Industrial Wastes ..... 22                      |
|                   | 11-5                                             | Maintenance of Pretreatment Facilities ..... 22 |
|                   | 11-6                                             | Monitoring ..... 22                             |
|                   | 11-6.1                                           | Control Manhole..... 22                         |
|                   | 11-6.2                                           | Sampling..... 22                                |
|                   | 11-6.3                                           | Interceptors / Separators ..... 22              |
| <b>SECTION 12</b> | <b>ENFORCEMENT</b>                               |                                                 |
|                   | 12-1                                             | General Provisions..... 23                      |
|                   | 12-2                                             | Violations..... 23                              |
|                   | 12-2.1                                           | Written Notice ..... 23                         |
|                   | 12-2.2                                           | Corrective Action ..... 23                      |
|                   | 12-3                                             | Discontinuance of Service ..... 23              |
|                   | 12-4                                             | Abatements ..... 23                             |
| <b>SECTION 13</b> | <b>SEVERABILITY</b>                              |                                                 |
|                   | 13-1                                             | Severability of Regulations ..... 24            |

**SECTION 14 EFFLUENT TO COACHELLA VALLEY WATER DISTRICT**

|          |                                  |    |
|----------|----------------------------------|----|
| 14-1     | Provisions .....                 | 25 |
| 14-2     | Plan Checks and Inspection.....  | 25 |
| 14-3     | Connections .....                | 25 |
| 14-4     | Bonds .....                      | 25 |
| 14-5     | Transfer of Title.....           | 25 |
| 14-6     | Sewer Capacity Charge .....      | 25 |
| 14-7     | Operations and Maintenance ..... | 25 |
| 14-8     | Monthly Charges .....            | 25 |
| 14-8.1   | District Charges .....           | 26 |
| 14-8.1.1 | Monthly Service Charge.....      | 26 |
| 14-8.1.2 | “In Lieu of Taxes” Charge.....   | 26 |
| 14-8.2   | Agency Charges.....              | 26 |
| 14-8.2.1 | Monthly Service Charge.....      | 26 |
| 14-9     | Termination .....                | 26 |

**SECTION 15 EFFLUENT TO CITY OF PALM SPRINGS**

|        |                                  |    |
|--------|----------------------------------|----|
| 15-1   | Provisions .....                 | 27 |
| 15-2   | Plan Checks and Inspection.....  | 27 |
| 15-3   | Connections .....                | 27 |
| 15-4   | Bonds .....                      | 27 |
| 15-5   | Transfer of Title.....           | 27 |
| 15-6   | Sewer Capacity Charge .....      | 27 |
| 15-7   | Operations and Maintenance ..... | 27 |
| 15-8   | Monthly Charges .....            | 27 |
| 15-8.1 | City Charges .....               | 27 |
| 15-8.2 | Agency Charges.....              | 28 |
| 15.9   | Termination .....                | 28 |

**SECTION 16 ADOPTION**

|      |                                  |    |
|------|----------------------------------|----|
| 16-1 | Effective Date .....             | 29 |
| 16-2 | Previous Ordinance Repealed..... | 29 |

# REGULATIONS GOVERNING SEWER SERVICE

## SECTION 1 - DEFINITION OF TERMS

- 1-1 **AGENCY DEFINITIONS:** Whenever the words defined in this section, or pronouns used in their stead, occur in these Rules and Regulations, they shall have the meanings here given:
- 1-1.1 **AGENCY** shall mean the Desert Water Agency organized and operated pursuant to the provisions of the Desert Water Agency Law, Stats.1961, Ch. 1069.
- 1-1.2 **APARTMENT** shall mean any dwelling unit within a building containing three or more dwelling units with separate plumbing facilities, but shall not include any building commonly known as a hotel, motel, or condominium.
- 1-1.3 **APPLICANT** shall mean an individual, partnership, corporation or agency which is the owner of the premises for which sewer service is being applied.
- 1-1.4 **BOARD** shall mean the Board of Directors of the Desert Water Agency.
- 1-1.5 **BUILDING SEWER** shall mean the customer's pipeline extending from the customer's house, building or structure, which receives waste discharge from the house, building, or structure and conveys it to the street lateral.
- 1-1.6 **CAPACITY CHARGE** shall mean a charge levied on a premises for the purpose of providing treatment capacity in a waste water reclamation plant and for conveyance capacity in the sewer system.
- 1-1.7 **CITY** shall mean the City of Palm Springs.
- 1-1.8 **CONDOMINIUM** shall mean a unit of a development as defined in Section 1350 of the Civil Code.
- 1-1.9 **CONNECTION CHARGE (Front Footage Charge)** shall mean a charge levied by the Agency on any premises for the purpose of providing sewer service.
- 1-1.10 **CONTRACTOR** shall mean any individual, firm, corporation, partnership, or association duly licensed to perform work by the State of California in connection with the installation of sewer facilities.
- 1-1.11 **CUSTOMER** shall mean the owner of the premises receiving sewer service.
- 1-1.12 **DEVELOPER** shall mean a person, firm, corporation, partnership, or association who proposes to develop real property, or who subdivides real property for purposes of development.

- 1-1.13      **DISTRICT** shall mean the Coachella Valley Water District.
- 1-1.14      **DUPLEX** shall mean any building containing two dwelling units, excluding any building commonly known as a hotel, motel, apartment, or condominium.
- 1-1.15      **DWELLING UNIT** shall mean a single family residence; each unit of a duplex, triplex or greater number of similar units; each unit of an apartment, condominium, motel, hotel, and each mobile home.
- 1-1.16      **EFFLUENT** shall mean waste water or other liquid, partially or completely treated, or in its natural state, flowing out of a treatment plant, or associated basin or reservoir.
- 1-1.17      **EQUIVALENT DWELLING UNIT (EDU)** shall mean a single family residence; each unit of a duplex, triplex, or a greater number of similar units; each unit of an apartment complex, condominium complex, and each mobile home. Each recreational vehicle or travel trailer park space, and motel or hotel, shall constitute 0.5 equivalent dwelling units. Equivalent dwelling unit (EDU) for commercial use shall be based on actual water consumption or as determined by Agency.
- 1-1.18      **FIXTURE UNIT (FU)** shall mean a unit value determined by the plumbing and fixture design for both the water supply and wastewater for each building.
- 1-1.19      **GENERAL MANAGER** shall mean the General Manager of the Desert Water Agency.
- 1-1.20      **INDUSTRIAL WASTES** shall mean industrial process wastes, including wastes from any producing, manufacturing, processing, or treatment process.
- 1-1.21      **INSTALLATION CHARGE** shall mean a charge levied on any premises covering material, labor, and equipment for installing sewer system facilities.
- 1-1.22      **INTERCEPTOR / SEPARATOR SURCHARGE** shall mean the charge established to provide inspection of an interceptor / separator as determined necessary.
- 1-1.23      **INTRACT** or **ONSITE** shall mean that area which lies inside the peripheral boundary of a subdivided area and/or a developed area.
- 1-1.24      **LOCAL AGENCY** shall mean a city, county, or city and county.
- 1-1.25      **LOT** shall mean a parcel or that portion of a parcel of land which is delineated or described as a single integral unit of a subdivision or parcel map.
- 1-1.26      **MONTHLY SERVICE CHARGE** shall mean a charge levied on any premises for the purpose of covering costs for operating, maintaining and replacing the facilities, providing sewer service, and for billing, collection, and administrative costs.

- 1-1.27 **OFFTRACT** or **OFFSITE** shall mean that area which lies outside the peripheral boundary of a subdivided area and/or a developed area.
- 1-1.28 **PERSON** shall mean any individual, firm, corporation, company, political subdivision, city, county, district, the State of California, or the United States of America, or any department or agency thereof. The singular shall in each case include the plural.
- 1-1.29 **PREMISES** shall mean any lot, or property, or any building or other structure.
- 1-1.30 **PRIVATE PLUMBING** shall mean the customer's pipeline and appurtenances extending from a point designated by the Agency or at the point of connection to the Agency's lateral to the customer's house, building, or structure.
- 1-1.31 **REGULATIONS** shall mean the current edition of, and any amendments or revisions to, the Agency's Regulations Governing Sewer Service.
- 1-1.32 **SERVICE AREA** shall mean that area for which the Agency provides sewer service.
- 1-1.33 **SERVICE CONNECTION** shall mean the same as STREET LATERAL.
- 1-1.34 **SEWAGE** shall mean any untreated residential, commercial, or industrial wastewater or liquid introduced into the sewer system.
- 1-1.35 **SEWER SERVICE** or **SERVICE** shall mean the furnishing of facilities for the collection, treatment and disposal of sewage, and all the administrative functions auxiliary thereto.
- 1-1.36 **SEWER SYSTEM** shall mean the facilities for collection, treatment and disposal of sewage constructed by the Agency, maintained and operated by the Agency for the purpose of providing sewage service.
- 1-1.37 **SEWER MAIN** or **SEWER** shall mean any sanitary sewage or treated industrial waste, or both, consisting of pipe and appurtenances including cleanouts and manholes for the collection of sewage and conveyance thereof.
- 1-1.38 **SEWER EXTENSION** shall mean the installation of any sewer and appurtenances, either intract or offtract beyond the existing sewer system.
- 1-1.39 **STANDARD SPECIFICATIONS** shall mean the current edition of the Standard Specifications for the Construction of Sewer Systems of the Agency.
- 1-1.40 **STREET LATERAL** shall mean that service piping between a sewer main and the customer's private plumbing.

- 1-1.41 **STREET SEWER** shall mean that portion of any sewer main controlled by the Agency, located in a street, alley, easement, thoroughfare or right of way which is used for connections to serve individuals, premises, customers, and the general public.
- 1-1.42 **SUBDIVISION** shall mean the division of any improved or unimproved land shown on the latest equalized county assessment roll as a unit or as contiguous units, for the purpose of sale, lease, or financing, whether immediate or future, except for leases of agricultural land for agricultural purposes. **SUBDIVISION** includes a condominium project or an apartment project.
- 1-1.43 **TENANT** shall mean an occupant of the residential property who has been allowed to become a customer of record according to the Agency's Policy on Discontinuation of Residential Water Service.
- 1-1.44 **WASTE WATER RECLAMATION PLANT** shall mean any arrangement of devices and structures used for treating sewage.
- 1-2 **Other Definitions:** Words or terms not defined above shall be defined in accordance with the **Glossary - Water and Waste Water Control Engineering** prepared by the American Public Health Association and the Water Pollution Control Federation.

## SECTION 2 - AUTHORITY

- 2-1      **General Authority:** The General Manager may prescribe and enforce rules and procedures not in conflict or inconsistent with existing regulations to implement the application, administration, interpretation, and enforcement of these Regulations.
- 2-2      **Revision of Fees and Charges:** The Board may from time to time, by motion, resolution, or ordinance, add, fix, alter, change, amend or revise any fees or charges for facilities and services.
- 2-3      **Authority of Inspectors:** The General Manager or his duly authorized representatives and/or employees of the Agency shall be permitted to enter upon all premises to which sewer service is being provided for the purpose of determining the size, depth, grade, location, and condition of any sewer facility, and to determine the location and discharge connections of plumbing fixtures; and inspection, observation, measurement, sampling, and testing of the quantity and nature of sewage being discharged to any sewer in accordance with the provisions of these Regulations.

## SECTION 3 – SEWER SERVICE

- 3-1        **Required Service Connection:** Upon providing a sewer in any area within the Agency's service area, the Agency may declare the further maintenance or use of septic tanks or any other local means of sewage disposal in such area to be a public nuisance and may require all buildings to be connected with the sewer within 90 days from the completion of such sewer or within 90 days after written notice. In any event, the prevailing monthly sewer charge shall be imposed to all such developed properties at the expiration of the 90 day notice period. A sewer will be deemed available if the main sewer has been constructed and is available for use in any public street, alley, or right of way within 100 feet of the building to be served.
- 3-2        **Changes in Customer's Equipment:** Customers making any material change in the size, character or extent of the equipment or operations utilizing sewer service, or whose change in operation results in an increase in the discharge of wastewater, shall immediately give the Agency a written notice of the nature of the change.
- 3-3        **Changes in Collection System:** Any person making improvements or changes which will result in cutting, refitting, relocating, raising or lowering of street laterals, sewer mains or other parts of the sewer system by the Agency will be required to agree in writing to indemnify the Agency for all costs incurred by the Agency in making such changes. When the location of a street lateral is changed at the customer's request, the cost of making such change will be at the customer's expense.
- 3-4        **Agency Consent:** No premises shall receive sewer service without prior consent of the Agency. No consent shall be given unless proper application has been made as provided in Section 4, and applicable charges have been paid in accordance with these Regulations. The applicant is responsible for paying all costs and expenses incidental to the installation and maintenance of the customer's own private plumbing facilities.
- 3-5        **Damage to Agency Facilities:** When damage is due to a line break or other system impairment, the person causing the break or impairment shall pay all costs incurred by the Agency in repairing such damage, including staff and overhead costs. In situations which in the discretion of the General Manager are emergencies, an additional charge in the amount of 100% of the above figure shall be imposed to attempt to recoup in behalf of the Agency and its sewer service customers all direct and indirect costs of such damage, including the threat to the public health and safety caused thereby. In such emergency situations, the minimum billing shall be \$500 because of the necessary, intangible and indirect costs of all such emergencies to the Agency and its sewer customers.

- 3-6      **Unauthorized Connections:** It shall be a violation of these Regulations to alter, disturb, uncover, use, make any connections to, or openings into any street sewer or appurtenances thereto without first obtaining permission in writing from the Agency. No person shall make a connection of roof downspouts, exterior foundation drains, areaway drains, air conditioning drains, swimming pool drains, or other sources of surface runoff or ground water to a street lateral which is connected directly or indirectly to a street sewer.
- 3-7      **Responsibility for Private Plumbing Facilities:** The Agency has no responsibility in the maintenance and operation of a customer's sewer system beyond the point of ownership by the Agency. The customer shall be responsible and liable for his own private plumbing facilities. The customer shall, at his own risk and expense, furnish, install, and keep in good and safe condition all the equipment that may be required for discharging sewage. The Agency shall not be responsible for any loss or damage caused by the improper care or wrongful act of the customer or of any of his tenants, agents, employees, contractors, licensees, or permittees in installing or maintaining, using, operating, or interfering with such equipment. The Agency shall be kept whole and harmless at all times of any claims resulting from matters involving quantities, quality, time or occasion of service, or any other phase of the maintenance, operation, and service of a customer's sewer system.
- 3-8      **Notification of Change of Ownership:** It shall be the duty of every owner signing an application for sewer service to notify the Agency of any change in the ownership of said premises at least two (2) business days prior to such change. Every applicant shall be liable for the sewer service furnished pursuant to such application until the Agency receives written notice to cancel such service. Upon discovery of ownership change, sewer service will be discontinued unless the subsequent owner makes arrangements with the Agency to continue the service. Discontinuance of sewer service may require discontinuance of water service from the Agency.
- 3-9      **Access to Premises:** The Agency's duly authorized agents shall at all reasonable times have the right to enter the customer's premises for any purpose properly connected with its operations.
- 3-10     **Responsibility:** The Agency's responsibility ends at the customer connection to Agency facilities located within Agency or public right-of-way.
- 3-11     **Ownership:** All street laterals shall remain at all times the property of the Agency.
- 3-12     **Maintenance:** Street laterals located within an Agency or public right-of-way shall be maintained and repaired by the Agency. Any expense caused to the Agency shall be charged to the customer whenever the act, negligence or carelessness of the customer results in the need for repair by the Agency. If determined by Agency that customer's responsibility begins at the wye connection of the lateral, maintenance and repairs to said lateral shall be performed by the customer.

3-13

**Replacement:** Street laterals within an Agency or public right-of-way shall be replaced by the Agency when rendered unserviceable through normal wear and tear, at the Agency's expense. Whenever the act, negligence, or carelessness of the customer results in the need for replacement of street laterals by the Agency, the expense of replacement will be charged to the customer. In locations where the applicant's premises do not directly abut on a public thoroughfare, the Agency shall not be responsible for replacement of that portion of the lateral that extends beyond the Agency or public right-of-way which shall be a portion of the customer's private plumbing.

## SECTION 4 – SEWER SERVICE CONNECTIONS

- 4-1        **Application:** An applicant who desires sewer service must complete an application form supplied by the Agency. Each applicant for sewer service may be required to establish credit in accordance with Section 8.
- 4-2        **Premises To Be Served:** The applicant shall describe the premises to be served, and only the premises so specified will be connected to the sewer. The Agency reserves the right to make separate connections to each and every unit, or to make a single connection to the entire premises.
- 4-3        **Division of Property:** Whenever property having a street lateral is divided into two or more parcels, the existing street lateral shall serve only the parcel which it directly enters, and new street laterals shall be required for each of the remaining parcels.
- 4-4        **Separate Service Connections:** A street lateral of size and material specified by the Agency shall be required for service to each lot or parcel of a subdivision.
- 4-5        **Approval of Drawings:** Every connection made to any sewer main from any premises shall be installed in accordance with the Agency's Standard Specifications. Sewer drawings will be required and they shall depict plan and profile views of proposed facilities. All drawings and specifications shall substantially conform to the Agency's Standard Specifications and shall be submitted to the Agency in advance of construction for prior approval by the Agency.
- 4-6        **Licensed Contractors:** Only duly authorized and licensed contractors, or employees or agents of the Agency shall be permitted to install sewer facilities.
- 4-7        **Street Lateral Size:** The Agency reserves the right to determine the size of the street lateral.
- 4-8        **Street Lateral Location:** Where practicable, the street lateral may be installed at a location selected by the applicant, but the Agency reserves the right to determine the location in relation to boundaries of the premises to be served. Customarily, a street lateral will terminate at a point behind and adjacent to the curb in streets or adjacent to the property line where no curb exists. In locations where the applicant's premises do not directly abut on a public thoroughfare, the Agency, at its option, may approve the installation of a street lateral of conventional length terminating at some practicable location on public property or on an Agency-owned easement, and the applicant has the responsibility of connecting thereto. In the event the applicant's building sewer is installed prior to the time the street lateral is installed, and its location does not correspond with that of the street lateral, then the applicant must bear the additional cost of connecting the street lateral piping with the applicant's building sewer.

- 4-9            **Installation:** All street laterals to be installed by a developer shall be plugged. Connection to the building sewer is prohibited unless otherwise approved in writing by the Agency.
- 4-10            **Cost of Installation:** The Agency will permit the installation of street laterals to the applicant's premises at the applicant's expense.
- 4-11            **Interceptors / Separators:** All interceptors/separators (i.e. grease, oil, sand and lint traps) shall be installed in accordance with the applicable governmental and/or Agency requirements. The applicant shall pay the cost of installation and maintenance. The Agency may at any time inspect the installation and the operation of the facility and require the applicant to perform any maintenance necessary. In all cases, the Agency shall be the final authority in determining the requirements of the installation and inspection of all interceptors/separators.
- 4-11.1            **Interceptor / Separator Surcharge:** The prevailing Interceptor/Separator Surcharge as provided for in Section 7-2 will be imposed on all premises required to install interceptors/separators.
- 4-11.2            **Interceptor / Separator Installation:** No interceptor/separator shall be installed without prior approval from the Agency. Applicant shall notify the Agency two (2) business days prior to the start of installation and all installations shall be inspected by the Agency at the applicable hourly rate paid for an inspector by the Agency.
- 4-12            **Plan Checking:** The Agency will review and check the drawings for sewer service connections, where sewer main extensions are not required, at the applicant's expense as provided in Section 6-3. Plan Check Fees, as provided in Section 6-3, shall not apply to applicants for sewer service connections to single family residences (classified as R-1).
- 4-13            **Inspection and Connection:** Every connection made to any sewer main shall be subject to inspection in accordance with Section 6-4. The Agency may have an inspector in attendance at all times during the actual work of connection.

## SECTION 5 – SEWER EXTENSIONS

### 5-1 General Provisions:

5-1.1 **Individual Extensions:** The Agency will permit extension of its sewer mains and street laterals to individual's premises at the individual's expense subject to the Agency's requirements and conditions.

5-1.2 **Agency Ownership:** Any such facilities which do not constitute private plumbing will be the sole property of the Agency upon acceptance by the Agency. Before service is provided for permanent or temporary use, the applicant shall execute any and all documents required by the Agency to vest title to those facilities in the Agency.

5-1.3 **Specifications:** The size, type, quality of materials, and their actual construction will be done in accordance with the Agency's Standard Specifications and the approved drawings. Construction shall be performed by a contractor acceptable to the Agency or by the Agency itself with its own forces. The installation of the sewer extension will be under the inspection of and subject to the approval of the Agency.

5-1.4 **Costs:** Adjustment of any difference between the estimated cost and the actual cost of any sewer extension constructed hereunder will be made as provided in Section 5-2.2.

5-1.5 **Feasibility:** The right is reserved, as the interests of the Agency may require, to determine the economic and/or engineering feasibility of any sewer extension and the Agency will not approve extensions for which the feasibility is uncertain as determined by the Agency in its sole discretion.

5-1.6 **Location:** Sewer extensions will be required in all streets fronting the premises and to be installed in conjunction with proposed street improvements to the premises. Sewer extensions will be located in streets, in easements provided to the Agency by the applicant, in easements obtained by the Agency, or in property deeded to the Agency. Prior to installing a sewer extension, the applicant shall provide the Agency with such easements or deeds as may be necessary or reasonably appropriate to the operation thereof. The Agency will not be required to make extensions where street grades have not been brought to those established by public authority.

5-1.7 **Parallel Mains:** Where the premises are located adjacent to a street exceeding 70 feet in width, or a freeway, waterway, or railroad right of way, the Agency may elect to install a sewer main extension on the same side thereof as the premises in lieu of extending a service connection across said street, freeway, waterway, or railroad right of way from an existing or proposed unit. Parallel mains may also be required to eliminate island or median crossings of sewer laterals.

- 5-1.8 **Agency Right to Allow Connections:** The Agency shall have the right at any time to allow other users to connect to the Agency's sewer system at any location, whether built by the Agency or by another party and transferred to the Agency, subject to payment of such fees as may be required by agreement or by resolution of the Board.
- 5-1.9 **Minimum Sizing:** The Agency will not permit a sewer main extension of less than eight inches in diameter unless approved in advance by the Agency.
- 5-1.10 **Agency Right to Design and Construct:** The Agency reserves the right to design and construct sewer facilities at its discretion. The cost of said facilities shall be borne by the applicant including but not limited to design, materials, and installation.
- 5-2 **Types of Extensions:**
- 5-2.1 **General:**
- 5-2.1.1 **Oversizing:** If the Agency requires a size or type of sewer extension in excess of the requirements of the applicant, the applicant will be reimbursed for the additional incremental cost of the material for the oversized requirement only, pursuant to the terms and conditions fixed by the Agency's General Manager.
- 5-2.1.2 **Offtract Improvements:** If offtract improvements are required to serve the applicant's intract improvements, the cost of required facilities shall be borne by the applicant, including but not limited to design, materials and installation.
- 5-2.1.2.1 **Main Extension Refund Agreement:** The Agency may elect to enter into a refunding agreement with the applicant. The refunding agreement shall contain such terms and conditions as the Board shall from time to time deem appropriate. Any refund shall be based on a front footage charge.
- 5-2.2 **By Agency:** The Agency, at its option, may extend its sewer system to the applicant's premises at the applicant's expense. The applicant shall pay the Agency a deposit equal to the estimated cost of the sewer extension, as determined by the Agency. Said deposit shall be used to compensate the Agency and/or any contractors and suppliers engaged by the Agency in the installation of the sewer extension. Within 60 days after the cost of the sewer extension has been determined, any difference between the cost and the deposit shall be paid by or refunded to the applicant. The Agency will not be required to pay interest on the deposit. Where two or more applicants apply for service from the same sewer extension, the Agency may allocate the costs proportionately.

- 5-2.3 **By Applicant:** The applicant shall furnish security to the Local Agency to guarantee the installation of the sewer extension in the amount equal to the estimated cost thereof as determined by the Agency. The applicant will be required to deposit with the Agency a sum of money as established by Resolution of the Board for the purpose of covering the cost of inspection and incidentals. The sewers and appurtenances shall be installed by a contractor holding a valid California Contractor's license in accordance with the provisions of Division 3, Chapter 9, of the Business and Professions Code of the State of California, or any amendments thereto. As used in this Section, the word "applicant" shall be deemed to include the word "subdivider."
- 5-3 **Inspection:** The Agency will provide inspection of the sewer extension at the applicant's expense as provided in Section 6-4.
- 5-4 **Plan Checking:** The Agency will review and check the drawings for the sewer extension prior to approval at the applicant's expense as provided in Section 6-3.
- 5-5 **Design Review:** The Agency will perform design review for tentative projects on an actual cost basis. An estimate will be prepared by the Agency prior to performing said review in accordance with Section 6-5.

## SECTION 6 – FEES AND CHARGES

- 6-1        **Capacity Charges:** Each applicant shall pay to the Agency a sewer capacity charge, then in effect, as established by resolution of the Board. Capacity charges are based on equivalent dwelling units (EDU) and/or fixture units (FU) as determined by the Agency, and are subject to revision from time to time.
- 6-1.1      **Time of Payment:** The Capacity Charge shall be paid to the Agency prior to issuance of a financial arrangement letter from the Agency to the appropriate governmental entity or prior to the provision of water or sewer service, whichever occurs first.
- 6-2        **Connection Charges (Front Footage Charge):** Every applicant who wishes to connect to the Agency’s sewer system shall execute the Agency’s standard sewer service application and pay the Connection Charge where applicable in an amount established by resolution of the Board.
- 6-2.1      **Time of Payment:** The Connection Charge shall be paid to the Agency prior to issuance of a financial arrangement letter from the Agency to the appropriate governmental entity or prior to the provision of water or sewer service, whichever occurs first.
- 6-2.2      **Exemption:** A developer who installs sewer facilities in accordance with Section 5-2.3 shall not be charged a Connection Charge for those sewer facilities that developer installs.
- 6-3        **Plan Check Fees:** Plan Check Fees are established by resolution of the Board and shall be charged for the Agency’s services in checking the drawings for required sewer facilities.
- 6-4        **Inspection Fees:** The Agency shall provide inspection at the applicant’s expense at the applicable hourly rate paid by the Agency for an inspector plus approved administrative and general charges.
- 6-5        **Design Review Fees:** Design Review Fees are established by resolution of the Board and shall be charged for the Agency’s services in analyzing the sewer requirements for proposed developments.
- 6-6        **Development Review Charge:** Development Review Charges are established by resolution of the Board and shall be charged for the Agency’s service in the preparation of will-serve letters, developer bond amounts, and response to initial studies.

## SECTION 7 – MONTHLY CHARGES

- 7-1        **Monthly Service Charges**: The monthly charge for all types or classes of service shall be set by Resolution of the Board. Service Charges are based on equivalent dwelling units (EDU) and/or fixture units (FU) as determined by the Agency and are subject to revision as deemed necessary.
- 7-1.1      **Quantitative Charges**: A Quantitative Charge for other than residential use and irrigation purposes shall be charged for metered water use as established by resolution of the Board.
- 7-1.2      **Treatment By Other Entities**: Charges include those payments the Agency is required to make to other entities to cover operation and maintenance and “in lieu of” taxes.
- 7-2        **Interceptor / Separator Surcharge**: The monthly charge for those premises with interceptors/separators shall be set by resolution of the Board.

## SECTION 8 – CREDIT POLICY

- 8-1      **Establishing Credit:** Sewer service, in all cases, will be kept in the name of the owner for water service. Each application for sewer service will be required to establish credit to the satisfaction of the General Manager before service will be rendered. Owner credit for sewer service will be deemed established with no additional deposit required, provided the requirements for establishing credit for water service has been approved

## SECTION 9 – DISCONTINUANCE AND RESTORATION OF SERVICE

### 9-1 **Discontinuance of Service:**

- 9-1.1 **Agency Initiated:** The Agency has the right to discontinue water or sewer service, or both, if a customer fails to comply with these Regulations. Under such circumstances, the Agency will make a reasonable effort to notify the customer. Prior to discontinuance of service, notice is not necessary when the noncompliance, violation or infraction of these Regulations by the customer results in a dangerous or unsanitary condition on the premises, or in the sewer system, or elsewhere. In such case, the Agency may order immediate discontinuance of service.

Before discontinuing service, subject to the exception as otherwise provided above, the Agency will give the customer a notice in writing specifying the reason or reasons why service may be discontinued and granting an opportunity to be heard within five days of receipt of said notice. If the customer fails or refuses to comply with the notice or fails to require an opportunity to be heard within a period of five days after presentation of the notice, then the Agency may discontinue service to the customer. If the person requests the opportunity to be heard and is heard, the Agency will thereafter determine if service shall be continued.

Residential customers who become 60 days delinquent will be notified according to Desert Water Agency's Policy on Discontinuation of Residential Water Service.

- 9-1.2 **At Customer's Request:** A customer may have service discontinued by notifying the Agency at least two (2) business days in advance of the desired date of discontinuance. Service will only be discontinued on the Agency's normal working days and during normal working hours unless approved by the Agency in advance.

### 9-2 **Restoration of Service:**

- 9-2.1 **General Provisions:** A customer whose service has been discontinued may have it restored by making application.

- 9-2.2 **Unauthorized Restoration:** It shall be a violation of these Regulations, and a crime, for any person to make an unauthorized reconnection to the Agency's sewer system once service has been discontinued, in accordance with Section 3-6.

## SECTION 10 – BILLING AND COLLECTION

10-1        **Rendering of Bills:** The charges fixed for any premises served shall be billed and collected with the charges for water service furnished by the Agency. Bills for sewer service shall be rendered monthly and are due and payable upon receipt. Any check or electronic payment submitted for payment of sewer service which is not honored and returned by the bank shall be subject to a return payment fee. Such checks not paid in cash, money order or cashier's check by the customer shall result in a discontinuance of sewer or water service.

10-2        **Proration of Bills:** The charges applicable to opening periods, closing bills and bills rendered for periods corresponding to less than one month will be computed as follows:

The amount of the minimum charge and the quantity allowed therefore will be prorated on the basis of the ratio of the number of days in the period that service is provided to the number of days in an average billing period. The measured quantity of usage will be applied to such prorated amounts and quantities.

10-3        **Payment of Bills:** During each month, the Agency shall mail a statement covering charges for all sewer service received by the customer during the preceding month. Charges shall be due and payable upon receipt of the statement. If it is necessary for the Agency to visit the premises to collect payment, a collection charge to be determined by the General Manager will be added to the amount owing. Any check or electronic payment submitted for payment of sewer service which is not honored and has been returned by the bank shall be subject to a return payment fee. Such payments shall be replaced by the customer with cash, money order or cashier's check including a returned payment fee as determined by the Agency in order to avoid discontinuance of sewer and water service.

10-4        **Delinquent Accounts:**

10-4.1      **Commercial Sewer Service:** The bill for commercial sewer service shall be delinquent if not paid within 15 days after billing. When delinquency occurs, a final notice will be mailed to the billing address. If payment has not been received 15 days after a final notice has been issued, the service address, if different from the billing address, will be tagged 48 hours in advance of scheduled turn off to give the occupant opportunity to pay the outstanding account. If occupant does not pay the outstanding account or make arrangements for payment by the date of scheduled turn off, then water or sewer service, or both, may be discontinued without further notice.

10-4.2      **Residential Sewer Service:** The bill for residential sewer service shall be delinquent if not paid within 15 days after billing. Nonpayment of any such delinquency after 60 days shall constitute a violation of this ordinance and shall be

cause for terminating residential water or sewer service, or both may be discontinued. When delinquency of 60 days occurs, the Agency will pursue collection attempts as outlined in the Desert Water Agency's Policy on Discontinuation of Residential Water Service.

If, in such circumstance, where a tenant has become the customer of record according to the provisions within Desert Water Agency's Policy on Discontinuation of Residential Water Service, the property owner will remain fully responsible for any and all past-due charges for water service to the property, whether incurred by the property owner or by any tenant at the property who becomes the customer of record. The Agency may pursue any and all remedies for all past-due charges for water service to the property, including recording a lien against the property.

10-4.3

**Restoration of Service Due to Disconnection for Non-Payment:** Service shall not be restored to the premises until all charges which are delinquent, including fees, if any, have been paid in full. An owner whose service has been discontinued for nonpayment of bills, or whose deposit shall have been applied in whole or in part to the payment of any bills, will be required to reestablish credit by a cash deposit in accordance with Section 8-1.

A customer who has a delinquency for any premise(s) served by the Agency may not receive sewer service, water service, or recycled water service on another premise until all delinquencies, including fees, are paid in full. Additionally, when a service has been terminated for nonpayment, all charges may be transferred to another account held in the sole name of the same owner. This account will become delinquent if payment is not made within 15 days from the date of delinquency transfer, and will be subject to turnoff without further notice. The Agency may file liens against the property or any other properties owned within the State of California by the delinquent customer to enforce collection of delinquent accounts.

## SECTION 11 – REGULATIONS OF WASTE AND WATER

- 11-1        **Discharges:** Except as hereafter provided, no person or customer shall discharge or cause to be discharged any of the following described wastes or waters into any sewer of the Agency:
- 11-1.1      Any liquid or vapor having a temperature higher than 150°F.
- 11-1.2      Any waters or wastes which contain more than 150 milligrams per liter (mg/L) of fat, oil or grease.
- 11-1.3      Any gasoline, benzine, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas.
- 11-1.4      Any waste products resulting from the handling, storage and sale of fruits and vegetables in wholesale or retail produce establishments, and wastes from plants engaged in the preparation, processing, or preserving of foods not intended primarily for immediate consumption.
- 11-1.5      Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, coal tar, asphalt, cement, plastics, wood, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewer system.
- 11-1.6      Any waters or wastes having a pH lower than 5.0 or higher than 9.5 having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel engaged in the operation or maintenance of the sewer system.
- 11-1.7      Any waters or wastes having corrosive property capable of causing damage to or hazard to, or containing a toxic or poisonous substance in sufficient quantity to injure or interfere with the operation of a waste water reclamation plant, or to constitute a hazard to humans or animals.
- 11-1.8      Any waters or wastes containing dissolved, suspended, or settleable solids of such character and quantity that abnormal attention or expense is required to handle such materials in the sewer system.
- 11-1.9      Any noxious or malodorous gas or substance in a quantity capable of creating a public nuisance.
- 11-1.10     Any water or wastes having a biological oxygen demand (BOD) greater than 400 mg/L by weight.
- 11-1.11     Any water or wastes containing more than 500 mg/L by weight of suspended solids (SS).

- 11-1.12 Any waters or wastes containing wax, whether emulsified or not, in excess of 100 mg/L or containing substances which may solidify or become viscous at temperatures between 32°F and 150°F.
- 11-1.13 Any garbage that has not been properly shredded.
- 11-1.14 Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Agency in compliance with applicable State or Federal regulations.
- 11-1.15 Unusual volume of flow or concentration of wastes constituting slugs.
- 11-1.16 Waters or wastes containing substances which are not amenable to treatment or reduction by the treatment processes employed, or are amenable to treatment only to such degree that the waste water reclamation plant effluent cannot meet the requirements of other agencies having jurisdiction.
- 11-1.17 Any storm water, surface water, ground water, roof runoff, subsurface drainage, cooling water, or industrial waste.
- 11-1.18 Any brines or dissolved salts in excess of 1000 mg/L to the sewer system including discharge of salts from regeneration of water softening units in industrial, commercial establishments and private residences and homes.
- 11-2 **Admission of Prohibited Discharges:** If any waters or wastes are discharged, or are proposed to be discharged to the sewer system, which waters or wastes contain the substances or possess the characteristics enumerated in Section 11-1, and which in the judgment of the Agency may have a deleterious effect upon the sewer system, or which otherwise create a hazard to life or constitute a public nuisance, the Agency may:
  - 11-2.1 Reject the wastes.
  - 11-2.2 Require pretreatment to an acceptable condition for discharge to the sewer system.
  - 11-2.3 Require control over the quantities and rates of discharge to the sewer system.
  - 11-2.4 Require payment to cover the added cost of handling the treatment of waters or wastes not covered by existing sewer charges under the provisions of these Regulations.
- 11-3 **Pretreatment:** Where required, in the opinion of the Agency, the customer shall provide at his own expense such pretreatment or handling as may be necessary to meet the Agency's requirements and any plans, specifications, and any other pertinent information relating to proposed preliminary treatment, interceptors/separators, or handling facilities shall be submitted for the approval of the Agency and no construction of such facilities shall be commenced until approval is obtained and standards set forth in this Section are met.

- 11-4        **Industrial Wastes:** Pretreatment of industrial wastes shall be in accordance with the Environmental Protection Agency pretreatment standards which have been promulgated for specific industrial classes.
- 11-5        **Maintenance of Pretreatment Facilities:** When pretreatment facilities are provided for any waters or wastes to meet the requirements of this Section, they shall be maintained in satisfactory and effective operation by the customer at its expense.
- 11-6        **Monitoring:**
- 11-6.1      **Control Manhole:** When required by the Agency, the customer discharging industrial wastes shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole shall be accessible and safely located, and shall be constructed in accordance with plans approved by the General Manager. The manhole shall be installed by the customer at customer's expense, and shall be maintained by the customer so as to be safe and accessible at all times.
- 11-6.2      **Sampling:** All measurements, tests, and analyses of the characteristics of water and wastes to which reference is made in these Regulations shall be determined in accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and shall be determined at the control manhole provided or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the sewer system from the point where the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the waste water reclamation plant and to determine the existence of hazards to life, limb and property.
- 11-6.3      **Interceptors / Separators:** (i.e. grease, oil, sand and lint) Interceptors / Separators shall be provided when, in the opinion of the Agency, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand or other harmful ingredients; except that such interceptors / separators shall not be required for dwelling units. All interceptors / separators shall be of a type and capacity approved by the Agency, and shall be located as to be readily and easily accessible for cleaning and inspection. Interceptors / separators shall be maintained in continuously efficient operation at all times by the customer and at the customer's expense.

## SECTION 12 – ENFORCEMENT

- 12-1      **General Provisions:** The following procedures are established for enforcement of these Regulations, not for penalty. All customers shall be held strictly responsible for any and all acts of tenants, agents or employees, and those customers shall be liable for any expense, loss, or damage incurred by the Agency, all pursuant to these Regulations.
- 12-2      **Violations:**
- 12-2.1    **Written Notice:** Any person found in violation of these Regulations will be notified pursuant to Section 9-1.1, except when immediate discontinuance of service is required as provided in that Section.
- 12-2.2    **Corrective Action:** Upon notification by the Agency of any violation of these Regulations, the customer shall immediately take whatever corrective action may be necessary.
- 12-3      **Discontinuance of Service:** The Agency may discontinue service for any violation of these Regulations as provided in Section 9-1.
- 12-4      **Abatements:** During any period of discontinuance of service, occupancy of such premises shall constitute a public nuisance, whereupon the Agency may cause abatement proceedings to be brought against said premises. In such event, and as a condition of restoration of service, the customer shall reimburse the Agency for reasonable attorney's fee and the cost of suit arising in said action, in addition to the charges provided for in Section 8 and Section 9.

## SECTION 13 – SEVERABILITY

- 13-1      **Severability of Regulations:** These Regulations and the various sections, parts and clauses thereof, are hereby declared to be separable. If any part, section, subsection, paragraph, sentence, clause, or phrase of these Regulations is for any reason held to be unconstitutional or unlawful, such provision shall not affect the validity of the remaining portions of these Regulations.

## SECTION 14 – EFFLUENT TO COACHELLA VALLEY WATER DISTRICT

- 14-1        **Provisions:** The provisions of this Section shall apply to all facilities constructed for the purpose of transporting effluent to the Coachella Valley Water District (“District”) for treatment or disposal.
- 14-2        **Plan Checks and Inspection:** Plans and specifications for construction of sewer facilities shall be subject to approval by the Agency, as well as by the District, at District’s request. Construction of the facilities will be subject to inspection by the Agency, as well as by the District, at District’s request. The developer of property requiring such construction shall pay to the Agency the prevailing charges for plan checking and inspection services, as determined by the Agency and District.
- 14-3        **Connections:** Agency shall notify and obtain District’s approval before connecting into District’s sewer system.
- 14-4        **Bonds:** The developer of any property shall provide such bonds or other security as the Agency and the District may require to ensure construction of sewer facilities. Neither the Agency nor the District shall be required to give assurances to any governmental agency that sewer service will be provided to the property until such security has been provided or the facilities have been accepted by the Agency and District.
- 14-5        **Transfer of Title:** Upon satisfactory completion of construction, a developer shall convey to District the title of those facilities lying within District’s boundaries. The developer shall convey to the Agency the title to those facilities lying within the Agency’s boundaries and within the boundaries of the Whitewater River Stormwater Channel. Title shall be free and clear of all mechanic’s liens, or other liens or encumbrances of any kind. The developer shall provide such evidence of clear title as may be required by the Agency or District. The developer shall also convey to the Agency and District all appropriate rights of way for such facilities. All instruments of conveyance shall be in a form approved by the Agency and District.
- 14-6        **Sewer Capacity Charge:** Each developer whose property is provided with sewer service shall pay to the Agency the Capacity Charge established by the Agency and in effect at the time application for service is made, but in no event shall such charge be less than that established by District.
- 14-7        **Operations and Maintenance:** The Agency shall operate and maintain all sewer facilities constructed pursuant to this Section, including such facilities as may be constructed within District’s boundaries.
- 14-8        **Monthly Charges:** Users shall pay a monthly charge for services provided by the Agency and District in an amount determined by resolution of the Board.
- 14-8.1      **District Charges:** The amount of the charge attributable to services provided by District shall consist of two components:

- 14-8.1.1 **Monthly Service Charge:** A monthly service charge equal to that charged by District within its Improvement District No. 80, less customer account expense.
- 14-8.1.2 **“In Lieu of Taxes” Charge:** An amount, as determined by District, to compensate District for the use of its sewer system, and to provide funds equal to taxes or other charges for sewer service collected from landowners and customers within District which are not applicable to customer outside of its boundaries.
- 14-8.2 **Agency Charges:**
- 14-8.2.1 **Monthly Service Charge:** The amount of the monthly charge attributable to the Agency shall include the amount necessary as determined by the Agency, to cover its costs for upgrading and maintaining the facilities, for billing, collections, and administrative costs. The monthly charges are subject to change at any time by resolution of the Board.
- 14-9 **Termination:** The Agency shall have the right at any time to terminate the flow of effluent to District and to provide for the treatment or disposal of such effluent entirely within the Agency’s boundaries.

## SECTION 15 – EFFLUENT TO CITY OF PALM SPRINGS

- 15-1      **Provisions:** The provisions of this Section shall apply to all facilities constructed for the purpose of transporting effluent to the City of Palm Springs (“City”) for treatment or disposal.
- 15-2      **Plan Checks and Inspection:** Plans and specifications for construction of sewer facilities shall be subject to approval by the Agency, as well as by the City, at City’s request. Construction of the facilities will be subject to inspection by the Agency, as well as by the City, at City’s request. The developer of property requiring such construction shall pay to the Agency the prevailing charges for plan checking and inspection services, as determined by the Agency and City.
- 15-3      **Connections:** Agency shall notify and obtain City’s approval before connecting into City’s sewer system.
- 15-4      **Bonds:** The developer of any property shall provide such bonds or other security as the Agency and the City may require to ensure construction of sewer facilities. Neither the Agency nor the City shall be required to give assurances to any governmental agency that sewer service will be provided to the property until such security has been provided or the facilities have been accepted by the Agency and City.
- 15-5      **Transfer of Title:** Upon satisfactory completion of construction, a developer shall convey to City the title of those facilities lying within City’s boundaries. The developer shall convey to the Agency the title to those facilities lying within the Agency’s boundaries. Title shall be free and clear of all mechanic’s liens, or other liens or encumbrances of any kind. The developer shall provide such evidence of clear title as may be required by the Agency or City. The developer shall also convey to the Agency and City all appropriate rights of way for such facilities. All instruments of conveyance shall be in a form approved by the Agency and City.
- 15-6      **Sewer Capacity Charge:** Each developer whose property is provided with sewer service shall pay to the Agency the Capacity Charge established by the Agency and in effect at the time application for service is made, but in no event shall such charge be less than that established by City in the City’s fee resolution.
- 15-7      **Operations and Maintenance:** The Agency shall operate and maintain all sewer facilities constructed pursuant to this Section, including such facilities as may be constructed within City’s boundaries.
- 15-8      **Monthly Charges:** Users shall pay a monthly charge for services provided by the Agency and City in an amount determined by resolution of the Board.
- 15-8.1      **City Charges:** The amount of the charge attributable to services provided by City be as established by the City in the City’s fee resolution. Monthly charges are subject to change at any time by resolution of the City.


- 15-8.2 **Agency Charges:** The amount of the monthly charge attributable to the Agency shall include the amount necessary as determined by the Agency to cover its cost for upgrading and maintaining the facilities, for billing, collections, and administrative costs. The monthly charges are subject to change at any time by resolution of the Board.
- 15.9 **Termination:** The Agency shall have the right at any time to terminate the flow of effluent to City and to provide for the treatment or disposal of such effluent entirely within the Agency's boundaries.

**SECTION 16 - ADOPTION**

16-1 **Effective Date:** Except as otherwise provided herein, this Ordinance becomes effective on February 1, 2020.

16-2 **Previous Ordinance Repealed:** Ordinance No. 68 is hereby repealed.

**ADOPTED** this 17<sup>th</sup> day of December 17, 2019.

  
Joseph K. Stuart, President

**ATTEST:**

  
Craig Ewing, Secretary-Treasurer

This page is intentionally left blank.

APPENDIX D

*DWA SANITARY SEWER CONSTRUCTION SPECIFICATIONS*

This page is intentionally left blank.



**SANITARY SEWER**

**CONSTRUCTION SPECIFICATIONS**

**DESERT WATER AGENCY**  
**P. O. Box 1710**  
**1200 Gene Autry Trail South**  
**Palm Springs, CA 92263**  
**(760) 323-4971**

the 1990s, the number of publications on the topic of the present study has increased steadily.

There are a number of reasons for this increase. First, the number of people who are interested in the topic of the present study has increased. This is due to the fact that the topic has become more relevant in the current climate of globalisation and internationalisation. Second, the number of people who are qualified to write about the topic has increased. This is due to the fact that there are now more people who have the necessary skills and knowledge to write about the topic. Third, the number of journals and publishers who are interested in the topic has increased. This is due to the fact that there are now more journals and publishers who are interested in the topic.

There are a number of reasons for this increase. First, the number of people who are interested in the topic of the present study has increased. This is due to the fact that the topic has become more relevant in the current climate of globalisation and internationalisation. Second, the number of people who are qualified to write about the topic has increased. This is due to the fact that there are now more people who have the necessary skills and knowledge to write about the topic. Third, the number of journals and publishers who are interested in the topic has increased. This is due to the fact that there are now more journals and publishers who are interested in the topic.

There are a number of reasons for this increase. First, the number of people who are interested in the topic of the present study has increased. This is due to the fact that the topic has become more relevant in the current climate of globalisation and internationalisation. Second, the number of people who are qualified to write about the topic has increased. This is due to the fact that there are now more people who have the necessary skills and knowledge to write about the topic. Third, the number of journals and publishers who are interested in the topic has increased. This is due to the fact that there are now more journals and publishers who are interested in the topic.

There are a number of reasons for this increase. First, the number of people who are interested in the topic of the present study has increased. This is due to the fact that the topic has become more relevant in the current climate of globalisation and internationalisation. Second, the number of people who are qualified to write about the topic has increased. This is due to the fact that there are now more people who have the necessary skills and knowledge to write about the topic. Third, the number of journals and publishers who are interested in the topic has increased. This is due to the fact that there are now more journals and publishers who are interested in the topic.

There are a number of reasons for this increase. First, the number of people who are interested in the topic of the present study has increased. This is due to the fact that the topic has become more relevant in the current climate of globalisation and internationalisation. Second, the number of people who are qualified to write about the topic has increased. This is due to the fact that there are now more people who have the necessary skills and knowledge to write about the topic. Third, the number of journals and publishers who are interested in the topic has increased. This is due to the fact that there are now more journals and publishers who are interested in the topic.

## **TABLE OF CONTENTS**

# TABLE OF CONTENTS

## General Requirements

|                                             |                  |
|---------------------------------------------|------------------|
| Definitions                                 | Requirements - 1 |
| Abbreviations                               | Requirements - 1 |
| Permits, Certificates, Laws, and Ordinances | Requirements - 2 |
| Contractor's Liability                      | Requirements - 2 |
| Rights-of-Way                               | Requirements - 2 |
| Interferences                               | Requirements - 2 |
| Sanitation                                  | Requirements - 2 |
| Accident Prevention and First Aid           | Requirements - 2 |
| First Aid Facilities                        | Requirements - 3 |
| Materials                                   | Requirements - 3 |
| Construction                                | Requirements - 3 |
| Records of Construction                     | Requirements - 3 |
| Inspection                                  | Requirements - 4 |
| Examination of Work                         | Requirements - 4 |
| Right to Occupy Work                        | Requirements - 4 |
| Maintenance and Guarantee                   | Requirements - 4 |
| Construction Power                          | Requirements - 4 |
| Construction Water                          | Requirements - 4 |
| Welding                                     | Requirements - 4 |
| Environmental Factors                       | Requirements - 4 |

## Basic Concrete Specifications

|                |                                                |               |
|----------------|------------------------------------------------|---------------|
| <b>Part 1-</b> | <b>General</b>                                 |               |
|                | General Requirements                           | Concrete - 1  |
|                | Reference Specifications, Codes, and Standards | Concrete - 1  |
|                | Contractor Submittals                          | Concrete - 1  |
|                | Quality Assurance                              | Concrete - 2  |
| <b>Part 2-</b> | <b>Products</b>                                |               |
|                | Concrete Materials                             | Concrete - 3  |
|                | Curing Materials                               | Concrete - 4  |
|                | Waterstop                                      | Concrete - 4  |
|                | Expansion Joints                               | Concrete - 5  |
|                | Joint Sealant                                  | Concrete - 5  |
|                | Concrete Bond Breaker                          | Concrete - 5  |
|                | Concrete Design Requirements                   | Concrete - 5  |
|                | Consistency                                    | Concrete - 6  |
|                | Ready-Mixed Concrete                           | Concrete - 6  |
| <b>Part 3-</b> | <b>Execution</b>                               |               |
|                | Proportioning and Mixing                       | Concrete - 7  |
|                | Preparation of Surfaces for Concreting         | Concrete - 7  |
|                | Handling, Transporting and Placing             | Concrete - 8  |
|                | Pumping of Concrete                            | Concrete - 9  |
|                | Order Placing of Concrete                      | Concrete - 9  |
|                | Tamping and Vibrating                          | Concrete - 9  |
|                | Finishing of Concrete Surfaces                 | Concrete - 10 |
|                | Architectural Finish                           | Concrete - 11 |
|                | Curing and Dampproofing                        | Concrete - 11 |
|                | Protection                                     | Concrete - 13 |
|                | Curing in Cold Weather                         | Concrete - 13 |
|                | Treatment of Surface Defects                   | Concrete - 13 |
|                | Testing of Hydraulic Structures                | Concrete - 14 |
|                | Care and Repair of Concrete                    | Concrete - 14 |

# TABLE OF CONTENTS

## **Basic Concrete Formwork Specifications**

|                |                                                |                       |
|----------------|------------------------------------------------|-----------------------|
| <b>Part 1-</b> | <b>General</b>                                 |                       |
|                | General Requirements                           | Concrete Formwork - 1 |
|                | Reference Specifications, Codes, and Standards | Concrete Formwork - 1 |
|                | Contractor Submittals                          | Concrete Formwork - 1 |
|                | Quality Assurance                              | Concrete Formwork - 1 |
| <b>Part 2-</b> | <b>Products</b>                                |                       |
|                | General                                        | Concrete Formwork - 1 |
|                | Form and Falsework Materials                   | Concrete Formwork - 1 |
|                | Form Ties                                      | Concrete Formwork - 2 |
| <b>Part 3-</b> | <b>Execution</b>                               |                       |
|                | General                                        | Concrete Formwork - 2 |
|                | Form Design                                    | Concrete Formwork - 2 |
|                | Construction                                   | Concrete Formwork - 2 |
|                | Reuse of Forms                                 | Concrete Formwork - 3 |
|                | Removal of Forms                               | Concrete Formwork - 3 |
|                | Maintenance of Forms                           | Concrete Formwork - 3 |
|                | Falsework                                      | Concrete Formwork - 3 |

## **Basic Concrete Reinforcement Specifications**

|                |                                                |                            |
|----------------|------------------------------------------------|----------------------------|
| <b>Part 1-</b> | <b>General</b>                                 |                            |
|                | General Requirements                           | Concrete Reinforcement - 1 |
|                | Reference Specifications, Codes, and Standards | Concrete Reinforcement - 1 |
|                | Contractor Submittals                          | Concrete Reinforcement - 1 |
|                | Quality Assurance                              | Concrete Reinforcement - 1 |
| <b>Part 2-</b> | <b>Products</b>                                |                            |
|                | Reinforcement Steel                            | Concrete Reinforcement - 2 |
|                | Mechanical Couplers                            | Concrete Reinforcement - 2 |
|                | Welded Splices                                 | Concrete Reinforcement - 2 |
| <b>Part 3-</b> | <b>Execution</b>                               |                            |
|                | General                                        | Concrete Reinforcement - 2 |
|                | Fabrication                                    | Concrete Reinforcement - 2 |
|                | Placing                                        | Concrete Reinforcement - 3 |
|                | Spacing of Bars                                | Concrete Reinforcement - 3 |
|                | Splicing                                       | Concrete Reinforcement - 4 |
|                | Cleaning and Protection                        | Concrete Reinforcement - 4 |

## **Basic Earthwork Specifications**

|  |                             |               |
|--|-----------------------------|---------------|
|  | Scope                       | Earthwork - 1 |
|  | Protection of Existing Work | Earthwork - 1 |
|  | Grade Control               | Earthwork - 1 |
|  | Clearing and Grubbing       | Earthwork - 1 |
|  | Field Compaction Tests      | Earthwork - 1 |
|  | Materials to be Excavated   | Earthwork - 1 |
|  | Fill and Backfill           | Earthwork - 1 |
|  | Finish Grading              | Earthwork - 2 |

## **Basic Concrete Masonry Specifications**

|                |                                                |             |
|----------------|------------------------------------------------|-------------|
| <b>Part 1-</b> | <b>General</b>                                 |             |
|                | General Requirements                           | Masonry - 1 |
|                | Reference Codes, Specifications, and Standards | Masonry - 1 |
|                | Quality Assurance                              | Masonry - 1 |
|                | Product Storage                                | Masonry - 2 |

# TABLE OF CONTENTS

## Basic Concrete Masonry Specifications (Cont.)

|                |                         |             |
|----------------|-------------------------|-------------|
| <b>Part 2-</b> | <b>Products</b>         |             |
|                | Materials               | Masonry - 2 |
|                | Mortar & Grout          | Masonry - 3 |
| <b>Part 3-</b> | <b>Execution</b>        |             |
|                | Workmanship             | Masonry - 3 |
|                | Protection of the Work  | Masonry - 3 |
|                | Masonry Units           | Masonry - 4 |
|                | Joints                  | Masonry - 4 |
|                | Reinforcing             | Masonry - 4 |
|                | Grouting                | Masonry - 5 |
|                | Cleaning and Protection | Masonry - 5 |

## Basic Painting Specifications

|  |                                    |              |
|--|------------------------------------|--------------|
|  | Scope                              | Painting - 1 |
|  | Materials                          | Painting - 1 |
|  | Workmanship                        | Painting - 1 |
|  | Application                        | Painting - 1 |
|  | Paint Systems                      | Painting - 1 |
|  | Protection                         | Painting - 3 |
|  | Data to be Submitted by Contractor | Painting - 3 |

## Basic Paving Specifications

|  |                            |            |
|--|----------------------------|------------|
|  | Scope                      | Paving - 1 |
|  | New Pavement Surfacing     | Paving - 1 |
|  | Pavement Removal           | Paving - 4 |
|  | Finishing Pavement Surface | Paving - 4 |

## Basic Sewer Specifications

|  |                                                      |            |
|--|------------------------------------------------------|------------|
|  | Scope                                                | Sewer - 1  |
|  | Survey Monuments and Construction Stakes             | Sewer - 1  |
|  | Traffic Control                                      | Sewer - 1  |
|  | Underground Utilities                                | Sewer - 1  |
|  | Storage of Equipment                                 | Sewer - 2  |
|  | Trench Excavation                                    | Sewer - 2  |
|  | Trench Bedding                                       | Sewer - 3  |
|  | Trench Backfill                                      | Sewer - 4  |
|  | Sewers and Appurtenances                             | Sewer - 5  |
|  | Pipe Materials and Pipe Installation                 | Sewer - 7  |
|  | Valves                                               | Sewer - 12 |
|  | Field Hydrostatic Test and Leakage Test              | Sewer - 13 |
|  | Leakage Test and Visual Inspection for Gravity Sewer | Sewer - 14 |
|  | Conductor Casings and Carrier Pipes                  | Sewer - 15 |
|  | Field Painting                                       | Sewer - 15 |

## **TABLE OF CONTENTS**

|                                                             |              |
|-------------------------------------------------------------|--------------|
| <b>Sewer Crossing Existing Watermain</b>                    | <b>S103</b>  |
| <b>Pre-Cast Eccentric Concrete Manhole</b>                  | <b>S104</b>  |
| <b>Manhole Frame and Cover</b>                              | <b>S105</b>  |
| <b>Sewer Clean-out</b>                                      | <b>S106</b>  |
| <b>Sewer Lateral (New Main)</b>                             | <b>S107</b>  |
| <b>Sewer Lateral (New Main)</b>                             | <b>S107A</b> |
| <b>Drop Manhole</b>                                         | <b>S108</b>  |
| <b>Sewer Lateral Saddle Connection (Existing Main Only)</b> | <b>S109</b>  |
| <b>Sewer Valve Box Installation</b>                         | <b>S110</b>  |



## **GENERAL REQUIREMENTS**

## GENERAL REQUIREMENTS

### 1. Definitions

Whenever the terms herein defined occur in these Specifications or other related documents, they shall have the meanings here given.

- a. "Agency" or "Owner" shall mean the DESERT WATER AGENCY, Post Office Box 1710 (92263-1710), 1200 Gene Autry Trail South, Palm Springs, California 92264, its Manager, and any other person or persons designated by the Owner to act on its behalf.
- b. "Manager" shall mean the person designated by the Board of Directors of the DESERT WATER AGENCY to have charge, supervision, and administration of said Owner.
- c. "Contractor" shall mean the person, firm, or corporation responsible for the construction of facilities and improvements or any portions thereof to be integrated into Owner's facilities, either on behalf of the Owner or on behalf of a Developer.

Contractor shall at all times be represented on the Work in person or by a duly designated agent or superintendent. Contractor shall hold a valid Contractor's License in accordance with the provisions of Division 3, Chapter 9 of the Business and Professions Code of the State of California, and any amendments thereto.

- d. "Work" shall mean all Work to be performed by Contractor and shall be as specified by these Specifications and the Construction Drawings, Special Requirements, and Specific Directions for any particular project.

The Owner may at any time during Work, by written order, make such changes as found necessary in the character, quality, or quantity of the Work to be furnished.

- e. "Construction Drawings" shall mean those drawings approved by the Owner showing dimensions, details, features, and requirements of the Work. Said Construction Drawings shall be used in conjunction with Special Requirements or Specific Directions and shall be augmented by these Specifications and the Standard Drawings.
- f. "Special Requirements" shall mean those requirements describing Work not specified by Construction Drawings or Specific Directions, clarifying Work as shown by Construction Drawings or as described by Specific Directions, or supplementing or modifying these Specifications. Said requirements may be written or verbal.
- g. "Specific Directions" shall mean those instructions of the Owner supplementing or modifying the Construction Drawings, Special Requirements, and Specifications and shall include all Work not specified by Construction Drawings or Special Requirements. Said instructions may be written or verbal.
- h. "Specifications", also "Construction Specifications", shall mean the requirements contained herein and shall apply to all Work, where applicable, unless specified otherwise, in the Construction Drawings, Special Requirements, or Specific Directions. Said Specifications shall augment Construction Drawings, Special Requirements, or Specific Directions and shall pertain to all methods and materials of construction.
- i. "Standard Drawings" shall mean all drawings referenced as such and bound with the Specifications. Said Standard Drawings shall be considered an integral part of the Specifications.
- j. "Standard Specifications" shall mean the Standard Specifications for Public Works Construction, latest edition, as published by Building News, Inc, Los Angeles, California. The Standard Specifications shall augment, not supersede, the "Construction Specifications". As used herein, the Standard Specifications shall not apply to measurement, payment, schedule, delays, or extra work.

**2. Abbreviations**

Whenever used in these Specifications, the following abbreviations shall refer to the agency shown:

|    |        |                                                                    |
|----|--------|--------------------------------------------------------------------|
| a. | AASHTO | American Association of State Highway and Transportation Officials |
| b. | ACI    | American Concrete Institute                                        |
| c. | AISC   | American Institute of Steel Construction                           |
| d. | AISI   | American Iron and Steel Institute                                  |
| e. | ANSI   | American National Standards Institute                              |
| f. | API    | American Petroleum Institute                                       |
| g. | ASTM   | American Society for Testing Materials                             |
| h. | AWWA   | American Water Works Association                                   |
| i. | AWS    | American Welding Society                                           |
| j. | CRSI   | Concrete Reinforcement and Steel Institute                         |
| k. | DIPRA  | Ductile Iron Pipe Research Institute                               |
| l. | EIA    | Electronic Industries Association                                  |
| m. | IEEE   | Institute of Electrical and Electronic Engineers                   |
| n. | IPCEA  | Insulated Power Cable Engineers' Association                       |
| o. | NBFU   | National Board of Fire Underwriters                                |
| p. | NEC    | National Electrical Code                                           |
| q. | NEMA   | National Electrical Manufacturing Association                      |
| r. | REA    | Rural Electrification Administration                               |
| s. | SSPC   | Steel Structures Painting Council                                  |
| t. | UL     | Underwriters' Laboratories                                         |

All references to Specifications of any of the above agencies shall mean the latest editions thereof.

**3. Permits, Certificates, Laws, and Ordinances**

Unless specified otherwise, Contractor shall at no cost to the Owner obtain all necessary permits, certificates, and licenses from such Federal, State, and local agencies as required to perform the Work. Contractor shall comply with all laws, ordinances, or rules and regulations of said agencies in performance of the Work.

**4. Contractor's Liability**

Contractor shall be responsible, and the Owner shall not be answerable or accountable in any manner, for any loss or damage that may happen to the Work performed by Contractor, subcontractors, or those associated with or working under Contractor, or for any of materials or equipment used or employed in performing the Work, or for injury to any person or persons, including employees, the public, or others, or for damage to property from any cause which might have been prevented by Contractor, subcontractors, or those associated with or working under Contractor. Contractor having control over such Work must properly guard and does indemnify and hold the Owner harmless, and will defend the Owner therefrom at Contractor's own expense, against all injuries or damages to persons and property.

Contractor shall indemnify, defend, and hold the Owner harmless from any and all claims, demands, fines, and penalties imposed or levied by any Federal, State, or local agency associated with or related to the taking (as defined by the United States Fish and Wildlife Service and, or the California Department of Fish and Game) of any protected animal or plant species or habitat by Contractor, subcontractors, or those associated with or working under Contractor.

**5. Rights-of-Way**

a. Permanent Rights-of-Way

For Developer financed Work, Developer shall provide the Owner with all permanent rights-of-way or permanent easements in a form approved by the Owner, unless specified otherwise.

For Owner financed Work, Owner will obtain all permanent rights-of-way or permanent easements as required to perform the Work unless specified otherwise. Said rights-of-way will not include rights-of-way for which permits, certificates, and licenses are required from Federal, State, and local agencies, unless specified otherwise.

b. Access or Temporary Rights-of-Way

Contractor shall, at no cost to the Owner, obtain all access or construction rights-of-way of a temporary nature other than specified.

**6. Interferences**

Any and all crossings of public utility facilities such as water mains, sewer lines, gas lines, electrical or control cables and/or conduits, telephone and/or telegraph cables and/or conduits shall be made by Contractor in accordance with requirements and Specifications of appropriate agencies. Contractor shall obtain any necessary permits, licenses, and/or agreements required by said agencies.

Whenever facilities are encountered by Contractor, he shall ascertain the ownership thereof and shall make all necessary arrangements with the owners for the protection, removal, relocation, and/or replacement thereof. Contractor shall give the owners due notice of his requirements and shall give them convenient access and cooperate with them in every way while any work of removal and/or replacement is being performed.

**7. Sanitation**

All parts of the Work shall be maintained in a neat, clean, sanitary condition. Fixed and portable toilets, inaccessible to insects, shall be provided wherever needed for use by employees and their use shall be strictly enforced. All waste and refuse from sanitary facilities or from any source related to Contractor's operations shall be disposed of in a sanitary manner satisfactory to the Owner and in accordance with laws and regulations pertaining thereto. Contractor shall rigorously prohibit and prevent committing of nuisance within the Work area or upon the Owner's right-of-way or adjacent private property. Contractor shall furnish all facilities and means for proper sanitation for the Work and shall indemnify, protect, and save the Owner harmless from any liability resulting from improper or insufficient sanitation.

**8. Accident Prevention and First Aid**

Contractor shall provide a safe working environment for all persons working on or affected by the Work. Contractor shall take precautions for the protection of persons and property at all times during the course of the Work. Contractor shall exercise and observe the safety provisions of applicable laws and building and construction codes. Contractor shall maintain in good and safe operating condition all equipment and facilities required for proper execution and inspection of the Work.

Contractor shall guard machinery, equipment, and hazards in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, the Construction Safety Orders and Trench Construction Safety Orders as issued by the Division of Industrial Safety of the Department of Industrial relations of the State of California, and Chapter 8 ("Traffic Control and Protection of Workmen") of the Manual of Instruction for the Maintenance Department of the California State Division of Highways, to the extent that such provisions are not inconsistent with applicable laws or regulations.

All warning signs, lights, barricades, and other measures designed to protect the travelling public shall be erected and maintained in good order by Contractor in accordance with applicable provisions of Chapter 21 ("Maintenance Signs, Barricades, and Traffic Control") of the Manual of Instruction for the Maintenance Department of the California State Division of Highways and of the applicable ordinances

of the public agency having jurisdiction over the maintenance and policing of highways, thoroughfares, and streets. Special regard shall be given to the rights and convenience of the traveling public and the property owners and residents in the area of Work. Cross-over boards or steel plates approved by the Owner shall be placed and other precautions taken whenever necessary to provide for at least one-way traffic along all traveled streets and to provide access to driveways and residences, unless specified otherwise.

**9. First Aid Facilities**

Contractor shall keep first aid facilities and supplies on the jobsite. Contractor shall provide instruction in first aid as required by State regulations. Contractor shall provide emergency first aid treatment and supplies for his employees sufficient to comply with all applicable laws.

**10. Materials**

Contractor shall furnish only approved materials as listed in the Owner's approved material list. All materials to be furnished by Contractor shall be new and of the best quality for their intended use. All like materials shall be of one manufacture for any particular project.

Contractor shall submit 3 copies of all material lists to the Owner for approval thereof. Said material lists shall include manufacturer's name, designation, description, and related information of all materials to be furnished and installed or otherwise used by Contractor in the performance of the Work. Said material lists shall be submitted at or prior to project preconstruction meeting and said lists shall be approved by the Owner prior to beginning construction.

**11. Construction**

Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, equipment, appliances, and methods and for any damage which may result from their failure or their improper construction, maintenance, or operation.

Contractor shall be responsible for examining all Construction Drawings, Specifications, Standard Drawings, Work site, delivery routes, and local conditions which may affect the Work.

Before proceeding with the Work, Contractor shall furnish the Owner any information required of him by the Construction Drawings, Specifications, Standard Drawings, Special Requirements, and Directions of the Owner.

Contractor shall keep at jobsite a complete set of Construction Drawings, Specifications, Standard Drawings, permits, certificates and licenses for the Work, and all other data required by the Owner. Contractor shall be responsible for checking all dimensions and quantities on said drawings or schedules and shall notify the Owner of any errors and omissions found.

Until acceptance of the Work by the Owner, Contractor shall bear the risk of injury or damage to any part of the Work by action of the elements or from any other cause and Contractor shall rebuild, repair, restore, and make good any injuries or damages to the Work except as limited in the Contract Appendix.

Contractor shall cooperate with other contractors who are working in the project area as the Owner may specify and he shall comply with all orders of the Owner. Contractor shall employ only competent and skillful persons to perform the Work. Said persons shall be qualified or certified to perform the Work in accordance with requirements of said person's trade.

Contractor shall submit to the Owner for approval a construction schedule covering all Work based on normal work periods. Contractor shall not deviate from approved schedule without prior permission from the Owner. Whenever Contractor arranges to work at night or at any time other than normal work

periods or to vary the period during which Work is to be carried on each day, he shall obtain special permission from the Owner to do so and he shall keep the Owner properly informed of his activities. Construction schedule shall show the order in which Contractor proposes to carry out Work, dates of anticipated commencement and completion of Work and salient components thereof, and estimated percentage of Work to be completed at any time during the construction period.

**12. Records of Construction**

Contractor shall maintain at least one complete set of Construction Drawings on the jobsite during the course of construction upon which he shall note any changes in the Work as they occur. Contractor shall maintain said Drawings so that the Owner may at any time during the course of construction ascertain the changes that have occurred. Said Construction Drawings shall be the basis of the two sets of record drawings that Contractor shall provide the Owner upon completion of the Work.

**13. Inspection**

All materials and equipment furnished and all Work performed shall be subject to rigid inspection by the Owner. Contractor may be required to remove and replace under proper inspection any Work performed in the absence of prescribed inspection, with the entire cost being borne by Contractor irrespective of whether such Work is found to be defective. Work covered up without authority of the Owner shall, upon order of the Owner, be uncovered to the extent required to permit inspection, repair, or replacement and thereafter be recovered, and Contractor shall bear entire cost.

**14. Examination of Work**

Contractor shall furnish the Owner every reasonable facility for ascertaining whether Work is being accomplished in accordance with the requirements and intention of the Construction Drawings, Specifications, Standard Drawings, Special Requirements, and Directions of the Owner.

**15. Right to Occupy Work**

The Owner may wish to occupy or place in service portions of the Work before its final completion and shall be at liberty to do so. Such occupancy or placing in service of any portion of the Work shall not relieve Contractor of his responsibility of protection and care of all Work until final completion and acceptance provided, however, that expense directly attributable to operation and placing portions of Work in service shall not be chargeable to Contractor.

**16. Maintenance and Guarantee**

Contractor shall guarantee that all Work performed by him meets all requirements specified as to character, quality, and quantity of materials and workmanship. Contractor shall replace all materials and pay all installation costs made necessary by defects in materials or workmanship supplied by him that become evident within one year after acceptance of the facilities or the date of final payment, whichever occurs later.

Contractor shall replace all defective materials promptly upon receipt of written notice from the Owner. If Contractor fails to replace all defective materials promptly, the Owner may secure the service of others to perform the Work and Contractor shall be liable to the Owner for any costs including removal and replacement thereof.

**17. Construction Power**

Contractor shall provide all necessary power required for his operations, and shall provide and maintain in good order such modern power equipment and installation as shall be adequate, in the opinion of the Owner, to perform the required Work in a safe and satisfactory manner.

**18. Construction Water**

Unless specified otherwise, the Owner will provide construction water to Contractor from its existing system at established rates. Contractor shall furnish and install all necessary piping and appurtenances necessary to convey water from the Owner's metered service connection to place of use.

**19. Welding**

Welding shall be done by the electric arc method using a process which excludes the atmosphere from the molten metal, except where otherwise approved by the Owner. Welding electrodes used for manual welding shall be an approved type. Except as modified herein, welding process qualification and operator qualification shall comply with the applicable requirements of the "Code for Arc and Gas Welding in Building Construction" of the AWS.

Each weld shall be uniform in width and size throughout its entire length. Each layer shall be smooth, free from slag, cracks, pinholes, and undercut and shall be completely fused to adjacent weld beads and base metal. Cover pass shall be completely free of course ripples, irregular surfaces, non-uniform bead pattern, high crown, deep ridges, or valleys between beads, and shall blend smoothly and gradually into surface of base metal. Butt welds shall be slightly convex, of uniform height, and shall have full penetration. Fillet welds shall be of size indicated, with full throat, and with each leg of equal length. Repair, chipping, or grinding of welds shall not gouge, groove, or reduce base metal thickness.

**20. Environmental Factors**

Contractor shall take all reasonable precautions to protect the environment.

a. Air Pollution

Contractor shall use only machinery and equipment which is equipped with suitable air pollution control devices so that undue quantities of pollutants are not added to the atmosphere in the vicinity of the Work site. Contractor's equipment shall meet all Federal, State, and local requirements for air quality emissions and Contractor shall comply with all applicable Federal, State, and local air pollution control regulations.

Contractor shall also take all necessary precautions to control dust created by construction operations. Contractor shall be especially diligent in implementing his dust control program and he shall be prepared to respond immediately and positively to any instructions for corrective action given by the Owner. Contractor shall use dust palliatives if necessary to satisfactorily control dust; however, Contractor shall secure the Owner's approval for use of dust palliatives other than water.

b. Explosives

Contractor shall handle, transport, store, and use explosives in accordance with applicable Federal, State, and local laws and regulations. Contractor shall be responsible for and make good any damage caused by his use of explosives.

c. Fires

Contractor shall exercise all precautions necessary to prevent unauthorized fires within or adjacent to the limits of the Work. Contractor shall be responsible for all damage resulting from fire due directly or indirectly to his or his employees' activities or the activities of his subcontractors or their employees.

d. Drainage and Flooding

Contractor shall manage excavation and spoil banks such that existing drainage conditions are not impaired. Contractor shall provide drainage in all cases where the existing drainage conditions are being unavoidably altered or disturbed by his operations. Temporary diversions, ditches, checks, swales, or other drainage structures or features necessary to ensure proper drainage and flood control shall be provided by Contractor at no extra cost to the Owner.

e. Historical and Archaeological Sites

If Contractor should encounter any evidence of historical or archaeological significance, he shall immediately cease construction, notify the Owner, and refrain from any activity until the Owner orders Work to resume. The Owner will assume full responsibility for any delays caused by historical or archaeological investigations.

f. Noise Pollution

Contractor shall equip all machinery and equipment used for construction with noise control devices such as mufflers for internal combustion engines or other suitable noise suppressors. Noise produced by construction operations shall be kept to a minimum and shall be consistent with reasonable human health requirements considering time of day and location of Work site. Contractor shall comply with all applicable Federal, State, and local noise pollution control regulations.

Unless specified otherwise, noise levels in connection with the Work shall not exceed 75 dB(A) at a distance of one hundred (100) feet for relatively continuous exposure and they shall not exceed 90 dB(A) at that same distance for relatively infrequent intermittent exposure. Contractor shall be prepared to respond immediately and positively to any instructions for corrective action given by the Owner particularly with respect to complaints from the public.

g. Public Relations

Contractor shall give due consideration to the comfort and convenience of the public and he shall instruct his employees to be polite and respectful in their dealings with the public at the Work site and in traveling to and from the Work site.

h. Traffic

Contractor shall adequately protect the public using any roads which are involved in Contractor's operations and he shall maintain safe traffic flow in the vicinity of the Work. Contractor shall use signs, barricades, delineators, flashers, and flagmen, all in strict compliance with Federal, State, and local rules and regulations regarding traffic control. Public roadways shall not be barricaded or blockaded except in accordance with requirements of public agencies having jurisdiction over same. Contractor shall provide access to all walkways, sidewalks, driveways, and streets at all times. If requested by the Owner, Contractor shall furnish a traffic control program for the Work.

i. Vegetation and Wildlife

Contractor shall not destroy or disturb any vegetation or habitat unless absolutely necessary for the performance of the Work. Contractor shall take all steps necessary to ensure that his employees do not destroy or disturb any vegetation or wildlife in the prosecution of the Work or incidental thereto, including travel to and from the Work site.

j. Water Pollution

Contractor shall discard materials which might adversely affect ground or surface water at approved dump sites only. Chemicals and other water pollutants shall not be discharged into natural watercourses or on land tributary to said watercourses. Contractor shall comply with all applicable Federal, State, and local water pollution control regulations.

k. Cleanup

Contractor shall keep the premises occupied by him in a neat, clean condition free from unsightly accumulation of rubbish. Contractor shall maintain all Work areas within or without the project limits free from dust which would cause a hazard to the Work, operations of other contractors, or other persons or property. Upon completion of the Work, Contractor shall at his own expense satisfactorily dispose of or remove from the vicinity of the Work all plants, building, rubbish, unused materials, concrete forms, and other equipment and materials belonging to him or used under his direction during construction and, if he fails to do so, the same may be removed and disposed of by the Owner at Contractor's expense.



## **BASIC SEWER**

## BASIC SEWER SPECIFICATIONS

### 1. Scope

Contractor shall furnish all pipe, fittings, materials, equipment, and labor and perform all operations necessary to construct sewers (force mains and gravity sewers) and appurtenances as specified by the Owner as shown by the Drawings. Drawings shall consist of construction drawings, installation drawings, laying drawings, standard drawings, detailed drawings, layout drawings, fabrication drawings, shop drawings, and clarifying diagrams or sketches.

The Work shall consist of all traffic control (including furnishing and installing all barricades, signs, delineators, arrow boards, and flagmen); all utility location and verification (excavating, exposing, and verifying locations, depths, and dimensions of utility facilities); all pavement removal and disposal; all earthwork (including trenching, shoring, dewatering if required, blasting if required, bedding, backfilling, and compacting); furnishing and installing all pipe, fittings, appurtenances, and making all related connections; protecting in place or removing and replacing all existing utilities and public and private improvements; removing and replacing all asphalt and Portland cement concrete pavement; pavement striping and restriping as required; testing all sewers; disposing of excess soil and rock material; and restoring all areas and improvements to pre-construction conditions.

Contractor shall, upon completion of sewer construction and appurtenances required herein, initially operate all components of the Work installed or furnished and installed by him, and make any additional adjustments, corrections, repairs, replacements, and reconstructions necessary to provide the Owner with complete, correctly operating sewers and appurtenances.

"Standard Specifications" shall mean the Standard Specifications for Public Works Construction, latest edition, as published by Building News, Inc., Los Angeles, California. The Standard Specifications shall augment, not supersede, the "Construction Specifications". As used herein the Standard Specifications shall not apply to measurement, payment, schedule, delays, or extra work.

### 2. Survey Monuments and Construction Stakes

Contractor shall not disturb or destroy any existing monuments or bench marks. If any survey monuments or bench marks need to be removed and replaced, Contractor shall have all necessary services performed by a registered civil engineer or a licensed land surveyor. If Contractor fails to comply, the Owner will have said services performed at Contractor's expense.

Before removing any monuments in preparation for construction, Contractor shall have a registered civil engineer or licensed land surveyor set at least four ties minimum for each monument to be removed and replaced; after construction Contractor shall have the same registered civil engineer or licensed land surveyor replace each monument using the aforementioned ties and file a corner record for each replaced monument.

Unless specified otherwise, Contractor shall use construction stakes and cut sheets for sewer construction and the Owner will use them for construction inspection. All construction stakes shall be set by a registered civil engineer or licensed land surveyor. The Owner must approve cut sheets before actual construction. Contractor shall protect all construction stakes set for construction and he shall restore any construction stakes destroyed or disturbed. If Contractor fails to comply, the Owner will have services performed at Contractor's expense.

### 3. Traffic Control

Contractor shall prepare, submit, and provide traffic control drawings for construction. Said traffic control drawings shall be approved by the Owner and agencies having jurisdiction over highways, thoroughfares, and streets prior to starting construction.

Traffic control requirements may be modified by the Owner or said agencies as conditions warrant. Contractor shall modify traffic control as required by the Owner or said agencies at no additional cost. Throughout the Work, Contractor shall inspect traffic control equipment (signs, barricades, arrowboards, and delineators) and shall maintain same in accordance with said traffic control drawings.

All construction signing, lighting, and barricading shall comply with State of California, Department of Transportation "Manual of Traffic Controls, Warning Signs, Lights, and Devices for Use in Performance of Work Upon Highways", latest edition.

#### **4. Underground Utilities**

Where underground utility facilities (conductors or conduits for water, gas, sewer, telephone, electric power, cable television, or other utilities) are shown on Construction Drawings, Contractor shall assume that service facilities (services or laterals for water, gas, sewer, telephone, electric power, cable television, or other utilities) extend from each utility facility to each parcel or property whether or not service facilities are shown.

At least two working days and up to ten working days before commencing any excavation on each segment of the Work, Contractor shall request Underground Service Alert (1-800-422-4133) and non-member companies or utilities to mark or otherwise indicate the locations of their subsurface facilities including, but not limited to, structures including vaults, main conductors or conduits, and service connections or facilities.

Contractor shall comply with applicable laws pertaining to subsurface installations, especially with respect to excavations and permits. Contractor shall specifically comply with applicable provisions of Sections 4215 and 4216.9 of the Government Code. Contractor shall take all actions necessary to maintain a valid inquiry identification number during the Work.

At least ten days in advance, or 1,000 feet minimum ahead of sewer trenching, Contractor shall excavate, expose, and determine ("pothole") the exact locations, depths and dimensions of each and every potential interference, including, but not limited to, all facilities shown specifically (depth and location) on Construction Drawings, or which have been marked by their respective owners.

Upon learning of the existence or location of any utility facility omitted from or shown incorrectly on Construction Drawings, or improperly marked or otherwise indicated, Contractor shall immediately notify the Owner, providing full details as to depth, location, size, and function. Contractor shall immediately notify utility having jurisdiction over facility.

Contractor shall not interrupt or disturb any utility facility without written permission from the Utility or written order from the Owner. Where protection is required to ensure integrity of utility facilities located as shown on Construction Drawings or visible to Contractor or marked or otherwise indicated as stated herein, Contractor shall, unless otherwise provided, furnish and place all necessary protection at his expense.

Contractor is advised that the Owner has no knowledge or information about trench backfill conditions of utility facilities adjacent to or parallel with sewer being constructed pursuant to these specifications; therefore, Contractor shall protect against adjacent or parallel trench backfill failure. If adjacent or parallel trench fails, Contractor shall, at his expense, remove and replace said backfill material in accordance with trench backfill requirements herein and remove and replace asphalt concrete pavement and any other improvements damaged in connection therewith.

#### **5. Storage of Equipment and Materials**

Contractor shall not store equipment or materials on private or public property without written permission from property owner(s) approving such use. Said permission shall be submitted to and approved by the Owner before Contractor moves equipment or materials onto site.

Contractor shall not park equipment or store materials in public right-of-way except while performing Work. Contractor shall remove equipment from public right-of-way and place it in Contractor's storage or construction yard by the end of each work day. Contractor shall keep materials in Contractor's storage or construction yard until they are needed for the Work.

Storage site or construction yard shall be completely fenced prior to moving any equipment or materials onto site or into yard. Contractor shall control dust in construction yard at all times, from establishing construction yard through construction, and until all Work has been completed and Contractor has moved all equipment, materials, and fencing from site.

## 6. Trench Excavation

### A. General

Unless specified otherwise, excavation for sewers and appurtenances shall be open trench to the depth and in the direction specified by the Construction Drawings. Excavation for trenches shall include removal of all material of any nature as required for installation of pipe, fittings, or appurtenances and shall include blasting, either sloping or shoring, and all necessary dewatering, if any, all at Contractor's expense.

Contractor is advised that unsuitable earth may be encountered during trenching operations. Where such material is encountered, Contractor shall, at his expense, remove such material, discard it at legal disposal site(s), and thereafter replace it with approved backfill material.

### B. Trench Protection Drawings

Before excavating any trench 5 feet or more in depth, Contractor shall submit to the Owner detailed drawings showing design of shoring, bracing, sloping, or other provisions to be made for worker, individual, or property protection.

Said trench protection drawings shall be prepared by a registered civil or structural engineer, engaged by Contractor at his expense, who shall certify that the detailed drawings comply with OSHA Construction Safety Orders (CAL OSHA or FED OSHA, whichever is applicable at time of construction). Said engineer shall affix his signature and seal to each sheet of said detailed drawings. Contractor shall not excavate until the Owner has received and acknowledged properly certified detailed drawings.

### C. Trench and Bell Hole Sloping or Shoring

Trenches and bell holes shall be adequately sloped or shored so that earth will not slide or settle into trench, so that all existing improvements and utilities (above and below ground) will be fully protected from damage, and so that workers and individuals are protected from injury. At minimum, Contractor shall keep toe of trench spoil at least 5 feet from top of trench. Contractor shall assume full responsibility for all damages caused by inadequate sloping or shoring. Contractor shall make all necessary repairs or perform all reconstruction at his expense and he shall bear all other expenses resulting from such damages.

### D. Trench Length, Width, and Depth

Unless specified otherwise, trenches shall be excavated not more than 1,000 feet in advance of pipe laying and open trenches shall be properly barricaded and signed as required for individual and property protection. Trenches shall not be excavated or left open nights, weekends, or holidays.

Unless specified otherwise, all sewer trenches within pipe zone shall, wherever possible, have vertical sides and minimum widths as specified on the Drawings, however, trenches shall be sloped or shored as required for worker, individual, and property protection.

Whenever maximum allowable trench width, as shown by the Drawings, is exceeded for any reason, the Owner may, at its discretion, require Contractor, at his expense, to cradle pipe (Class B Portland cement concrete) or to provide higher class bedding and relative compaction to support pipe as required to limit load on pipe to allowable supporting strength. The Owner shall approve method of support prior to its use.

Trenches shall be excavated to depths specified by or shown on Construction Drawings or as otherwise directed by the Owner. If trench excavation is carried below grade without direction or permission, Contractor shall, at his expense, refill trench to proper grade with crushed rock, moist clean sand, sand and gravel, or other suitable material as approved by the Owner, tamped in place to 90 percent relative compaction minimum. Excess excavated material shall be incorporated in backfill or discarded at legal disposal site(s) by Contractor at his expense.

E. Excavated Materials

All material excavated from trench shall be placed for minimum obstruction to traffic (automobile and pedestrian). Gutters shall be kept clear and other provisions shall be made for street or road drainage. Excess excavated material, including material rejected by the Owner for use as backfill, shall be discarded at legal disposal site(s) by Contractor at his expense.

If pipe, fittings, or appurtenances belonging to the Owner are uncovered or removed during excavation, they shall be salvaged and deposited as directed by the Owner. If the Owner determines that certain materials need not be salvaged, said materials shall be discarded at legal disposal site(s) by Contractor at his expense.

F. Blasting

Blasting for excavation will be permitted only with approval of the Owner and only after proper precautions have been taken for protection of persons and property, provided Contractor has secured all necessary permits. Blasting shall be limited to specific periods as approved by the Owner. Any damage caused by blasting shall be repaired by Contractor at his expense. Contractor's blasting methods and procedures shall conform with State and local laws and County and municipal ordinances. Contractor shall post signs warning radio equipment operators that blasting operations are in progress and advising that radio transmissions are prohibited during blasting operations.

7. **Trench Bedding**

A. General

Bedding for gravity sewers shall be as shown on the Drawings for bedding factor specified and as specified herein.

Unless specified or shown otherwise, trenches shall be overexcavated to accommodate crushed rock bedding material having 9 inch minimum thickness between bottom of excavated trench and pipe bell for gravity sewers. For force mains or gravity sewers, trenches shall have flat bottoms conforming with grades to which pipe is to be laid. Trench bottoms shall be uniform and provide firm and uniform bearing for pipe or bedding material.

Pipe shall be laid so that pipe barrel bears evenly on the trench bottom or on bedding material. Bell holes shall be excavated in trench bottom and sides as necessary to permit satisfactory construction and inspection of pipe joints.

**B. Unsuitable Soil**

Where unsuitable soil consisting of loose, soft, spongy, or organic earth is encountered, it shall be removed from trench bottom to depth determined in field by the Owner and trench shall be refilled to proper grade with moist clean sand, sand and gravel, or other suitable material as approved by the Owner, tamped in place to 90 percent relative compaction minimum, all at no additional cost to Owner. Trench bottom shall be graded flat and prepared to provide firm and uniform bearing for pipe or bedding material.

Where unyielding soil consisting of rock, rocky earth, or cemented earth is encountered, it shall be removed from trench bottom to at least 9 inches below pipe bell and trench shall be refilled to proper grade with crushed rock, moist clean sand, sand and gravel, or other suitable material as approved by owner, tamped in place to 90 percent relative compaction, minimum. Trench bottom shall be graded flat and prepared to provide firm and uniform bearing for pipe or bedding material.

Unless specified otherwise, Contractor shall, at his expense, remove unsuitable soil, replace it with suitable soil, and discard unsuitable soil at legal disposal site(s). Contractor shall not deposit or store unsuitable soil on private or public property without written permission of property owner(s) and without applicable governmental permits pertaining to earthwork, including compaction, and the environment. Before placing any material on private or public property, Contractor shall provide the Owner with evidence of written permission to do so and he shall then obtain the Owner's written approval for same.

**8. Trench Backfill**

**A. General**

In addition to meeting backfill requirements specified herein, Contractor shall also comply with backfill requirements established through permits issued by jurisdictions (State, County, City) having control over rights-of-way in which construction is taking place. Whenever the separate requirements conflict with one another, the more stringent shall apply. Backfill shall not commence without prior approval of the Owner.

Backfill material shall be either select excavated material, screened or washed if necessary, or commercially processed material. Backfill material shall meet separate specific requirements for backfill within pipe zone and backfill above pipe zone. Backfill material meeting pipe zone requirements may be used for above pipe zone backfill material but not the reverse.

After sheeting, shoring, or shields have been removed, all backfill material including pipe zone backfill material shall be compacted to 90 percent relative compaction minimum except that the upper 12 inches of backfill material (excluding pavement section) shall be compacted to 95 percent relative compaction minimum, as verified by field compaction tests. Relative compaction shall be determined in accordance with ASTM D-1557, latest, modified to three-layer curve in lieu of five-layer curve. The Owner will specify where (number & location) compaction tests are to be taken.

Unless specified otherwise, the Owner will have all necessary compaction tests performed by soils engineer of its choosing. The Owner will pay for all passing tests; Contractor shall pay for all failing tests. Contractor shall notify the Owner when any segment of backfill has been compacted and is ready for compaction testing and the Owner will then have such tests performed.

Unless determined otherwise, compaction tests will be taken along the sewer, in the pipe zone, above the pipe zone, and at ground surface or subgrade at 300 foot intervals maximum and along all lateral and sewer extensions. Contractor shall assist, at no additional cost to the Owner, soils engineer in taking all compaction tests. Contractor shall furnish all equipment (including shoring),

labor, and materials needed for such assistance. Compaction testing shall be completed and accepted by the Owner prior to leakage testing of sewers and appurtenances.

Within highways, thoroughfares, and streets, Contractor shall, at the end of each work day and by 5:00 PM, unless permitted otherwise, completely backfill trenches with material sufficiently compacted to support traffic. Contractor shall then place 2 inch minimum thickness temporary asphalt concrete pavement over trench; it shall be compacted, rolled smooth with a steel wheeled pavement roller and placed flush with adjacent pavement. Contractor shall maintain and repair backfilled and paved areas to prevent potholes or pavement failures. Highways, thoroughfares, and streets shall be completely open to traffic at night (after 5:00 PM), on weekends, on holidays, and whenever Contractor is not actively working in specific area.

Contractor shall not excavate trenches or install pipe on weekends and holidays. Holidays include union holidays, Owner holidays, and County and municipal holidays. Contractor shall not leave any excavation open overnight or on weekends or holidays.

**B. Backfill Within Pipe Zone**

Backfill for gravity sewers within pipe zone shall be as shown on the Drawings for the trench load factor specified and as specified herein.

Unless specified or shown otherwise, 3/4 inch crushed rock and select excavated material, screened or washed if necessary, shall be used for sewers (gravity and force main). Said select excavated material shall consist of moist clean, loose earth, sand, or gravel (1 inch maximum size) free of clay and silt as well as brush, roots, and organic substances.

Initial backfilling shall be performed as soon as possible after pipe has been laid. 3/4 inch crushed rock or approved backfill material shall be placed in trench simultaneously on each side of pipe to a depth not greater than pipe centerline (springline) or 12 inches (loose measurement), whichever is less, and it shall then be tamped under pipe so that all voids are eliminated and material is compacted to 90 percent relative compaction minimum.

Subsequent backfilling shall be performed immediately following initial backfilling. Crushed rock or approved backfill material shall continue to be placed in trench simultaneously on each side of pipe in lifts not exceeding 12 inches in thickness (loose measurement), if required, with each lift being tamped, until the pipe has been covered by at least 12 inches of well compacted material. Alternatively, backfill material may be densified by water settlement until the pipe has been covered by at least 12 inches of well densified material. Backfilled material shall be tamped or settled to 90 percent relative compaction minimum.

Regardless of compaction or densification technique, care in backfilling shall be exercised to avoid any damage to pipe, fittings, and appurtenances, to avoid any damage to persons or property, and to achieve relative compaction of backfilled material of at least 90 percent minimum.

**C. Backfill Above Pipe Zone**

Backfill material shall consist of moist clean loose earth, sand, gravel, or rock free of clay and silt as well as brush, roots, and organic substances. From the top of selected backfill in the pipe zone to within 1 foot of ground surface or pavement subgrade, backfill material shall be free of material exceeding 8 inches in greatest dimension. It shall also be compacted to 90 percent relative compaction minimum. Within 1 foot of ground surface or pavement subgrade, backfill material shall be free of material exceeding 2 inches in greatest dimension and it shall be compacted to 95 percent relative compaction minimum. Rocks shall be mixed with suitable soil to eliminate voids; they shall not be nested. Backfill material shall be well graded.

Backfill material shall be placed in lifts not exceeding 12 inches in thickness (loose measurement) and each lift shall be compacted to 90 percent relative compaction minimum by hand tampers, pneumatic tampers, or mechanical compactors except that the upper 12 inches of backfill shall be compacted with mechanical compactors or compaction equipment, excluding stompers, to 95 percent relative compaction. Alternatively and except for the upper 12 inches of backfill, sandy, granular soils may be densified by water settlement. Trench to be backfilled by water settlement shall be diked at suitable intervals not exceeding 100 feet. Impounded water shall be of sufficient depth so that earth pushed or shoveled into trench will at all times fall into water, becoming completely saturated. If necessary, jetting may augment flooding. Backfill densified by water settlement shall be densified to 90 percent relative compaction minimum. Contractor shall use mechanical compactors or compaction equipment, excluding stompers, to achieve required compaction if required densification is not achieved by water settlement.

D. Imported Backfill Material

Whenever excavated material is unsuitable as backfill material and Contractor is unable to process or screen such material for backfill material or whenever excavated material is insufficient to accomplish backfill and Contractor must secure additional material, Contractor shall import such material and the material and its source shall be approved by the Owner.

Unless specified otherwise, imported backfill material shall be commercially processed and it shall be selected, clean, loose earth, sand, or gravel (1 inch maximum size). Said material shall be granular and it shall be free of clay, silt, and fine sand. It shall be suitable for compaction with minimum effort.

E. Backfill Completion

Where pavement is not required, trench backfill shall be brought to grade of existing surface and dressed to provide firm, stable, and even surface without ruts or irregularities. It shall conform with grades of existing surface. Where pavement is required, trench backfill shall be brought to subgrade for pavement structure. Pavement shall then be placed in accordance with Paving Specifications.

9. **Sewers and Appurtenances**

A. Construction Materials

Contractor shall furnish only approved materials as listed in the Owner's Approved Material List.

All materials shall be new and of the best quality for their intended use. All like materials shall be of one manufacture for any particular project.

Contractor shall, in addition to submitting other data herein required, submit six signed and dated copies of shop drawings, cut sheets and specification data for materials to be used in installation (force mains and gravity sewers) and appurtenance construction including gravity sewer installation, force main installations, air valve installations, manhole installations, cleanout installations, and related appurtenances for Owners approval.

B. Sewer Construction

1) Sewer and Appurtenances

Sewers (force main and gravity sewer) and appurtenances shall be constructed in accordance with these Specifications and the Drawings and as specified by the Owner.

2) Valves and Appurtenances

Force main valves at force main intersections shall be connected directly to force main intersection fittings (cross or tee) unless specified otherwise.

Unless specified otherwise, air valve installations shall be constructed at all force main high spots. Contractor shall construct, at his expense, air valve installations in addition to those specified, if necessary to accommodate his work and schedule.

3) Sewer Length

All sewer lengths noted by the Construction Drawings or otherwise specified or referenced shall mean net horizontal constructed lengths and said lengths shall extend through all fittings and appurtenances including manholes, bends, outlets, tees, flanges, and valves. Contractor shall provide all pipe necessary to accommodate any vertical alignment of the sewer and said pipe shall be represented by the net horizontal constructed length.

4) Sewer Alignment

All sewers shall be constructed with no basic variation in horizontal alignment as shown by the Drawings or as specified by the Owner. Sewers shall be constructed parallel with centerlines of streets or rights-of-way and appurtenances shall be constructed perpendicular thereto unless the Construction Drawings specify otherwise. Sewers may be constructed by the use of pulled joints, short joints, bevels, bends, and elbows, provided sewers are constructed in conformance with the Drawings.

In all non-critical areas and subject to the Owner's approval, force mains may be constructed at variance with vertical alignment as shown by the Construction Drawings by the use of pulled joints, short joints, bevels, bends, and elbows provided force mains are constructed as specified at force main connections and underground interferences, and where force main cover is limited. The Owner will not approve any variation in vertical alignment until it has determined that proposed alignment is proper and modifications are in order.

5) Sewer Tolerances

a. Force Mains

With regard to vertical alignment, force mains shall be constructed so that actual flow line elevations, measured at pipe joints, are within 0.1 foot of design flow line elevations. Force mains, when installed, shall have continuous slope upgrade or downgrade, corresponding with design slope, without any high spots or low spots.

With regard to horizontal alignment, force mains shall be constructed so that actual force main centerlines, measured at pipe joints, are within 0.1 foot of design force main centerlines. Pipelines, when installed, shall closely follow specified horizontal alignment.

Force main construction shall conform with Construction Drawings and layout, installation, or laying drawings (design drawings which show flow line elevations and force main centerlines) in accordance with the above specified tolerances. Contractor shall make or assist the Owner in making all necessary measurements, as determined by the Owner, to confirm or verify compliance with construction tolerances.

b. Gravity Sewers

With regard to vertical alignment, gravity sewers shall be constructed so that actual flow line elevations, measured at pipe joints, are within 0.02 foot of design flow line elevations. Gravity sewers, when installed, shall have continuous slope upgrade corresponding with design slope.

With regard to horizontal alignment, gravity sewers shall be constructed so that actual gravity sewer centerlines, measured at pipe joints, are within 0.1 foot of design sewer centerlines. Gravity sewers, when installed, shall closely follow specified horizontal alignment.

Gravity sewer construction shall conform with Construction Drawings in accordance with the above specified tolerances. Contractor shall make or assist the Owner in making all necessary measurements, as determined by the Owner, to confirm or verify compliance with construction tolerances.

6) Sewer Cover

a. Force Main

Force main cover as shown by the Construction Drawings is hereby defined as design cover over force main. If field conditions determined during construction staking show that pipe grade changes are required to provide design cover, Contractor shall, at his expense, make required changes in force main grade and construct force main accordingly.

Force main cover from top of pipe to ground surface over force main shall not be less than 36 inches. Where future ground surface elevation over force main has been established and where actual ground surface is greater, force main cover shall be referenced to future (established) ground surface elevation, not actual ground surface elevation.

b. Gravity Sewer

Gravity sewer cover as shown by the Construction Drawings is hereby defined as design cover over gravity sewer. If field conditions determined during construction staking show that pipe grade changes are required to provide design cover, Contractor shall, at his expense, make required changes in gravity sewer grade and construct gravity sewer accordingly.

Gravity sewer cover from top of pipe to ground surface over gravity sewer shall not be less than 84 inches, unless otherwise specified. Where future ground surface elevation over gravity sewer has been established and where actual ground surface is greater, gravity sewer cover shall be referenced to future (established) ground surface elevation, not actual ground surface elevation.

## 10. Pipe Materials and Pipe Installation

### A. Force Mains (Ductile Iron Pipe)

#### 1) Scope

Ductile iron pipe and fittings shall conform with applicable provisions of AWWA C104, C105, C110, C111, C115, C150, C151, and C153, latest, as modified herein, by the Drawings, or by the Owner.

All ductile iron pipe shall be manufactured by organizations which have had not less than ten years successful experience in the manufacture of the type of pipe specified. The Owner shall approve manufacturer's product before its use.

#### 2) Data to be Submitted by Contractor

Contractor shall furnish three copies of an Affidavit of Compliance in accordance with Section 51-5, AWWA C151, latest. Contractor shall also furnish certifications, three copies each, of the following:

##### a. Material Certification

- (1) Grade of iron (chemical requirements)
- (2) Flanges
- (3) Nuts and bolts
- (4) Flange gaskets
- (5) Rubber Gaskets

##### b. Manufacturing Certification

- (1) Hydrostatic Test Reports
- (2) Tensile Test Reports
- (3) Impact Test Reports

Unless specified otherwise, Contractor shall furnish detailed installation or laying drawings showing pipe, fittings, appurtenances, station, and elevation for each fitting, and each change in alignment or slope. Contractor shall submit the installation or laying drawings to the Owner for approval in all cases in time sufficient to allow review and approval as hereinafter specified and to accommodate the Contractor's construction schedule.

Installation or laying drawings shall be submitted in triplicate. Owner will return one (1) set of drawings to Contractor within fifteen (15) days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the accepted drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish Owner five (5) sets of all accepted drawings.

#### 3) Pipe

All pipe shall be ductile iron and shall conform with AWWA C151 (ANSI A21.5, and applicable portions of ASTM A536, Grade 60-42-10), latest, as modified herein by the Drawings, or by the Owner.

- a. Pipe, including standard, random, and special short lengths, shall be Class 150 minimum and, unless specified otherwise, shall have push on joints. Minimum

pipe wall thickness shall be as noted by the Construction Drawings or specified by the Owner; it shall not be less than noted by the Standard Drawings. Pipe wall thickness shall be increased if necessary to accommodate threads or grooves or if required for extremely shallow (less than 2.5 feet) or excessively deep (more than 14 feet) pipeline cover. 90 percent of all pipe of any specific class and size, excluding special short lengths, shall be furnished in standard lengths. The remaining 10 percent may be furnished in random lengths.

- b. Standard lengths shall have nominal lengths of 18 feet up to 36 inches in diameter and 20 feet above 36 inches in diameter, plus or minus 1 inch. Random lengths of pipe may be up to 2 feet shorter than standard lengths. Special short lengths shall only be furnished where needed to accommodate specified fittings.
- c. Pipe shall have an interior cement mortar lining of standard thickness and shall be seal coated with asphaltic material or other approved material in accordance with AWWA C104 (ANSI A21.4), latest. Said lining shall be full thickness throughout pipe except for bell which shall be cleaned and lightly sprayed or brushed with an asphaltic or bituminous coating in accordance with AWWA C151 (ANSI A21.51). The interior cement mortar lining shall be moisture cured for at least two days before shipment. To prevent moisture loss during the curing period, ends of pipe shall be kept closed with plastic caps or covers which shall remain in place until installation.

Steam curing may be substituted for moisture curing, providing one hour of steam curing is equivalent to six hours moisture curing and ambient vapor is maintained at relative humidity of 85 percent with temperature ranging between 110 degrees Fahrenheit and 150 degrees Fahrenheit for minimum steam curing period of six hours, after which exterior coating may be applied. The lining shall then be cured for another twelve hours before shipment. Other methods of curing the cement mortar lining may be used providing they are acceptable to the Owner.

Temperature and shrinkage cracks in cement mortar lining less than 1/16 inch in width or 24 inches in length need not be repaired. Cracks wider than 1/16 inch or longer than 24 inches shall be repaired unless it can be demonstrated to the satisfaction of the Owner that the cracks will heal autogenously under continuous soaking in water.

- d. Pipe shall have an exterior asphaltic or bituminous coating in accordance with AWWA C151 (ANSI A21.51), latest.
- e. All pipe shall be furnished with rubber gasketed push-on type joints unless mechanical joints or flanged joints are otherwise specified or permitted. Joint restraints may be required as specified by the Owner. All joints shall comply with AWWA C111 (ANSI A21.11), latest, as approved by the Owner.
- f. Rubber gaskets shall conform AWWA C111 (ANSI A21.11) latest.
- g. Each pipe shall be marked with the weight, class, or nominal thickness and casting period. The manufacturers mark, year in which pipe was produced and the letters "DI" or "ductile" shall be cast or stamped on the pipe. All required markings shall be clear and legible and all cast marks shall be on or within 2 feet of bell ends.
- h. Where restrained joints are required, they shall be accomplished with boltless restrained joint gaskets or components, unless otherwise specifically approved by Owner. Restrained joints shall be ductile iron in accordance with applicable

provisions of AWWA C111 and C151 (ANSI A21.11 and A21.51, respectively), latest, except as to manufacturer's proprietary dimensions. Set screws shall not be utilized for any application.

Each restrained joint for pipe 4 inches through 12 inches shall consist of a gasket system where stainless steel locking segments molded within the gasket provide restraint for pipe joints or fitting joints.

Each restrained joint for pipe 14 inches through 24 inches shall consist of a gasket system where stainless steel locking segments molded within the gasket provide restraint for pipe joints or fitting joints, or alternatively, a boltless restrained push-on joint system where ductile iron locking segments inserted through slots in the bell face provide positive axial lock between the bell interior surface and the spigot retainer weldment or gripper ring.

Each restrained joint for pipe 27 inches and larger shall consist of a boltless restrained push-on joint system where ductile iron locking segments inserted through slots in the bell face provide positive axial lock between the bell interior surface and the spigot retainer weldment or gripper ring.

All restraining components must make full contact around the circumference of the pipe, even if it has deflected. Field cut kits shall be composed of full ring gripper rings with serrated edges and shall be compatible with the pipe joints and fittings joints.

4) Fittings

Ductile iron fittings shall conform with AWWA C110, C111, and C153 (ANSI A21.10, A21.11, and A21.53, respectively), latest. Unless specified otherwise, fittings shall be push-on joint and comply with AWWA C111 (ANSI A21.11).

Fittings shall have an asphaltic outside coating in accordance with AWWA C110 or C153 (ANSI A21.10 or A21.53), latest, and cement mortar lining in accordance with AWWA C104 (ANSI A21.4), latest. Fittings shall have standard lining thickness and shall be seal coated with asphaltic material or other approved material. The lining process must produce a dense, compacted lining that shall be bonded to the interior of the fitting and have a smooth surface.

Where restrained joints are specified, they shall be accomplished with boltless restrained joint gaskets or components and shall comply with all requirements of Section 10.A.3.h. of the Basic Sewer Specifications. Restrained joint fittings shall be of same joint design as the restrained joint pipe. Restrained joints shall be ductile iron in accordance with applicable provisions of AWWA C110 and C153 (ANSI A21.10 and A21.53), latest, except as to manufacturer's proprietary dimensions.

5) Special Lining

Where "special lined" ductile iron pipe is specified on the Drawings, Special Requirements, or where ductile iron pipe is specified as gravity sewer; pipe and fittings shall be lined with a system to provide special corrosion resistance in accordance with the owner's approved material list.

6) Testing

All pipe, including standard, random, and special short lengths, furnished shall be tested in the United States in accordance with AWWA C151, latest.

7) Manufacturing Inspection

The Owner shall at all times have the right to inspect all Work and materials during the course of manufacture. Manufacturer shall furnish the Owner reasonable facility for obtaining such information as he may desire regarding the progress and manner of the Work and the character and quality of materials used.

8) Loading, Transporting, and Unloading

After the pipe has been tested in accordance with Section 5 above, it shall be loaded on rubber-tired vehicles, and adequately supported and chocked to prevent any damage during transportation, and delivered to the Work site. During loading, unloading, and stringing operations, pipe and fittings shall be moved with care to prevent damage thereto. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe and fittings to be dropped or bumped in handling.

9) Defective or Damaged Material

Pipe and fittings shall be carefully inspected for defects. Any pipe found to be defective in workmanship or materials or so damaged as to make repair and use impossible shall be rejected and removed from the Work site.

In the event that pipe is damaged, damaged portions may be removed, as approved by the Owner, and discarded. Remaining sound portions may be used with ductile iron fittings. Contractor shall be responsible for any and all damage to material and he shall stand the expense of repairing or replacing same. Contractor shall take proper precautions to assure that rubber gaskets are protected from oxidation or undue deterioration.

10) Installation

Pipe manufacturer, fitting manufacturer, and material supplier, in addition to the Owner and the Owner's representative, shall have access to the Work during installation. Contractor shall use assistance provided by either manufacturer or supplier where required for proper installation of pipe, fittings, or materials; however, Contractor shall limit role of either manufacturer or supplier to advisory service.

All pipe shall be laid true to line and grade and at the locations shown by the Construction Drawings or as specified. Pipe shall be installed in accordance with applicable provisions of AWWA C600, latest, applicable provisions of Ductile Iron Pipe Research Association "Guide for the Installation of Ductile Iron Pipe", latest, and manufacturer's directions. Bell ends shall be placed uphill unless otherwise permitted.

After pipe has been set in trench, exterior of spigot and interior of bell shall be thoroughly cleaned. Lubricant recommended by pipe manufacturer and as approved by the Owner shall be applied to rubber gasket. Lubricant shall be water soluble, nontoxic, and shall have no deteriorating effects on the rubber gaskets, and shall not support growth of bacteria. Excess lubricant shall be removed. Pipe ends shall be aligned, and spigot shall be pulled into bell with come-along devices, or hoists with chains and slings, unless permitted otherwise. If either the pry bar or the backhoe bucket method is permitted, a timber header

shall be placed between the pipe and the pry bar or backhoe bucket before the spigot is pushed into bell. The receiving pipe section shall be adequately braced or backfilled to springline to prevent alignment deflection.

Curved alignment by use of pulled joints will be permitted. Maximum joint deflection shall be 3 degrees. For purposes of reducing angular deflections at pipe joints, Contractor may install pipe sections of less than standard length.

Whenever cutting of pipe is required, it shall be done with a special cutting tool specifically made for cutting and machining ductile iron pipe. Cut ends and rough edges shall be ground smooth and beveled for push-on joints.

Whenever specified, pipe shall be encased with 8 mil (0.2 mm) thick minimum polyethylene tube lapped 1 foot minimum, and valves and fittings shall be wrapped with polyethylene tube or with polyethylene sheets lapped 1 foot minimum. Polyethylene tube and polyethylene sheets shall be secured in place with suitable adhesive tape. All polyethylene tube and polyethylene sheet encasements shall be installed in accordance with AWWA C105, latest.

As Work progresses, a pipe cleaning tool as approved by the Owner shall be drawn through pipe to remove dirt, rocks, or other foreign material. At the end of each day's work, all openings in the pipeline shall be plugged with watertight expandable plugs or approved equal.

**B. Gravity Sewer (Vitrified Clay Pipe)**

**1) Scope**

All vitrified clay pipe shall conform with applicable provisions of ASTM C700, latest, as modified herein, by the Drawings, or by the Owner.

All vitrified clay pipe shall be manufactured by organizations with at least ten years successful experience in manufacturing, and fabrication of the type of pipe specified. The Owner shall approve manufacturer's product before its use.

**2) Data to be Submitted by Contractor**

Contractor shall furnish three copies of an affidavit of compliance in accordance with ASTM C700, C425, and C301, latest. Contractor shall also furnish certifications, three copies each, of the following:

**a. Material Certification**

- (1) Pipe
- (2) Type "G" Joints

**b. Manufacturing Certification**

- (1) Pipe Three (3) Edge Bearing Test Reports
- (2) Hydrostatic Test Reports

**c. Contractor shall submit shop drawings for manholes, covers, concrete, and appurtenances.**

3) Pipe and Fittings

Pipe and fittings shall be extra strength vitrified clay pipe (VCP) in accordance with ASTM C700, latest, and the "Standard Specifications", latest, as modified herein, by the Drawings or by the Owner.

a. **Straight Pipe**

Pipe diameter shall not vary from a true circle by more than 3 percent nominal diameter. Standard pipe length, excluding socket depth, shall be 40 inches and shall not deviate from straight by more than 1/16 inch per foot. All fabricated bends and bevels shall be manufactured from pipe meeting all specified requirements. Pipe and fittings shall not contain blisters, cracks, and chips. Pipes and fittings failing to meet these requirements will be rejected and shall be removed from the job site immediately.

b. **Pipe Fittings**

Fittings shall have dimensions that will accommodate Type G joints. Wye and tee branch fittings shall be furnished by manufacturer with spurs securely fastened to pipe barrels. Branches shall not project beyond pipe barrel inner surface.

Tee branch fittings shall have axes perpendicular to the longitudinal axis of the pipe. Wye branch fittings shall have axes 45 degrees from the longitudinal axis of the pipe. Spur barrel shall be of sufficient length to permit proper joining of connecting pipe.

c. **Pipe Stoppers**

Stoppers for branch fittings and pipe ends left unconnected shall be strong enough to sustain all applied construction and in-place loads, including field pressure tests. Stoppers for pipe shall be one of the following: polyethylene (PE), polyurethane, polypropylene, acrylonitrile-butadiene-styrene (ABS), polyvinyl chloride (PVC), ozone-resistant synthetic rubber, or vitrified clay.

d. **Marking**

Each length of pipe and each fitting shall be clearly marked with the name or trademark of the manufacturer, the location of the plant, and the strength designation of the pipe. Each standard length of straight pipe shall also be marked with manufacturer's date code.

4) Pipe Joints

Pipe joints shall be Type G (polyurethane). Type G joints shall consist of polyurethane elastomer sealing components, one bonded to the outside of the spigot and the other bonded to the inside of the socket. The sealing components shall be shaped, sized, bonded, and cured to uniform hardness so as to form a tight seal of the joint when assembled. The sealing components shall resist attack by bacteria and chemicals or combinations of chemicals normally present in domestic or industrial waste sewage.

Each joint within vertical and horizontal curves shall be constructed using factory fabricated mitered or beveled pipe or by deflecting joints. Ends may be beveled up to 4 degrees. In no case shall joints be deflected more than 1 degree.

5) Manufacturing Inspection

Owner shall at all times have the right to inspect all materials and work in the course of manufacture. Manufacturer shall furnish Owner reasonable facility for obtaining such information as he may desire regarding the progress and manner of the Work and the character and quality of materials used. Manufacturer shall furnish, upon request, certified test reports on manufactured pipe.

6) Loading and Transporting

Pipe shall be loaded on rubber-tired vehicles, adequately supported and chocked to prevent any damage during transportation, and delivered job site. During the unloading and stringing operations, the pipe shall be moved in such a manner as to prevent injury to the pipe. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe sections to be bumped or dropped in handling.

7) Defective or Damaged Material

All pipe and fittings shall be carefully inspected for defects. Any pipe, fitting, or joint found to be defective in workmanship or material or so damaged as to make repair and use impossible, shall be rejected and removed from the job site immediately.

8) Installation

Sewers shall be installed with bedding and backfill as specified herein and as shown on Drawings for the trench load factor specified.

All sewers shall be laid true to line and grade and at the locations as shown by Construction Drawings or as specified. Pipe shall be installed in accordance with the manufacturer's directions, applicable provisions of "Clay Pipe Engineering Manual" as published by the National Clay Pipe Institute and as specified herein.

Before lowering and while suspended at trench side, the pipe shall be inspected for defects. Vitrified clay pipe (VCP) shall be rung with a light hammer to detect cracks. Any defective material shall be rejected and removed from the site. Trench bottom shall be inspected and adjustments made in line and grade. All pipe shall be laid without break, upgrade from structure to structure, with bell end of pipe upgrade.

As the Work progresses, interior of the sewer shall be cleaned of all dirt and deleterious and superfluous materials with a procedure approved by Owner. At the end of each days work, all openings in the sewer shall be plugged with water-tight expandable plugs or approved equal.

Prior to joining pipe sections, the mating surfaces shall be cleaned, and lubricated with a lubricant recommended by the pipe supplier. The pipe shall be joined spigot into socket.

The pipe and fitting manufacturer shall have free access to the Work during laying, backfilling, and testing. Manufacturer shall be free to observe and verify all tests. Any improper act or operation by Contractor which is observed by manufacturer shall be reported to Owner.

9) Manholes and Appurtenances

a. Scope

Manholes shall be constructed of precast reinforced concrete in accordance with the requirements of ASTM C-478 (latest edition) and shall be designed for H-20 loadings. Dimensions and details of manholes and appurtenances shall be as shown on Construction Drawings, Standard Drawings, or as specified. After final pavement has been placed, manhole covers shall be adjusted to grade.

b. Manhole Bases

Unless specified otherwise, manhole base shall be constructed of Class A (3500 psi) concrete. Unless specified otherwise, manhole bases shall be cured twenty-four hours minimum prior to manhole shaft placement.

c. Concrete and Mortar for Manholes

Concrete shall be of the class specified on the Drawings and shall comply with the Basic Concrete Specifications.

Cement mortar shall consist of one part Portland cement and two and one half parts clean, well graded sand of such size that all will pass a number 8 sieve. Cement and sand shall first be combined in proper proportions, and then thoroughly mixed with only that quantity of water necessary to produce a mixture sufficiently workable for the purpose intended.

Mortar shall be used as soon as possible after mixing and shall shown no visible signs of setting prior to use. Mortar shall not be retempered.

d. Manhole Frames and Covers

Manhole frames and covers shall be furnished in accordance with the Drawings. Castings shall conform to ASTM, A-48, Class 35. Bearing surfaces of the frames and covers shall be machined and covers shall seat firmly into frames without rocking. Frames and covers shall be thoroughly cleaned and coated with commercial quality asphalt paint. Unless specified otherwise, covers shall have raised letter identification as specified on the Drawings.

10) Laterals

Laterals shall be in accordance with the Drawings. Laterals shall be located at least 10 feet from any potable water service.

II. Valves

A. General

Valves shall be as shown on the Drawings and specified herein.

B. Air Valves

Unless specified otherwise, air valves shall be combination sewage air and vacuum valves (air, vacuum, and automatic release). They shall permit automatic escape of large quantities of air from

force main when it is being filled, permit large quantities of air to enter force main when it is being emptied, and allow accumulating air to escape while force main is in operation and under pressure.

Air valves shall be single body double orifice with elongated ductile iron bodies and covers, stainless steel floats, stainless steel internal working parts (including guides), stainless steel pressure seats (Buna N), seat hardness shall be selected by the manufacturer for actual operating pressure for the system, and white Viton "O" rings or seats. Unless specified otherwise, air valves shall be service rated at cold water working pressure of 150 psi minimum. Unless specified otherwise, resilient seats shall be service rated for 150 psi maximum operating pressure.

Air valve interiors shall be completely fusion bonded epoxy coated (12 mils minimum) in accordance with AWWA C550, latest. The Owner shall approve epoxy coating material and methods before application. Completed coating shall be free from all defects and shall be inspected by use of low voltage holiday detectors and non-destructive thickness gauges.

Air valve inlets shall be flanged. Air valves shall be subjected to factory hydrostatic test at pressure equal to 200 percent rated working pressure with no harmful deflections or other defects.

Air valve outlets shall be screened as specified to prevent entrance of foreign substances or materials.

Air valves shall be tagged or labeled with the manufacturer's name, size, model number, pressure rating and other specialty features as listed above or as specified by the Owner.

Unless otherwise specified, each unit shall be supplied with isolation valve (solid wedge gate), blowoff valve, 1/2 inch back flushing shutoff valve, and 5 foot rubber supply hose with disconnect couplings.

Air valves shall be kept clean and free from dirt, earth, debris, and other deleterious materials prior to, during, and after installation and construction. Until in operation, each valve shall be protected by the use of an approved canvas or plastic bag or sack completely covering valve and securely fastened to valve riser.

#### C. Gate Valves

Gate valves shall be manufactured in accordance with AWWA C509, latest, except as specified herein or as shown by the Standard Drawings. Gate valves shall be suitable for above grade or buried service as shown on Drawings. Above grade valves shall be equipped with hand wheel operator. Below grade valves shall be equipped with valve boxes in accordance with Standard Drawings.

Gate valves shall have ductile iron bodies, resilient seats, and ANSI B16.1 Class 125 flanges. Valve disc shall be permanently bonded with resilient material to ensure drip tight shut off. Valve stems, each with hand wheel or 2 inch square operating nut, shall be nonrising and shall turn counterclockwise to open. Gate valves shall have "O" ring seals, non-shock cold water working pressure of 200 psi, minimum.

Gate valves shall be fusion bonded epoxy coated (12 mils minimum) inside and outside in accordance with AWWA C550, latest. The Owner shall approve epoxy coating materials and methods before application. Completed coating shall be free from all defects and shall be inspected by use of low voltage holiday detecting and non-destructive thickness gauges.

Gate valves shall be tagged or labeled by the manufacturer with the manufacturer's name, size, model number, pressure rating and other specialty features as listed above or as specified by the

Owner. Contractor shall provide manufacturers certification that all materials used in valves produced under AWWA C509, latest, conform with Section 2.1 of said standard.

D. Eccentric Plug Valve

Eccentric plug valves shall be of the non-lubricated eccentric type with round or rectangular port, unless otherwise specified. The valve body and plug shall be constructed of cast iron meeting the requirements of ASTM A-126, Class B. The valve body shall be furnished with a welded overlay raised nickel seat. The valve plug shall be of one piece construction and shall be completely encapsulated with Buna N rubber. Unless otherwise shown or specified on the Drawings, the valves shall be flanged with dimensions, facing, and drilling in full conformance with ANSI B 16.1, Class 125. With plug in full open position, valve shall have no cavities where debris can collect, have minimal head loss, and be capable of passing a clean out pig with the same nominal diameter as the adjacent pipe. Valves shall be equipped with operators as shown on the Drawings and as specified herein. Valves 4 inches and larger shall be provided with enclosed worm gear operators and hand wheels. Buried valves shall have square nut and be designed for buried service. All eccentric plug valves shall have a working pressure rating of not less than 150 psi, for drip tight shut off. All interior ferrous surfaces shall be coated with 10 mils (minimum) of a two part high build epoxy. Valves shall be the product of a single manufacturer and shall be Val-Matic, Clow, or DeZurik

12. **Field Hydrostatic Test and Leakage Test**

A. Hydrostatic Test for Ductile Iron Pipe

Upon completion of force main construction and at least seven days after last concrete thrust device has been placed, force mains and appurtenances constituting the Work shall be filled with water for twenty-four hours minimum. During filling, Contractor shall see that all air valves are open and operating. After force mains have been completely filled, they shall be allowed to stand for twelve hours minimum under slight pressure for sufficient time to permit all air to escape. During that same period, Contractor shall examine all fittings, flanges, and connections for leaks. If any leaks are found, they shall be eliminated.

Unless otherwise specified, test pressure shall be 225 psi minimum for Class 150 pipe and 150 percent of pipe class for other classes of pipe. Test pressure shall be applied to test sections as directed by the Owner. Test pressures shall be maintained for four hours minimum. Test sections will be selected which give, as nearly as possible, constant pressure throughout section being tested. Normally test pressures will be measured at lowest elevations.

B. Leakage Test for Ductile Iron Pipe

After pressure test has been satisfactorily completed, force main and appurtenances shall be tested for leakage at pressure equal to the pressure class of pipe. Contractor shall test force mains and appurtenances in test sections as designated by the Owner and required pressures shall be maintained for two hours minimum during which time leakage shall be accurately measured.

Measured leakage shall not exceed the limits set by the following formula unless otherwise specified by the Construction Drawings.

$$L = \frac{ND(P)^{1/2}}{5000}$$

L is the allowable leakage in gallons per hour for section of pipeline being tested; N is the number of joints (rubber gasket, flanged, or mechanical joints) where leakage could occur in the section of pipeline being tested; D is the nominal diameter (inches) of the pipeline being tested; and P is the

weighted average test pressure (psi gauge) within the section of pipeline being tested during the leakage test.

**C. General Requirements**

- 1) Required test pressures shall be applied by pump connected to force main sections being tested. The Owner shall approve pump connections to force main before testing begins. As part of the Work, and unless specified otherwise, Contractor shall install, at his expense, top outlets required for testing.

Contractor shall provide calibrated meters for measurement of leakage, and all pumps, piping, fittings, bulkheads, plugs, valves, gages, power equipment, additional outlets for pressure and flow verification, and manpower necessary for conducting all tests required, all at his expense. Contractor shall furnish the Owner three copies of all records of all tests performed.

- 2) Contractor, at his expense, shall locate and repair leaks or other defects which may develop or become apparent during test. Contractor shall excavate, including removal of backfill already placed, and make all repairs necessary for required water tightness, and then replace all excavated material, after which Contractor shall retest repaired force main section. Force main sections shall be repeatedly repaired and tested until they meet requirements set forth herein.
- 3) Pipe manufacturer and fitting manufacturer shall have free access to the Work during testing. Any improper act on the part of Contractor which the pipe and fitting manufacturer may observe shall be reported to the Owner. Pipe and fitting manufacturer shall be free to observe and verify all tests.
- 4) After completed force main and appurtenances or test sections have successfully met test requirements to the satisfaction of the Owner, the entire force main or each test section shall be filled or shall remain filled with clean water until completion of the Work, unless otherwise ordered by the Owner.

**13. Leakage Test and Visual Inspection for Gravity Sewer**

**A. General**

Contractor shall, upon completion of sewer and appurtenances, including backfill (prior to final paving), perform leakage tests on sewers and laterals. Contractor shall furnish all labor and equipment necessary to perform testing, including calibrated meters for measurement of the leakage, necessary bulkheads, piping, gages, pumps, power, and plugs. Contractor shall furnish to Owner copies of all tests performed.

Contractor, at his own expense, shall do all excavation necessary to locate and eliminate leaks or other defects which may develop under test, including removal of backfill and sewer line necessary to achieve the required water tightness. After repair the required test shall be repeated until the sewer main and appurtenances meet the requirements set forth herein. Refer to Section 13 herein for repair.

**B. Leakage Test**

The leakage test to be performed by the Contractor shall be either the water exfiltration test or the air pressure test in accordance with Section 306-1.4.1, 306-1.4.2 and 306-1.4.4 of the Standard Specifications. The water infiltration test (in accordance with Section 306-1.4.3) will be required

only when specified in the Special Requirements, on the Drawings, or where ground water is encountered.

C. Water Exfiltration Test

Test shall be in accordance with Section 306-1.4.2 of the Standard Specifications as modified herein. The total leakage shall be the decrease in volume of water in the upper structure. The leakage shall not exceed 200 gallons per day per inch of nominal diameter of pipe per 1 mile of sewer pipe being tested. The length of house connections shall not be used in computing the length of sewer main being tested. The minimum test duration period shall be two hours.

If ground water is encountered and the Owner requires the infiltration test in accordance with Sections 306-1.4.3, the Contractor will be required to also perform the air pressure test, and the exfiltration test will not be required.

D. Air Pressure Test

The air pressure test shall be in accordance with Section 306-1.4.4 of the Standard Specifications.

E. Inspection of Pipeline Interior

Sewer line 21 inches and larger will be visually inspected by the Owner after successful completion of acceptable leakage tests. The Contractor shall furnish all necessary equipment, safety apparatus, and labor to permit said inspection including gas detector ventilation fans, pipe cart, and ropes to permit crawling the line. Ventilation fans (exhaust) shall be provided at manholes upstream and downstream of the manhole being entered.

Sewer line smaller than 21 inches will be visually inspected by sewer video taping after completion of acceptable leakage tests. The Contractor shall furnish all necessary labor and equipment to complete said video taping. Contractor shall provide video tape and video tape log to Owner for review.

For either inspection method, Owner shall check for cracked or damaged pipe, excessive joint gap, and debris in line. The Contractor shall remove any debris. Any pipe which is cracked or damaged shall be removed and replaced.

F. Pipe Repair and Replacement

Where it is determined that pipe must be replaced due to damage or excessive leakage, said replacement may be performed by installing new pipe and connecting to existing pipe utilizing rubber Calder type couplings with stainless steel bands. For pipe larger than 12 inches, said couplings shall be encased in concrete as directed by the Owner.

Upon approval of Owner, pressure applied sealants may be used to repair joints where structural integrity of pipe is not altered; however, numerous leaking joints evidencing material or installation defects shall form basis for prohibiting repair with sealant. Under such circumstances, pipe shall be removed and replaced as necessary.

14. **Conductor Casings and Carrier Pipes**

Wherever required, conductor casings shall be installed. Said casings shall be comprised of either welded steel pipe or reinforced concrete pipe, as specified. Conductor casings shall be bored and jacked into place unless open trench installations are permitted; conductor casings shall not be sluiced or jetted into place. Conductor casings shall be bored and jacked into place from one direction only.

Conductor casings shall be installed to the lines, grades, and depths specified. Unless specified otherwise, Contractor will be permitted a tolerance from horizontal alignment and from vertical alignment of 0.5 percent of conductor length but no more than 1 foot maximum regardless of conductor length.

Unless specified otherwise, methods and equipment used shall be as selected by Contractor and as approved by the Owner. Said approval shall not relieve Contractor of any responsibility with regard to conductor casing construction. Conductor casings shall have minimum inside diameters at least 12 inches larger than maximum outside diameters of carrier pipes.

Prior to any boring and jacking operations, Contractor shall submit to the Owner a construction plan consisting of a schedule of operations, details of methods of construction, types of equipment to be used, details of boring and jacking pit including lengths, widths and depths, and shoring and bracing. Said construction plan shall be approved as to sufficiency by the Owner before any construction is commenced.

Boring and receiving pits shall be shored in accordance with OSHA standards. A 6 foot high chain link fence with posts at 10 foot intervals shall be erected around said pits and said pits shall be protected on all sides with Type K barriers and lighted barricades. Barriers shall be placed to direct traffic around the pits.

Prior to constructing pits, Contractor shall excavate both sides of each crossing to determine exact locations of facilities to be crossed (horizontal and vertical). Contractor shall adjust casing locations to accommodate crossings based on Contractor's field measurements.

Contractor shall schedule his operation to prevent pits from being open on weekends or holidays. Contractor shall provide traffic control around the pits in accordance with Contractor's approved traffic control drawings.

Contractor shall take all necessary precautions to prevent subsidence of or lifting of existing roadbeds, roadways, and pavements during or following installation of conductor casings. Material excavated during boring and jacking operations shall be removed carefully so as to avoid caving. Voids created during boring and jacking shall be grouted with an approved grout from within the casing once the casing has been installed. Couplings shall be welded to steel casing to permit grouting. Following grouting, threaded plugs shall be inserted into said couplings.

After conductor casing has been constructed, carrier pipe shall be equipped with approved plastic or steel casing insulators uniform size and spacing and then installed in conductor casing in accordance with aforementioned construction plan as approved by the Owner. Annulus between conductor casing and carrier pipe shall be filled with sand and the ends shall be capped with plastic or steel end seals or plugged with brick and mortar. Weepholes shall be placed in the bottoms of the end seals or brick and mortar plugs.

Contractor shall backfill boring and jacking pits with material specified for sewer backfill. Said backfill material shall be compacted to the relative compaction specified which shall be not less than 90 percent. Contractor shall remove conductor casing and carrier pipe remnants, shoring materials, asphalt, concrete and all other Work related debris. Contractor shall restore paved surfaces, if required.

## **15. Field Painting**

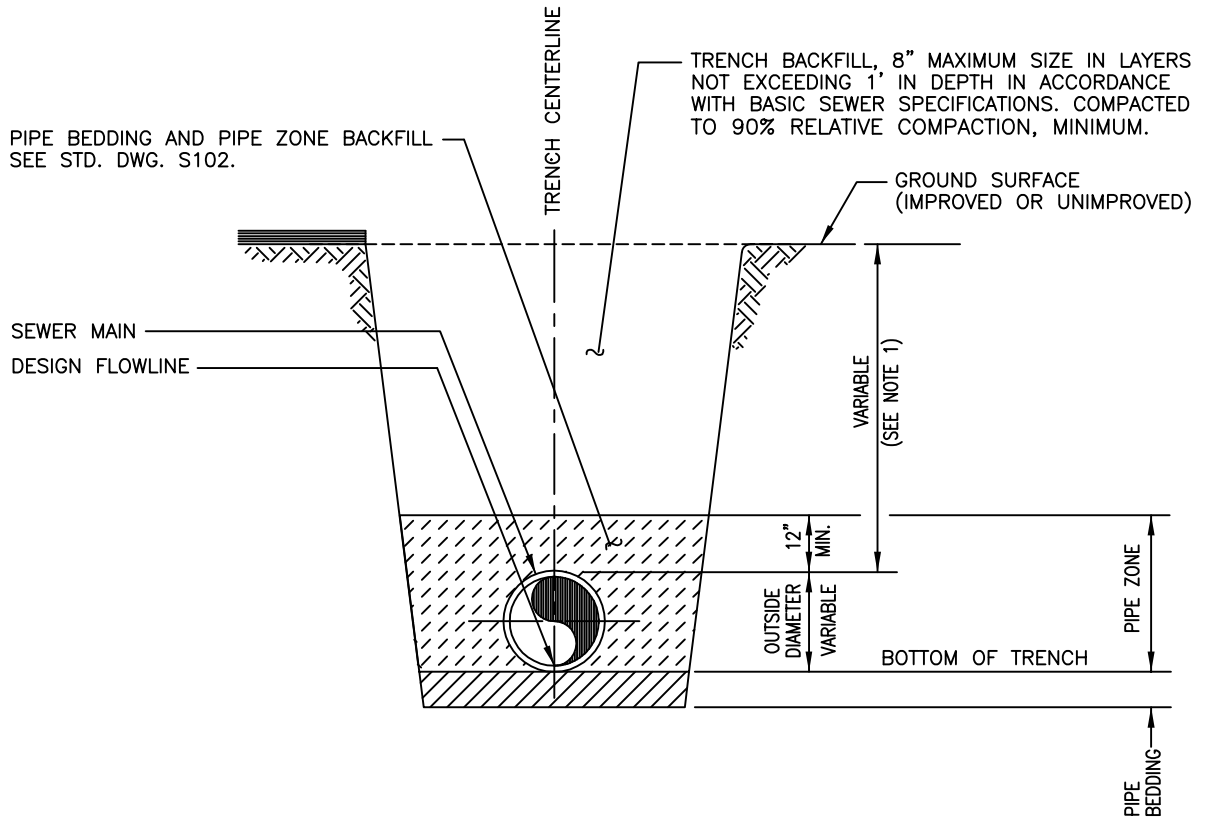
Contractor shall field paint all aboveground, bare, or exposed piping and appurtenances in accordance with the applicable specifications and drawings.

This page is intentionally left blank.

## APPENDIX E

### *DWA SANITARY SEWER CONSTRUCTION STANDARD DRAWINGS*

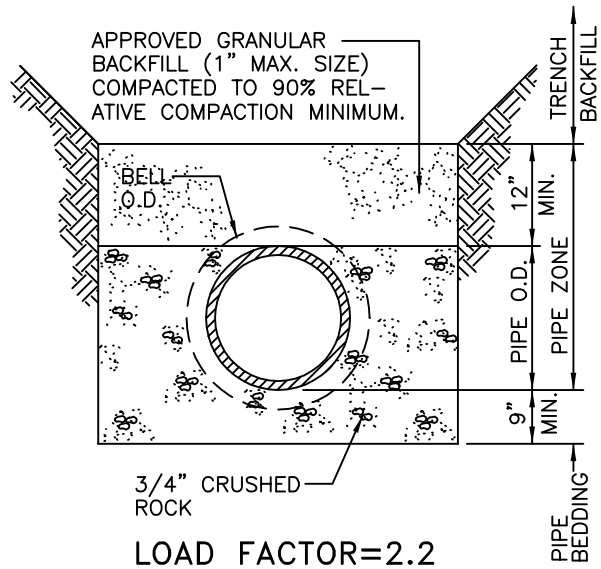
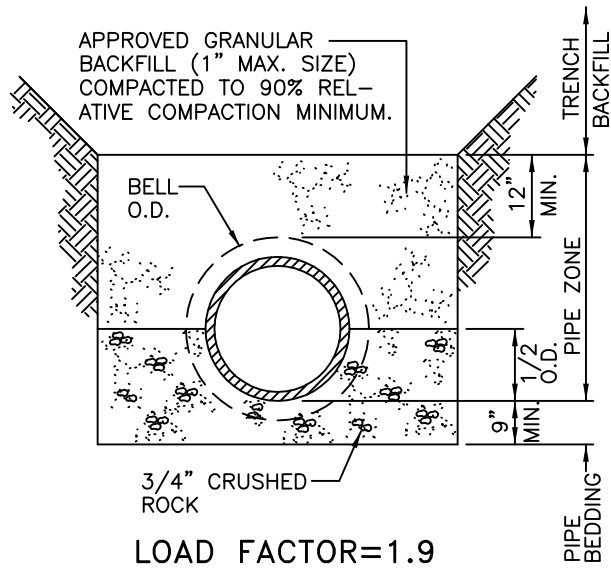
This page is intentionally left blank.



NOTES:

- 1) SEWER COVER SHALL BE 7'-0" MINIMUM FOR SEWER LINES.
- 2) TRENCH SIDES SHALL BE SLOPED OR SHORED IN ACCORDANCE WITH CAL OSHA CONSTRUCTION SAFETY ORDERS FOR TRENCH DEPTHS 5' AND GREATER.
- 3) ALL EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO TRENCHING, AND WHERE TRENCH SIDES SLUFF AND PAVEMENT BREAKS AWAY, IT SHALL BE SAWCUT, NORMAL OR PARALLEL TO TRENCH, PRIOR TO PERMANENT PAVEMENT REPAIR.
- 4) WHENEVER EXISTING UTILITY FACILITIES, EXCEPT WATERLINES, ARE ENCOUNTERED, SEWERS SHALL CLEAR THEM BY 12" MINIMUM, BOTH HORIZONTALLY AND VERTICALLY, CONSISTENT WITH ABOVE SEWER REQUIREMENTS. SEWERS SHALL CLEAR WATERLINES IN ACCORDANCE WITH STANDARD DRAWING S103. SPECIFIED CLEARANCES OR SEPARATIONS SHALL NOT BE REDUCED UNLESS ORDERED OR PERMITTED BY AGENCY. SEWERS SHALL NOT BE IN CONTACT WITH OR REST AGAINST OTHER UTILITY FACILITIES.

|                                               |                      |                                                        |  |
|-----------------------------------------------|----------------------|--------------------------------------------------------|--|
| APPROVED                                      | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA |  |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. <u>36810</u> | <b>SEWER TRENCH</b>                                    |  |
|                                               |                      | <b>STANDARD DRAWING S101</b>                           |  |
| REVISION                                      | BY                   | DATE                                                   |  |



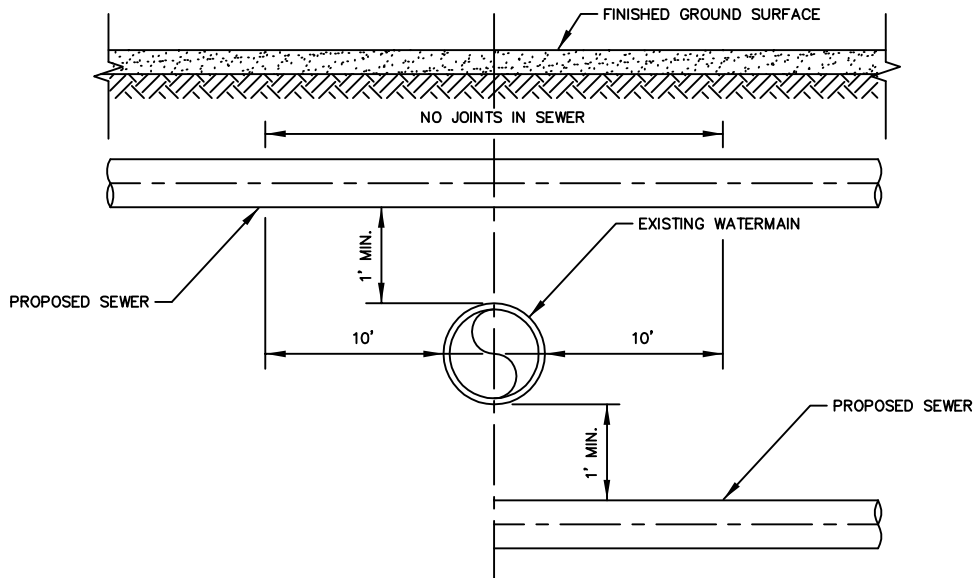
| MINIMUM LOAD FACTOR—UNLIMITED TRENCH WIDTH |                       |     |     |     |     |     |     |
|--------------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|
| SEWER DIAMETER (INCHES)                    | DEPTH OF COVER (FEET) |     |     |     |     |     |     |
|                                            | 6                     | 8   | 10  | 12  | 14  | 16  | 18  |
| 8                                          | 1.9                   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.2 |
| 10                                         | 1.9                   | 1.9 | 1.9 | 1.9 | 1.9 | 2.2 |     |
| 12                                         | 1.9                   | 1.9 | 1.9 | 1.9 | 2.2 |     |     |
| 15                                         | 1.9                   | 1.9 | 1.9 | 2.2 |     |     |     |
| 18                                         | 1.9                   | 1.9 | 1.9 | 2.2 |     |     |     |

**NOTES:**

- AS A MINIMUM, ALL SEWERS SHALL BE CONSTRUCTED WITH A LOAD FACTOR OF 1.9.
- 3/4" CRUSHED ROCK SHALL BE PER STANDARD SPECIFICATIONS, SECTION 300 WITH THE FOLLOWING GRADATIONS:
 

| SIEVE | % PASSING |
|-------|-----------|
| 1"    | 100%      |
| 3/4"  | 90-100%   |
| 1/2"  | 20-55%    |
| 3/8"  | 0-15%     |
| No.4  | 0-5%      |
- FOR SEWER DIAMETERS DIFFERENT THAN SHOWN AND FOR DEPTHS OF COVER DIFFERENT THAN SHOWN, AGENCY SHALL APPROVE PIPE BEDDING AND PIPE ZONE BACKFILL PRIOR TO CONSTRUCTION.

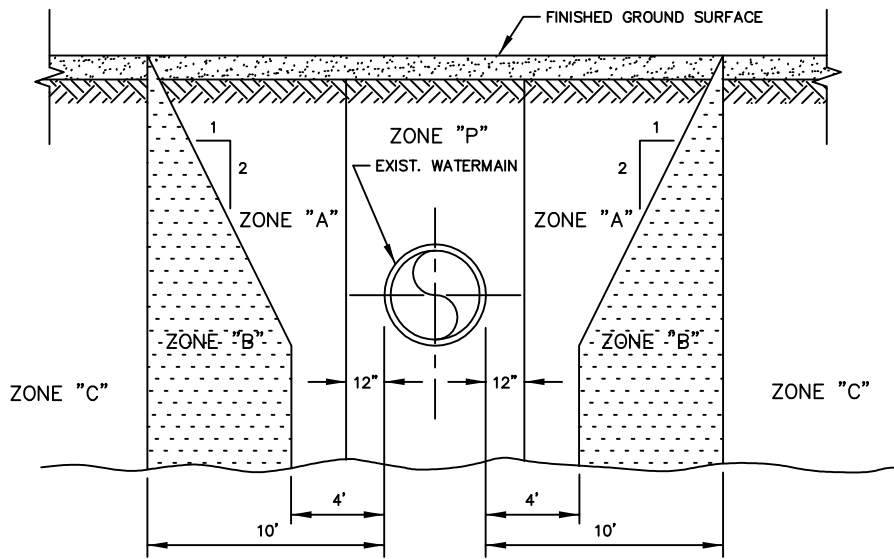
|                                               |                      |                                                        |  |
|-----------------------------------------------|----------------------|--------------------------------------------------------|--|
| APPROVED _____                                | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA |  |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. <u>36810</u> | <b>PIPE BEDDING FOR</b><br><b>VITRIFIED CLAY PIPE</b>  |  |
|                                               |                      | <b>STANDARD DRAWING S102</b>                           |  |
| REVISION                                      | BY                   | DATE                                                   |  |



**CROSSING CONDITION**

PROPOSED SEWER ABOVE EXISTING WATERMAIN      PROPOSED SEWER BELOW EXISTING WATERMAIN

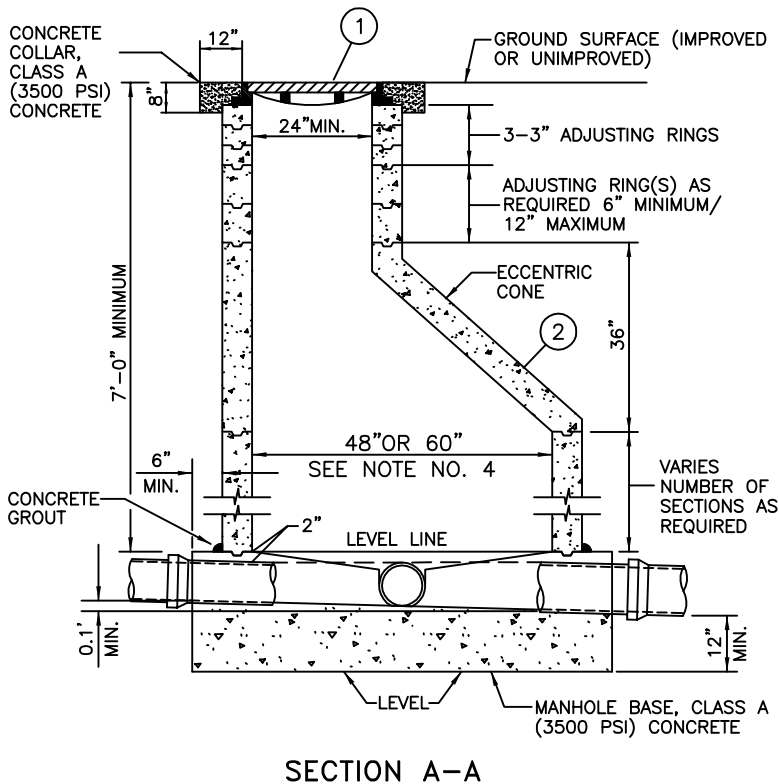
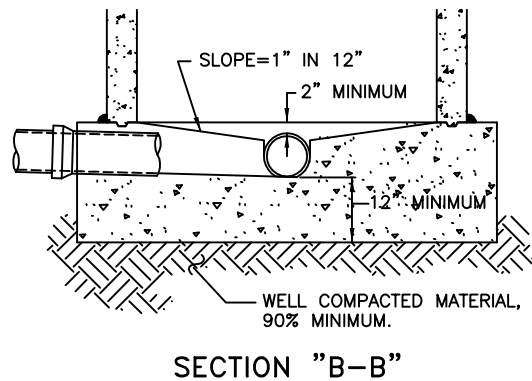
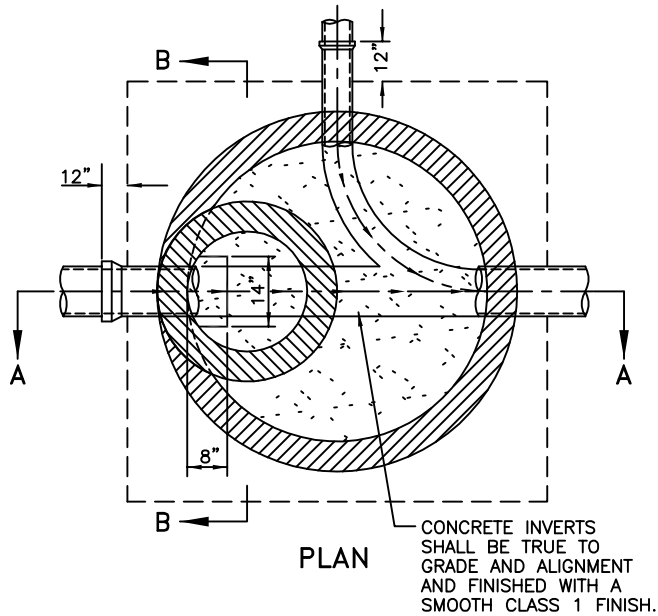
- 1) SEWER SHALL BE DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS OR SEWER SHALL BE WITHIN A CONTINUOUS SLEEVE.
- 2) CROSSINGS AT OTHER THAN 90° ANGLES SHALL BE AS SPECIFIED BY AGENCY.



**PARALLEL CONDITION**

- ZONE "A" - NO SEWERS SHALL BE CONSTRUCTED WITHOUT SPECIAL PERMISSION FROM STATE DEPARTMENT OF HEALTH SERVICES AND THE AGENCY.
- ZONE "B" - SEWER SHALL BE EXTRA-STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS AND SHALL BE APPROVED BY AGENCY.
- ZONE "C" - NO SPECIAL CONDITIONS REQUIRED.
- ZONE "P" - NO SEWER CONSTRUCTION ALLOWED.

|                                               |                      |                                                        |                              |
|-----------------------------------------------|----------------------|--------------------------------------------------------|------------------------------|
| APPROVED _____                                | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA |                              |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. <b>36810</b> | <b>SEWER CROSSING</b><br><b>EXISTING WATERMAIN</b>     |                              |
| REVISION                                      | BY                   | DATE                                                   | <b>STANDARD DRAWING S103</b> |

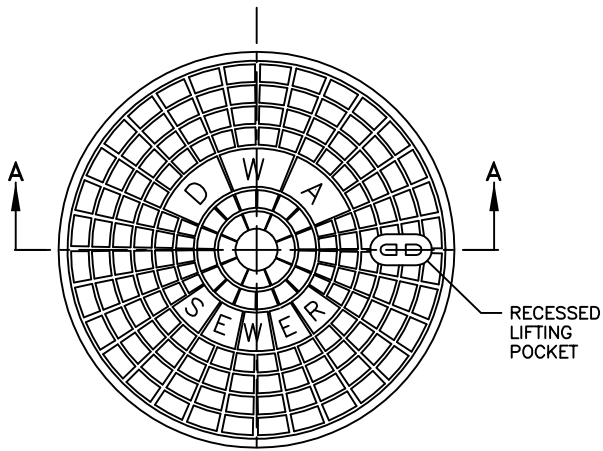


NOTES:

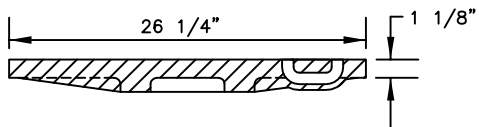
1. PRECAST REINFORCED CONCRETE MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478, LATEST AND SHALL BE DESIGNED FOR H-20 LOADING.
2. ALL MANHOLE SECTIONS SHALL BE JOINED WITH 3/8" THICK CEMENT MORTAR NEATLY STRUCK AND POINTED.
3. VERTICAL WALL OF CONE SHALL BE ON UPSTREAM SIDE OF MANHOLES.
4. MANHOLE DIAMETER SHALL BE 48" FOR SEWER DIAMETERS 24" AND LESS, AND 60" FOR SEWER DIAMETERS 27" AND LARGER.
5. WHEN MANHOLE IS IN STREET TO BE PAVED, MANHOLE FRAME SHALL BE SET AFTER PAVEMENT HAS BEEN PLACED. TOP OF MANHOLE SHALL BE FLUSH WITH PAVEMENT.
6. MANHOLE SHALL BE SPACED AT 300 FOOT INTERVALS, MAXIMUM, UNLESS SPECIFIED OTHERWISE,

| ITEM | No. REQ'D. | DESCRIPTION                                                           | APPROVED MATERIAL LIST NO. |
|------|------------|-----------------------------------------------------------------------|----------------------------|
| 1    | 1          | CAST IRON MANHOLE FRAME AND COVER. COVER SHALL BE MARKED "DWA SEWER". | SEE DWG S105               |
| 2    | 1          | REINFORCED CONCRETE MANHOLE SHAFT.                                    | S-02                       |

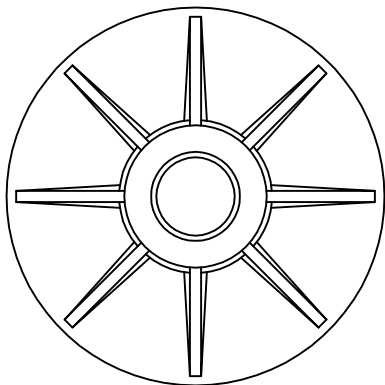
|                                                        |                      |                                                        |
|--------------------------------------------------------|----------------------|--------------------------------------------------------|
| APPROVED _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA |
|                                                        | RCE NO. <b>36810</b> |                                                        |
| REVISION                                               | BY                   | DATE                                                   |
| <b>STANDARD DRAWING S104</b>                           |                      |                                                        |



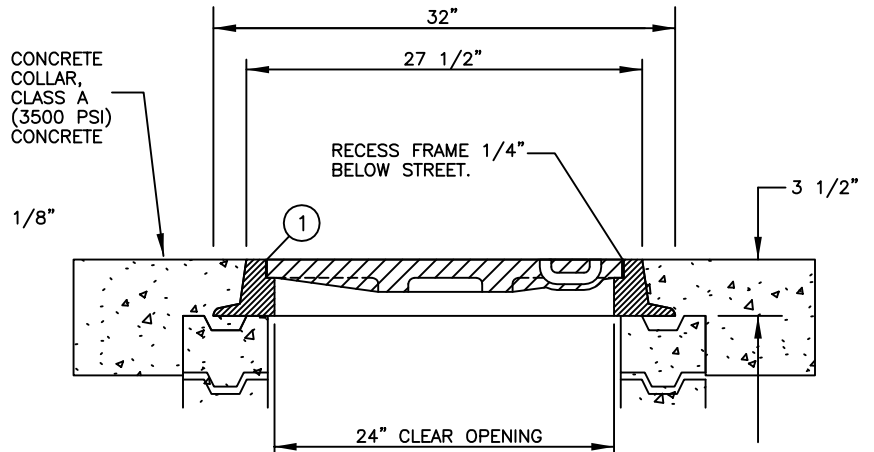
COVER  
TOP VIEW



SECTION A-A



COVER  
BOTTOM VIEW



TYPICAL INSTALLATION

NOTES:

1. THE CAST IRON USED SHALL HAVE A TENSILE STRENGTH OF 30,000 LBS PER SQUARE INCH.
2. LETTERING SHALL BE CAST IN COVER AND SHALL BE 2" HIGH, MINIMUM.
3. COVER SHALL INCLUDE A 3/4" DIAMETER MONITORING HOLE.

| ITEM | No. REQ'D. | DESCRIPTION                        | APPROVED MATERIAL LIST NO. |
|------|------------|------------------------------------|----------------------------|
| 1    | 1          | CAST IRON MANHOLE FRAME AND COVER. | S-01                       |

APPROVED

DATE \_\_\_\_\_

\_\_\_\_\_  
ASSISTANT GENERAL MANAGER/OPERATIONS

RCE NO. 36810

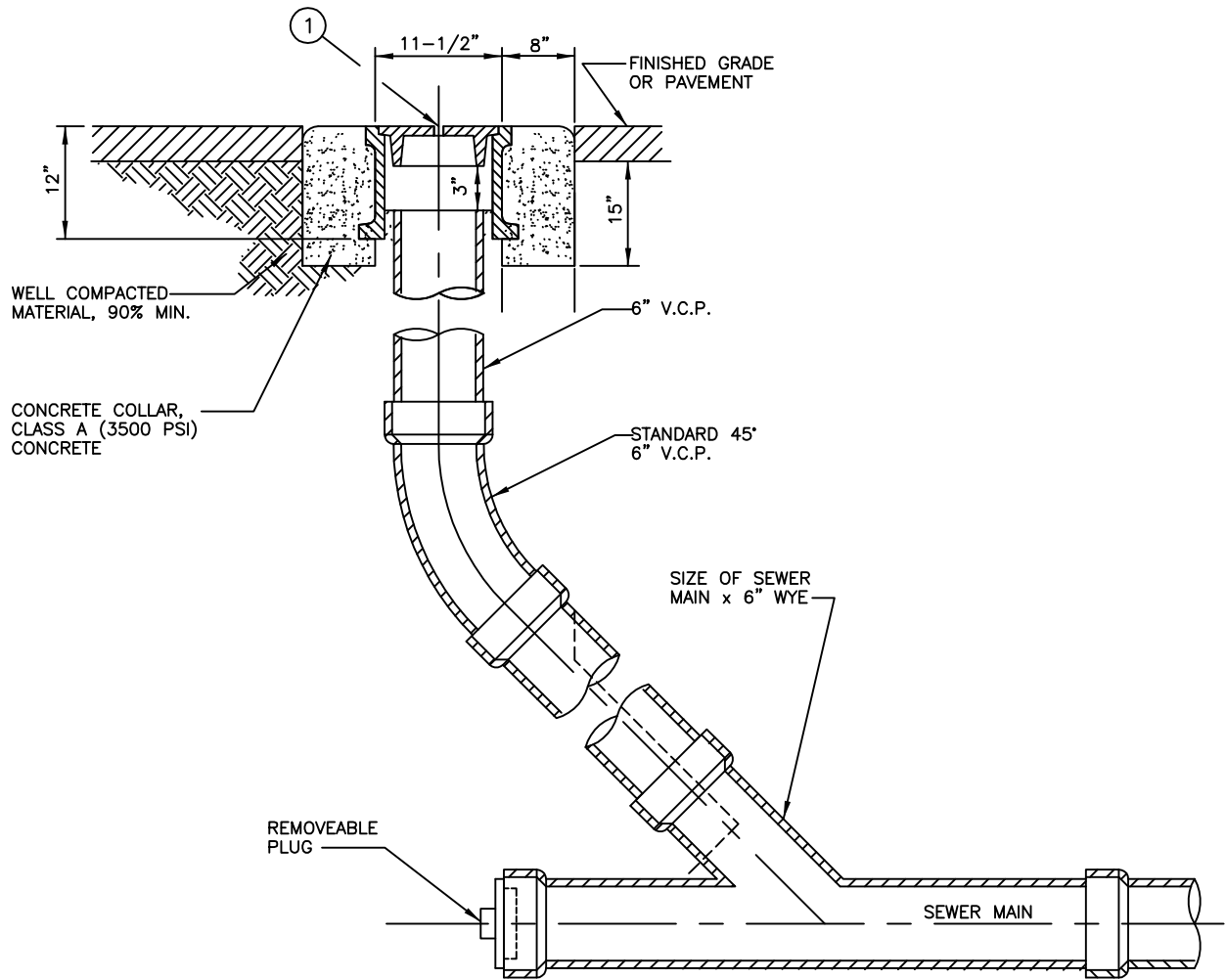
DESERT WATER AGENCY  
PALM SPRINGS, CALIFORNIA

MANHOLE  
FRAME AND COVER

STANDARD DRAWING S105

REVISION

BY DATE



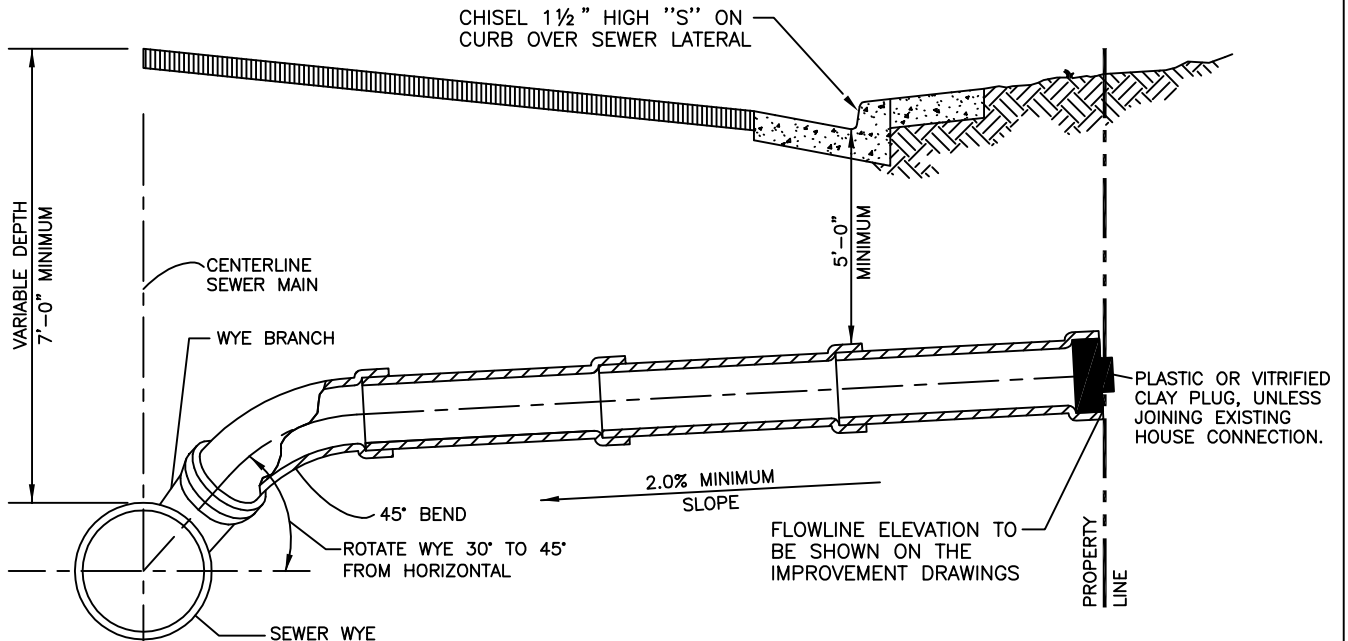
ELEVATION

| ITEM | No. REQ'D. | DESCRIPTION                                                         | APPROVED MATERIAL LIST NO. |
|------|------------|---------------------------------------------------------------------|----------------------------|
| 1    | 1          | CAST IRON CLEAN-OUT FRAME AND COVER. COVER SHALL BE MARKED "SEWER". | S-03                       |

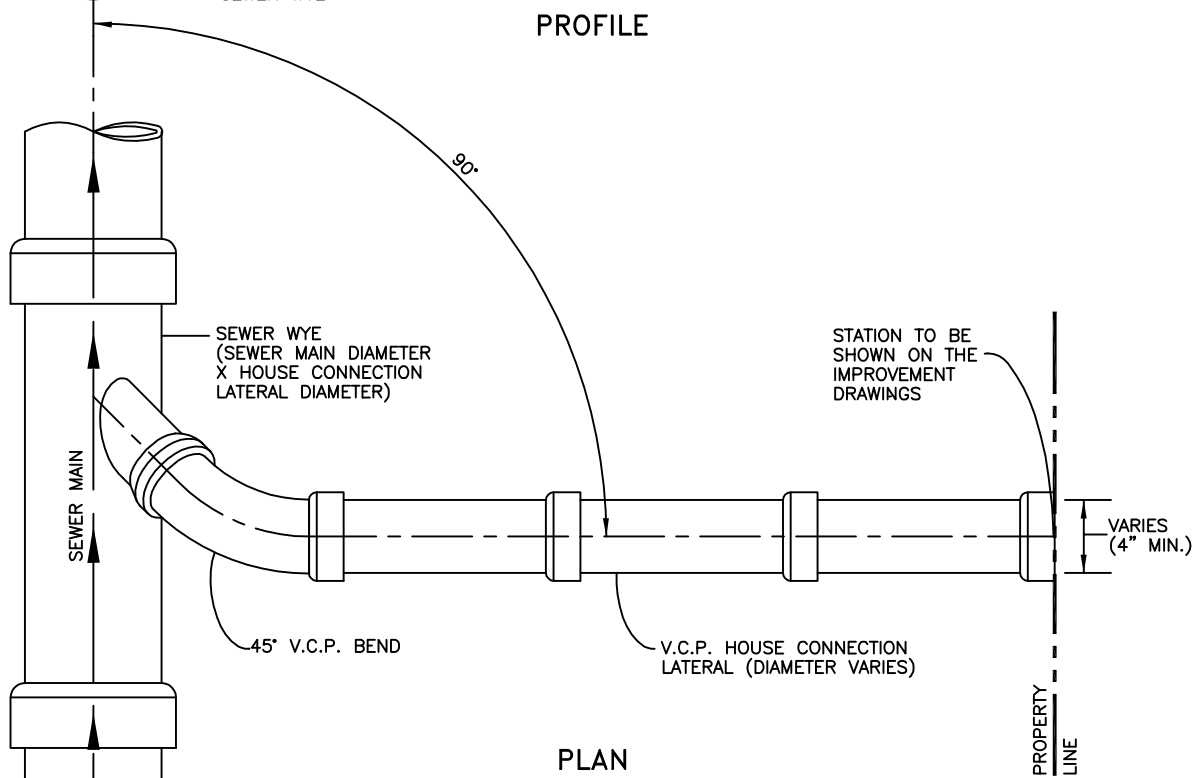
**NOTE:**

1. CLEANOUTS SHALL BE INSTALLED AT THE END OF THE SEWER MAIN IF WITHIN 200 FEET OF A MANHOLE.
2. LETTERING SHALL BE CAST IN COVER.

|                                               |                      |                                                 |
|-----------------------------------------------|----------------------|-------------------------------------------------|
| APPROVED                                      | DATE _____           | DESERT WATER AGENCY<br>PALM SPRINGS, CALIFORNIA |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. <u>36810</u> |                                                 |
|                                               |                      | SEWER CLEAN-OUT                                 |
|                                               |                      | STANDARD DRAWING S106                           |
| REVISION                                      | BY                   | DATE                                            |



PROFILE



PLAN

NOTES:

1. SEWER LATERALS FOR RESIDENTIAL USE SHALL BE 4" DIAMETER, MINIMUM.
2. SEWER LATERALS FOR ALL OTHER USES SHALL BE 6" DIAMETER, MINIMUM.

APPROVED

DATE \_\_\_\_\_

\_\_\_\_\_  
ASSISTANT GENERAL MANAGER/OPERATIONS

RCE NO. 36810

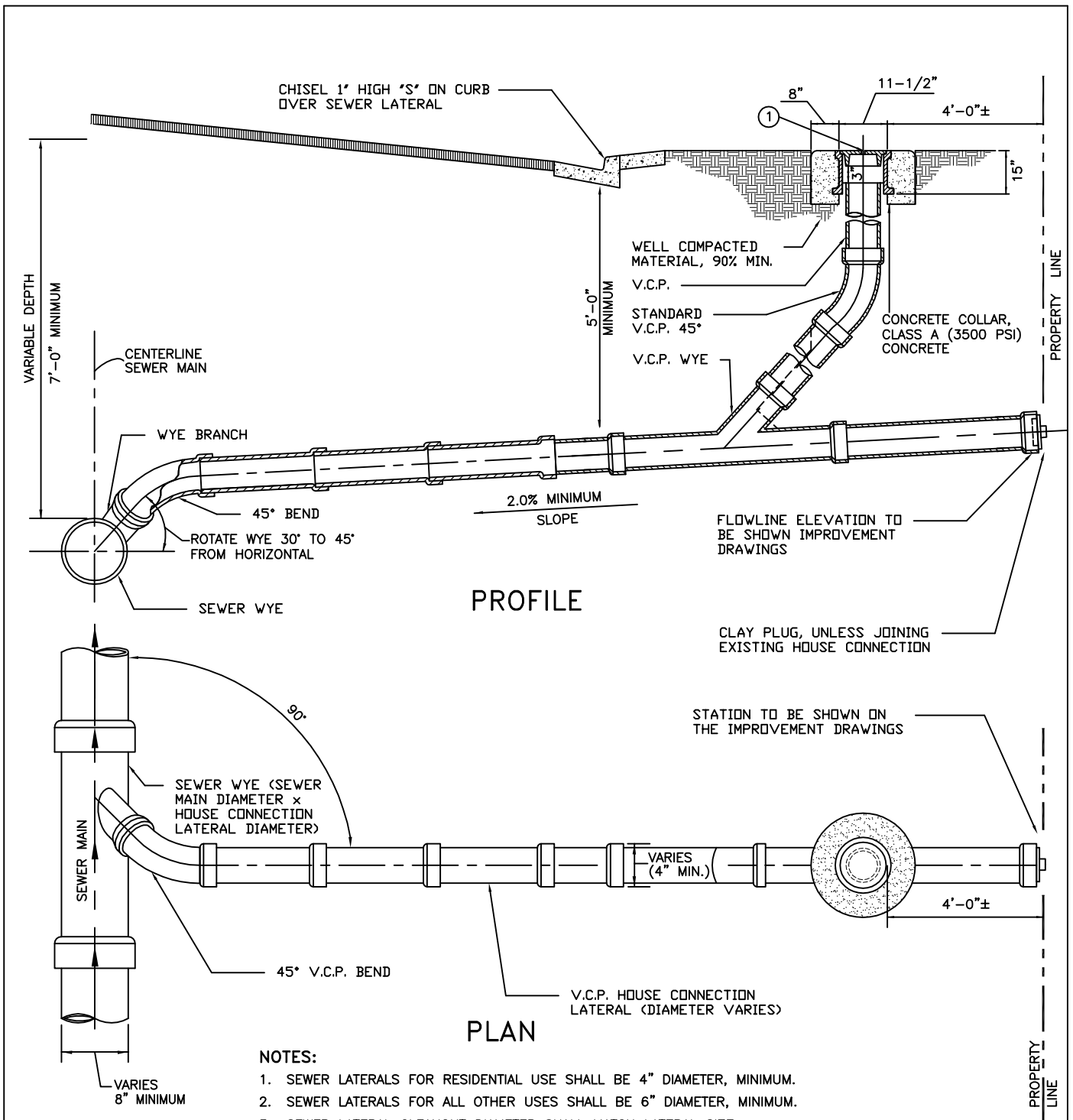
DESERT WATER AGENCY  
PALM SPRINGS, CALIFORNIA

SEWER LATERAL  
(NEW MAIN)

STANDARD DRAWING S107

REVISION

BY DATE



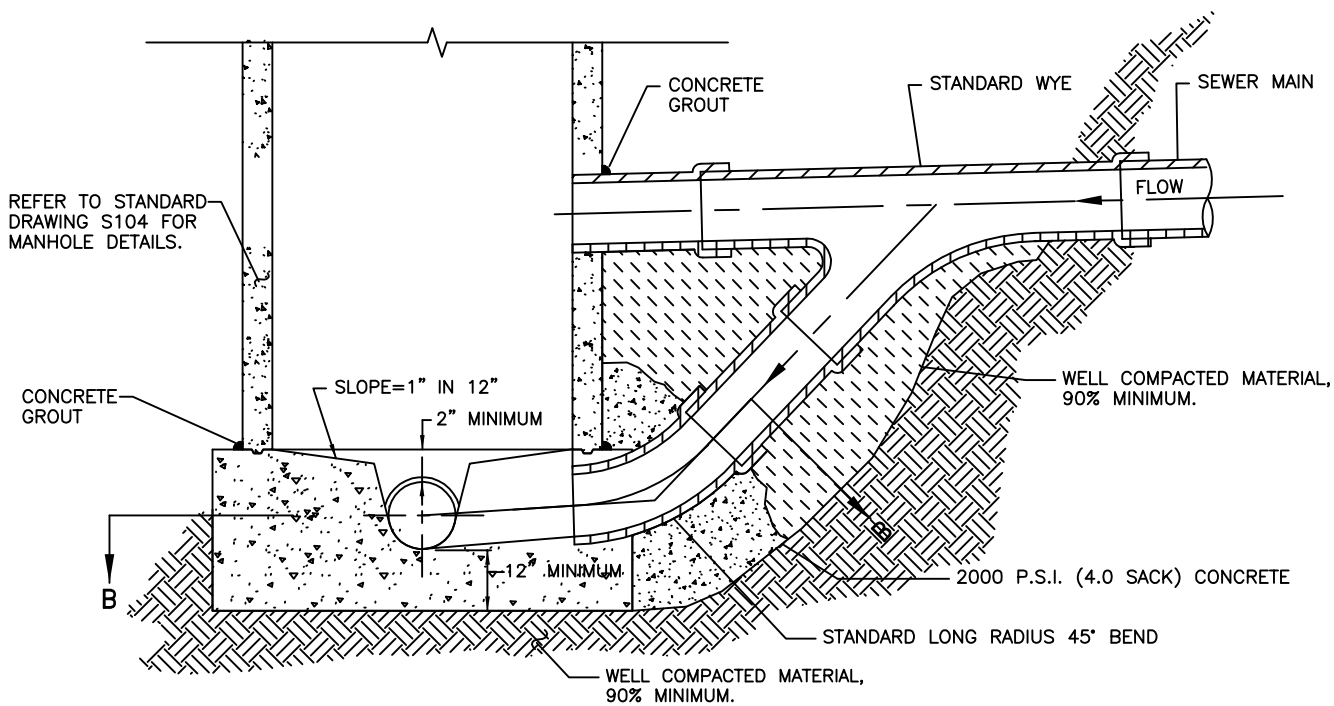
**NOTES:**

1. SEWER LATERALS FOR RESIDENTIAL USE SHALL BE 4" DIAMETER, MINIMUM.
2. SEWER LATERALS FOR ALL OTHER USES SHALL BE 6" DIAMETER, MINIMUM.
3. SEWER LATERAL CLEANOUT DIAMETER SHALL MATCH LATERAL SIZE.

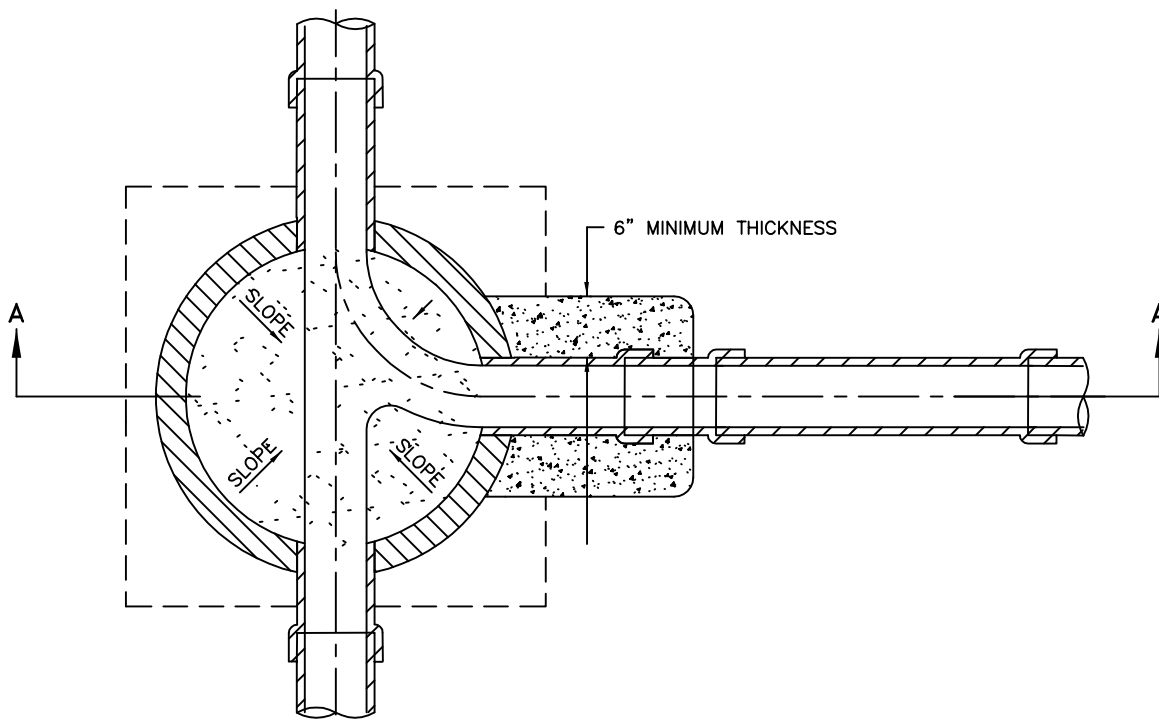
| ITEM | No. REQ'D. | DESCRIPTION                                                         | APPROVED MATERIAL LIST NO. |
|------|------------|---------------------------------------------------------------------|----------------------------|
| 1    | 1          | CAST IRON CLEAN-OUT FRAME AND COVER. COVER SHALL BE MARKED "SEWER". | SD-06                      |

|                                                |               |
|------------------------------------------------|---------------|
| APPROVED _____                                 | DATE _____    |
| OPERATIONS ENGINEER                            | RCE NO. 58514 |
| SIDEWALK ADDED AND LATERAL SLOPE MADE CONSTANT | JDT 6/1/05    |
| C.O. O/S 4' FROM P.L.; LAT. EXTENDING TO P.L.  | JDT 6/1/05    |
| REVISION                                       | BY DATE       |

**DESERT WATER AGENCY**  
 PALM SPRINGS, CALIFORNIA  
**SEWER LATERAL**  
**(NEW MAIN)**  
**STANDARD DRAWING S107A**



SECTION "A-A" SECTION



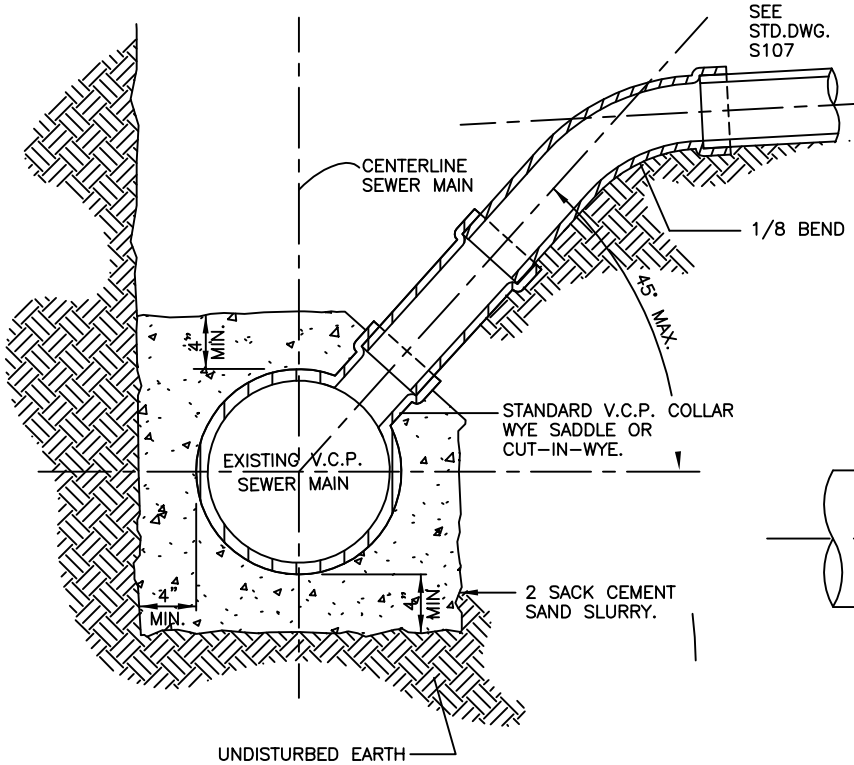
PLAN

|                                               |               |
|-----------------------------------------------|---------------|
| APPROVED                                      | DATE _____    |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. 36810 |
|                                               |               |
|                                               |               |
| REVISION                                      | BY DATE       |

DESERT WATER AGENCY  
PALM SPRINGS, CALIFORNIA

DROP MANHOLE

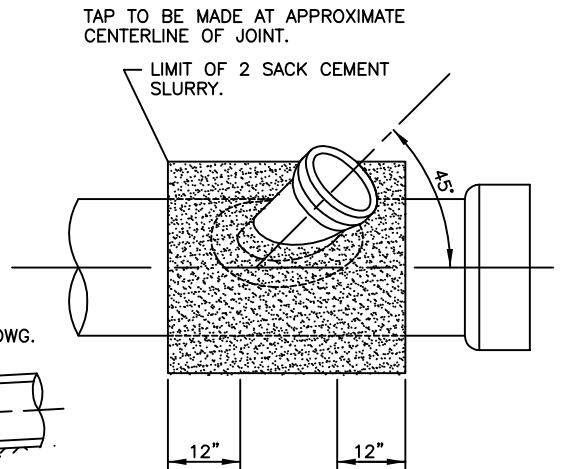
STANDARD DRAWING S108



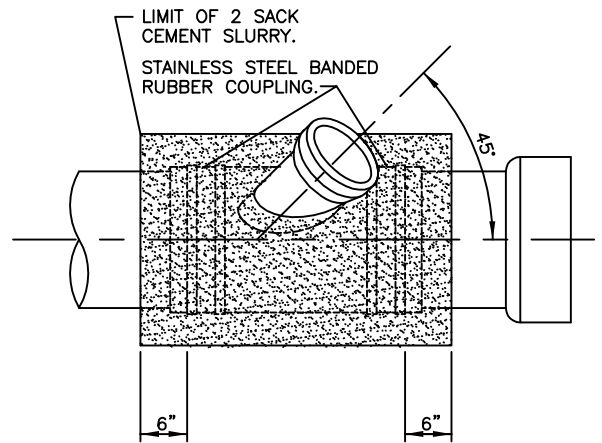
**SECTION - SEWER LATERAL**

**NOTES:**

- 1) SEWER LATERALS FOR RESIDENTIAL USE SHALL BE 4" DIAMETER, MINIMUM.
- 2) SEWER LATERALS FOR ALL OTHER USES SHALL BE 6" DIAMETER, MINIMUM.
- 3) THE OPENING FOR THE COLLAR WYE SADDLE SHALL BE MADE WITH A TAPPING MACHINE AND SHALL BE SANDED TO PROVIDE A CLEAN, NEAT OPENING FOR THE COLLAR WYE.
- 4) CONTRACTOR SHALL SECURE THE COLLAR WYE SADDLE TO THE SEWER WITH AN APPROVED EPOXY RESIN.
- 5) CONTRACTOR SHALL KEEP ALL CHIPS, DIRT, EPOXY, MORTAR, AND CONCRETE OUT OF THE SEWER. CONTRACTOR SHALL CLEAN AND BALL THE EXISTING SEWER MAIN AS DIRECTED BY THE AGENCY.
- 6) CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED PIPE AS DIRECTED BY THE AGENCY.

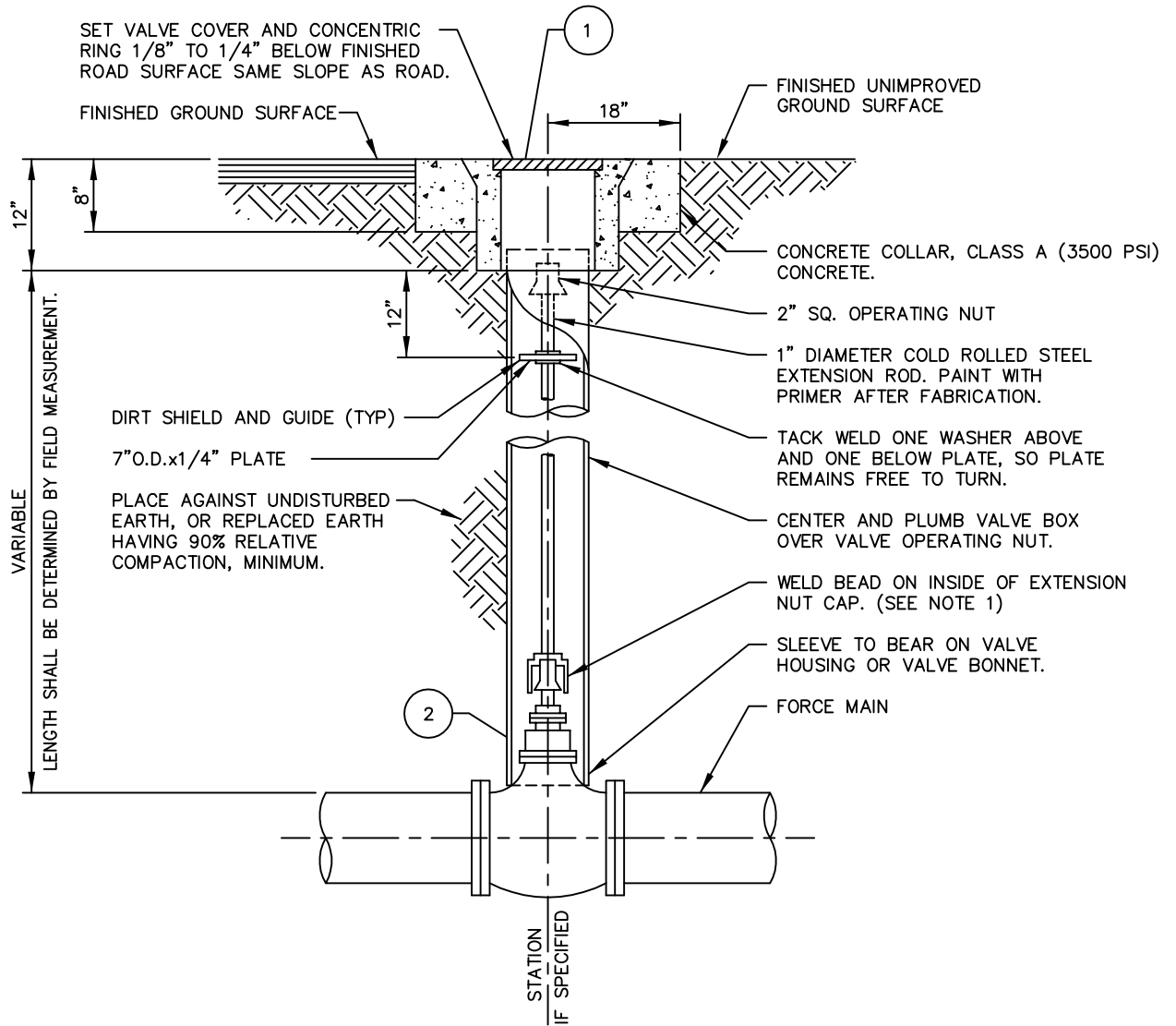


**COLLAR WYE SADDLE**  
(FOR SEWER MAINS 12" AND LARGER)



**CUT IN WYE**  
(FOR SEWER MAINS LESS THAN 12")

|                                               |                      |                                                                                                                                    |                              |  |
|-----------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--|
| APPROVED _____                                | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA<br><b>SEWER LATERAL</b><br><b>SADDLE CONNECTION</b><br>(EXISTING MAIN ONLY) |                              |  |
| _____<br>ASSISTANT GENERAL MANAGER/OPERATIONS | RCE NO. <b>36810</b> |                                                                                                                                    |                              |  |
| REVISION                                      | BY                   | DATE                                                                                                                               | <b>STANDARD DRAWING S109</b> |  |
|                                               |                      |                                                                                                                                    |                              |  |

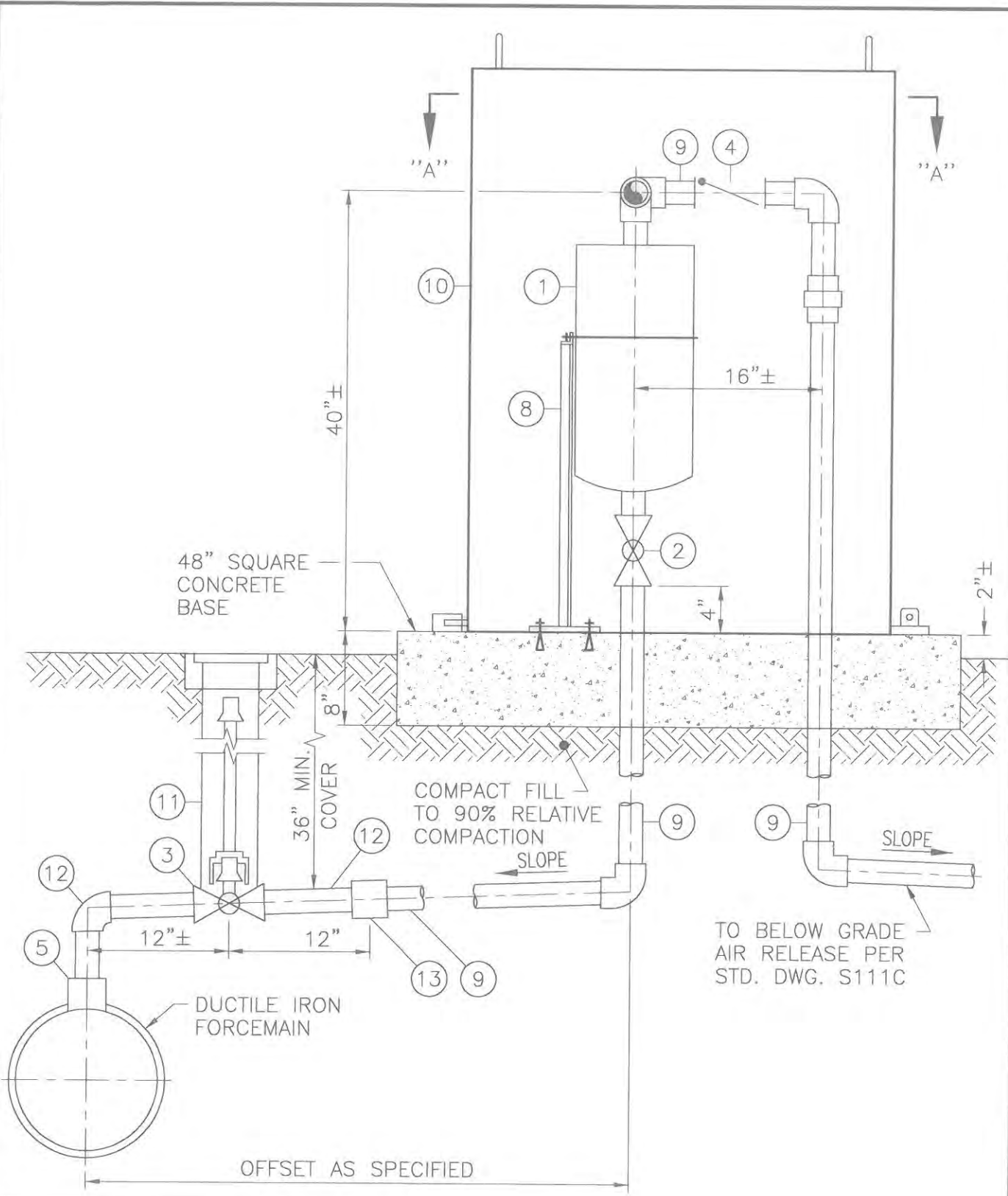


| ITEM | DESCRIPTION                                                           | APPROVED MATERIAL LIST NO. |
|------|-----------------------------------------------------------------------|----------------------------|
| 1    | TRAFFIC BOX – COVER MARKED "SEWER". LETTERING SHALL BE CAST IN COVER. | S-04                       |
| 2    | VALVE BOX EXTENSION.                                                  | S-05                       |

**NOTES**

- EXTENSION ROD REQUIRED WHENEVER TOP OF VALVE IS 3' OR MORE BELOW FINISHED GROUND SURFACE. WHEN EXTENSION ROD IS REQUIRED, OPERATING NUT SHALL BE 12" BELOW TOP OF TRAFFIC BOX. REQUIRED LENGTH FOR EXTENSION ROD SHALL BE DETERMINED BY FIELD MEASUREMENT. EXTENSION ROD SHALL BE SECURED TO VALVE OPERATING NUT BY WELDING A BEAD ON THE INSIDE OF THREE WALLS OF THE EXTENSION NUT CAP.

|                                         |                      |                                                        |
|-----------------------------------------|----------------------|--------------------------------------------------------|
| APPROVED _____                          | DATE _____           | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA |
| ASSISTANT GENERAL MANAGER/OPERATIONS    | RCE NO. <u>36810</u> |                                                        |
| <b>SEWER VALVE BOX<br/>INSTALLATION</b> |                      | <b>STANDARD DRAWING S110</b>                           |
| REVISION                                | BY DATE              |                                                        |



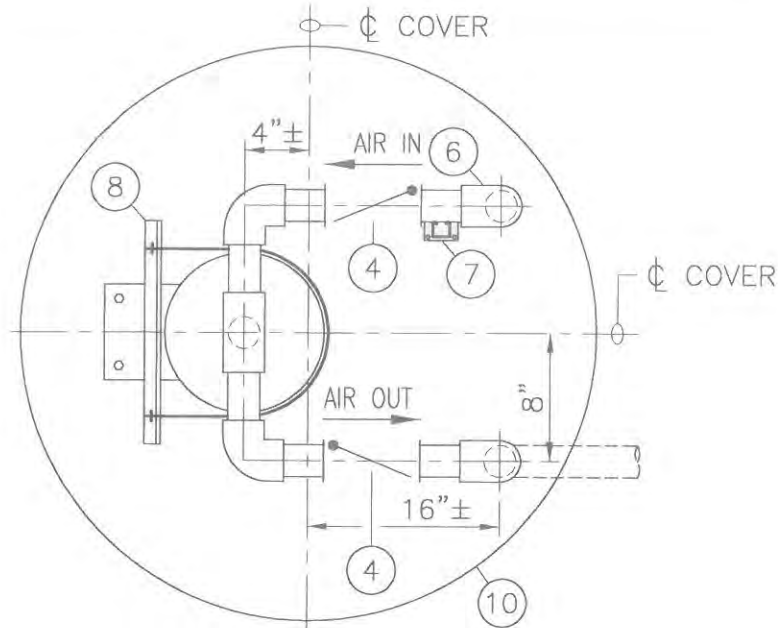
APPROVED *T. David G. Rubin* DATE 6/10/97  
 ASSISTANT GENERAL MANAGER/OPERATIONS RCE NO. 36810

**DESERT WATER AGENCY**  
 PALM SPRINGS, CALIFORNIA

**2" COMBINATION SEWAGE  
 AIR/VACUUM VALVE INSTALLATION  
 SECTION**

| REVISION | BY | DATE |
|----------|----|------|
|          |    |      |
|          |    |      |
|          |    |      |

**STANDARD DRAWING S111A**




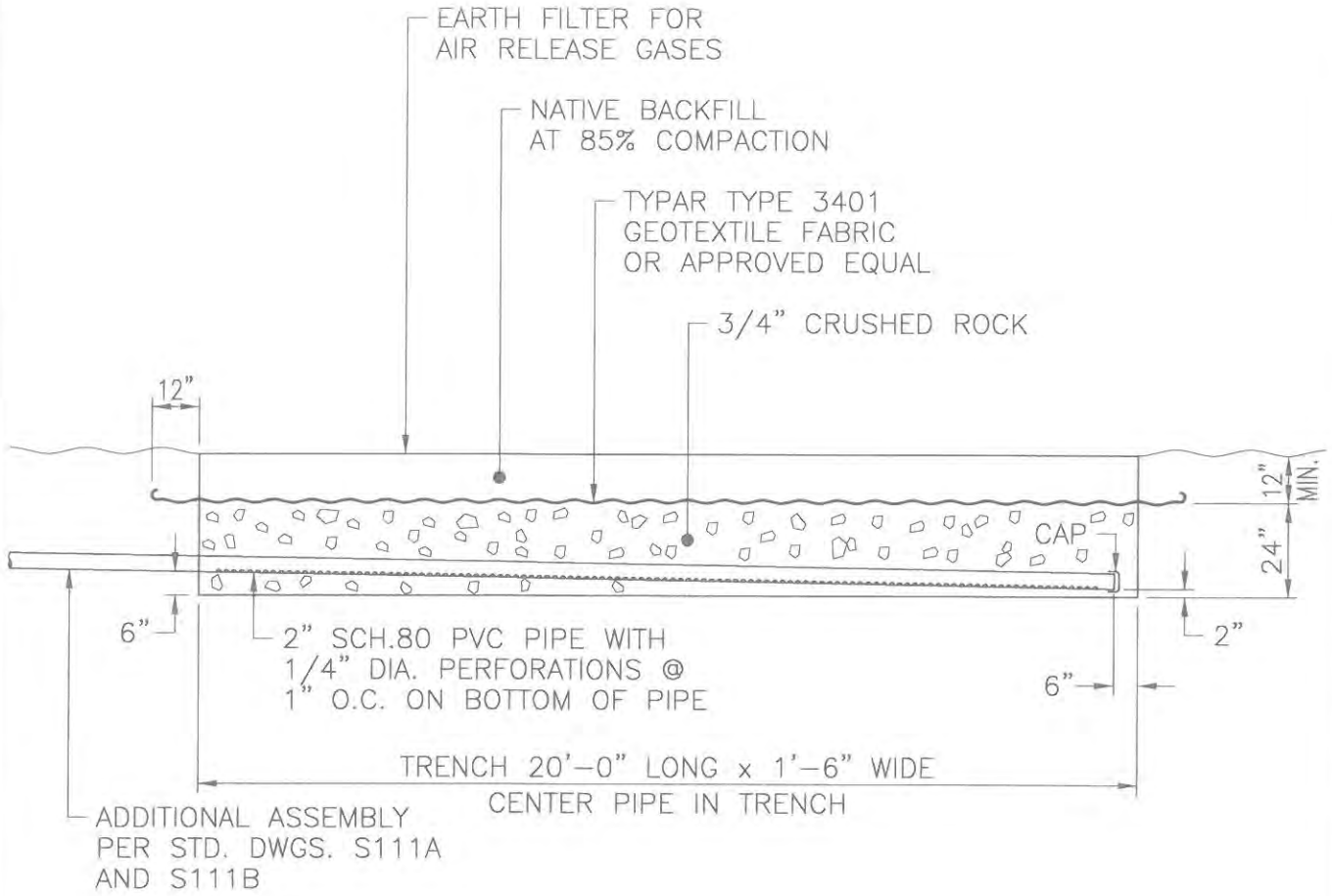
PLAN SECTION "A-A"

| ITEM | DESCRIPTION                                                                                                                                                                                                                                                   | APPROVED MATERIAL LIST NO. |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 1    | 2" COMBINATION SEWAGE AIR AND VACUUM VALVE.                                                                                                                                                                                                                   | SB-08                      |
| 2    | 2" THREADED STAINLESS STEEL BALL VALVE WITH LEVER OPERATOR.                                                                                                                                                                                                   | SEE SPEC.                  |
| 3    | 2" THREADED STAINLESS STEEL BALL VALVE FOR BURIED SERVICE WITH STEM EXTENSION TEE AND HANDLE.                                                                                                                                                                 | SEE SPEC.                  |
| 4    | 2" THREADED STAINLESS STEEL SWING CHECK VALVE.                                                                                                                                                                                                                | SEE SPEC.                  |
| 5    | EPOXY COATED DOUBLE STRAP SERVICE SADDLE WITH STAINLESS STEEL BOLTS AND NUTS AND 2" THREADED CONNECTION.                                                                                                                                                      |                            |
| 6    | 2" THREADED SCH.80 PVC 90° ELBOW WITH 2" NIPPLE x 2" LONG, POINTED DOWN WITH MODEL F-16 NUT STYLE SUCTION STAINER BY FLOW EZY FILTERS, INC..                                                                                                                  |                            |
| 7    | NON-METALLIC CORROSION RESISTANT AICKINSTRUT PIPE SUPPORT, ATTACHED TO 2" NIPPLE WITH PIPE CLAMP, PROVIDE POST BASE CONNECTED TO CONCRETE FOUNDATION WITH 4- 1/4" EXPANSION ANCHORS.                                                                          |                            |
| 8    | VALVE SUPPORT, FABRICATED WITH 1"x1"x1/4"x14"L HORIZONTAL ANGLE WELDED TO 1"x1"x1/4"x24"L VERTICAL ANGLE WITH 6"x6"x1/4" BASE PLATE. ANCHOR BASE PLATE TO CONCRETE FOUNDATION WITH 4- 3/8" EXPANSION ANCHORS (STAINLESS STEEL). ATTACH AIR VALVE WITH U-BOLT. |                            |
| 9    | 2" SCH.80 PVC PIPE AND FITTINGS, SOLVENT WELDED. PROVIDE THREADED NIPPLES AND FITTINGS WHERE CONNECTING TO VALVES.                                                                                                                                            |                            |
| 10   | 36" DIA. x 48" HIGH AIR VALVE COVER. SEE STANDARD DRAWING S-112.                                                                                                                                                                                              |                            |
| 11   | VALVE BOX INSTALLATION PER STANDARD DRAWING S-110. PROVIDE TEE HANDLE CONNECTION AT VALVE, SQUARE NUT AT TOP OF EXTENSION.                                                                                                                                    |                            |
| 12   | 2" SCH.40 STAINLESS STEEL THREADED PIPE AND FITTING.                                                                                                                                                                                                          |                            |
| 13   | 2" SCH.40 STAINLESS STEEL THREADED COUPLING.                                                                                                                                                                                                                  |                            |

**NOTE**

EXPOSED PIPING, AIR VALVE, AIR VALVE COVER, AND AIR VALVE SCREEN, EXCEPT STAINLESS STEEL, SHALL BE PAINTED IN ACCORDANCE WITH AGENCY APPROVED PAINT SYSTEMS.

|                                                                                                                                         |                      |                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPROVED<br><br>ASSISTANT GENERAL MANAGER/OPERATIONS | DATE <u>6/18/97</u>  | <b>DESERT WATER AGENCY</b><br>PALM SPRINGS, CALIFORNIA<br><b>2" COMBINATION SEWAGE<br/>         AIR/VACUUM VALVE INSTALLATION</b><br><b>PLAN SECTION AND MATERIAL LIST</b><br><b>STANDARD DRAWING S111B</b> |
|                                                                                                                                         | RCE NO. <u>36810</u> |                                                                                                                                                                                                             |
| REVISION                                                                                                                                | BY                   | DATE                                                                                                                                                                                                        |



ADDITIONAL ASSEMBLY  
PER STD. DWGS. S111A  
AND S111B

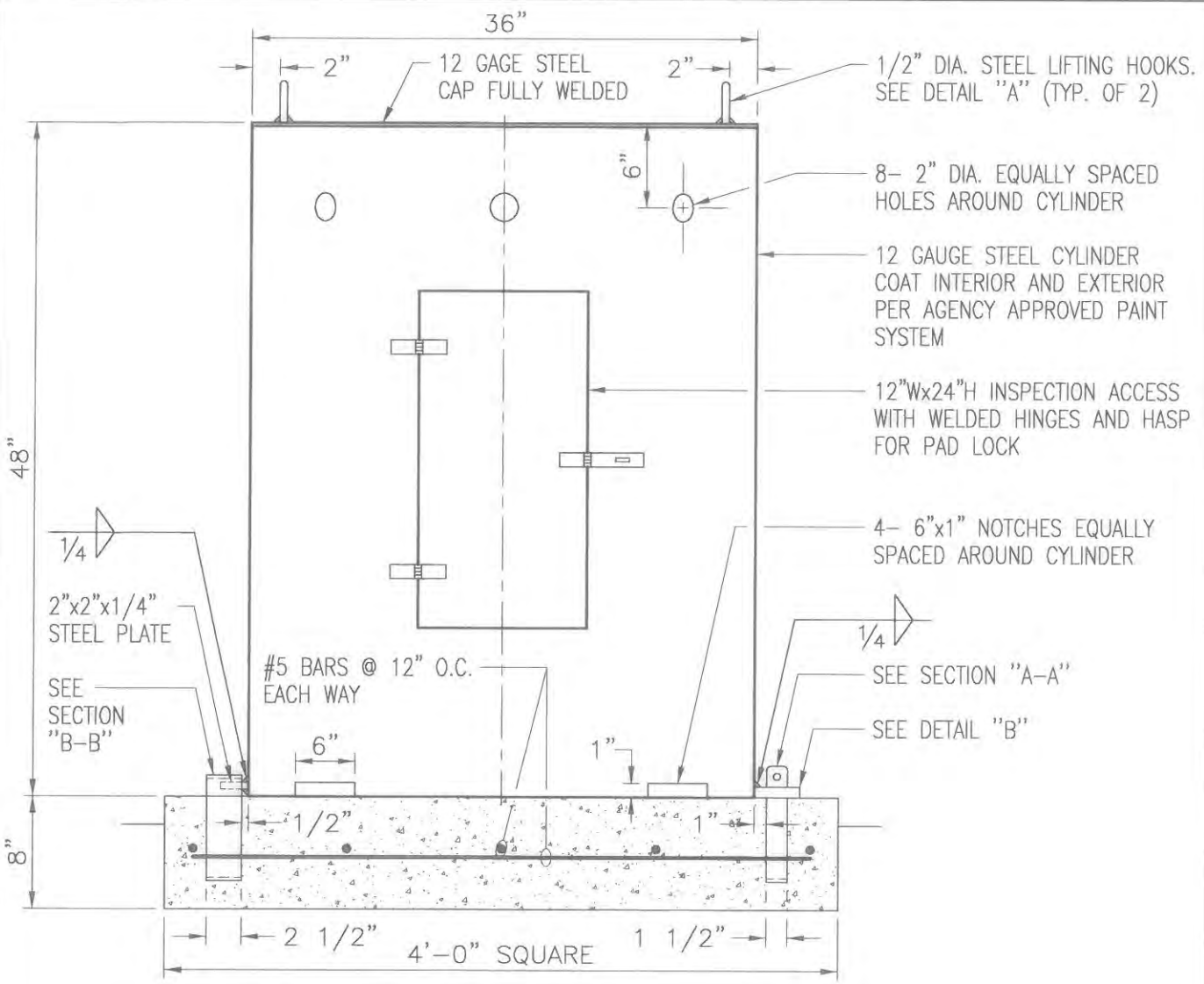
APPROVED  
*David K. Palm*  
ASSISTANT GENERAL MANAGER/OPERATIONS  
DATE 6/18/97  
RCE NO. 36810

DESERT WATER AGENCY  
PALM SPRINGS, CALIFORNIA

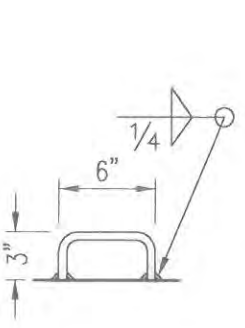
2" COMBINATION SEWAGE  
AIR/VACUUM VALVE INSTALLATION  
BELOW GRADE AIR RELEASE

STANDARD DRAWING S111C

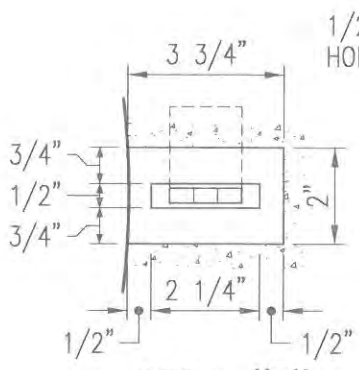
| REVISION | BY | DATE |
|----------|----|------|
|          |    |      |
|          |    |      |
|          |    |      |



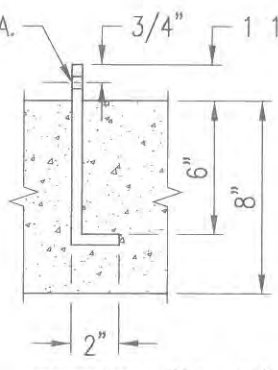
- 36"
- 2"
- 12 GAGE STEEL CAP FULLY WELDED
- 2"
- 1/2" DIA. STEEL LIFTING HOOKS. SEE DETAIL "A" (TYP. OF 2)
- 8- 2" DIA. EQUALLY SPACED HOLES AROUND CYLINDER
- 12 GAGE STEEL CYLINDER COAT INTERIOR AND EXTERIOR PER AGENCY APPROVED PAINT SYSTEM
- 12"Wx24"H INSPECTION ACCESS WITH WELDED HINGES AND HASP FOR PAD LOCK
- 4- 6"x1" NOTCHES EQUALLY SPACED AROUND CYLINDER
- SEE SECTION "A-A"
- SEE DETAIL "B"
- 1/4"
- 2"x2"x1/4" STEEL PLATE
- SEE SECTION "B-B"
- #5 BARS @ 12" O.C. EACH WAY
- 6"
- 1"
- 1"
- 8"
- 2 1/2"
- 4'-0" SQUARE
- 1 1/2"



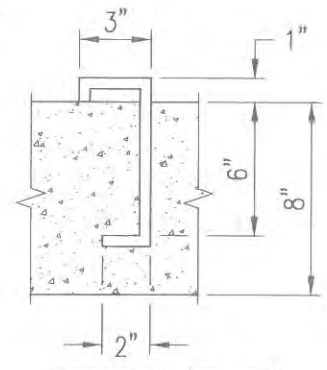
DETAIL "A"



DETAIL "B"



SECTION "A-A"



SECTION "B-B"

ALL BRACKETS SHALL BE CONSTRUCTED OF 1/4" STEEL PLATE

APPROVED  
*David K. Fisher*  
 ASSISTANT GENERAL MANAGER/OPERATIONS  
 DATE 6/18/97  
 RCE NO. 36810

DESERT WATER AGENCY  
 PALM SPRINGS, CALIFORNIA

AIR VALVE  
 COVER

|          |    |      |
|----------|----|------|
| REVISION | BY | DATE |
|          |    |      |
|          |    |      |
|          |    |      |

STANDARD DRAWING S112

This page is intentionally left blank.

## APPENDIX F

### *INTERNAL REPORT AUDIT HISTORY*

This page is intentionally left blank.

## REPORT AUDITING

The Agency will conduct an internal audit of the SSMP every two years. After the audit is conducted, the time, date and list of Agency personnel will be added to the report audit documentation below.

|                                                                       |                                                                                                                                  |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Internal Report Audit</b>                                          |                                                                                                                                  |
| Date: June 2021                                                       | Report: SEWER PREVENTATIVE MAINTENANCE PROGRAM (SPMP) COLLECTION SYSTEM / LIFT STATIONS                                          |
| Agency Staff:<br>Updated By: David Tate<br>Approved By: Steve Johnson |                                                                                                                                  |
| <b>Internal Report Audit</b>                                          |                                                                                                                                  |
| Date: July 2021                                                       | Report: SANITARY SEWER MANAGEMENT PLAN (SSMP)                                                                                    |
| Agency Staff:<br>Updated By: David Tate<br>Approved By: Steve Johnson |                                                                                                                                  |
| <b>Internal Report Audit</b>                                          |                                                                                                                                  |
| Date: August 2021                                                     | Report: SANITARY SEWER OVERFLOW RESPONSE PLAN (SSORP) COLLECTION SYSTEM / LIFT STATIONS                                          |
| Agency Staff<br>Updated By: David Tate<br>Approved By: Steve Johnson  |                                                                                                                                  |
| <b>Internal Report Audit/Revision</b>                                 |                                                                                                                                  |
| Date: June 2023                                                       | Report: SANITARY SEWER MANAGEMENT PLAN (SSMP), SPILL EMERGENCY RESPONSE PLAN (SERP), SEWER PREVENTIVE MAINTENANCE PROGRAM (SPMP) |
| Agency Staff<br>Updated By: David Tate<br>Approved By: Steve Johnson  |                                                                                                                                  |

## REPORT AUDITING

The Agency will conduct an internal audit of the SSMP every two years. After the audit is conducted, the time, date and list of Agency personnel will be added to the report audit documentation below.

|                                                                                    |                                                                                                                                  |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Internal Report Audit                                                              |                                                                                                                                  |
| Date: October 2025                                                                 | Report: SANITARY SEWER MANAGEMENT PLAN (SSMP)                                                                                    |
| Agency Staff:<br>Updated By: Ryan Molhoek<br>Approved By: David Tate               |                                                                                                                                  |
| Internal Report Audit/Revision                                                     |                                                                                                                                  |
| Date: May 2026                                                                     | Report: SANITARY SEWER MANAGEMENT PLAN (SSMP), SPILL EMERGENCY RESPONSE PLAN (SERP), SEWER PREVENTIVE MAINTENANCE PROGRAM (SPMP) |
| Agency Staff:<br>Updated By: Ryan Molhoek<br>Approved By: David Tate, Esther Saenz |                                                                                                                                  |
| Internal Report Audit                                                              |                                                                                                                                  |
| Date:                                                                              | Report:                                                                                                                          |
| Agency Staff                                                                       |                                                                                                                                  |
| Internal Report                                                                    |                                                                                                                                  |
| Date:                                                                              | Report:                                                                                                                          |
| Agency Staff                                                                       |                                                                                                                                  |
| Internal Report                                                                    |                                                                                                                                  |
| Date:                                                                              | Report:                                                                                                                          |
| Agency Staff                                                                       |                                                                                                                                  |



**DESERT  
WATER  
— AGENCY —**

**Sanitary Sewer Management Plan Audit**

May 3, 2022 to May 2, 2025

WDID No. 7SSO11440

## Table of Contents

|       |                                               |   |
|-------|-----------------------------------------------|---|
| 1     | Purpose.....                                  | 1 |
| 2     | Background.....                               | 2 |
| 3     | Audit Overview.....                           | 4 |
| 4     | Evaluation of SSMP Effectiveness.....         | 5 |
| 4.1   | Sewer Overflow Performance.....               | 5 |
| 4.1.1 | Sanitary Sewer Overflow Rate.....             | 5 |
| 4.1.2 | Spills Impacting Surface Waters.....          | 5 |
| 4.1.3 | Number and Size of Sewer Overflows.....       | 6 |
| 4.2   | Review of Effectiveness of SSMP Elements..... | 7 |
| 4.2.1 | System Overview.....                          | 7 |
| 4.2.2 | Organization.....                             | 7 |
| 4.2.3 | Operations and Maintenance Program.....       | 7 |
| 4.2.4 | Design and Performance Provisions.....        | 8 |
| 4.2.5 | Spill Emergency Response Plan.....            | 8 |
| 4.2.6 | Sewer Pipe Blockage Control Program.....      | 8 |

## **1 Purpose**

The purpose of this document is to report the results of the Sewer System Management Plan (SSMP) Program Audit conducted for Desert Water Agency, covering the audit period beginning May 3, 2022 and ending May 2, 2025. This report was prepared pursuant to the requirements included in the State Water Resources Control Board Order No. 2022-0103-DWQ – Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems (General Order). The audit requirements are:

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. Within six months after the end of the required 3-year audit period, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of the General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators' input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

This audit serves as the 2025 SSMP Program Audit for the Desert Water Agency.

## **2 Background**

In 1976, the Desert Water Agency (Agency) gained authority from the Local Agency Formation Committee to provide sanitary sewer collection service within its service area. The Agency developed a master plan for collecting sewage within portions of Cathedral City, and in 1979 initiated construction of its sewage collection system. The approximate population served by sewer system is 8,050.

### **SANITARY SEWER COLLECTION SYSTEM**

The Agency's sanitary sewer collection area is limited to its boundary within the City of Cathedral City (Refer to Exhibit 2 for Collection Systems Map). Up-to-date maps of the sanitary sewer system will be made available to State and Regional Water Board staff upon request. The sewer effluent is conveyed to and treated by either the City of Palm Springs or the Coachella Valley Water District. The approximate population of sewer service that is conveyed to the City of Palm Springs is 2,295; the approximate population of sewer service that is conveyed to the Coachella Valley Water District is 5,755.

### **SYSTEM OVERVIEW**

The total length of sewer owned, operated, and maintained by the Agency is 29 miles, this includes: approximately 28 miles of gravity sewer mainline, and 1 mile of pressurized force mains. Within the Agency's boundary, sewage conveyed to the City of Palms Springs flows via gravity main. Sewage conveyed to Coachella Valley Water District flows via gravity mains and is pumped through two separate lifts stations and force mains into the Coachella Valley Water District Sewer System; one lift station is in the Date Palm Lift Station Collection System, and one lift station is in the Cathedral Canyon Lift Station Collection System.

The Agency owns, operates, and maintains the sewer system within the public Right-of-Way, including lower sewer laterals. The Agency has no responsibility in the maintenance and operation of the upper lateral (customer's sewer system beyond the point of ownership by the Agency). The Agency prohibits any connection between a public or private storm water system and the sewer system.

### **DREAM HOMES COLLECTION SYSTEM**

The Dream Homes Collection System provides service for the Dream Homes neighborhood in the western portion of the City of Cathedral City. Said area is bounded on the north by San Mateo Drive, on the south by Mission Drive and Ramon Road, on the west by San Joaquin Drive, and on the east by San Diego Drive. Sewage from the Dream Homes is conveyed by gravity sewer mains to an existing sewer system manhole owned and operated by Palm Springs. The sewage is then conveyed by Palm Springs, sewer system to the wastewater treatment plant located in Palm Springs. Within this collection system the percentage of residential, commercial, and industrial serviced connections is: 99% residential, 1% commercial, and 0% industrial.

### **DATE PALM LIFT STATION COLLECTION SYSTEM**

The Date Palm Lift Station Collection System provides service for the Cathedral City Cove neighborhood and the Cathedral City Downtown Core area, both of which are located in the southern portion of the City of Cathedral City. The Cathedral City Cove neighborhood is bounded on the north by Highway 111, on the south by Foothill Road, on the west by an existing wash/storm drain channel, and on the east by an existing wash/storm drain channel. The Cathedral City Downtown Core area is bounded on the north by the existing flood control channel, on the south by Highway 111, on the west by an existing wash/storm drain channel, and on the east by Date Palm Drive. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Date Palm Lift Station. The station then pumps the sewage to a gravity sewer system manhole owned and operated by the Coachella Valley Water District (CVWD). The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities. Within this collection system the percentage of residential, commercial, and industrial serviced connections is: 90% residential, 10% commercial, and 0% industrial.

#### CATHEDRAL CANYON LIFT STATION COLLECTION SYSTEM

The Cathedral Canyon Lift Station Collection System provides service for areas west of Cathedral Canyon Drive and south of the Whitewater River channel in the City of Cathedral City, to include, but is not limited to, portions of the Cathedral Canyon Country Club, The District housing tract, and the Target Shopping Center. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Cathedral Canyon Lift Station. The station then pumps the sewage to a drop manhole owned and operated by CVWD on the north side of the Whitewater River Channel. The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities. Within this collection system the percentage of residential, commercial, and industrial serviced connections is: 90% residential, 10% commercial, and 0% industrial.

### **3 Audit Overview**

This audit reviews the period between May 3, 2022 and May 2, 2025 and was performed to comply with Specification 5.4 – Sewer System Management Plan Audits of the General Order requiring completion of an internal audit of the Sewer System Management Plan at a minimum frequency of once every three years.

The Agency's Sanitary Sewer Management Plan was last updated June 2023. This audit assesses the current state of Sanitary Sewer Management Plan compliance with the General Order, identifies deficiencies found in the Sanitary Sewer Management Plan and program implementation, and recommends corrective actions. In addition, the audit provides an evaluation of Sanitary Sewer Management Plan and program implementation effectiveness. The Agency intends to use the audit results to improve Sanitary Sewer Management Plan compliance and performance.

The audit was conducted including input from operations staff involved with implementation of activities of the Agency's Sanitary Sewer Management Plan and Spill Emergency Response Plan, as required by the General Order.

## 4 Evaluation of SSMP Effectiveness

Overall, based on analysis of the spill trends between May 3, 2022 through May 2, 2025 and the results of the SSMP Program audit, the overall program for managing the sewer systems is effective and operates at a high level of performance. The Agency's SSMP was successful in minimizing SSO incidents. Only very minor spills occurred and were for all intents unavoidable.

### 4.1 Sewer Overflow Performance

The primary measure of the effectiveness of the SSMP is sewer overflow performance. The primary indicators of sewer overflow performance include:

- Spill Rate: Number of Spills per 100 miles of gravity mainlines and force mains per Year
- Spills Impacting Surface Waters: Number of Spills and Spill Volume Reaching Surface Waters
- High-Volume Spill Events: Number of High-Volume Spill Events and associated Spill Volume

This section reviews the Agency's recent sewer overflow performance through analysis of the sewer overflow data reported to the State Water Resource Control Board (SWRCB) California Integrated Water Quality System (CIWQS) database.

#### 4.1.1 Sanitary Sewer Overflow Rate

During the audit period (May 2022 through May 2025), the Agency's collection system contained approximately 35 miles of sewer mains. The Agency's spill performance over the past three years has been excellent and has averaged 0.03 spills per mile per year.

#### 4.1.2 Spills Impacting Surface Waters

The Agency experienced a total of 2 sewer overflow events during the audit period. Table 4-1 summarizes the total spill volume released from collection systems managed by the Agency annually during the audit period. None of the Agency's spills discharged to surface water. All of the volume spilled was recovered.

Table 4-1

| Date         | Category | Total Volume (Gallons) |
|--------------|----------|------------------------|
| 10/2024      | Cat 4    | 5                      |
| 1/2024       | Cat 4    | 45                     |
| <b>TOTAL</b> |          | <b>50</b>              |

### 4.1.3 Number and Size of Sewer Overflows

State Water Resources Control Board categorizes spill events into Category 1, Category 2, Category 3 or Category 4 as shown in Table 4-2. Category 1 Spills are considered most severe because all reach surface waters. Category 4 Spills are least severe because all are less than 50 gallons and do not reach surface waters. Table 4-3 shows that most all the Agency’s spills are the lower severity Category 4 Spills.

Table 4-2

| Spill Category | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category 1     | <p>A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:</p> <ul style="list-style-type: none"> <li>• A surface water, including a surface water body that contains no flow or volume of water; or</li> <li>• A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.</li> </ul> <p>Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.</p> <p>A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order.</p> |
| Category 2     | <p>A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.</p> <p>A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Category 3     | <p>A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.</p> <p>A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|            |                                                                                                                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category 4 | <p>A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.</p> <p>A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.</p> |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table 4-3

| Date    | Category | Cause                                        | Action(s) Taken                                                               |
|---------|----------|----------------------------------------------|-------------------------------------------------------------------------------|
| 10/2024 | Cat 4    | Root intrusion                               | Root removal and lateral replacement with added root barrier                  |
| 1/2024  | Cat 4    | Sewer main damaged by developer’s contractor | Inspected response and ensured measures were taken to minimize spill quantity |

**4.2 Review of Effectiveness of SSMP Elements**

In June 2023, the Agency updated the SSMP to meet the requirements of SWRCB Order No. 2022-0103 DWQ. The following sections focus on evaluating the effectiveness of each element of the SSMP and provides audit findings and recommendations. Every element was audited. Where findings and recommendations are not presented here, it was determined that none were warranted.

**4.2.1 SYSTEM OVERVIEW**

- The total length of sewer mainlines to be updated in the next SSMP update.
- The size and count of laterals to be added to the next SSMP update.
- The percentage of connections by use type to be updated in the next SSMP update.

**4.2.2 Organization**

- Responsible parties’ titles to be updated in the next SSMP update.

**4.2.3 Operations and Maintenance Program**

- Maps continue to be updated on an ongoing basis.
- GIS sewer system maps are currently undergoing QA/QC review and updates
- GIS workflow solutions have been implemented in conjunction with attribute updates to facilitate streamlined maintenance and tracking. Additional workflows and updates will be implemented to further improve operations and maintenance.

- Training on the workflow and documentation processes was provided to field crews responsible for the related maintenance activities.

#### **4.2.4 Design and Performance Provisions**

- The Agency's Sanitary Sewer Standard Drawings and Construction Specifications to be reviewed and any necessary updates made in conjunction with the next SSMP update.

#### **4.2.5 Spill Emergency Response Plan**

The Agency's Spill Emergency Response Plan (SERP) was updated in June 2023, and is included as Attachment 2 of the Agency's Sanitary Sewer Management Plan.

- Responsible parties' titles in the Spill Response Organization section to be updated in conjunction with the next SSMP update.
- Table 1: Contact Information to be reviewed and updated as necessary in conjunction with the next SSMP update.

#### **4.2.6 Sewer Pipe Blockage Control Program**

- The Agency maintains that a Sewer Pipe Blockage Control Program is not necessary. Agency flushing, cleaning, and grease trap inspections have continued to keep fats, oils, grease, rags, and debris from becoming a problem.

This page is intentionally left blank.

## APPENDIX G

*DWA Board of Directors Approval of SSMP Update*



**BOARD OF DIRECTORS  
APRIL 21, 2026  
REGULAR MEETING AGENDA  
8:00 AM 1200 SOUTH GENE AUTRY TRAIL - PALM SPRINGS - CA 92264**

**Our Mission**

*To responsibly manage our water resources, ensuring ongoing sustainability and effectively delivering safe, reliable water for current and future generations.*

---

*This meeting will be held virtually and in person. The link and the telephone option provided is for the convenience of the public.*

**Toll Free: (253) 215-8782  
Meeting ID: 847 8621 0223  
Passcode: 572972  
or Via Computer:  
<https://dwa-org.zoom.us/j/84786210223?pwd=c1ailWvBh4PfgfcMjQ7xXcTciaBJO8.1>  
Meeting ID: 847 8621 0223**

*Members of the public who wish to comment on any item within the jurisdiction of the Agency or any item on the agenda may submit comments by emailing [administrative@dwa.org](mailto:administrative@dwa.org) or may do so during the meeting. Comments will become part of the Board meeting record.*

***\*In order to reduce feedback, please mute your audio when you are not speaking.***

---

*Esta reunión se llevará a cabo virtualmente y en persona. El enlace y la opción telefónica proporcionada es para la comodidad del público.*

**Numero gratuito: (253) 215-8782  
ID de reunión: 847 8621 0223  
código de acceso: 572972  
o a través de la computadora:  
<https://dwa-org.zoom.us/j/84786210223?pwd=c1ailWvBh4PfgfcMjQ7xXcTciaBJO8.1>  
ID de reunión: 847 8621 0223**

*Los miembros del público que deseen comentar sobre cualquier tema dentro de la jurisdicción de la Agencia o cualquier tema en la agenda pueden enviar comentarios por correo electrónico a [administrative@dwa.org](mailto:administrative@dwa.org) o pueden hacerlo durante la reunión. Los comentarios pasarán a formar parte del registro de la reunión de la Junta.*

***\*Para reducir los comentarios, silencia el audio cuando no estés hablando.***

**1. CALL TO ORDER**

**2. PLEDGE OF ALLEGIANCE**

**3. ROLL CALL**

**4. PUBLIC COMMENT ON ITEMS NOT LISTED ON THE AGENDA:**

Members of the public may comment on any item not listed on the agenda, but within the jurisdiction of the Agency. Speakers are requested to keep their comments to no more than three (3) minutes. As provided in the Brown Act, the Board is prohibited from acting on items not listed on the agenda.

**5. PUBLIC COMMENT ON ITEMS LISTED ON THE AGENDA:**

Members of the public may also comment on items listed on the agenda that are not the subject of a public hearing, at this time. Again, speakers are requested to keep their comments to no more than three (3) minutes.

**6. CONSENT CALENDAR ITEMS:**

Items listed under the Consent Calendar are considered to be routine and will be acted upon by one motion of the Board without discussion. There will be no separate discussion on these items unless a Board Member requests a specific item to be discussed and/or removed from the Consent Calendar for separate action.

- A. Approve Minutes of the April 7, 2026 Regular Board Meeting
- B. Receive and File Minutes of the April 16, 2026 Executive Committee
- C. Receive and File March 2026 Public Affairs & Conservation Activities & Events
- D. Receive and File Board Correspondence from Keith Davis

**7. ACTION ITEM(S):**

- A. Request Approval of the Sanitary Sewer Management Plan 2026 Update

**8. DISCUSSION ITEM(S):**

- A. Presentation on the Water Year 2024-2025 SGMA Annual Report for the San Gorgonio Pass Subbasin
- B. Review Grants Update Presentation
- C. Presentation on the Draft Water Shortage Contingency Plan for Desert Water Agency

**9. SECRETARY-TREASURER'S REPORT**

- A. Secretary-Treasurer's Report (March 2026)

**10. GENERAL MANAGER'S REPORT**

- A. General Manager's Report

**11. DIRECTOR'S REPORTS ON MEETINGS/EVENTS ATTENDED ON BEHALF OF THE AGENCY**

**12. DIRECTOR'S COMMENTS/REQUESTS**

**13. CLOSED SESSION**

**A. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION**

Pursuant to Government Code Section 54956.9 (d) (1)

Name of Case: Agua Caliente Band of Cahuilla Indians vs. Coachella Valley Water District, et al

Two Cases

**B. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION**

Pursuant to Government Code Section 54956.9(d)

One Potential Case

**14. RECONVENE INTO OPEN SESSION - REPORT FROM CLOSED SESSION**

**15. ADJOURNMENT**

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting is asked to contact Desert Water Agency's Assistant Secretary of the Board, at (760) 323-4971, at least 48 working hours prior to the meeting to enable the Agency to make reasonable arrangements. Copies of records provided to Board members that relate to any agenda item to be discussed in open session may be obtained from the Agency at the address indicated on the agenda.

**DECLARATION OF POSTING**

Pursuant to Government Code Section 54954.2, I certify that this agenda has been posted at least 72 hours prior to the meeting on the Agency's website at [www.dwa.org](http://www.dwa.org) and at the Agency's main office, 1200 South Gene Autry Trail, Palm Springs, CA.

Sylvia Baca, MMC  
Assistant Secretary of the Board



**STAFF REPORT**

**April 21, 2026**

**RE: Request Approval of the Sanitary Sewer Management Plan  
2026 Update**

**BACKGROUND**

The State Water Resources Control Board Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems (ORDER WQ 2022-0103-DWQ) requires enrollees (Desert Water Agency) to update their Sewer System Management Plan (SSMP) every six years. As such, Desert Water Agency is required to update our SSMP by May 2, 2026. The General Order requires the enrollees governing entity to approve the updated plan prior to submittal to the state.

Desert Water Agency's SSMP has been effective in minimizing spills as written and implemented. As such, only minor updates such as updated personnel titles and contact information, sewer system maps, and system statistics have been made to the plan. Regular audits and reports are performed as required. The next annual report is due in April 2027 and the next audit is due November 2028.

**PRIOR ACTION**

Ordinance No. 71 – Regulations Governing Sewer Service

**FISCAL IMPACT**

None. Finance Director Slough has reviewed this report.

**LEGAL REVIEW**

N/A

## **STRATEGIC PLAN ALIGNMENT**

Goal 2 – Operational

Initiative 2.4.3 – Review and update management plans for safe operation and risk avoidance.

Initiative 2.5.1 – Develop, enhance, and/or implement emergency and crisis response plans.

## **RECOMMENDATION**

Staff recommends the Board approve the Sanitary Sewer Management Plan 2026 Update. Upon approval, Staff will submit the plan to the State Water Resources Control Board.

## **ATTACHMENTS**

Attachment 1: Sanitary Sewer Management Plan 2026 Update

This page is intentionally left blank.

## ATTACHMENTS

ATTACHMENT 1 – SEWER PREVENTIVE MAINTENANCE PROGRAM (SPMP)

ATTACHMENT 2 – SPILL EMERGENCY RESPONSE PLAN (SERP)

This page is intentionally left blank.

# ATTACHMENT 1

## *SEWER PREVENTIVE MAINTENANCE PROGRAM (SPMP)*

This page is intentionally left blank.



## DESERT WATER AGENCY

SEWER PREVENTATIVE MAINTENANCE PROGRAM  
(SPMP) COLLECTION SYSTEM / LIFT STATIONS

WDID No. 7SSO11440

Desert Water Agency  
Engineering Department  
June 2023

Any comments on this plan can be submitted to [SSMP-Comments@DWA.ORG](mailto:SSMP-Comments@DWA.ORG)

This page is intentionally left blank.

## TABLE OF CONTENTS

|                                                      |       |
|------------------------------------------------------|-------|
| INTRODUCTION .....                                   | - 1 - |
| Dream Homes Collection System.....                   | - 1 - |
| Date Palm Lift STATION Collection System .....       | - 1 - |
| Cathedral Canyon Lift STATION Collection System..... | - 1 - |
| GRAVITY SEWER MAINTENANCE PROGRAM .....              | - 2 - |
| MANHOLE MAINTENANCE PROGRAM .....                    | - 2 - |
| SEWER FORCE MAIN MAINTENANCE .....                   | - 2 - |
| SANITATION LIFT STATION MAINTENANCE .....            | - 3 - |
| VIDEO INSPECTION.....                                | - 3 - |
| GREASE TRAP INSPECTION.....                          | - 3 - |
| TRAINING.....                                        | - 4 - |
| Safety Meetings/Tailgate Meetings .....              | - 4 - |
| Field Exercise.....                                  | - 4 - |
| OSHA Training/Seminars.....                          | - 4 - |

This page is intentionally left blank.

## INTRODUCTION

The Sewer Preventive Maintenance Program (SPMP) is developed to assist Desert Water Agency and contractors with preventative maintenance for the Agency's wastewater system. The Agency's sanitary sewer collection area is limited to its boundary within the City of Cathedral City, specifically:

### **Dream Homes Collection System**

The Dream Homes Collection System provides service for the Dream Homes neighborhood in the western portion of the City of Cathedral City. Said area is bounded on the north by San Mateo Drive, on the south by Mission Drive and Ramon Road, on the west by San Joaquin Drive, and on the east by San Diego Drive. Sewage from the Dream Homes is conveyed by gravity sewer mains to an existing sewer system manhole owned and operated by Palm Springs. The sewage is then conveyed by the Palm Springs' sewer system to the wastewater treatment plant located in Palm Springs.

### **Date Palm Lift STATION Collection System**

The Date Palm Lift Station Collection System provides service for the Cathedral City Cove neighborhood and the Cathedral City Downtown Core area, both of which are located in the southern portion of the City of Cathedral City. The Cathedral City Cove neighborhood is bounded on the north by Highway 111, on the south by Foothill Road, on the west by an existing wash/storm drain channel, and on the east by an existing wash/storm drain channel. The Cathedral City Downtown Core area is bounded on the north by the existing flood control channel, on the south by Highway 111, on the west by an existing wash/storm drain channel, and on the east by Date Palm Drive. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Date Palm Lift Station. The station then pumps the sewage to a gravity sewer system manhole owned and operated by the Coachella Valley Water District (CVWD). The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities.

### **Cathedral Canyon Lift STATION Collection System**

The Cathedral Canyon Lift Station Collection System provides service for areas west of Cathedral Canyon Drive and south of the Whitewater River channel in the City of Cathedral City, to include, but is not limited to, portions of the Cathedral Canyon Country Club, The District housing tract, and the Target Shopping Center. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Cathedral Canyon Lift Station. The station then pumps the sewage to a drop manhole owned and operated by CVWD on the north side of the Whitewater River Channel. The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities.

## GRAVITY SEWER MAINTENANCE PROGRAM

Gravity sewer maintenance will be performed by the Agency's Construction Department and shall consist of two (2) components, as follows:

### A. Routine Cleaning

- All gravity sewer pipelines shall be flushed and cleaned every 6 months by Agency personnel.

### B. Target Cleaning

- Known problem areas shall be monitored by Agency field crews and flush and clean as necessary to ensure a proper operating system.

## MANHOLE MAINTENANCE PROGRAM

Manhole maintenance will be performed by a dedicated sewer construction crew and shall be performed on an as needed basis to include:

- Replacement of worn-out frame and cover assemblies
- Replacement of concrete collars
- Locate and raise to grade after street improvements
- Inspection of interior manholes

## SEWER FORCE MAIN MAINTENANCE

Force main maintenance will be performed by the Agency's Construction Department and requires coordination with the Agency's Operations Department, to include the following:

- Cleaning, flushing and making all of the necessary repairs to the mains and air vacs as needed
- Locate, mark, and exercise all valves on the force main once a year

## SANITATION LIFT STATION MAINTENANCE

The Agency operates and maintains two (2) sanitary lifts stations throughout the wastewater collection system. The Operation and Maintenance of the lift stations is performed by the Agency's Operation Department, to include:

- Make operational decisions concerning pumping flows;
- Clean wet wells to get rid of grease build-up that can cause pump failures or odor problems;
- Repair and replace pumps;
- Routine daily mechanical equipment inspection;
- Pump and Motor maintenance;
- Electrical and electronic controls;
- Control and Data Acquisition system maintenance.

## VIDEO INSPECTION

Currently, the Agency contracts all video work to include:

- Inspection of sewer mains following any stoppage to locate and identify problems;
- Inspect mains that have been cleaned to evaluate quality of work;
- Inspect mains to determine condition for future Capital Improvement Projects;
- Inspect newly installed sewer systems to evaluate the condition of work.

## GREASE TRAP INSPECTION

The Construction Department maintains a monthly grease trap inspection program to include:

- Temperature reading of waste;
- Thickness reading of waste;
- Advise customer of required pumping.

## TRAINING

The purpose of training is for personnel to become familiar with the conditions and procedures of a sewer emergency, to visualize response roles and to address procedural problems. Exercises that are performed by the Agency include the following:

### **Safety Meetings/Tailgate Meetings**

1. These meetings are designed to cover safety issues, such as confined entry, excavation hazards, and PPE requirements.

### **Field Exercise**

1. These procedures simulate a spill event, allowing personnel to deploy equipment and resources necessary to contain a sewage spill.
2. Upon completion of the exercises, personnel will evaluate the event, to include equipment performance, response time, training resources and staff capabilities.

### **OSHA Training/Seminars**

1. These training courses are required by OSHA to ensure that field personnel are properly trained, covering topics such as confined space rescue, HAZWOPER.

All exercises will have follow-up meetings to review strengths and weaknesses and to recommend improvements.

## ATTACHMENT 2

### *SANITARY EMERGENCY RESPONSE PLAN (SERP)*

This page is intentionally left blank.



**DESERT  
WATER  
— AGENCY —**

SPILL EMERGENCY RESPONSE PLAN (SERP)  
COLLECTION SYSTEM / LIFT STATIONS  
WDID No. 7SSO11440

Desert Water Agency  
Engineering Department  
May 2026

Any comments on this plan can be submitted to [SSMP-Comments@DWA.ORG](mailto:SSMP-Comments@DWA.ORG)



## Table of Contents

|                                                                            |    |
|----------------------------------------------------------------------------|----|
| EXECUTIVE SUMMARY .....                                                    | 1  |
| BACKGROUND .....                                                           | 1  |
| SANITARY SEWER COLLECTION SYSTEM.....                                      | 1  |
| SPILL RESPONSE ORGANIZATION .....                                          | 3  |
| GENERAL RESPONSE REQUIREMENTS .....                                        | 3  |
| COLLECTION SYSTEM OVERFLOWS .....                                          | 4  |
| SEWER FORCE MAIN BREAKS.....                                               | 6  |
| SANITATION LIFT STATION EMERGENCY PROCEDURES .....                         | 7  |
| SPILL CATEGORIES .....                                                     | 8  |
| Category 1 Spill .....                                                     | 8  |
| Category 2 Spill .....                                                     | 8  |
| Category 3 Spill .....                                                     | 8  |
| Category 4 Spill .....                                                     | 9  |
| Enrollee Owned/Operated Lateral Spills .....                               | 9  |
| Private Lateral Sewage Discharge (PLSD).....                               | 9  |
| NOTIFICATION .....                                                         | 10 |
| Notification of Spills of 1,000 Gallons or Greater to the Cal OES.....     | 10 |
| Spill Notification Information: .....                                      | 11 |
| Table 1: Contact Information.....                                          | 12 |
| Notification of Spill Report Updates .....                                 | 13 |
| SPILL-SPECIFIC MONITORING REQUIREMENTS.....                                | 13 |
| Spill Location and Spread.....                                             | 13 |
| Spill Volume Estimation.....                                               | 13 |
| Receiving Water Monitoring .....                                           | 14 |
| REPORTING REQUIREMENTS .....                                               | 17 |
| Reporting Requirements for Individual Category 1 Spill Reporting .....     | 17 |
| Reporting Requirements for Individual Category 2 Spill Reporting .....     | 18 |
| Monthly Certified Spill Reporting for Category 3 Spills.....               | 19 |
| Monthly Certified Spill Reporting for Category 4 Spills.....               | 19 |
| Amended Certified Spill Reports for Category 3 Spills .....                | 19 |
| Annual Certified Spill Reporting of Category 4 and/or Lateral Spills ..... | 19 |
| Monthly Certification of “No-Spills” .....                                 | 20 |
| Monthly Certification of “Category 4 Spills” .....                         | 20 |
| Monthly Certification of “Non-Category 1 Lateral Spills” .....             | 20 |
| RECORD KEEPING .....                                                       | 20 |
| TRAINING .....                                                             | 21 |
| Safety Meetings/Tailgate Meetings .....                                    | 21 |
| Field Exercise .....                                                       | 21 |
| OSHA Training.....                                                         | 21 |

## EXHIBITS

Exhibit 1 – Agency Boundary Map

Exhibit 2 – Collection System Map

## APPENDICES

Appendix A – SWRCB Order No. 2022-0103-DWQ

Appendix B – SWRCB Order No. 2022-0103-DWQ, Attachment “A”

Appendix C – List of Approved Wastewater Pumping Contractors

Appendix D – SWRCB Order No. 2022-0103-DWQ, Attachment “E1”-Notification,  
Monitoring, Reporting, and Recordkeeping Requirements

Appendix E – SWRCB Order No. 2022-0103-DWQ, Attachment “E2”-Notification,  
Monitoring, Reporting, and Recordkeeping Requirements

Appendix F – Sewer Spill Estimation Guide

Appendix G – SSO Water Quality Monitoring Plan

Appendix H – Internal Report Audit Form

## **EXECUTIVE SUMMARY**

This Spill Emergency Response Plan (SERP) provides a framework to assist Desert Water Agency (Agency) personnel in responding to Spills and Sanitary Sewer Overflows (SSO) as a result of collection system overflows, lift station failures, or force main breaks. The SERP identifies the responsibilities of Agency employees within the specific departments, and outlines field activities, notification procedures, and spill monitoring requirements.

## **BACKGROUND**

Desert Water Agency was formed as a groundwater management agency in the western Coachella Valley in 1961 by the State of California through the enactment of special legislation. The Agency is a public agency of the state of California and its responsibilities and duties are governmental and public in nature. The Agency is led by a publicly elected, five-member Board of Directors who are responsible for making guiding policy decisions as representatives of the public. The Agency is one of only twenty-nine state water contractors in California. As a state water contractor, the Agency imports water which is used to recharge the groundwater basin.

The Agency serves a three hundred twenty-five (325) square mile area that includes parts of Cathedral City, Palm Springs, and Desert Hot Springs, as well as certain unincorporated areas of Riverside County (Refer to Exhibit 1 for Boundary Map). In 1968, the Agency began providing retail water service to its customers in Palm Springs and Cathedral City.

In 1976, the Agency gained authority from the Local Agency Formation Committee to provide sanitary sewer collection service within its service area. The Agency developed a master plan for collecting sewage within portions of Cathedral City, and in 1979 initiated construction of its sewage collection system. The sewer effluent is conveyed to, and treated by, either the City of Palm Springs or the Coachella Valley Water District.

## **SANITARY SEWER COLLECTION SYSTEM**

The Agency's sanitary sewer collection area is limited to its boundary within the City of Cathedral City (Refer to Exhibit 2 for Collection Systems Map).

The Dream Homes Collection System provides service for the Dream Homes neighborhood in the western portion of the City of Cathedral City. Said area is bounded on the north by San Mateo Drive, on the south by Mission Drive and Ramon Road, on the west by San Joaquin Drive, and on the east by San Diego Drive. Sewage from the Dream Homes is conveyed by gravity sewer mains to an existing sewer system manhole owned and operated by Palm Springs. The sewage is then conveyed by Palm Springs' sewer system to the wastewater treatment plant located in Palm Springs.

The Date Palm Lift Station Collection System provides service for the Cathedral City Cove neighborhood and the Cathedral City Downtown Core area, both of which are in the southern portion of the City of Cathedral City. The Cathedral City Cove neighborhood is bounded on the north by Highway 111, on the south by Foothill Road, on the west by an existing wash/storm drain channel, and on the east by an existing wash/storm drain channel. The Cathedral City Downtown Core area is bounded on the north by the existing flood control channel, on the south by Highway 111, on the west by an existing wash/storm drain channel, and on the east by Date Palm Drive. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Date Palm Lift Station. The station then pumps the sewage to a gravity sewer system manhole owned and operated by the Coachella Valley Water District (CVWD). The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities.

The Cathedral Canyon Lift Station Collection System provides service for areas west of Cathedral Canyon Drive and south of the Whitewater River channel in the City of Cathedral City, to include, but is not limited to, portions of the Cathedral Canyon Country Club, The District housing tract, and the Target Shopping Center. Sewage from these areas is conveyed by gravity sewer mains to the Agency's Cathedral Canyon Lift Station. The station then pumps the sewage to a drop manhole owned and operated by CVWD on the north side of the Whitewater River Channel. The sewage is then conveyed by the CVWD sewer system to one of CVWD's treatment facilities.

## **SPILL RESPONSE ORGANIZATION**

Responsibilities for each level of organizational response are outlined below and will include:

### **ENGINEERING MANAGER**

1. Assume primary management and coordinate all emergency actions
2. Communicate with the General Manager, Assistant General Manager, and Director of Public Affairs and Water Planning (or Outreach and Conservation Manager)
3. Provide official estimate of spill volume
4. Notify all necessary regulatory agencies in accordance with pertinent regulations

### **CONSTRUCTION SUPERINTENDENT**

1. Direct immediate spill control and containment measures
2. Oversee all corrective work and cleanup activities
3. Request assistance from other departments or other agencies
4. Notify and coordinate outside contractors as necessary
5. Coordinate field inspection of contractors' activities
6. Direct the posting of warning signs as needed
7. Document by photos, spill abatement activities and damages

### **SAFETY AND TRAINING SPECIALIST**

1. Document safety related events during the spill
2. Oversee the proper use of personal protective equipment
3. Assess damages to private property and report to the Engineering Manager
4. Report all incidents to insurance carriers

### **DIRECTOR OF PUBLIC AFFAIRS AND CONSERVATION (OR PUBLIC AFFAIRS MANAGER)**

1. Coordinate all media and public information communications
2. Report to the Engineering Manager for status reports on activities
3. Provide the General Manager with status reports regarding media coverage and public information

### **LABORATORY DIRECTOR**

1. Assess the spill for potential environmental degradation caused by the spill and determine if any environmental samples are required
2. Coordinate all sample collection and analysis
3. Report to the Engineering Manager for status reports on sample analysis

## **GENERAL RESPONSE REQUIREMENTS**

The Agency will assume person-in-charge responsibilities and lead the response to a SSO that occurs on any part of the Agency operated system.

Agency staff will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to Receiving Water (The Waters of the United States within the Whitewater River Region) and the MS4 (Municipal Separate Storm Sewer System).

**Agency staff may cut locks, open manholes, or otherwise enter MS4 facilities as necessary to contain and clean up a Spill or SSO.**

If the Agency was required to enter a MS4 Permittee's facility, the maintenance/public works department of the appropriate MS4 Permittee will be contacted as soon as possible to notify them of actions within their MS4. The Agency will coordinate with MS4 Permittee staff as necessary to ensure that the clean-up adequately remedies the impact of the sewage released to the MS4.

**It should be noted that the Regional Water Board prefers that MS4 facilities are not sanitized with disinfectant, where not immediately impacting public health (i.e., no chlorine shall be used when discharge is within 1,500 feet of a waterway).**

For additional information on the Board Order, see SWRCB Order No. 2022-0103-DWQ, in Appendix "A".

For additional definitions, see SWRCB Order No. 2022-0103-DWQ, Attachment A-Definitions, included in Appendix "B."

## **COLLECTION SYSTEM OVERFLOWS**

For a fast and efficient response plan, two different response plans have been established, one for regular working hours and one for after hours (including weekends and holidays).

If the SSO was a result of a private lateral, the private property owner will be informed of the blockage and will be responsible for removing the blockage. If the SSO was the result of a sewer trunk line blockage, the Agency's response crew will correct the problem.

A list of Approved Wastewater Pumping Contractors is included in Appendix "C".

### **THE RESPONSE PLANS ARE AS FOLLOWS: REGULAR WORKING HOURS**

1. Collection system overflows reported during regular working hours will most likely be telephone calls to the Agency telephone operator. The operator will be required to report all overflow complaints to the Operations and Engineering Manager or Construction Superintendent.

2. The Operations and Engineering Manager or Construction Superintendent will direct the remediation crews to the location of the overflow and to take proper action to contain and correct the problem causing the overflow.
3. The Operations and Engineering Manager will report overflow information to the Facilities and Safety Officer, Director of Public Affairs and Water Planning (or Outreach and Conservation Manager), Laboratory Director, Assistant General Manager, General Manager, and all necessary regulatory agencies. The Operations and Engineering Manager will also begin a log of events to include the date and time of spill, name of first responder and cleanup measures.
4. The Construction Superintendent will coordinate all field activities and shall determine best containment measures to include:
  - a. Dikes (construct small dikes of dirt and sandbags to contain spill)
  - b. Divert (construct small dikes to change direction of flow to containment area or to sewer)
  - c. Retain (let spill collect in natural low areas or sump and remove as soon as possible)
5. Once the spill has been contained, the sewage shall be transferred to the appropriate location, as determined by the Construction Superintendent, using jet vactor truck, pump truck, or by-pass pumps.
6. Repairs shall be made to the damaged sewer system by the field crews.
7. Crews shall use barricades, cones, or flagmen to control traffic or pedestrians within the affected area.
8. All recovered sewage shall be transferred to a lift station, treatment plant or to a nearby manhole.
9. All sand or other absorbent products used to absorb or divert spilled material shall be removed and disposed of at a legal disposal location.

**AFTER WORKING HOURS (WEEKENDS AND HOLIDAYS)**

1. Collection system overflows reported after regular working hours, weekends or holidays will most likely be telephone calls to the Agency construction standby personnel. The standby crew foreman will be required to report all overflow complaints to the Operations and Engineering Manager or Construction Superintendent.

2. The standby foreman will respond by calling standby personnel as per schedule at the time of the incident and will direct the standby crews to the location of the overflow and will report to the Operations and Engineering Manager and Construction Superintendent the status of the spill.
3. The Operations and Engineering Manager will report overflow information to the Facilities and Safety Officer, Director of Public Affairs and Water Planning (or Outreach and Conservation Manager), General Manager, and all necessary regulatory agencies. The Operations and Engineering Manager will also begin a log of events to include the date and time of spill, name of first responder and cleanup measures.
4. The Construction Superintendent and standby foreman will coordinate all field activities and shall determine best containment measures to include:
  - a) Dikes (construct small dikes of dirt and sandbags to contain spill)
  - b) Divert (construct small dikes to change direction of flow to containment area or to sewer)
  - c) Retain (let spill collect in natural low areas or sump and remove as soon as possible)
5. Once the spill has been contained, the sewage shall be transferred to the appropriate location, as determined by the Construction Superintendent or standby foreman, using jet vactor truck, pump truck, or by-pass pumps.
6. Repairs shall be made to the damaged sewer system by the field crews.
7. Crews shall use barricades, cones, or flagmen to control traffic or pedestrians within the affected area.
8. All recovered sewage shall be transferred to a lift station, treatment plant or to a nearby manhole.
9. All sand or other absorbent products used to absorb or divert spilled material shall be removed and disposed of at a legal disposal location.

## **SEWER FORCE MAIN BREAKS**

Force main breaks will require coordination with the Agency's Operations Department as they will be involved with lift station procedures and operations.

### **Response Procedures**

1. The Operations and Engineering Manager shall notify the Operations Supervisor of the problem and shall instruct shutdown of lift stations involved.

2. The responding crews shall contain the spill by constructing berms or excavating a pit in general area of break and shall close main valves to isolate spill area.
3. The main break shall be bypassed using a vactor truck, pump truck, or bypass pumps, removing sewage from lift station and transferring downstream of the break.
4. Crews shall make necessary repairs to force main.

## **SANITATION LIFT STATION EMERGENCY PROCEDURES**

In the event of a lift station failure, the following steps should be taken to prevent spills.

### **PUMP FAILURE**

1. Determine if the pump will run in the hand or automatic mode. If the pump will not run in the automatic mode but does run in the hand position, contact the Operations Manager (or Operations Supervisor) to investigate problem. Do not leave the pump unattended when operating in “hand” position.
2. If the pump does not respond to either the automatic or hands mode of operations, contact the Operations Manager (or Operations Supervisor) and Engineering Manager. The Construction Superintendent shall also be notified and prepare the vactor truck, pump truck, or portable pumps.
3. Operation Department personnel shall monitor the lift station levels and shall assist vactor truck crew with pumping sewage from lift station wet well.
4. If the vactor truck is unable to lower level within wet well, Construction Superintendent shall coordinate with pumping contractor to assist with wet well pumping. Attachment “C” has a list of approved contractors capable of conveying the wastewater.

### **POWER FAILURE**

1. If it is determined that the site has lost power, the Operations Manager, and Engineering Manager shall be notified.
2. If there is a generator on-site, Operations Department personnel shall start up and monitor the site while the generator is operational.
3. If there is no generator, Operations Department personnel shall deliver and connect portable generator.
4. The site shall be monitored by the Operations Department at all times during power outage and shall monitor wet well levels to ensure volume remains below critical levels.

## SPILL CATEGORIES

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

### *CATEGORY 1 SPILL*

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface *water unless* the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of SWRCB Order No. 2022-0103-DWQ, included in Appendix “D”.

### *CATEGORY 2 SPILL*

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

### *CATEGORY 3 SPILL*

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

***CATEGORY 4 SPILL***

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

***ENROLLEE OWNED/OPERATED LATERAL SPILLS***

A spill of any volume from an Enrollee's owned and/or operated lateral that is caused by a failure or blockage in the lateral and that do not discharge to a surface water.

***PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)***

A spill 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 sewer assets.

## NOTIFICATION

Notification means the notifying of appropriate parties of a spill event or other activity.

A summary of the Notification, Monitoring and Reporting Requirements can be found in SWRCB Order No. 2022-0103-DWQ, Attachment E2- Summary of Notification, Monitoring, Reporting, Requirements, included in Appendix “E”.

### *NOTIFICATION OF SPILLS OF 1,000 GALLONS OR GREATER TO THE CAL OES*

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Agency shall **notify the California Office of Emergency Services (1-800-852-7550) and obtain a California Office of Emergency Services Control Number as soon as possible but no later than two (2) hours after:**

- The Agency has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

In addition to Cal OES, the Agency is required to notify regional government agencies. The contact information for the regional government agencies is provided in **Table 1, Contact Information (on page 13)**. The government agencies should be called in sequential order. Be sure to note relevant information in Table 1; such as, time called, or attempted to call, with whom you spoke to, and any information provided by the regional government agency.

***SPILL NOTIFICATION INFORMATION:***

The Agency shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

Name and phone number of the person notifying the California Office of Emergency Services;

- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Agency was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

**TABLE 1: CONTACT INFORMATION**

Contact the following phone numbers in sequential order. Note time called (or attempted) and person contacted (one contact per agency is acceptable). If no one answers, leave a message with a description and a return phone number.

|                                                                                       |                                                               | Time Called/Person Contacted: |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------|
| <b>Governor's Office of Emergency Services (OES)</b>                                  |                                                               |                               |
| Main line                                                                             | <b>(800) 852-7550</b>                                         |                               |
| <b>California Office of Emergency Services Control Number:</b>                        |                                                               |                               |
| <b>Regional Water Quality Control Board Colorado River Basin Region</b>               |                                                               |                               |
| Main line                                                                             | <b>(760) 346-7491</b>                                         |                               |
| <b>County Department of Environmental Health / Environmental Resources Management</b> |                                                               |                               |
| Business hours)                                                                       | <b>(760) 863-7570</b>                                         |                               |
| After hours)                                                                          | <b>(951) 782-2968</b>                                         |                               |
| Alternative number                                                                    | <b>(888) 722-4234</b>                                         |                               |
| <b>Riverside County Flood Control and Water Conservation District NPDES Section</b>   |                                                               |                               |
| David Ortega (primary)<br>djortega@rivco.org                                          | <b>(951) 961-9574 (cell)</b><br><b>(951)955-4390 (office)</b> |                               |
| Ryan Kearns                                                                           | <b>(951)955-2047 (office)</b>                                 |                               |
| Amy McNeill                                                                           | <b>(951) 202-6861 (cell)</b>                                  |                               |
| <b>After Hours:</b>                                                                   |                                                               |                               |
| Miguel Negrete (primary)                                                              | <b>(951) 534-9964 (cell)</b>                                  |                               |
| David Ortega                                                                          | <b>(951) 961-9574 (cell)</b>                                  |                               |
| <b>City of Cathedral City</b>                                                         |                                                               |                               |
| Main line                                                                             | <b>(760) 770-0327</b>                                         |                               |
| <b>Coachella Valley Water District</b>                                                |                                                               |                               |
| Main line                                                                             | <b>(760) 398-2651</b>                                         |                               |
| <b>California Highway Patrol</b>                                                      |                                                               |                               |
| If highway affected                                                                   | 9 1 1                                                         |                               |

Contact Notes:

### *NOTIFICATION OF SPILL REPORT UPDATES*

Following the initial notification to the California Office of Emergency Services and until such time that the Agency certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Agency shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses

### **SPILL-SPECIFIC MONITORING REQUIREMENTS**

Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.

#### *SPILL LOCATION AND SPREAD*

The Agency shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
  - The system location where spill originated.
  - For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
  - Drainage conveyance system entry locations,
  - The location(s) of discharge into surface waters, as applicable,
  - Extent of spill spread, and
  - The location(s) of clean up.

#### *SPILL VOLUME ESTIMATION*

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

Note: Appendix “F” contains a Sewer Spill Estimation Guide

## **RECEIVING WATER MONITORING**

### **RECEIVING WATER VISUAL OBSERVATIONS:**

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),
  - Discoloration of receiving water, and
  - Impact to the receiving water

### **RECEIVING WATER – WATER QUALITY SAMPLING AND ANALYSIS:**

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than 18 hours after the Enrollee’s knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, if sewage discharges to a surface water via a drainage conveyance system; and/or
  - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements;

If the receiving water has no flow during the duration of the spill, the Enrollee must report “No Sampling Due to No Flow” for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of Appendix “D”-SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - E-coli
  - Enterococcus

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

**WATER QUALITY ANALYSIS SPECIFICATIONS:**

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

**SUFFICIENTLY SENSITIVE METHODS**

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

**ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM-ACCREDITED LABORATORIES**

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

**RECEIVING WATER SAMPLING LOCATIONS:**

The Enrollee shall collect receiving water samples at the following locations.

**Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge**

**Sampling Location:** DCS-001

**Sampling Location Description:** A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

**Receiving Surface Water Sampling (RSW) <sup>1</sup>**

**Sampling Location:** RSW-001 (Point of Discharge)

**Sampling Location Description:** A point in the receiving water where sewage initially enters the receiving water.

**Sampling Location:** RSW-001U (Upstream of Point of Discharge)

**Sampling Location Description:** A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.

**Sampling Location:** RSW-001D: (Downstream of Point of Discharge)

**Sampling Location Description:** A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

<sup>1</sup> The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

Appendix “G” contains an Agency specific SSO Water Quality Monitoring Plan.

**SAFETY AND ACCESS EXCEPTIONS:**

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

## REPORTING REQUIREMENTS

Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.

All reporting required for General Order No. 2022-0103-DWQ must be submitted electronically to the online CIWQS Sanitary Sewer System Database (<https://ciwqs.waterboards.ca.gov>), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of General Order No. 2022-0103-DWQ.

### *REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 1 SPILL REPORTING*

#### **DRAFT SPILL REPORT FOR CATEGORY 1 SPILLS:**

**Within three (3) business days** of the Enrollee's knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

For the Draft Spill Report specific reporting requirements, see Appendix "D"- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.1.1.

#### **CERTIFIED SPILL REPORT FOR CATEGORY 1 SPILLS:**

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

For the Certified Spill Report specific reporting requirements, see Appendix "D"- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.1.2.

#### **SPILL TECHNICAL REPORT FOR INDIVIDUAL CATEGORY 1 SPILL IN WHICH 50,000 GALLONS OR GREATER DISCHARGED INTO A SURFACE WATER:**

For any spill in which 50,000 gallons or greater are discharged into a surface-water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

For the Spill Technical Report specific reporting requirements, see Appendix "D"- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.1.3.

**AMENDED CERTIFIED SPILL REPORTS FOR INDIVIDUAL CATEGORY 1 SPILLS:**

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

*REPORTING REQUIREMENTS FOR INDIVIDUAL CATEGORY 2 SPILL REPORTING*

**DRAFT SPILL REPORT FOR CATEGORY 2 SPILL:**

**Within three (3) business days** of the Enrollee’s knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

For the Draft Spill Report specific reporting requirements, see Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.2.1.

**CERTIFIED SPILL REPORT FOR CATEGORY 2 SPILLS:**

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online CIWQS Sanitary Sewer System Database (<https://ciwqs.waterboards.ca.gov>). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

For the Certified Spill Report specific reporting requirements, see Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.2.2.

**AMENDED CERTIFIED SPILL REPORTS FOR INDIVIDUAL CATEGORY 2 SPILLS:**

The Enrollee shall update or add additional information to a Certified Spill Report **within 90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

**After 90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

### ***MONTHLY CERTIFIED SPILL REPORTING FOR CATEGORY 3 SPILLS***

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30th). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

For the monthly reporting of all Category 3 spills specific reporting requirements, see Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.3.

### ***MONTHLY CERTIFIED SPILL REPORTING FOR CATEGORY 4 SPILLS***

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

### ***AMENDED CERTIFIED SPILL REPORTS FOR CATEGORY 3 SPILLS***

**Within 90 calendar days of the certified Spill Report due date**, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

**After 90 calendar days**, the Legally Responsible Official shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

### ***ANNUAL CERTIFIED SPILL REPORTING OF CATEGORY 4 AND/OR LATERAL SPILLS***

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of Appendix “D”- SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements;

The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.

- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per - SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.1 (Appendix “D”)

***MONTHLY CERTIFICATION OF “NO-SPILLS”***

If no spills occur during a calendar month, the Enrollee shall certify, within 30 calendar days after the end of each calendar month, either a “No-Spill” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were no spills, (per SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.6 included in Appendix “D”) for the designated month.

***MONTHLY CERTIFICATION OF “CATEGORY 4 SPILLS”***

If a Category 4, spill occurs during a calendar month, the Enrollee shall certify, within 30 calendar days after the end of each calendar month, a “Category 4 Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were a Category 4 that will be reported annually (per SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.6 included in Appendix “D”) for the designated month.

***MONTHLY CERTIFICATION OF “NON-CATEGORY 1 LATERAL SPILLS”***

If a Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occurs during a calendar month, the Enrollee shall certify, within 30 calendar days after the end of each calendar month, “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were a Non-Category 1 Lateral Spill that will be reported annually (per SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 3.6 included in Appendix “D”) for the designated month.

**RECORD KEEPING**

Recordkeeping means the maintaining of information and data in an official records storage system. The Agency will maintain records in accordance with SWRCB Order No. 2022-0103-DWQ, Attachment E1- Notification, Monitoring, Reporting, and Recordkeeping Requirements, Section 4 included in Appendix “D”. A form for reporting internal audits is included in Appendix “H”.

## TRAINING

The purpose of training is for personnel to become familiar with the conditions and procedures of a sewer emergency, to visualize response roles and to address procedural problems. Exercises that are performed by the Agency include the following:

### *SAFETY MEETINGS/TAILGATE MEETINGS*

1. These meetings are designed to cover safety issues, such as confined space entry, excavation hazards, and PPE requirements.

### *FIELD EXERCISE*

1. These procedures simulate a spill event, allowing personnel to deploy equipment and resources necessary to contain a sewage spill.
2. Upon completion of the exercises, personnel will evaluate the event, to include equipment performance, response time, training resources and staff capabilities.

### *OSHA TRAINING*

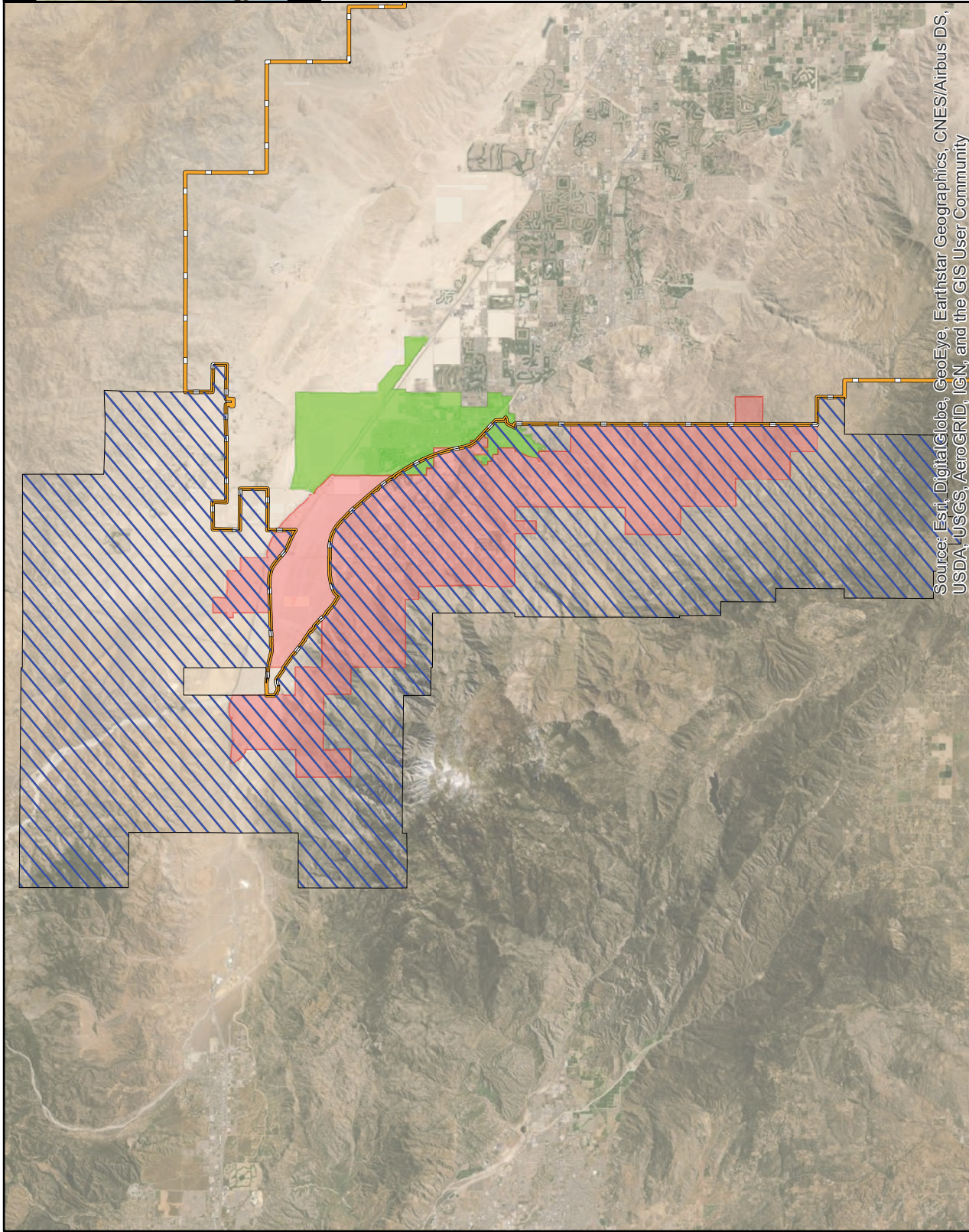
1. These training courses are required by OSHA to ensure that field personnel are properly trained, covering topics such as confined space rescue, hazwoper.

## EXHIBITS

*EXHIBIT 1 – AGENCY BOUNDARY MAP*

*EXHIBIT 2 – COLLECTION SYSTEM MAP*

This page is intentionally left blank.







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Location**



Sources: Esri, HERE, Garmin, USGS, Intermap, Mexico INCREMENTAL, INRCam, Esri

**Legend**

-  Desert Water Agency Boundary
-  Coachella Valley Water District Boundary
-  City of Palm Springs Boundary
-  Cathedral City Boundary

**DESERT WATER**  
  
**Desert Water Agency**  
 1200 Gene Autry Trail South  
[www.dwa.org](http://www.dwa.org)  
 Ph. (760) 323-4971  
 Fx. (760) 325-6505

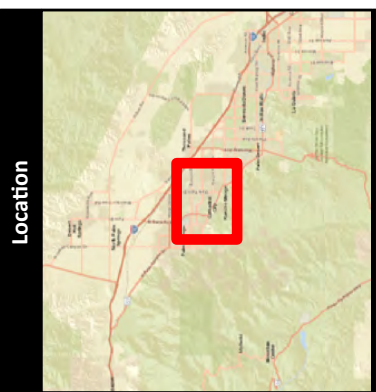
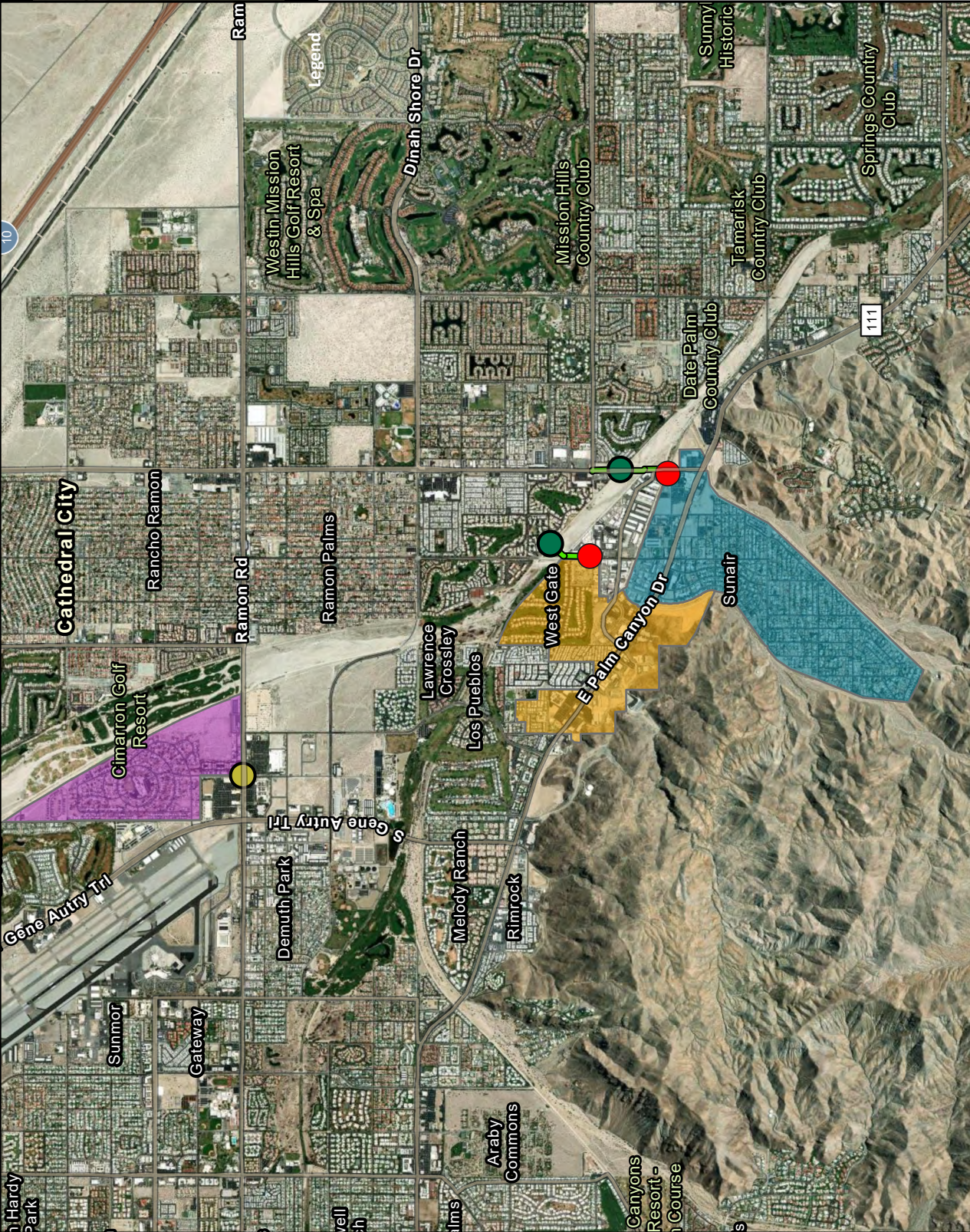


This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or planning purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

**Exhibit 1  
 Boundary Map**

File Name: Boundary Map.mxd  
 Date Updated: Wed 02/15/2012 2:59:19 Information for RWQCD Report Project Drawings (ArcGIS Maps) (Boundary Map)  
 Updated By: map  
 Department: DWA Engineering

This page is intentionally left blank.



- Location**
- Legend**
- Sewer Lift Station
  - Coachella Valley Water District Connection Points
  - City of Palm Springs Connection Point
  - Sewer Force Main
  - Cathedral Canyon Lift Station Collection System
  - Dream Homes Collection System
  - Date Palm Lift Station Collection System

**Desert Water Agency**  
 1200 Gene Autry Trail South  
[www.dwa.org](http://www.dwa.org)  
 Ph. (760) 323-4971  
 Fx. (760) 325-6505



**Exhibit 2**  
**Collection Systems Map**

File Name: Sewer System Management.mxd  
 File Location: I:\Projects\GIS\Projects\Lower Management  
 Date Updated: 1/20/11  
 Updated By: jbracks  
 Department: DWA Engineering

This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or planning purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

This page is intentionally left blank.

## APPENDICES

*APPENDIX A – SWRCB ORDER No. 2022-0103-DWQ*

*APPENDIX B – SWRCB ORDER No. 2022-0103-DWQ, ATTACHMENT “A”*

*APPENDIX C – LIST OF APPROVED WASTEWATER PUMPING CONTRACTORS*

*APPENDIX D – SWRCB ORDER No. 2022-0103-DWQ, ATTACHMENT “E1”-  
NOTIFICATION, MONITORING, REPORTING, AND RECORDKEEPING  
REQUIREMENTS*

*APPENDIX E – SWRCB ORDER No. 2022-0103-DWQ, ATTACHMENT “E2”-  
NOTIFICATION, MONITORING, REPORTING, AND RECORDKEEPING  
REQUIREMENTS*

*APPENDIX F – SEWER SPILL ESTIMATION GUIDE*

*APPENDIX G – SSO WATER QUALITY MONITORING PLAN*

*APPENDIX H – INTERNAL REPORT AUDIT FORM*

This page is intentionally left blank.

Appendix A

SWRCB Order No. 2022-0103-DWQ

This page is intentionally left blank.

**STATE WATER RESOURCES CONTROL BOARD**  
**1001 I Street, Sacramento, California 95814**  
**ORDER WQ 2022-0103-DWQ**  
**STATEWIDE WASTE DISCHARGE REQUIREMENTS**  
**GENERAL ORDER FOR SANITARY SEWER SYSTEMS**

|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
| This Order was adopted by the State Water Resources Control Board on December 6, 2022.                             |
| This Order shall become effective <b>180 days after the Adoption Date of this General Order</b> , on June 5, 2023. |
| The Enrollee shall comply with the requirements of this Order upon the Effective Date of this General Order.       |

This General 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, protect the Enrollee from liability under federal, state, or local laws, nor create a vested right for the Enrollee to continue the discharge of waste.

**CERTIFICATION**

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on December 6, 2022.

AYE:           Chair E. Joaquin Esquivel  
                  Vice Chair Dorene D'Adamo  
                  Board Member Sean Maguire  
                  Board Member Laurel Firestone  
                  Board Member Nichole Morgan

NAY:           None

ABSENT:       None

ABSTAIN:      None

 for  
\_\_\_\_\_  
Jeanine Townsend  
Clerk to the Board

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

**Table of Contents**

- 1. Introduction ..... 4
- 2. Regulatory Coverage and Application Requirements ..... 5
  - 2.1. Requirements for Continuation of Existing Regulatory Coverage ..... 5
  - 2.2. Requirements for New Regulatory Coverage..... 5
  - 2.3. Regulatory Coverage Transfer ..... 7
- 3. Findings ..... 7
  - 3.1. Legal Authorities ..... 7
  - 3.2. General ..... 11
  - 3.3. Water Quality Control Plans, Policies and Resolutions ..... 14
  - 3.4. California Environmental Quality Act..... 16
  - 3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders ..... 16
  - 3.6. Notification to Interested Parties ..... 17
- 4. Prohibitions ..... 17
  - 4.1 Discharge of Sewage from a Sanitary Sewer System..... 17
  - 4.2. Discharge of Sewage to Waters of the State..... 17
  - 4.3. Discharge of Sewage Creating a Nuisance..... 18
- 5. Specifications..... 18
  - 5.1. Designation of a Legally Responsible Official ..... 18
  - 5.2. Sewer System Management Plan Development and Implementation..... 18
  - 5.3. Certification of Sewer System Management Plan and Plan Updates..... 19
  - 5.4. Sewer System Management Plan Audits ..... 19
  - 5.5. Six-Year Sewer System Management Plan Update..... 21
  - 5.6. System Resilience..... 22
  - 5.7. Allocation of Resources ..... 22
  - 5.8. Designation of Data Submitters..... 22
  - 5.9. Reporting Certification..... 22
  - 5.10. System Capacity ..... 23
  - 5.11. System Performance Analysis ..... 23
  - 5.12. Spill Emergency Response Plan and Remedial Actions ..... 23
  - 5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements ..... 24
  - 5.14. Electronic Sanitary Sewer System Service Area Boundary Map..... 26
  - 5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems ..... 26
  - 5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services ..... 27
  - 5.17. Unintended Failure to Report ..... 27

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

5.18. Duty to Report to Water Boards ..... 27  
5.19. Operation and Maintenance ..... 27  
6. Provisions ..... 27  
6.1. Enforcement Provisions ..... 27  
6.2. Other Regional Water Board Orders ..... 30  
6.3. Sewer System Management Plan Availability ..... 31  
6.4. Entry and Inspection ..... 31

**Table of Attachments**

Attachment A – Definitions .....A-1  
Attachment B – Application for Enrollment .....B-1  
Attachment C - Notice of Termination.....C-1  
Attachment D – Sewer System Management Plan – Required Elements .....D-1  
Attachment E1 – Notification, Monitoring, Reporting and Recordkeeping Requirements .....E1-1  
Attachment E2 – Summary of Notification, Monitoring and Reporting Requirements.....E2-1  
Attachment F – Regional Water Quality Control Board Contact Information ..... F-1

# STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

## 1. INTRODUCTION

This General Order regulates sanitary sewer systems designed to convey sewage. For the purpose of this Order, a sanitary sewer system includes, but is not limited to, pipes, valves, pump stations, manholes, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks. A sanitary sewer system includes:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

Sewage is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system. Sewage contains high levels of suspended solids, non-digested organic waste, pathogenic bacteria, viruses, toxic pollutants, nutrients, oxygen-demanding organic compounds, oils, grease, pharmaceuticals, and other harmful pollutants.

For the purpose of this General Order, a spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Sewage and its associated wastewater spilled from a sanitary sewer system may threaten public health, beneficial uses of waters of the State, and the environment.

This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of this General Order are enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). Through this General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States;
- Comply with specifications, and notification, monitoring, reporting and recordkeeping requirements in this General Order that implement the federal Clean Water Act, the California Water Code (Water Code), water quality control plans (including Regional Water Board Basin Plans) and policies;
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills;
- Eliminate discharges of sewage to waters of the State through effective implementation of a Sewer System Management Plan;
- Monitor, track, and analyze spills for ongoing system-specific performance improvements; and
- Report noncompliance with this General Order per reporting requirements.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one (1) mile or less in length where the State Water Board or a Regional Water Board requires regulatory coverage under this Order; or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Board or a Regional Water Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

For the purpose of this Order, a sanitary sewer system includes only systems owned and/or operated by the Enrollee.

## 2. REGULATORY COVERAGE AND APPLICATION REQUIREMENTS

### 2.1. Requirements for Continuation of Existing Regulatory Coverage

To continue regulatory coverage from previous Order 2006-0003-DWQ under this General Order, **within the 60-days-prior-to the Effective Date of this General Order**, the Legally Responsible Official of an existing Enrollee shall electronically certify the Continuation of Existing Regulatory Coverage form in the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database. The Legally Responsible Official will receive an automated CIWQS-issued Notice of Applicability email, confirming continuation of regulatory coverage under this General Order. All regulatory coverage under previous Order 2006-0003-DWQ will cease on the Effective Date of this Order.

An Enrollee continuing existing regulatory coverage is not required to submit a new application package or pay an application fee for enrollment under this General Order. The annual fee due date for continued regulatory coverage from previous Order 2006-0003-DWQ to this General Order remains unchanged.

A previous Enrollee of Order 2006-0003-DWQ that fails to certify the Continuation of Existing Regulatory Coverage form in the online CIWQS database by the Effective Date of this Order is considered a New Applicant, and will not have regulatory coverage for its sanitary sewer system(s) until:

- A new application package for system(s) enrollment is submitted per section 2.2 (Requirements for New Regulatory Coverage) below; and
- The new application package is approved per section 2.2.2 (Approval of Application Package (For New Applicants Only)).

### 2.2. Requirements for New Regulatory Coverage

No later than 60 days prior to commencing and/or assuming operation and maintenance responsibilities of a sanitary sewer system, a duly authorized representative that

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

maintains legal authority over the public or private sanitary sewer system is required to enroll under this General Order by submitting a complete application package as specified below and as provided in Attachment B (Application for Enrollment Form) of this General Order.

Unless required by a Regional Water Board, a public agency that owns a combined sewer system subject to the Combined Sewer Overflow Control Policy (33 U.S. Code § 1342(q)), is not required to enroll, under this Order, the portions of its sanitary sewer system(s) that collects combined sanitary wastewater and stormwater.

### 2.2.1. Application Package Requirements

The Application for Enrollment package for new applicants must include the following items:

- **Application for Enrollment Form.** The form in Attachment B of this General Order must be completed, signed, and certified by a Legally Responsible Official, in accordance with section 5.1 (Designation of a Legally Responsible Official) of this General Order. If an electronic Application for Enrollment form is available at the time of application, a new applicant shall submit its application form electronically; and
- **Application Fee.** A fee payable to the “State Water Resources Control Board” in accordance with the Fee Schedule in the California Code of Regulations, Title 23, section 2200, or subsequent fee regulations updates.

The application fee for this General Order is based on the sanitary sewer system’s threat to water quality and complexity designations of category 2C or 3C, which is assigned based on the population served by the system. The current Fee Schedule for sanitary sewer systems is listed under subdivision (a)(2) at the following website: [Fee Schedule](https://www.waterboards.ca.gov/resources/fees/water_quality/) ([https://www.waterboards.ca.gov/resources/fees/water\\_quality/](https://www.waterboards.ca.gov/resources/fees/water_quality/)).

### 2.2.2. Approval of Application Package (For New Applicants Only)

The Deputy Director of the State Water Board, Division of Water Quality (Deputy Director) will consider approval of each complete Application for Enrollment package. The Deputy Director will issue a Notice of Applicability letter which serves as approved regulatory coverage for the new Enrollee.

If the submitted application package is not complete in accordance with section 2.2.1 (Application Package Requirements) of this General Order, the Deputy Director will send a response letter to the applicant outlining the application deficiencies. The applicant will have 60 days from the date of the response letter to correct the application deficiencies and submit the identified items necessary to complete the application package to the State Water Board.

### 2.2.3. Electronic Reporting Account for New Enrollee

**Within 30 days after the date of the Approval of Complete Application Package for System Enrollment**, a duly authorized representative for the Enrollee shall obtain a CIWQS Sanitary Sewer System Database user account by clicking the “User Registration” button and following the directions on the [CIWQS Login Page](#)

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

(<https://ciwqs.waterboards.ca.gov>). If additional assistance is needed to establish an online CIWQS user account, contact State Water Board staff by email at [CIWQS@waterboards.ca.gov](mailto:CIWQS@waterboards.ca.gov). The online user account will provide the Enrollee secure access to the online CIWQS database for electronic reporting.

### **2.3. Regulatory Coverage Transfer**

Regulatory coverage under this General Order is not transferable to any person or party except after an existing Enrollee submits a written request for a regulatory coverage transfer to the Deputy Director, at least 60 days in advance of any proposed system ownership transfer. The written request must include a written agreement between the existing Enrollee and the new Enrollee containing:

- Acknowledgement that the transfer of ownership is solely of an existing system with an existing waste discharge identification (WDID) number;
- The specific ownership transfer date in which the responsibility and regulatory coverage transfer between the existing Enrollee and the new Enrollee becomes effective; and
- Acknowledgement that the existing Enrollee is liable for violations occurring up to the ownership transfer date and that the new Enrollee is liable for violations occurring on and after the ownership transfer date.

The Deputy Director will consider approval of the written request. If approved, the Deputy Director will issue a Notice of Applicability letter which serves as an approved transfer of regulatory coverage to the new Enrollee.

## **3. FINDINGS**

### **3.1. Legal Authorities**

#### **3.1.1. Federal and State Regulatory Authority**

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States (33 U.S.C. 1251). The Water Code authorizes the State Water Board to implement the Clean Water Act in the State and to protect the quality of all waters of the State (Water Code sections 13000 and 13160).

#### **3.1.2. Discharge of Sewage**

A discharge of untreated or partially treated sewage is a discharge of waste as defined in Water Code section 13050(d) that could affect the quality of waters of the State and is subject to regulation by waste discharge requirements issued pursuant to Water Code section 13263 and Chapter 9, Division 3, Title 23 of the California Code of Regulations. A discharge of sewage may pollute and alter the quality of the waters of the State to a degree that unreasonably affects the beneficial uses of the receiving water body or facilities that serve those beneficial uses (Water Code section 13050(l)(1)).

### **3.1.3 Water Boards Authority to Require Technical Reports, Monitoring, and Reporting**

Water Code sections 13267 and 13383 authorize the Regional Water Boards and the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Water Code section 13267(b), authorizes the Regional Water Boards to “require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region... or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires...In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.” Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

The technical and monitoring reports required by this General Order and Attachment E (Notification, Monitoring, Reporting and Recordkeeping Requirements) are necessary to evaluate and ensure compliance with this General Order. The effort to develop required technical reports will vary depending on the system size and complexity and the needs of the specific technical report. The burden and cost of these reports are reasonable and consistent with the interest of the state in protecting water quality, which is the primary purpose of requiring the reports.

Water Code section 13383(a) authorizes the Water Boards to “establish monitoring, inspection, entry, reporting, and recordkeeping requirements... for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.” Section 13383(b) continues, “the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.”

Reporting of spills from privately owned sewer laterals and systems pursuant to section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) of this General Order is authorized by Water Code section 13225(c) and encouraged by the State Water Board, wherein a local agency may investigate and report on any technical factors involved in water quality control provided the burden including costs of such reports bears a reasonable relationship to the need for the report and the benefits to be obtained therefrom. The burden of reporting private spills under section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) is minimal and is outweighed by the benefit of providing Regional Water Boards an opportunity to respond to these spills

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

when an Enrollee, which in many cases has a contractual relationship with the owner of the private system, has knowledge of the spills.

### **3.1.4. Water Board Authority to Prescribe General Waste Discharge Requirements**

Water Code section 13263(i) provides that the State Water Board may prescribe general waste discharge requirements 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 waste discharge requirements than individual waste discharge requirements.

Since 2006, the State Water Board has been regulating over 1,100 publicly owned sanitary sewer systems (See section 3.1.5 (Previous Statewide General Waste Discharge Requirements) of this General Order). California also has a large unknown number of unregulated privately owned sanitary sewer systems. All waste conveyed in publicly owned and privately owned sanitary sewer systems (as defined in this General Order) is comprised of untreated or partially treated domestic waste and/or industrial waste. Generally, sanitary sewer systems are designed and operated to convey waste by gravity or under pressure; system-specific design elements and system-specific operations do not change the common nature of the waste, the common threat to public health, or the common impacts on water quality. Spills of waste from a sanitary sewer system prior to reaching the ultimate downstream treatment facility are unauthorized and enforceable by the State Water Board and/or a Regional Water Board. Therefore, spills from sanitary sewer systems are more appropriately regulated under general waste discharge requirements.

As specified in Water Code sections 13263(a) and 13241, the implementation of requirements set forth in this Order is for 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 Regional Water Board and take into account the environmental characteristics of sewer service areas and 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, costs associated with compliance with these requirements, the need for developing housing within California, and the need to protect sources of drinking water and other water supplies.

### **3.1.5. Previous Statewide General Waste Discharge Requirements**

On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ serving as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260) for inadvertent discharges to waters of the State. Order 2006-0003-DWQ prohibited discharges of untreated or partially treated sewage. Order 2006-0003-DWQ also required system-specific management, operation, and maintenance of publicly owned sewer systems greater than one mile in length.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

To decrease the impacts on human health and the environment caused by sewage spills, the previous Order required enrollees to develop a rehabilitation and replacement plan that identifies system deficiencies and prioritizes short-term and long-term rehabilitation actions. The previous Order also required enrollees to:

1. Maintain information that can be used to establish and prioritize appropriate Sewer System Management Plan activities; and
2. Implement a proactive approach to reduce spills.

The previous Order required Sewer System Management Plan elements for “the proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management.”

On July 30, 2013, the State Water Board amended General Order 2006-0003-DWQ with Order WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Many enrollees of Order 2006-0003-DWQ have already implemented proactive measures to reduce sewage spills. Other enrollees, however, still need technical assistance and funding to improve sanitary sewer system operation and maintenance for the reduction of sewage spills.

### **3.1.6. Existing Memorandum of Agreement with California Water Environment Association**

The California Water Environment Association is a nonprofit organization dedicated to providing water industry certifications, training, and networking opportunities. The Association’s Technical Certification Program provides accredited sanitary sewer system operator certification for collection system operators and maintenance workers.

On February 10, 2016, the State Water Board entered into a collaborative agreement with the Association titled *Memorandum of Agreement Between the California State Water Resources Control Board and the California Water Environment Association - Training Regarding Requirements Set Forth in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The Memorandum sets forth collaborative training necessary for regulated sanitary sewer system personnel to operate and maintain a well operating system and ensure full compliance with statewide sewer system regulations.

On March 15, 2018, the State Water Board and the California Water Environment Association amended the existing Memorandum of Agreement to include collaborative outreach and expand training needs associated with further updates to Water Board regulations for sanitary sewer systems. The State Water Board encourages further Agreement updates as necessary to support improved sewer system operations and the professionalism of collection system operators.

# STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

## 3.2. General

### 3.2.1. Waters of the State

Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

### 3.2.2. Sanitary Sewer System Spill Threats to Public Health and Beneficial Uses

Sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Sewage spills may cause a public nuisance, particularly when sewage is discharged to areas with high public exposure such as streets and surface waters used for drinking, irrigation, fishing, recreation, or other public consumption or contact uses.

More specifically, sanitary sewer spills may:

- Adversely affect aquatic life and/or threaten water quality when reaching receiving waters;
- Inadvertently release trash, including plastics;
- Impair the recreational use and aesthetic enjoyment of surface waters by polluting surface water or groundwater;
- Threaten public health through direct public exposure to bacteria, viruses, intestinal parasites, and other microorganisms that can cause serious illness such as gastroenteritis, hepatitis, cryptosporidiosis, and giardiasis;
- Negatively impact ecological receptors and biota within surface waters; and
- Cause nuisance including odors, closure of beaches and recreational areas, and property damage.

Sanitary sewer system spills may pollute receiving waters and threaten beneficial uses of surface water and groundwater. Potentially threatened beneficial uses include, but are not limited to the following (with associated acronym representations as included in statewide water quality control plans and Regional Water Boards' Basin Plans):

- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2)
- Cold Freshwater Habitat (COLD)
- Warm Freshwater Habitat (WARM)
- Native American Culture (CUL)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Wetland Habitat (WET)
- Agricultural Supply (AGR)
- Estuarine Habitat (EST)

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Commercial and Sport Fishing (COMM)
- Subsistence Fishing (SUB)
- Tribal Tradition and Culture (CUL)
- Tribal Subsistence Fishing (T-SUB)
- Aquaculture (AQUA)
- Marine Habitat (MAR)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Navigation (NAV)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Water Quality Enhancement (WQE)
- Fresh Water Replenishment (FRSH)
- Groundwater Recharge (GWR)
- Inland Saline Water Habitat (SAL)

### 3.2.3. Proactive Sanitary Sewer System Management to Eliminate Spill Causes

Finding 3 of the previous Order, 2006-0003-DWQ, states: “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 [sanitary sewer overflow]. 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.”

Many spills are preventable through proactive attention on sanitary sewer system management using the best practices and technologies available to address major causes of spills, including but not limited to:

- Blockages from sources including but not limited to:
  - Fats, oils and grease;
  - Tree roots;
  - Rags, wipes and other paper, cloth and plastic products; and
  - Sediment and debris.
- Sewer system damage and exceedance of sewer system hydraulic capacity from identified system-specific environmental, and climate-change impacts, including but not limited to:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence.
- Infrastructure deficiencies and failures, including but not limited to:
  - Pump station mechanical failures;
  - System age;
  - Construction material failures;
  - Manhole cover failures;
  - Structural failures; and
  - Lack of proper operation and maintenance.
- Insufficient system capacity (temporary or sustained), due to factors including but not limited to:
  - Excessive and/or increased storm or groundwater inflow/infiltration;
  - Insufficient capacity due to population increase and/or new connections from industrial, commercial and other system users; and
  - Stormwater capture projects utilizing a sanitary sewer system to convey stormwater to treatment facilities for reuse.
- Community impacts, including but not limited to:
  - Power outages;
  - Vandalism; and
  - Contractor-caused or other third party-caused damages.

### **3.2.4. Underground Sanitary Sewer System Leakage**

Portions of some sanitary sewer systems may leak, causing underground exfiltration (exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.

Underground exfiltrated sewage may threaten beneficial uses if discharged to waters of the State. Exfiltrated sewage that discharges to groundwater may impact beneficial uses of groundwater and pollute groundwater supply. Additionally, if in close proximity, exfiltrated sewage may enter into a compromised underground drainage conveyance system that discharges into a water of the United States, or into groundwater that is hydrologically connected to (feeds into) a water of the United States, thus potentially causing: (1) a Clean Water Act violation, (2) threat and impact to beneficial uses, and/or (3) surface water pollution.

### **3.2.5. Proactive Sanitary Sewer System Management to Reduce Inflow and Infiltration**

Excessive inflow (stormwater entering) and infiltration (groundwater seepage entering) to sanitary sewer systems is preventable through proactive sewer system management using the best practices and technologies available. The efficiency of the downstream wastewater treatment processes is dependent on the performance of the sanitary sewer system. When the structural integrity of a sanitary sewer system deteriorates, high volumes of inflow and infiltration can enter the sewer system. High levels of inflow and infiltration increase the hydraulic load on the downstream treatment plant, which can reduce treatment efficiency, lead to bypassing a portion of the treatment process, cause illegal discharge of partially treated effluent, or in extreme situations make biological treatment facilities inoperable (e.g., wash out the biological organisms that treat the waste).

### **3.3. Water Quality Control Plans, Policies and Resolutions**

The nine Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. The State Water Board has adopted statewide water quality control plans, policies and resolutions establishing statewide water quality objectives, implementation programs and initiatives.

#### **3.3.1. State Water Board Antidegradation Policy**

On October 28, 1968, the State Water Board adopted Resolution 68-16, titled Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

The continued prohibition of sewage discharges from sanitary sewer systems into waters of the State aligns with Resolution 68-16. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.

#### **3.3.2. State Water Board Sources of Drinking Water Policy**

On May 19, 1988, the State Water Board adopted Resolution 88-63 (amended on February 1, 2006), titled Sources of Drinking Water, establishing state policy that all waters of the State, with certain exceptions, are suitable or potentially suitable for municipal or domestic supply.

#### **3.3.3. State Water Board Cost of Compliance Resolution**

On September 24, 2013, the State Water Board adopted Resolution 2013-0029, titled Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Compliance While Maintaining Water Quality Protection. Through this resolution, the State Water Board committed to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance with regulatory orders while maintaining water quality protection and improving regulatory program outcomes.

### **3.3.4. State Water Board Human Right to Water Resolution**

On February 16, 2016, the State Water Board adopted Resolution 2016-0010, titled Adopting the Human Right to Water as a Core Value and Directing its Implementation in Water Board Programs and Activities, addressing the human right to water as a core value and directing Water Board programs to implement requirements to support safe drinking water for all Californians.

On November 16, 2021, the State Water Board adopted Resolution 2021-0050 titled Condemning Racism, Xenophobia, Bigotry, and Racial Injustice, and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-racism. Among other actions, through Resolution 2021-0050, the State Water Board, in summary as corresponding to this General Order, reaffirms its commitment to its Human Right to Water resolution, upholding that every human being in California deserves safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes. Resolution 2021-0050 provides the State Water Board commitment to:

- Protect public health and beneficial uses of waterbodies in all communities, including communities disproportionately burdened by wastes discharge of waste to land and surface water;
- Restore impaired surface waterbodies and degraded aquifers; and
- Promote multi-benefit water quality projects.

Through Resolution 2021-0050, the State Water Board also commits to expanding implementation of its Climate Change Resolution to address the disproportionate effects of extreme hydrologic conditions and sea-level rise on Black, Indigenous, and people of color communities, prioritizing:

- The right to safe, clean, affordable, and accessible drinking water and sanitation;
- Sustainable management and protection of local groundwater resources;
- Healthy watersheds; and
- Access to surface waterbodies that support subsistence fishing.

On June 7, 2022, the State Water Board adopted a Resolution, titled Authorizing the Executive Director or Designee to Enter into One or More Multi-Year Contracts Up to a Combined Sum of \$4,000,000 for a Statewide Wastewater Needs Assessment, supporting the equitable access to sanitation for all Californians and implementation of Resolutions 2016-0010 and 2021-0050.

This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer systems. Data reported per the requirements of this Order will be used with data from other Water Boards' programs, to further develop criteria and create a statewide risk

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

framework to prioritize critical funding and infrastructure investments for California's most vulnerable populations, including disadvantaged or severely disadvantaged communities with inadequate or failing sanitation systems and threatened access to healthy drinking water supplies.

### **3.3.5. State Water Board Open Data Resolution**

On July 10, 2018, the State Water Board adopted Resolution 2018-0032, titled Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, directing regulatory programs to assure all monitoring and reporting requirements support the State Water Boards' Open Data Initiative.

### **3.3.6. State Water Board Response to Climate Change**

On March 7, 2017, the State Water Board adopted Resolution 2017-0012, titled Comprehensive Response to Climate Change, requiring a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

### **3.4. California Environmental Quality Act**

The adoption of this Order is an action to reissue general waste discharge requirements that is exempt from the California Environmental Quality Act (Public Resources Code section 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., Title 14, section 15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., Title 14, section 15301, to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in sections 15301 and 15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

### **3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders**

The State Water Board, Division of Financial Assistance administers the implementation of the State Water Board financial assistance programs, per Board-adopted funding policies. Among other funding areas, the Division administers loan and grant funding for the planning and construction of wastewater and water recycling facilities per funding program-specific policies and guidelines. Applicants may apply for Clean Water State Revolving Fund low-interest loan, Small Community Wastewater grant funding assistance, and other funding available at the time of application, for some of the costs associated with complying with this General Order.

Funding applicants may obtain further information regarding current funding opportunities, and Division of Financial Assistance staff contact information at the following website: [Financial Assistance Funding - Grants and Loans | California State Water Resources Control Board](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/).

([https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/))

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Section 13477.6 of the Water Code authorizes the Small Community Grant Fund. The Small Community Grant Fund allows the State Water Board to provide grant funding assistance to small, disadvantaged communities and small severely disadvantaged communities that may not otherwise be able to afford a loan or similar financing for projects to comply with requirements of this General Order. The State Water Board also considers loan forgiveness on a disadvantaged community-specific basis.

For disadvantaged communities' wastewater needs, the State Water Board places priority on the funding of projects that address:

- Public health;
- Violations of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits;
- Providing sewer system service to existing septic tank owners; and
- High priority public health and water quality concerns identified by a Regional Water Board.

### **3.6. Notification to Interested Parties**

On January 31, 2022, the State Water Board notified interested parties and persons of its intent to reissue Sanitary Sewer Systems General Order 2006-0003-DWQ by issuing a draft General Order for a 60-day public comment period. State Water Board staff conducted extensive stakeholder outreach and encouraged public participation in the adoption process for this General Order. On March 15, 2022, the State Water Board held a public meeting to hear and consider oral public comments. The State Water Board considered all public comments prior to adopting this General Order.

**THEREFORE, IT IS HEREBY ORDERED**, that pursuant to Water Code sections 13263, 13267, and 13383 this General Order supersedes Order 2006-0003-DWQ, Order WQ 2013-0058-EXEC, and any amendments made to these Orders thereafter, except for enforcement purposes and to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Enrollee shall comply with the requirements in this Order.

## **4. PROHIBITIONS**

### **4.1 Discharge of Sewage from a Sanitary Sewer System**

Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.

### **4.2 Discharge of Sewage to Waters of the State**

Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### 4.3. Discharge of Sewage Creating a Nuisance

Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code section 13050(m) is prohibited.

## 5. SPECIFICATIONS

### 5.1. Designation of a Legally Responsible Official

The Enrollee shall designate a Legally Responsible Official that has authority to ensure the enrolled sanitary sewer system(s) complies with this Order, and is authorized to serve as a duly authorized representative. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system, and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The Legally Responsible Official must have or have direct authority over individuals that:

- Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training and experience.

For example, a sewer system superintendent or manager, an operations manager, a public utilities manager or director, or a district engineer may be designated as a Legally Responsible Official.

The Legally Responsible Official shall complete the electronic [CIWQS "User Registration" form](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>). A Legally Responsible Official that represents multiple enrolled systems shall complete the electronic CIWQS "User Registration" form for each system.

The Enrollee shall submit any change to its Legally Responsible Official, and/or change in contact information, to the State Water Board within 30 calendar days of the change by emailing [ciwqs@waterboards.ca.gov](mailto:ciwqs@waterboards.ca.gov) and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

### 5.2. Sewer System Management Plan Development and Implementation

To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies.

For an existing Enrollee under Order 2006-0003-DWQ that has certified its Continuation of Existing Regulatory Coverage, per section 2.1 (Requirements for Continuation of Existing Regulatory Coverage) of this General Order:

### **Within six (6) months of the Adoption Date of this General Order:**

- The Legally Responsible Official shall upload the Enrollee's existing Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

For a new Enrollee:

### **Within twelve (12) months of the Application for Enrollment approval date:**

- The governing entity of the new Enrollee shall approve its Sewer System Management Plan; and
- The Legally Responsible Official shall certify and upload its Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

### **5.3. Certification of Sewer System Management Plan and Plan Updates**

The Legally Responsible Official shall certify and upload its Sewer System Management Plan and all subsequent updates to the online CIWQS Sanitary Sewer System Database.

### **5.4. Sewer System Management Plan Audits**

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. **Within six months after the end of the required 3-year audit period**, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of this General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators’ input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

A new Enrollee of this General Order (that did not have a sanitary sewer system enrolled in the previous State Water Board Order 2006-0003-DWQ) shall conduct its first internal Sewer System Management Plan audit for the time period between the date of submittal of its certified Sewer System Management Plan and the third subsequent December 31<sup>st</sup> date. The audit report must be submitted into the online CIWQS Sanitary Sewer System Database **by July 1 of the following calendar year.**

See the following tables for clarification:

**Initial Audit Period and Audit Due Date for New Enrollees**

|                | Audit Period                                                                                                                                | Audit Due Date                               |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| New Enrollee   | Certified Sewer System Management Plan Submittal Date through the third subsequent December 31 <sup>st</sup> date                           | July 1 <sup>st</sup> date after audit period |
| <i>Example</i> | <i>Certified Sewer System Management Plan Submittal Date of August 2, 2025<br/>Audit Period of August 2, 2025 through December 31, 2027</i> | <i>July 1, 2028</i>                          |

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

**Initial Audit Period for Transition from 2-Year Audit Required in Previous Order 2006-0003-DWQ to 3-Year Audit Required in this General Order**

|                                                        | Audit Period                                                                                                              | Audit Due Date                                     |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| An Enrollee previously regulated by Order 2006-003-DWQ | A 3-year period starting from the end of last required 2-year Audit Period                                                | Within six months after end of 3-year Audit Period |
| <i>Example</i>                                         | <i>Last required Audit Period start date of August 2, 2021;<br/>Audit Period of August 2, 2021 through August 1, 2024</i> | <i>February 1, 2025</i>                            |

**Three-Year Ongoing Audit Period**

|               | Audit Period                                                        | Audit Due Date                                     |
|---------------|---------------------------------------------------------------------|----------------------------------------------------|
| Each Enrollee | A 3-year period starting from the end of last required Audit Period | Within six months after end of 3-year Audit Period |

**5.5. Six-Year Sewer System Management Plan Update**

At a minimum, the Enrollee shall update its Sewer System Management Plan every six (6) years after the date of its last Plan Update due date. (For an Enrollee previously regulated by Order 2006-0003-DWQ, the six-year period shall commence on the due date identified in section 3.11 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this Order. The Updated Sewer System Management Plan must include:

- Elements required in Attachment D (Sewer System Management Plan – Required Elements) of this Order;
- Summary of revisions included in the Plan update based on internal audit findings; and
- Other sewer system management-related changes.

The Enrollee’s governing entity shall approve the updated Plan. The Legally Responsible Official shall upload and certify the approved updated Plan in the online CIWQS Sanitary Sewer System Database in accordance with section 3.11 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order. During the time period in between Plan updates, the Enrollee shall continuously document changes to its Sewer System Management Plan in a change log attached to the Plan.

## 5.6. System Resilience

The Enrollee shall include and implement system-specific procedures in its Sewer System Management Plan to proactively prioritize: (1) operation and maintenance, (2) condition assessments, and (3) repair and rehabilitation, to address ongoing system resilience, as specified in Attachment D (Sewer System Management Plan – Required Elements) of this General Order.

## 5.7. Allocation of Resources

The Enrollee shall:

- Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and
- Allocate the necessary resources to its sewer system management program for:
  - Compliance with this General Order,
  - Full implementation of its updated Sewer System Management Plan,
  - System operation, maintenance, and repair, and
  - Spill responses.

## 5.8. Designation of Data Submitters

The Legally Responsible Official may designate one or more individuals as a Data Submitter for reporting of spill data. The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online [CIWQS database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>) prior to the individuals establishing a [CIWQS user account](https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) (<https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp>) and entering spill data into the online CIWQS Sanitary Sewer System Database.

The Legally Responsible Official shall submit any change to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing [ciwqs@waterboards.ca.gov](mailto:ciwqs@waterboards.ca.gov) and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

## 5.9. Reporting Certification

The Legally Responsible Official shall electronically certify, on the Enrollee's behalf, all applications, reports, the Sewer System Management Plan(s) and corresponding updates, and other information submitted electronically into the online CIWQS Sanitary Sewer System Database, as follows:

*"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."*

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

Hardcopy submittals to the State Water Board must be accompanied by the above certification statement.

### 5.10. System Capacity

The Enrollee shall maintain the system capacity necessary to convey: (1) base flows during dry weather conditions, and (2) wet weather peak flows consistent with designated local historic storms. Design storms must take into account system-specific stormwater contributions via inflow and infiltration, and location-specific depth of groundwater and storm frequencies. The Enrollee shall implement capital improvements to provide adequate hydraulic capacity to:

- Meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance element of its Sewer System Management Plan; and
- Prevent system capacity-related spills, and adverse impacts to the treatment efficiency of downstream wastewater treatment facilities.

### 5.11. System Performance Analysis

The Enrollee shall include a running 10-year system performance analysis in its Annual Report. The analysis must include two CIWQS-generated graphs presenting the following information:

#### **Graph 1 – Total Spill Volume per Year:**

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total spill volume, per Spill Category, for each calendar year.

#### **Graph 2 – Total Number of Spills per Year:**

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total number of spills, per Spill Category, for each calendar year.

The current calendar year is the calendar year covered in the Annual Report.

The Enrollee shall generate the graphs in CIWQS, using the existing data in the online CIWQS Sanitary Sewer System Database at the following graph generation link: ([https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso\\_operation\\_report](https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_operation_report)).

### 5.12. Spill Emergency Response Plan and Remedial Actions

For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

**Within six (6) months of the Adoption Date of this General Order**, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### For New Enrollees:

**Within six (6) months of the Application for Enrollment approval date**, the Enrollee shall develop and implement a Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

### **5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements**

The Enrollee shall comply with notification, monitoring, reporting, and recordkeeping requirements in Attachment E1 of this General Order.

#### **5.13.1. Spill Categories**

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

- **Category 1 Spill**

A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

### 5.13.2. Annual Report

The Enrollee shall submit an Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

**For new Enrollees: Within 30 days of obtaining a CIWQS account,** a new Enrollee shall submit its initial Annual Report, as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

**5.14. Electronic Sanitary Sewer System Service Area Boundary Map**

**For continuing enrollees, starting on July 1, 2025, and no later than December 31, 2025:**

**For new enrollees – no earlier than July 1, 2025, or within 12 months of the Application for Enrollment approval date, whichever date is later:**

The Legally Responsible Official shall submit, to the State Water Board, geospatial data detailing the locations of the Enrollee’s sanitary sewer system service area boundary, per the required content and specifications in section 3.8 (Electronic Sanitary Sewer System Service Area Boundary Map) of Attachment E1 of this General Order, for each system identified by a WDID number.

An Enrollee of a disadvantaged community that may need assistance developing an electronic map to comply with this requirement, may contact State Water Board staff for assistance at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov).

**5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems**

Within 24 hours of becoming aware of a spill (as described below) from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to report the following observations to the online CIWQS Sanitary Sewer System Database at the following link:

<https://ciwqs.waterboards.ca.gov>:

- A spill equal or greater than 1,000 gallons that discharges (or has a potential to discharge) to a water of the State, or a drainage conveyance system that discharges to waters of the State; **or**
- Any volume of sewage that discharges (or has a potential to discharge) to surface waters.

In the CIWQS module, the Enrollee is encouraged to identify:

- Time of observation;
- Description of general spill location (for example, street name and cross street names);
- Estimated volume of spill;
- If known, general description of spill destination (for example, flowing into drainage channel, flowing directly into a creek, etc.); and
- If known, name of private system owner/operator.

The CIWQS database will make the name and contact information of the entity voluntarily reporting a private spill, accessible to State and Regional Water Board staff only. The CIWQS database will only make information regarding the actual spill, accessible to the public.

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

### **5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services**

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge to waters of the State:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

### **5.17. Unintended Failure to Report**

If an Enrollee becomes aware that they unintentionally failed to submit relevant facts in any report required in this General Order, the Enrollee shall promptly notify Regional Water Board and State Water Board staff. Regional Water Board contact information is included in Attachment F of this Order. State Water Board staff shall be contacted by email at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) for assistance in formally amending the corresponding report(s) in the online CIWQS Sanitary Sewer System Database.

### **5.18. Duty to Report to Water Boards**

In accordance with Water Code section 13267 and/or section 13383, upon request by the State Water Board Executive Director (or designee) or a Regional Water Board Executive Officer (or designee), the Enrollee shall provide the requested information which the State or Regional Water Board deems necessary to determine compliance with this General Order.

### **5.19. Operation and Maintenance**

To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.

## **6. PROVISIONS**

### **6.1. Enforcement Provisions**

The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy.

#### **6.1.1. Enforceability of Clean Water Act and Water Code Violations**

Noncompliance with requirements of this General Order or discharging sewage without enrolling in this General Order constitutes a violation of the Water Code and a potential

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

violation of the Clean Water Act and is grounds for an enforcement action by the State Water Board or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the Enrollee to administrative civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this General Order or the Clean Water Act may subject the Enrollee to administrative civil liabilities up to \$10,000 a day per violation and additional liability up to \$10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to \$5,000 a day per violation pursuant to Water Code section 13350 or up to \$20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

### **6.1.2. Monetary Penalties**

The Water Code provides the State and Regional Water Boards the authority to pursue formal enforcement actions, including imposing administrative liability and civil monetary penalties, for non-compliance with the requirements of this General Order and violations of the Clean Water Act.

### **6.1.3. Falsifying or Failure to Report**

The Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order, or falsifying any information provided in the technical or monitoring reports is subject to administrative liability and civil monetary penalties. Any person who knowingly fails or refuses to furnish technical or monitoring program reports or falsifies any information provided in reports required by this General Order is subject to criminal penalties.

### **6.1.4. Severability of General Order**

The provisions of this General Order are severable; 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.

### **6.1.5. Indirect Discharges**

In the event that a spill enters into a drainage conveyance system, the Enrollee shall take all feasible steps to prevent discharge of sewage into waters of the State by blocking or redirecting the flow in the drainage conveyance system, removing the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body.

### **6.1.6. Water Boards' Considerations for Discretionary Enforcement**

Consistent with the State Water Board Enforcement Policy, when considering Water Code section 13327 factors, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to contain, control, clean up, and mitigate spills. In assessing the factors, the State Water Board or the applicable Regional Water Board will consider:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- The Enrollee's compliance with this General Order with a focus on compliance with reporting requirements;
- The Enrollee's provision of adequate funding to implement the requirements of this General Order;
- The Enrollee's compliance with providing a complete and updated Sewer System Management Plan;
- The Enrollee's compliance with implementing its Sewer System Management Plan;
- The overall effectiveness of the Enrollee's Sewer System Management Plan with respect to:
  - System management, operation, and maintenance,
  - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent spills (e.g. adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow, etc.),
  - Preventive maintenance (including cleaning, root grinding, and fats, oils, and grease control) and source control measures,
  - Implementation of backup equipment,
  - Inflow and infiltration prevention and control,
  - Appropriate sanitary sewer system capacity to prevent spills, and
  - The Enrollee's responsiveness to stop and mitigate the impact of the discharge;
- The Enrollee's compliance with identifying the cause of the spill;
- The Enrollee's use of available information and observations to accurately estimate the spill volume and identify the affected or potentially affected receiving waters;
- The Enrollee's thoroughness of cleaning up sewage in drainage conveyance systems after the spill(s);
- The Enrollee's use of water quality and biological monitoring and assessment to determine the short-term and long-term impacts to beneficial uses and the environment;
- The Enrollee's follow up actions to improve system performance;
- The Enrollee's implementation of feasible alternatives to prevent spills, such as:
  - Use of temporary storage or waste retention,
  - Reduction of system inflow and infiltration,
  - Collection and hauling of waste to a treatment facility,
  - Prevention of and/ or containment of spills due to a design storm event identified in the Enrollee's Sewer System Management Plan,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- Implementation of available equipment, technologies, strategies, and recommended industry practices for maintaining and managing sewer systems to prevent spills, and contain and eliminate discharges to waters of the State; and
- The spill duration and factors beyond the reasonable control of the Enrollee causing the event.

### 6.1.7. Enforcement Discretion Based on Reporting Compliance

Consistent with the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to comply with spill reporting requirements when determining compliance with Water Code section 13267 and section 13383. When assessing Water Code section 13227 factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's diligence to comply with all reporting requirements in this General Order;
- The use of best available information for the Enrollee's reporting of spill start date and start time in which the release of sewage from the sanitary sewer system initiated;
- The Enrollee's reporting of spill end date, and end time to be the date and time in which the release of sewage from the sanitary sewer system was stopped;
- The Enrollee's diligence to accurately estimate and report spill volumes;
- The Enrollee's subsequent verification and/or updates to initial Draft Spill Reports in accordance with this General Order; and
- The Enrollee's timely certification of required spill reports.

Consistent with Water Code section 13267 and section 13383, the State Water Board or a Regional Water Board may require an Enrollee to report the results of a condition assessment of a specified portion of the Enrollee's sanitary sewer system.

### 6.2. Other Regional Water Board Orders

It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with federal and state regulations. This Order will not be interpreted or applied:

- In a manner inconsistent with the federal Clean Water Act;
- To authorize a spill or discharge that is illegal under either the Clean Water Act, the Water Code, and/or an applicable Basin Plan prohibition or water quality standard;
- To prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System (NPDES) permit or individual waste discharge requirements superseding an Enrollee's regulatory coverage under this General Order for a sanitary sewer system authorized under the Clean Water Act or Water Code;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER

- To supersede any more specific or more stringent waste discharge requirements or enforcement orders issued by a Regional Water Board; or
- To supersede any more specific or more stringent state or federal requirements in existing regulation, an administrative/judicial order, or Consent Decree.

### **6.3. Sewer System Management Plan Availability**

The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

### **6.4. Entry and Inspection**

#### **6.4.1. Entry and Availability of Information**

The Enrollee shall allow State and Regional Water Board staff, upon presentation of credentials and other documents as may be required by law, to:

- Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this General Order;
- Have access to and reproduce any records required to be maintained by this General Order;
- Inspect any facility and/or equipment (including monitoring and control equipment), practices, or operations required in this General Order; and
- Sample or monitor substances or parameters for assuring compliance with this General Order, or as otherwise authorized by the Water Code.

#### **6.4.2. Pre-Inspection Questionnaire**

The Enrollee shall provide pre-inspection information to State and Regional Water Board staff through the completion of a Pre-Inspection Questionnaire provided by Water Board staff.

This page is intentionally left blank.

## Appendix B

Attachment "A" of SWRCB Order No. 2022-0103-DWQ

This page is intentionally left blank.

## **ATTACHMENT A - DEFINITIONS**

### **Annual Report**

An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the Enrollee provides a calendar-year update of its efforts to prevent spills.

### **Basin Plan**

A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

### **Beneficial Uses**

The term “Beneficial Uses” is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

### **California Integrated Water Quality System (CIWQS)**

CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

### **Data Submitter**

A Data Submitter is an individual designated and authorized by the Enrollee’s Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

### **Disadvantaged Community**

A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.

For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

### **Drainage Conveyance System**

A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

## Enrollee

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one mile or less in length where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order, or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

## Environmentally Sensitive Area

An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

## Exfiltration

Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

## Flood Control Channel

A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

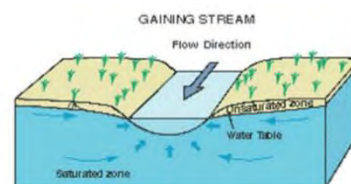
## Governing Entity

A governing entity includes but is not limited to the following:

- A publicly elected governing board, council, or commission of a municipal agency;
- A Department or Division director of a federal or state agency that is not governed by a board;
- A governing board or commission of an organization or association; and
- A private system owner/manager that is not governed by a board.

## Hydrologically Connected

Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)



### **Lateral (including Lower and Upper Lateral)**

A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership.

A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations.

An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

### **Legally Responsible Official**

A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

### **Nuisance**

For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:

- 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;
- 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
- Occurs during, or as a result of, the treatment or disposal of wastes.

### **Private Sewer Lateral**

A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

### **Private Sanitary Sewer System**

A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

### **Potential to Discharge, Potential Discharge**

Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

## **Receiving Water**

A receiving water is a water of the State that receives a discharge of waste.

## **Resilience**

Resilience is the ability to recover from or adjust to adversity or change, and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

## **Sanitary Sewer System**

A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

For purpose of this Order, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

## **Satellite Sewer System**

A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

## **Sewer System Management Plan**

A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

## **Sewage**

Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system.

## **Spill**

A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

## **Training**

Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with this General Order.

**Wash Down Water**

Wash down water is water used to clean a spill area.

**Waste**

Waste, as defined in Water Code section 13050(d), 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, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

**Waste Discharge Identification Number (WDID)**

A waste discharge identification number (WDID) identifies each individual sanitary sewer system enrolled under this General Order. A WDID number is assigned to each enrolled system upon an Enrollee's approved regulatory coverage.

**Waters of the State**

Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

**Waters of the United States**

Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

**Water Quality Objective**

A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

This page is intentionally left blank.

## Appendix C

### List of Approved Pumping Contractors

- Roto Rooter: (760)206-8963
- Asap pumping: (760)328-7887
- Hammer pumping: (760)321-7448
- Wright Septic: (760)654-4840
- S and G Pumping Services: (760)404-6325
- Sewer Septic Pros: (760)329-7600
- Action Pumping Inc: (760)365-0861

This page is intentionally left blank.

Appendix D

Attachment "E1" of SWRCB Order No. 2022-0103-DWQ

This page is intentionally left blank.

**ATTACHMENT E1 – NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS**

**Table of Contents**

- 1. Notification Requirements ..... E1-3
  - 1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services ..... E1-3
  - 1.2. Spill Notification Information ..... E1-4
  - 1.3. Notification of Spill Report Updates ..... E1-4
- 2. Spill-Specific Monitoring Requirements ..... E1-5
  - 2.1 Spill Location and Spread ..... E1-5
  - 2.2 Spill Volume Estimation ..... E1-5
  - 2.3. Receiving Water Monitoring ..... E1-5
  - 2.4. Safety and Access Exceptions ..... E1-8
- 3. Reporting Requirements ..... E1-8
  - 3.1. Reporting Requirements for Individual Category 1 Spill Reporting ..... E1-8
  - 3.2. Reporting Requirements for Individual Category 2 Spill Reporting ..... E1-12
  - 3.3. Monthly Certified Spill Reporting for Category 3 Spills ..... E1-14
  - 3.4. Monthly Certified Spill Reporting for Category 4 Spills ..... E1-16
  - 3.5. Amended Certified Spill Reports for Category 3 Spills ..... E1-16
  - 3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills ..... E1-16
  - 3.7. Monthly Certification of “No-Spills” or “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” ..... E1-16
  - 3.8. Electronic Sanitary Sewer System Service Area Boundary Map ..... E1-17
  - 3.9. Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ) ..... E1-17
  - 3.10. Sewer System Management Plan Audit Reporting Requirements ..... E1-19
  - 3.11. Sewer System Management Plan Reporting Requirements ..... E1-19
- 4. Recordkeeping Requirements ..... E1-20
  - 4.1. Recordkeeping Time Period ..... E1-20
  - 4.2. Availability of Documents ..... E1-20
  - 4.3. Spill Reports ..... E1-20
  - 4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills ..... E1-21
  - 4.5. Sewer System Telemetry Records ..... E1-22
  - 4.6. Sewer System Management Plan Implementation Records ..... E1-22
  - 4.7. Audit Records ..... E1-23

STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

4.8. Equipment Records..... E1-23  
4.9. Work Orders..... E1-23

## **ATTACHMENT E1– NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS**

The Notification Requirements (section 1), Spill-specific Monitoring Requirements (section 2), Reporting Requirements (section 3) and Recordkeeping Requirements (section 4) in this Attachment are pursuant to Water Code section 13267 and section 13383, and are an enforceable component of this General Order. For the purpose of this General Order, the term:

- Notification means the notifying of appropriate parties of a spill event or other activity.
- Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.
- Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.
- Recordkeeping means the maintaining of information and data in an official records storage system.

Failure to comply with the notification, monitoring, reporting and recordkeeping requirements in this General Order may subject the Enrollee to civil liabilities of up to \$10,000 a day per violation pursuant to Water Code section 13385; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Resources Control Board (State Water Board) to collect sanitary sewer spill information for each spill event and make this information available to the public. Sanitary sewer spill information for each spill event includes but is not limited to: Enrollee contact information for each spill event, spill cause, estimated spill volume and factors used for estimation, location, date, time, duration, amount discharged to waters of the State, response and corrective action(s) taken.

### **1. NOTIFICATION REQUIREMENTS**

#### **1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services**

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Enrollee shall notify the California Office of Emergency Services and obtain a California Office of Emergency Services Control Number as soon as possible **but no later than two (2) hours** after:

- The Enrollee has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

## 1.2. Spill Notification Information

The Enrollee shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

## 1.3. Notification of Spill Report Updates

Following the initial notification to the California Office of Emergency Services and until such time that the Enrollee certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Enrollee shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

## **2. SPILL-SPECIFIC MONITORING REQUIREMENTS**

### **2.1 Spill Location and Spread**

The Enrollee shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
  - The system location where spill originated.  
For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
  - Drainage conveyance system entry locations,
  - The location(s) of discharge into surface waters, as applicable,
  - Extent of spill spread, and
  - The location(s) of clean up.

### **2.2 Spill Volume Estimation**

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

### **2.3. Receiving Water Monitoring**

#### **2.3.1. Receiving Water Visual Observations**

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Discoloration of receiving water, and
- Impact to the receiving water.

### 2.3.2. Receiving Water – Water Quality Sampling and Analysis

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than **18 hours** after the Enrollee's knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment, if sewage discharges to a surface water via a drainage conveyance system; and/or
  - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment;

If the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of this Attachment:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - *E-coli*
  - Enterococcus

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

**2.3.3. Water Quality Analysis Specifications**

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

**2.3.4. Receiving Water Sampling Locations**

The Enrollee shall collect receiving water samples at the following locations.

**Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge**

| Sampling Location | Sampling Location Description                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------|
| DCS-001           | A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water. |

**Receiving Surface Water Sampling (RSW)<sup>1</sup>**

| Sampling Location                           | Sampling Location Description                                                                                                                |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| RSW-001<br>Point of Discharge               | A point in the receiving water where sewage initially enters the receiving water.                                                            |
| RSW-001U:<br>Upstream of Point of Discharge | A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts. |

| Sampling Location                                | Sampling Location Description                                                                                                                  |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| RSW-001D:<br>Downstream of<br>Point of Discharge | A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water. |

<sup>1</sup> The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

**2.4. Safety and Access Exceptions**

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

**3. REPORTING REQUIREMENTS**

All reporting required in this General Order must be submitted electronically to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (https://ciwqs.waterboards.ca.gov), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of this General Order.

The Enrollee shall report any information that is protected by the Homeland Security Act, by email to [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov), with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

**3.1. Reporting Requirements for Individual Category 1 Spill Reporting**

**3.1.1. Draft Spill Report for Category 1 Spills**

**Within three (3) business days** of the Enrollee’s knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;
  - o If a single spill 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 spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry location(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system;
  - o Estimated spill volume remaining within the drainage conveyance system;
11. Description and photographs of all discharge point(s) into the surface water;
12. Estimated spill volume that discharged to surface waters; and
13. Estimated total spill volume recovered.

### 3.1.2. Certified Spill Report for Category 1 Spills

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.1.1 (Draft Spill Report for Category 1 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
  - o The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - o The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
  - o Observed impacts on aquatic life,
  - o Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
  - o Responsible entity for closing/restricting use of water body, and
  - o Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

### **3.1.3. Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water**

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
  - o Complete and detailed explanation of how and when the spill was discovered;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
  - Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
  - Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
  - Detailed description of the spill cause(s);
  - Description of the pipe material, and estimated age of the pipe material, at the failure location;
  - Description of the impact of the spill;
  - Copy of original field crew records used to document the spill; and
  - Historical maintenance records for the failure location.
2. Enrollee's response to the spill:
- Chronological narrative description of all actions taken by the Enrollee to terminate the spill;
  - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
  - Final corrective action(s) completed and a schedule for planned corrective actions, including:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
    - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
- Description of all water quality sampling activities conducted;
  - List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring) of this Attachment;
  - Laboratory results, including laboratory reports;
  - Detailed location map illustrating all water quality sampling points; and
  - Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

### 3.1.4. Amended Certified Spill Reports for Individual Category 1 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

## 3.2. Reporting Requirements for Individual Category 2 Spill Reporting

### 3.2.1. Draft Spill Report for Category 2 Spills

**Within three (3) business days** of the Enrollee's knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;

If a single spill 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 spill appearance point explanation field;

8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry location(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system;
  - o Estimated spill volume remaining within the drainage conveyance system;

- Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and

11. Estimated total spill volume recovered.

### 3.2.2. Certified Spill Report for Category 2 Spills

**Within 15 calendar days** of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online [CIWQS Sanitary Sewer System Database](https://ciwqs.waterboards.ca.gov) (<https://ciwqs.waterboards.ca.gov>). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.2.1 (Draft Spill Report for Category 2 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
  - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and

14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

### 3.2.3. Amended Certified Spill Reports for Individual Category 2 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

### 3.3. Monthly Certified Spill Reporting for Category 3 Spills

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30<sup>th</sup>). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated:
  - o If a single spill 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 spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
  - o Description of the drainage conveyance system transporting the spill;
  - o Photographs of the drainage conveyance system entry locations(s);
  - o Estimated spill volume fully recovered from the drainage conveyance system; and

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.
- 10. Estimated total spill volume recovered;
- 11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
- 12. Spill end date and time;
- 13. Description of how the spill volume estimations were calculated, including, at minimum:
  - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
- 14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
- 15. System failure location (for example, main, pump station, etc.);
- 16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
- 17. Description of the impact of the spill;
- 18. Whether or not the spill was associated with a storm event;
- 19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
- 20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
  - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
  - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
    - Adjusted schedule/method of preventive maintenance,
    - Planned rehabilitation or replacement of sanitary sewer asset,
    - Inspected, repaired asset(s), or replaced defective asset(s),
    - Capital improvements,
    - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
    - Description of spill response activities,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Spill response completion date, and
- Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;

21. Detailed narrative of investigation and investigation findings of cause of spill.

### 3.4. Monthly Certified Spill Reporting for Category 4 Spills

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

### 3.5. Amended Certified Spill Reports for Category 3 Spills

**Within 90 calendar days of the certified Spill Report due date**, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

**After 90 calendar days**, the Legally Responsible Official shall contact the State Water Board at [SanitarySewer@waterboards.ca.gov](mailto:SanitarySewer@waterboards.ca.gov) to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

### 3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of this Attachment;  
The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.
- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

### 3.7. Monthly Certification of “No-Spills” or “Category 4 Spills” and/or “Non-Category 1 Lateral Spills”

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of this Attachment) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Enrollee has no further spills of any category, in the subsequent calendar month, the Enrollee shall certify “no-spills” for the subsequent calendar month.

If the Enrollee has no spills from its systems during a calendar month, but the Enrollee voluntarily reported a spill from a private lateral or a private system, the Enrollee shall certify “no-spills” for that calendar month.

If the Enrollee has spills from its owned and/or operated laterals during a calendar month, the Enrollee shall not certify “no spills” for that calendar month.

### 3.8. **Electronic Sanitary Sewer System Service Area Boundary Map**

The Legally Responsible Official shall submit, to the State Water Board, an up-to-date electronic spatial map of its sewer system service area boundaries. The map must be in accordance with section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order and the specification provided on the statewide Sanitary Sewer Systems program website. The map must include the location of wastewater treatment facility(ies) that treats the sewer system waste, if in the same sewer service boundary.

By the Effective Date of this General Order, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.

### 3.9. **Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ)**

A new Enrollee shall complete and submit its first certified Annual Report into the online CIWQS Sanitary Sewer System Database, **within 30 days of obtaining a CIWQS account**; Subsequent Annual Reports are due by April 1 of each year.

All enrollees shall update their previous year’s Annual Report, **by April 1 of each year after the Effective Date of this General Order**, for each calendar year (January 1 through December 31).

The Annual Report must be entered directly into the online CIWQS Sanitary Sewer System Database. The Enrollee’s Legally Responsible Official shall certify the Annual Report as instructed in CIWQS;

The Annual Report must address, and update as applicable, the following items:

- Population served;

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Updated sewer system service area boundary map, if service area boundary has changed from original map submitted per section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order;
- Number of system operation and maintenance staff:
  - Entry level (less than two years of experience),
  - Journey level (greater than two years of experience),
  - Supervisory level, and
  - Managerial level;
- Number of operation and maintenance staff certified as a certified collection system operator by the California Water Environmental Association (CWEA), with:
  - Corresponding number of certified collection system operator grade levels (Grade I, II, III, IV, and V);
- System information:
  - Miles of system gravity and force mains,
  - Number of upper and lower service laterals connected to system,
  - Estimated number of upper and lower laterals owned and/or operated by the Enrollee,
  - Portion of laterals that is Enrollee's responsibility,
  - Average age the major components of system infrastructure,
  - Number and age of pump stations, and
  - Estimated total miles of the system pipeline not accessible for maintenance;
- Name and location of the treatment plant(s) receiving sanitary sewer system's waste;
- Name of satellite sewer system tributaries;
- Number of system's gravity sewer above or underground crossings of water bodies throughout system;
- Number of force main (pressurized pipe) above or underground crossings of water bodies throughout system;
- Number of siphons used to convey waste throughout the sewer system;
- Miles of sewer system cleaned;
- Miles of sewer system video inspected, or comparable (i.e., video closed-circuit television or alternative inspection methods);
- System Performance Evaluation as specified in section 5.11 (System Performance Analysis) of this General Order;
- Major spill causes (for example, root intrusion, grease deposition);

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- System infrastructure failure points (for example, main, pump station, lateral, etc.);
- Ongoing spill investigations; and
- Actions taken to address system deficiencies.

### 3.10. Sewer System Management Plan Audit Reporting Requirements

The Enrollee shall submit its Sewer System Management Plan Audit and other pertinent audit information, in accordance with section 5.4 (Sewer System Management Plan Audits) of this General Order, to the online CIWQS Sanitary Sewer System Database **by six (6) months after the end of the 3-year audit period.**

If a Sewer System Management Plan Audit is not conducted as required: the Enrollee shall:

- Update the online CIWQS Sanitary Sewer System Database and select the justification for not conducting the Audit; and
- Notify its corresponding Regional Water Board (see Attachment F (Regional Water Quality Control Board Contact Information)) of the justification for the lapsed requirements.

The Enrollee's reporting of a justification for not conducting a timely Audit does not justify non-compliance with this General Order. The Enrollee shall:

- Submit the late Audit as required in this General Order; and
- Comply with subsequent Audit requirements and due dates corresponding with the original audit cycle.

### 3.11. Sewer System Management Plan Reporting Requirements

For an Existing Enrollee previously regulated by Order 2006-0003-DWQ: **Within every six (6) years after the required due date of its last Plan Update**, the Legally Responsible Official shall upload and certify a local governing entity-approved Sewer System Management Plan Update to the online CIWQS Sanitary Sewer System Database. If the electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its updated Sewer System Management Plan posted on its own website.

Order 2006-0003-DWQ required each enrollee to develop its initial Sewer System Management Plan per the following schedule, with required Plan updates at a frequency of 5-years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2009

Between 100,000 and 10,000: August 2, 2009

Between 10,000 and 2,500: May 2, 2010

Less than 2,500: August 2, 2010

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

This Order carries forth the previously-required Plan Update schedule per Order 2006-0003-DWQ. Per the six-year Plan Update frequency required in this Order, the Enrollee shall upload and certify its first Plan Update, to the online CIWQS Sanitary Sewer System Database by the following due dates, with subsequent Plan Updates at the frequency of six years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2025

Between 100,000 and 10,000: August 2, 2025

Between 10,000 and 2,500: May 2, 2026

Less than 2,500: August 2, 2026

For a New Enrollee: **Within twelve (12) months of its Application for Enrollment Approval date**, the Legally Responsible Official of a new Enrollee shall upload and certify a local governing entity-approved Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database. If electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its Sewer System Management Plan posted on its own website. The due date for subsequent 6-year Plan updates, is six (6) years from the submittal due date of the new Enrollee's first Sewer System Management Plan.

### 4. RECORDKEEPING REQUIREMENTS

The Enrollee shall maintain records to document compliance with the provisions of this General Order, and previous General Order 2006-0003-DWQ as applicable, for each sanitary sewer system owned, including any required records generated by an Enrollee's contractor(s).

#### 4.1. Recordkeeping Time Period

The Enrollee shall maintain records of documents required in this Attachment, including records collected for compliance with this General Order, and records collected in accordance with previous General Order 2006-0003-DWQ, for five (5) years.

#### 4.2. Availability of Documents

The Enrollee shall make the records required in this General Order readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request.

#### 4.3. Spill Reports

The Enrollee shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Enrollee responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
  - Date, time, and method of notification,

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant's contact information, if available, and
- Final resolution of the complaint;
- Records documenting the steps and/or remedial action(s) undertaken by the Enrollee, using all available information, to comply with this General Order, and previous General Order 2006-0003-DWQ as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Records, in accordance with the Monitoring Requirements in this Attachment.

### **4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills**

An Enrollee must maintain the following records for each individual Category 4 spill and for each individual non-Category 1 Enrollee-owned and/or operated lateral spill, and report in accordance to section 3.6 (Annual Certified Spill Reporting of Category 4 and/or Lateral Spills) of this Attachment.

#### **Recordkeeping of Individual Category 4 Spill Information:**

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
  - Description of drainage conveyance system location,
  - Estimated spill volume fully recovered within the drainage conveyance system, and
  - Estimated spill volume remaining within the drainage conveyance system;
5. Estimated total spill volume exiting the sanitary sewer system;
6. Spill date and start time;
7. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
8. System failure location (for example, main, pump station, etc.);
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of how the volume estimation was calculated, including, at minimum:

## STATEWIDE SANITARY SEWER SYSTEMS GENERAL ORDER 2022-0103-DWQ

- The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
  - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
11. Description of implemented system modifications and operating/maintenance modifications.

### **Recordkeeping of Individual Lateral Spill Information:**

1. Date and time the Enrollee was notified of, or self-discovered, the spill;
2. Location of individual spill;
3. Estimated individual spill volume;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
5. Description of how the volume estimations were calculated.

### **Total Annual Spill Information:**

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
  - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
  - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

## **4.5. Sewer System Telemetry Records**

The Enrollee shall maintain the following sewer system telemetry records if used to document compliance with this General Order, and previous General Order 2006-0003-DWQ as applicable, including spill volume estimates:

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

## **4.6. Sewer System Management Plan Implementation Records**

The Enrollee shall maintain records documenting the Enrollee's implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

**4.7. Audit Records**

The Enrollee shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

**4.8. Equipment Records**

The Enrollee shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

**4.9. Work Orders**

The Enrollee shall maintain record of work orders for operations and maintenance projects.

This page is intentionally left blank.

Appendix E

Attachment "E2" of SWRCB Order No. 2022-0103-DWQ

This page is intentionally left blank.

**ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS**

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

**Table E2-1**

**Spill Category 1: Spills to Surface Waters**

| <b>Spill Requirement</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Method</b>                                                                                               |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Notification             | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters:</p> <p>Notify the California Office of Emergency Services and obtain a notification control number.</p>                                                                                                                                                                                                                                                                           | <p>California Office of Emergency Services at:<br/>(800) 852-7550<br/><br/>(Section 1 of Attachment E1)</p> |
| Monitoring               | <ul style="list-style-type: none"> <li>• Conduct spill-specific monitoring;</li> <li>• Conduct water quality sampling of the receiving water within <b>18 hours</b> of initial knowledge of spill of 50,000 gallons or greater to surface waters.</li> </ul>                                                                                                                                                                                                                                                                                               | <p>(Section 2 of Attachment E1)</p>                                                                         |
| Reporting                | <ul style="list-style-type: none"> <li>• Submit Draft Spill Report <b>within three (3) business days</b> of the Enrollee’s knowledge of the spill;</li> <li>• Submit Certified Spill Report <b>within 15 calendar days</b> of the spill end date;</li> <li>• Submit Technical Report <b>within 45 calendar days</b> after the spill end date for a Category 1 spill in which <b>50,000 gallons or greater</b> discharged to surface waters; and</li> <li>• Submit Amended Spill Report <b>within 90 calendar days</b> after the spill end date.</li> </ul> | <p>(Section 3.1 of Attachment E1)</p>                                                                       |

**Table E2-2**

**Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                       | <b>Method</b>                                                                                         |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Notification              | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p>                                                                                | <p>California Office of Emergency Services at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p> |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                               | (Section 2 of Attachment E1)                                                                          |
| Reporting                 | <ul style="list-style-type: none"> <li>• Submit Draft Spill Report <b>within three (3) business days</b> of the Enrollee’s knowledge of the spill;</li> <li>• Submit Certified Spill Report <b>within 15 calendar days</b> of the spill end date; and</li> <li>• Submit Amended Spill Report <b>within 90 calendar days</b> after the spill end date.</li> </ul> | (Section 3.2 of Attachment E1)                                                                        |

**Table E2-3**

**Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                           | <b>Method</b>                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Notification              | Not Applicable                                                                                                                                                                                                                                                                                                                                       | Not Applicable                         |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                   | (Section 2 of Attachment E1)           |
| Reporting                 | <ul style="list-style-type: none"> <li>Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within <b>30 calendars days</b> after the end of the month in which the spills occur; and</li> <li>Submit Amended Spill Reports <b>within 90 calendar days</b> after the Certified Spill Report due date.</li> </ul> | (Section 3.3 and 3.5 of Attachment E1) |

**Table E2-4**

**Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Method</b>                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Notification              | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Not Applicable                                   |
| Monitoring                | Conduct spill-specific monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (Section 2 of Attachment E1)                     |
| Reporting                 | <ul style="list-style-type: none"> <li>If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred.</li> <li>Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1<sup>st</sup> after the end of the calendar year in which the spills occur.</li> </ul> | (Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1) |

**Table E2-5  
Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters**

| <b>Spill Requirements</b> | <b>Due</b>                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Method</b>                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Notification              | <p><b>Within two (2) hours</b> of the Enrollee’s knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State:</p> <p>Notify California Office of Emergency Services and obtain a notification control number.</p> <p>Not applicable to a spill of less than 1,000 gallons.</p>                                                       | <p>California Office of Emergency Services<br/>at: (800) 852-7550</p> <p>(Section 1 of Attachment E1)</p> |
| Monitoring                | Conduct visual monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                | (Section 2 of Attachment E1)                                                                              |
| Reporting                 | <ul style="list-style-type: none"> <li>• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1<sup>st</sup> after the end of the calendar year in which the spills occur.</li> <li>• Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.</li> </ul> | (Sections 3.6, 3.7 and 4.4 of Attachment E1)                                                              |

## Appendix F

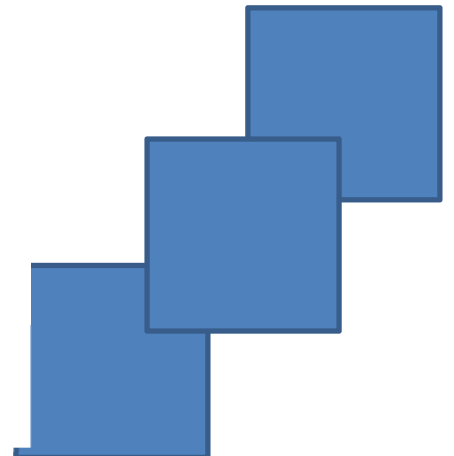
### Sewer Spill Estimation Guide

This page is intentionally left blank.



# SEWER SPILL ESTIMATION GUIDE

**Developed by the Orange County  
Area Waste Discharge  
Requirements Steering Committee**





# **Sewer Spill Estimation Guide**

**A Guide to Estimating Sanitary Sewer Overflow (SSO) Volumes**

**Developed by the Orange County Area  
Waste Discharge Requirements Steering Committee  
Orange County, CA**

**February 18, 2014**  
**Revised May 15, 2014**

## Acknowledgements

This Sewer Spill Estimation Guide has been compiled through the efforts of members of the Orange County Wastewater Discharge Requirements (WDR) Steering Committee. This committee was originally formed to address the requirements of the original WDR imposed by the California Regional Water Quality Board, Region 8 and later the statewide WDR imposed by the California State Water Resources Control Board. Committee members who assisted in the compilation of this Sewer Spill Estimation Guide are:

|                      |                                         |                                      |
|----------------------|-----------------------------------------|--------------------------------------|
| Nicholas J. Arhontes | Director<br>Facilities Support Services | Orange County Sanitation District    |
| Peggy Echavarria     | Executive Assistant                     | Orange County Sanitation District    |
| Gene Estrada         | Environmental Program Manager           | City of Orange                       |
| Rob Hamers           | District Engineer                       | Costa Mesa Sanitary District         |
| Robert Kreg          | (Former) Director of Support Services   | South Coast Water District (Retired) |

## Disclaimer

This Sewer Spill Estimation Guide is freely offered to agencies to assist the user with the estimation process for a sanitary sewer overflow. Methods used for spill estimation and the estimate itself are solely the responsibility of the agency making the estimate. The authors or contributors to this Sewer Spill Estimation Guide do not accept any responsibility for the spill estimation methods used; their accuracy or any spill estimate determined through the use of this guide. Information found in this guide is commonly available on the internet and is also common practice with many cities and sewerage agencies throughout Southern California.

No statewide or national standards issued by a regulatory agency exist at this time.

## Table of Contents

|                                                       |    |
|-------------------------------------------------------|----|
| Acknowledgements.....                                 | 1  |
| Disclaimer.....                                       | 1  |
| SSO Volume Estimation.....                            | 3  |
| Start Time.....                                       | 4  |
| Stop Time.....                                        | 4  |
| Photographs.....                                      | 5  |
| Flow Rate.....                                        | 5  |
| Volume Estimation Methods.....                        | 5  |
| Visual or Eyeball Method.....                         | 5  |
| Measured Volume.....                                  | 6  |
| Counting Connections.....                             | 8  |
| Pick and Vent Holes in Manhole Covers.....            | 8  |
| Pick and Vent Hole Estimation Chart.....              | 10 |
| Manhole Ring.....                                     | 12 |
| Partially Covered Manhole.....                        | 13 |
| Open Manhole.....                                     | 15 |
| Pictorial Reference.....                              | 18 |
| City of San Diego Manhole Overflow Picture Chart..... | 19 |
| SSCSC Manhole Overflow Gauge.....                     | 20 |
| Gutter Flow (Simplified Version).....                 | 21 |
| Bucket Method.....                                    | 22 |
| Pipe Size.....                                        | 23 |
| Metered Flow.....                                     | 24 |
| Rain Events.....                                      | 25 |
| Saturated Soils.....                                  | 25 |
| Combo Truck or Vacuum Truck Recovery.....             | 26 |
| Conversion Factors.....                               | 27 |
| Volumes Recovered with Trucks or Pumped to Tanks..... | 27 |
| References.....                                       | 28 |
| Sample Worksheet.....                                 | 29 |

## **SSO Volume Estimation**

Accurate flow estimation is essential to determine the volume of a Sanitary Sewer Overflow (SSO). An accurate estimate of an SSO is required for reporting to the California Integrated Water Quality System (CIQWS) and to the local health care agency. The estimated volume of an SSO is used to determine the category of the SSO and can also be used in the calculation of penalties or fines from the State or Regional Water Quality Control Boards in California. Additionally, accurate flow estimation is important to determine the extent of the cleanup and its effectiveness.

Volume estimation is basically the flow rate (gallons per minute) times the amount of time (in minutes) the flow has occurred. Each SSO tends to be unique requiring different strategies for determining the volume of the SSO. Different methods can also be used for the same SSO acting as a check to ensure the most accurate estimate. The method(s) utilized will be determined by several factors including the type of SSO and the personnel responding. Some SSO volumes, due to terrain, rainfall or other factors, can be very difficult for field staff to determine and may require someone with additional expertise. There is no one method that works for all types of SSOs. The following are methods that may be utilized for SSO volume estimation. These methods are effective means of estimating a sewer spill volume during dry weather but may not be effective during rain events.

During rain events, infiltration and/or inflow into the collection system and runoff in the stormwater system, including the curb and gutter, can affect the SSO estimate. When estimating an SSO during a rain event, the SSO estimate is to include only the wastewater that left the collection system and not any waters that the wastewater comingled with after leaving the system. The same is true for any wash down water; although contaminated, the water is not considered part of the SSO estimate. Any water that infiltrated into the collection system upstream of the SSO and subsequently became part of the SSO is included in the SSO volume estimate.

## **Start Time**

Determining the start time for an SSO is one of the most critical, yet can be one of the most difficult, factors to determine. Depending upon the location and time of day, an SSO may occur for some time before it is reported to the City or Agency or it may trickle for an extended period of time before being noticed. What is known is that the SSO started some time before the City or Agency was notified. It is common for SSOs to start and stop as flows in the pipeline routinely rise and fall because most blockages do not entirely block the flow in the pipe. Every effort should be utilized to determine the most accurate start time of each SSO. These efforts may include:

- If possible, contact the person who reported the SSO to determine when they became aware of the SSO.
- Make contact with residences or businesses in the area of the SSO to determine if there were any witnesses that could help establish the start time.
- Conditions change during the SSO. This is particularly true in remote areas out of public view. Initially, there may be an amount of toilet paper and solids around the spill site. This will increase the longer the SSO continues. After a few days to a week, these may form a light brown residue that may turn dark after a few weeks to a month.

Lacking direct evidence supporting a specific start time the operator should rely upon their experience and system flow characteristics based upon observed conditions to establish a reasonable estimated start time for the event. The agency's management staff should review the estimate before being finalized. Methods used to establish the start time should be documented.

## **Stop Time**

The stop time is the time that wastewater stopped overflowing. For manhole covers in low areas, this is noted by water flowing back into the manhole through the vent holes and should be easy to determine by SSO response personnel. Care should be taken to accurately record the time that the SSO stopped.

## **Photographs**

Take photographs of the spill event. Try to include objects of known size in the photographs to give a perspective of the extent of the spill. Photographs should include the initial spill, remediation efforts, clean up, and the spill area after the spill remediation has been completed. Photographs should be maintained with the spill report information.

## **Flow Rate**

The flow rate is the volume of flow per unit time that is escaping from the collection system. SSOs do not always occur at a constant rate. This is because flows into the collection system are not constant and rise and fall throughout the day. Additionally, most blockages are not full blockages. Pressure buildup as the wastewater surcharges in the pipe can cause the blockage to clear or partially clear, resulting in changes to the flow rate.

To make an SSO volume estimate as accurate as possible, the onsite City or Agency employee should note the time and the amount of change of any significant differences in flow noticed during the event. For example, if the employee determines the flow rate escaping from the manhole is 100 gallons per minute when they arrive on scene but noticed that it has dropped to 50 gallons per minute five minutes later, their report should reflect that fact. The estimated flow rate and the time period for that flow rate should be recorded. During any one SSO event there could be multiple flow rates spread over the duration of the SSO.

## **Volume Estimation Methods**

### **Visual or Eyeball Method**

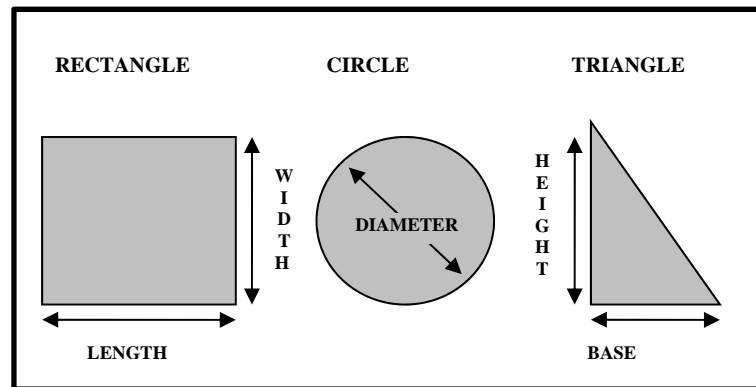
The volume of small spills can be estimated using an “eyeball estimate.” To use this method, imagine the amount of water that would spill from a bucket or a barrel. A full bucket may contain 1, 2 or 5 gallons and a barrel contains 55 gallons when full. If the spill is larger than 55 gallons, try to divide the standing water into barrels and then multiply by 55 gallons. This method is useful for contained spills up to approximately 200 gallons. This method can be useful on spills that occur on hard surfaces such as concrete or asphalt. Crews can be trained

by estimating the volume of a measured amount of potable water spilled upon concrete and asphalt surfaces.

## Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

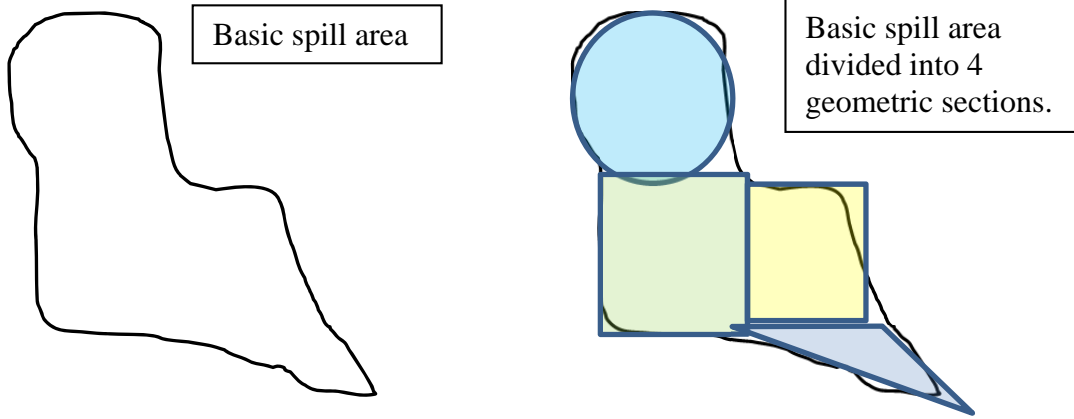
### *Common Shapes and Dimensions*



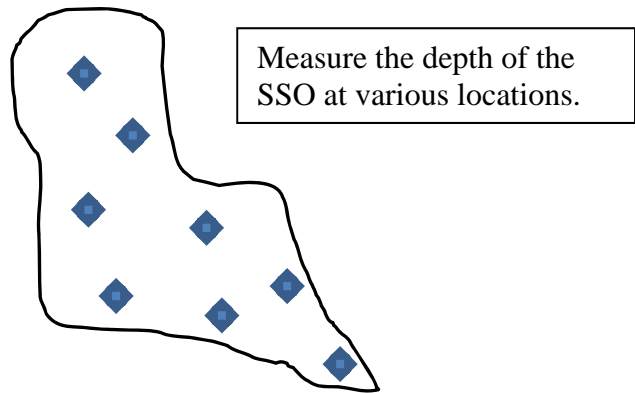
1. Sketch the shape of the contained wastewater.
2. Measure or pace off the dimensions.
3. Measure the depth at several locations and select an average.
4. Convert the dimensions, including depth, to feet.
5. Calculate the area:  
Rectangle:     Area = length (feet) x width (feet)  
Circle:         Area = diameter (feet) x diameter (feet) x 3.14 divided by 4  
Triangle:       Area = base (feet) x height (feet) x 0.5
6. Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.
7. Multiply the volume in cubic feet by 7.48 to convert to gallons

Not all SSOs will conform to a specific shape. When this occurs, break up the area of the SSO into various shapes or segments, then calculate the amount of wastewater spilled in each segment, adding them together to arrive at the total spill volume.

Example:



Determine the area of each of the geometric sections adding them all together to determine the total area of the spill.



| Inch to Feet Conversion: |    |       |
|--------------------------|----|-------|
| Inches                   | to | Feet  |
| 1/8"                     | =  | 0.01' |
| 1/4"                     | =  | 0.02' |
| 3/8"                     | =  | 0.03' |
| 1/2"                     | =  | 0.04' |
| 5/8"                     | =  | 0.05' |
| 3/4"                     | =  | 0.06' |
| 7/8"                     | =  | 0.07' |
| 1"                       | =  | 0.08' |
| 2"                       | =  | 0.17' |
| 3"                       | =  | 0.25' |
| 4"                       | =  | 0.33' |
| 5"                       | =  | 0.42' |
| 6"                       | =  | 0.50' |
| 7"                       | =  | 0.58' |
| 8"                       | =  | 0.67' |
| 9"                       | =  | 0.75' |
| 10"                      | =  | 0.83' |
| 11"                      | =  | 0.92' |
| 12"                      | =  | 1.00' |

Where it is difficult to measure wet spots on asphalt, use a depth of 0.0026' or 1/32". For wet spots on concrete use depths of 0.0013' or 1/64" for reasonable estimates.

Sample Calculation:  
 A 20 ft x 20 ft square wet spot on concrete equals 3.9 gal  
 and for asphalt is 7.8 gal.

## Counting Connections

Once the location of the blockage has been established, the amount of the SSO could be estimated by counting the number of upstream connections. On the sewer atlas maps or GIS system, locate the pipeline where the SSO occurred. Count all of the developed parcels that are connected to the pipeline upstream of the blockage. The typical single family residential parcel may discharge 8 to 10 gallons of wastewater per hour during active times of the day. For a multi-family residential development such as an apartment or condo complex, count each apartment as a single family residential unit. Use the higher flow number (10 gallons per hour) during typical peak flow hours and the lower flow number (8 gallons per hour) during low flow periods. Multiply the number of connections times the average flow (8 to 10 gallons per hour) times the time period (duration) that the SSO occurred.

Example for an SSO occurring on a weekday at 8:00am:

|                                        |                     |
|----------------------------------------|---------------------|
| Number of upstream connections         | 22                  |
| Estimated flow per parcel              | 10 gallons per hour |
| Duration of SSO event                  | 45 minutes          |
| Total spill estimation (22 x 10 x .75) | 165 gallons         |

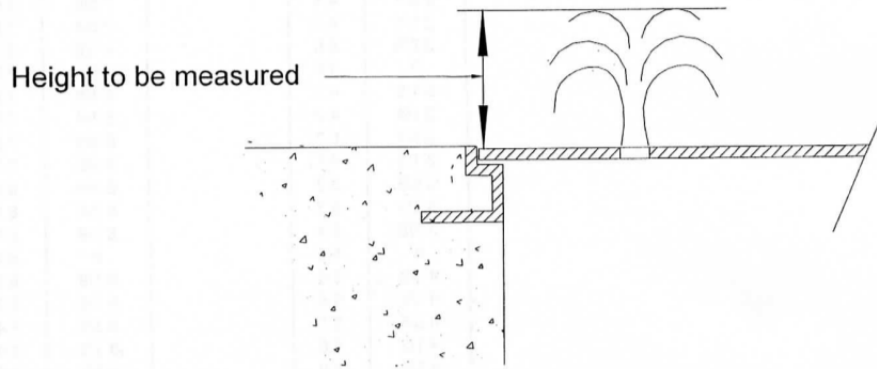
(22 connections x 10 gallons per hour x 45 minutes (.75 hour) = 165 gallons)

Data may be available in your drainage area from your capacity planners at your city or agency. Consult with them on reasonable flow amounts or rates of flow.

## Pick and Vent Holes in Manhole Covers

Small SSOs will occur where the wastewater escaping from the manhole is isolated to the pick or vent holes in the cover. Larger SSOs may involve both the discharge from the pick and/or vent holes and the gap between the manhole cover and manhole frame. To estimate an SSO occurring from the manhole pick and vent holes, measure the height of the wastewater plume exiting the holes. Find that height and hole diameter on the manhole pick or vent hole chart to determine the flow rate escaping the pick/vent hole. Multiply the flow rate times the number of holes that are discharging wastewater. Once the total volume (gpm) has been determined,

multiply the gpm by the duration of the SSO in minutes. This will result in the total estimated gallons of the SSO.



Example: Measured height of plume exiting pick/vent hole is 1 inch from a ½-inch vent hole and there are 4 vent holes. The total volume per minute would be .94 gpm per hole (from attached chart) or 3.76 gpm total (.94 gpm x 4 holes) from the manhole cover. If the SSO lasted one hour, the total wastewater lost would be 226 gallons (3.76 x 60 = 225.6).

|                                       |             |
|---------------------------------------|-------------|
| Number of pick holes                  | 4           |
| Flow from each pick hole              | .94 gpm     |
| Duration of SSO                       | 60 minutes  |
| Total SSO volume (.94 x 4 x 60=225.6) | 226 gallons |

## Pick and Vent Hole Estimation Chart

**Estimated Flows thru Manhole Cover Vent Holes and Pick Holes for SSO estimating**

| Hole Dia.<br>inches | Area<br>sq. ft.                  | Coeff. of Vel.<br>Cv | Coeff. Of Cont.<br>Cc | C<br>Cv x Cc        | Water Ht<br>inches | Water Ht<br>inches | Water Ht<br>feet   | Q<br>cfs                                     | Q<br>gpm            | Q<br>gph           |
|---------------------|----------------------------------|----------------------|-----------------------|---------------------|--------------------|--------------------|--------------------|----------------------------------------------|---------------------|--------------------|
|                     | Formula:<br>=0.785*Ax*<br>Ax/144 |                      |                       | Formula:<br>=Ix*449 |                    |                    | Formula:<br>=Gx/12 | Formula:<br>=Ex*Bx*(S<br>QRT(2*32.<br>2*Hx)) | Formula:<br>=Ix*449 | Formula:<br>=Jx*60 |
| <b>Vent Hole</b>    |                                  |                      |                       |                     |                    |                    |                    |                                              |                     |                    |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1/16 th            | 0.063              | 0.005              | 0.0005                                       | 0.23                | 14                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1/8 th             | 0.125              | 0.010              | 0.0007                                       | 0.33                | 20                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1/4 th             | 0.250              | 0.021              | 0.0010                                       | 0.47                | 28                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | one half           | 0.500              | 0.042              | 0.0015                                       | 0.66                | 40                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 3/4 ths            | 0.750              | 0.063              | 0.0018                                       | 0.81                | 49                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 inch             | 1.000              | 0.083              | 0.0021                                       | 0.94                | 56                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 1/4 "            | 1.250              | 0.104              | 0.0023                                       | 1.05                | 63                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 3/8"             | 1.375              | 0.115              | 0.0024                                       | 1.10                | 66                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 1/2"             | 1.500              | 0.125              | 0.0026                                       | 1.15                | 69                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 5/8"             | 1.625              | 0.135              | 0.0027                                       | 1.20                | 72                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 1 3/4"             | 1.750              | 0.146              | 0.0028                                       | 1.24                | 74                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 2 inches           | 2.000              | 0.167              | 0.0030                                       | 1.33                | 80                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 2 1/4"             | 2.250              | 0.188              | 0.0031                                       | 1.41                | 84                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 2 1/2"             | 2.500              | 0.208              | 0.0033                                       | 1.48                | 89                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 2 3/4"             | 2.750              | 0.229              | 0.0035                                       | 1.56                | 93                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 3 inches           | 3.000              | 0.250              | 0.0036                                       | 1.62                | 97                 |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 3 1/4"             | 3.250              | 0.271              | 0.0038                                       | 1.69                | 101                |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 3 1/2"             | 3.500              | 0.292              | 0.0039                                       | 1.75                | 105                |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 3 3/4"             | 3.750              | 0.313              | 0.0040                                       | 1.82                | 109                |
| 0.50                | 0.00136                          | 0.945                | 0.70                  | 0.662               | 4.000              | 4.000              | 0.333              | 0.0042                                       | 1.88                | 113                |
| <b>Vent Hole</b>    |                                  |                      |                       |                     |                    |                    |                    |                                              |                     |                    |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1/16 th            | 0.063              | 0.005              | 0.0011                                       | 0.51                | 31                 |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1/8 th             | 0.125              | 0.010              | 0.0016                                       | 0.72                | 43                 |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1/4 th             | 0.250              | 0.021              | 0.0023                                       | 1.02                | 61                 |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | one half           | 0.500              | 0.042              | 0.0032                                       | 1.44                | 87                 |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 3/4 ths            | 0.750              | 0.063              | 0.0039                                       | 1.77                | 106                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 inch             | 1.000              | 0.083              | 0.0045                                       | 2.04                | 122                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 1/4 "            | 1.250              | 0.104              | 0.0051                                       | 2.28                | 137                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 3/8"             | 1.375              | 0.115              | 0.0053                                       | 2.39                | 144                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 1/2"             | 1.500              | 0.125              | 0.0056                                       | 2.50                | 150                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 5/8"             | 1.625              | 0.135              | 0.0058                                       | 2.60                | 156                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 1 3/4"             | 1.750              | 0.146              | 0.0060                                       | 2.70                | 162                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 2 inches           | 2.000              | 0.167              | 0.0064                                       | 2.89                | 173                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 2 1/4"             | 2.250              | 0.188              | 0.0068                                       | 3.06                | 184                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 2 1/2"             | 2.500              | 0.208              | 0.0072                                       | 3.23                | 194                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 2 3/4"             | 2.750              | 0.229              | 0.0075                                       | 3.38                | 203                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 3 inches           | 3.000              | 0.250              | 0.0079                                       | 3.53                | 212                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 3 1/4"             | 3.250              | 0.271              | 0.0082                                       | 3.68                | 221                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 3 1/2"             | 3.500              | 0.292              | 0.0085                                       | 3.82                | 229                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 3 3/4"             | 3.750              | 0.313              | 0.0088                                       | 3.95                | 237                |
| 0.75                | 0.00307                          | 0.955                | 0.67                  | 0.640               | 4.000              | 4.000              | 0.333              | 0.0091                                       | 4.08                | 245                |
| <b>Vent Hole</b>    |                                  |                      |                       |                     |                    |                    |                    |                                              |                     |                    |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1/16 th            | 0.063              | 0.005              | 0.0020                                       | 0.88                | 53                 |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1/8 th             | 0.125              | 0.010              | 0.0028                                       | 1.25                | 75                 |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1/4 th             | 0.250              | 0.021              | 0.0039                                       | 1.77                | 106                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | one half           | 0.500              | 0.042              | 0.0056                                       | 2.50                | 150                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 3/4 ths            | 0.750              | 0.063              | 0.0068                                       | 3.06                | 184                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 inch             | 1.000              | 0.083              | 0.0079                                       | 3.54                | 212                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 1/4 "            | 1.250              | 0.104              | 0.0088                                       | 3.96                | 237                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 3/8"             | 1.375              | 0.115              | 0.0092                                       | 4.15                | 249                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 1/2"             | 1.500              | 0.125              | 0.0097                                       | 4.33                | 260                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 5/8"             | 1.625              | 0.135              | 0.0100                                       | 4.51                | 271                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 1 3/4"             | 1.750              | 0.146              | 0.0104                                       | 4.68                | 281                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 2 inches           | 2.000              | 0.167              | 0.0111                                       | 5.00                | 300                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 2 1/4"             | 2.250              | 0.188              | 0.0118                                       | 5.31                | 318                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 2 1/2"             | 2.500              | 0.208              | 0.0125                                       | 5.59                | 336                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 2 3/4"             | 2.750              | 0.229              | 0.0131                                       | 5.87                | 352                |
| 1.00                | 0.00545                          | 0.960                | 0.65                  | 0.624               | 3 inches           | 3.000              | 0.250              | 0.0136                                       | 6.13                | 368                |

## Pick and Vent Hole Estimation Chart - continued

**Estimated Flows thru Manhole Cover Vent Holes and Pick Holes for SSO estimating**

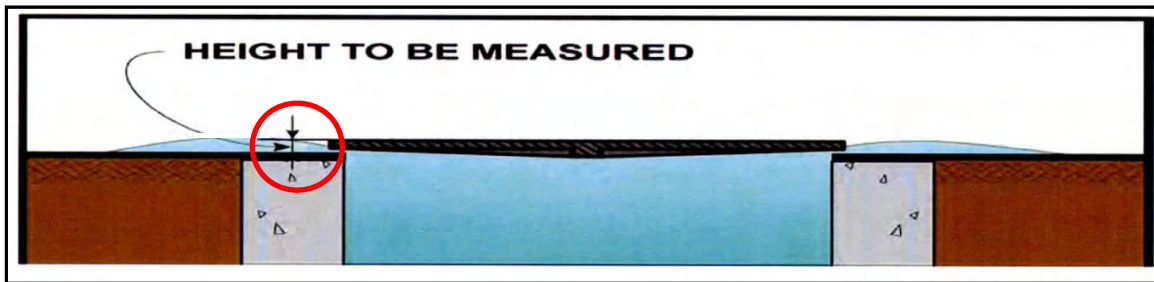
| Hole Dia.<br>Inches                | Area<br>sq. ft.                    | Coeff. of Vel.<br>Cv | Coeff. Of Cont.<br>Cc | C<br>Cv x Cc         | Water Ht<br>Inches | Water Ht<br>Inches | Water Ht<br>feet    | Q<br>cfs                                        | Q<br>gpm             | Q<br>gph            |
|------------------------------------|------------------------------------|----------------------|-----------------------|----------------------|--------------------|--------------------|---------------------|-------------------------------------------------|----------------------|---------------------|
|                                    | Formula:<br>=0.785*A*x*<br>A/x/144 |                      |                       | Formula:<br>=I*x^449 |                    |                    | Formula:<br>=G*x/12 | Formula:<br>=E*x*B*x*(S<br>QRT(2*32.<br>2*H*x)) | Formula:<br>=I*x^449 | Formula:<br>=J*x*60 |
| <b>Vent Hole</b>                   |                                    |                      |                       |                      |                    |                    |                     |                                                 |                      |                     |
| 1.00                               | 0.00545                            | 0.960                | 0.65                  | 0.624                | 3 1/4"             | 3.250              | 0.271               | 0.0142                                          | 6.38                 | 383                 |
| 1.00                               | 0.00545                            | 0.960                | 0.65                  | 0.624                | 3 1/2"             | 3.500              | 0.292               | 0.0147                                          | 6.62                 | 397                 |
| 1.00                               | 0.00545                            | 0.960                | 0.65                  | 0.624                | 3 3/4"             | 3.750              | 0.313               | 0.0153                                          | 6.85                 | 411                 |
| 1.00                               | 0.00545                            | 0.960                | 0.65                  | 0.624                | 4.000              | 4.000              | 0.333               | 0.0158                                          | 7.08                 | 425                 |
| <b>Pick Hole semicircular area</b> |                                    |                      |                       |                      |                    |                    |                     |                                                 |                      |                     |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 1/16 th            | 0.063              | 0.005               | 0.0010                                          | 0.44                 | 27                  |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 1/8 th             | 0.125              | 0.010               | 0.0014                                          | 0.63                 | 38                  |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 1/4 th             | 0.250              | 0.021               | 0.0020                                          | 0.89                 | 53                  |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | one half           | 0.500              | 0.042               | 0.0028                                          | 1.25                 | 75                  |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 3/4 ths            | 0.750              | 0.063               | 0.0034                                          | 1.53                 | 92                  |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 1 inch             | 1.000              | 0.083               | 0.0039                                          | 1.77                 | 106                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 1-1/2 inch         | 1.500              | 0.125               | 0.0048                                          | 2.17                 | 130                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 2 inches           | 2.000              | 0.167               | 0.0056                                          | 2.51                 | 150                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 2 1/4"             | 2.250              | 0.188               | 0.0059                                          | 2.66                 | 159                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 2 1/2"             | 2.500              | 0.208               | 0.0062                                          | 2.80                 | 168                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 2 3/4"             | 2.750              | 0.229               | 0.0065                                          | 2.94                 | 176                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 3 inches           | 3.000              | 0.250               | 0.0068                                          | 3.07                 | 184                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 3 1/4"             | 3.250              | 0.271               | 0.0071                                          | 3.19                 | 192                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 3 1/2"             | 3.500              | 0.292               | 0.0074                                          | 3.31                 | 199                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 3 3/4"             | 3.750              | 0.313               | 0.0076                                          | 3.43                 | 206                 |
| 1.00                               | 0.00273                            | 0.960                | 0.65                  | 0.624                | 4.000              | 4.000              | 0.333               | 0.0079                                          | 3.54                 | 213                 |

Courtesy of OCSD: Created 5/17/99 and modified 5/15/14, as an estimating tool for field staff. This is based on flow through orifices assumptions. Your city or agency may want to develop a similar tool.

**$Q=CA(2gh)^{.5}$     Where  $Q=cfs$      $C=Cv \times Cc$      $A=area(sq. ft.)$      $g=32.2 ft/sec/sec$   
 **$h=$  water height (ft.)****

## Manhole Ring

Some manhole covers in use today typically only have one pick hole forcing most of the wastewater to escape from the perimeter of the manhole cover during higher flow SSOs. To estimate the volume in this example, measure the observed height of the wastewater plume exiting the manhole cover. Find the height and manhole diameter on the Manhole with Cover in Place to determine the flow rate escaping the manhole. The chart has two columns, one for 24-inch diameter covers and one for 36-inch diameter covers. Wastewater will also be escaping from the pick hole and must be accounted for separately by following the instructions for estimating an SSO from pick/vent hole. Multiply the flow rate times the number of holes that are discharging. The total estimated rate (gpm) is determined by adding together the rate being lost (gpm) from around the cover with the rate being lost (gpm) from the pick and/or vent hole(s). Once the total rate (gpm) has been determined, multiply the gpm by the duration of the SSO in minutes. This will result in the total estimated gallons of the SSO.



Example: The measured height of the plume exiting the ring of a 36-inch manhole is 1 inch. The total volume per minute would be 13 gpm from around the ring of a 36-inch manhole cover (from the attached chart). (Calculate the amount exiting the pick hole(s) and add to the total being lost around the ring). If the SSO lasted one hour the total wastewater lost would be 780 gallons ( $13 \times 60 = 780$ ).

|                                                                            |             |
|----------------------------------------------------------------------------|-------------|
| Estimated loss around ring (from chart)                                    | 13 gpm      |
| Duration of SSO                                                            | 60 minutes  |
| Total SSO (without loss from pick hole)                                    | 780 gallons |
| (13 gal/min x 60 minutes = 780 gallons plus amount lost from pick hole(s)) |             |

**ESTIMATED SSO FLOW OUT OF MH WITH COVER IN PLACE**

**24" COVER**

| Height of spout above M/H rim<br>H in inches | SSO FLOW<br>Q |        | Min. Sewer size in which these flows are possible |
|----------------------------------------------|---------------|--------|---------------------------------------------------|
|                                              | in gpm        | in MGD |                                                   |
| 1/4                                          | 1             | 0.001  |                                                   |
| 1/2                                          | 3             | 0.004  |                                                   |
| 3/4                                          | 6             | 0.008  |                                                   |
| 1                                            | 9             | 0.013  |                                                   |
| 1 1/4                                        | 12            | 0.018  |                                                   |
| 1 1/2                                        | 16            | 0.024  |                                                   |
| 1 3/4                                        | 21            | 0.030  |                                                   |
| 2                                            | 25            | 0.037  |                                                   |
| 2 1/4                                        | 31            | 0.045  |                                                   |
| 2 1/2                                        | 38            | 0.054  |                                                   |
| 2 3/4                                        | 45            | 0.065  |                                                   |
| 3                                            | 54            | 0.077  |                                                   |
| 3 1/4                                        | 64            | 0.092  |                                                   |
| 3 1/2                                        | 75            | 0.107  |                                                   |
| 3 3/4                                        | 87            | 0.125  |                                                   |
| 4                                            | 100           | 0.145  |                                                   |
| 4 1/4                                        | 115           | 0.166  |                                                   |
| 4 1/2                                        | 131           | 0.189  |                                                   |
| 4 3/4                                        | 148           | 0.214  |                                                   |
| 5                                            | 166           | 0.240  |                                                   |
| 5 1/4                                        | 185           | 0.266  |                                                   |
| 5 1/2                                        | 204           | 0.294  |                                                   |
| 5 3/4                                        | 224           | 0.322  | 6"                                                |
| 6                                            | 244           | 0.352  |                                                   |
| 6 1/4                                        | 265           | 0.382  |                                                   |
| 6 1/2                                        | 286           | 0.412  |                                                   |
| 6 3/4                                        | 308           | 0.444  |                                                   |
| 7                                            | 331           | 0.476  |                                                   |
| 7 1/4                                        | 354           | 0.509  |                                                   |
| 7 1/2                                        | 377           | 0.543  |                                                   |
| 7 3/4                                        | 401           | 0.578  | 8"                                                |
| 8                                            | 426           | 0.613  |                                                   |
| 8 1/4                                        | 451           | 0.649  |                                                   |
| 8 1/2                                        | 476           | 0.686  |                                                   |
| 8 3/4                                        | 502           | 0.723  |                                                   |
| 9                                            | 529           | 0.761  |                                                   |

**36" COVER**

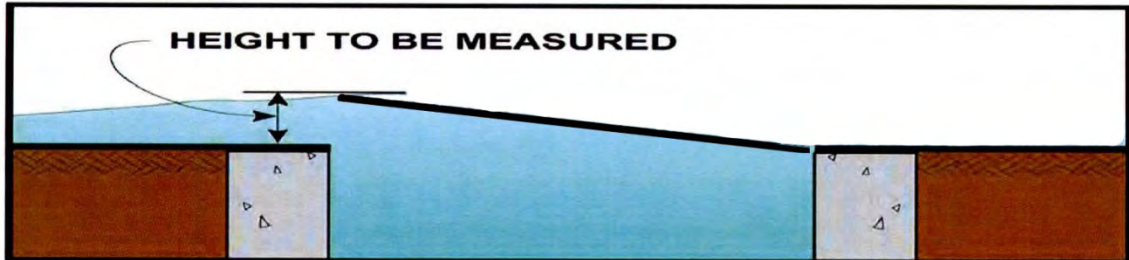
| Height of spout above M/H rim<br>H in inches | SSO FLOW<br>Q |        | Min. Sewer size in which these flows are possible |
|----------------------------------------------|---------------|--------|---------------------------------------------------|
|                                              | in gpm        | in MGD |                                                   |
| 1/4                                          | 1             | 0.002  |                                                   |
| 1/2                                          | 4             | 0.006  |                                                   |
| 3/4                                          | 8             | 0.012  |                                                   |
| 1                                            | 13            | 0.019  |                                                   |
| 1 1/4                                        | 18            | 0.026  |                                                   |
| 1 1/2                                        | 24            | 0.035  |                                                   |
| 1 3/4                                        | 31            | 0.044  |                                                   |
| 2                                            | 37            | 0.054  |                                                   |
| 2 1/4                                        | 45            | 0.065  |                                                   |
| 2 1/2                                        | 55            | 0.079  |                                                   |
| 2 3/4                                        | 66            | 0.095  |                                                   |
| 3                                            | 78            | 0.113  |                                                   |
| 3 1/4                                        | 93            | 0.134  |                                                   |
| 3 1/2                                        | 109           | 0.157  |                                                   |
| 3 3/4                                        | 127           | 0.183  |                                                   |
| 4                                            | 147           | 0.211  |                                                   |
| 4 1/4                                        | 169           | 0.243  |                                                   |
| 4 1/2                                        | 192           | 0.276  |                                                   |
| 4 3/4                                        | 217           | 0.312  | 6"                                                |
| 5                                            | 243           | 0.350  |                                                   |
| 5 1/4                                        | 270           | 0.389  |                                                   |
| 5 1/2                                        | 299           | 0.430  |                                                   |
| 5 3/4                                        | 327           | 0.471  |                                                   |
| 6                                            | 357           | 0.514  |                                                   |
| 6 1/4                                        | 387           | 0.558  | 8"                                                |
| 6 1/2                                        | 419           | 0.603  |                                                   |
| 6 3/4                                        | 451           | 0.649  |                                                   |
| 7                                            | 483           | 0.696  |                                                   |
| 7 1/4                                        | 517           | 0.744  |                                                   |
| 7 1/2                                        | 551           | 0.794  |                                                   |
| 7 3/4                                        | 587           | 0.845  | 10"                                               |
| 8                                            | 622           | 0.896  |                                                   |
| 8 1/4                                        | 659           | 0.949  |                                                   |
| 8 1/2                                        | 697           | 1.003  |                                                   |
| 8 3/4                                        | 734           | 1.057  |                                                   |
| 9                                            | 773           | 1.113  |                                                   |

The formula used to develop Table 1 measures the maximum height of the water coming out of the maintenance manhole above the rim. The formula was taken from Hydraulics and Its Application by A.H. Gibson (Constable & Co. Limited).

**Partially Covered Manhole**

Sometimes an SSO will occur that only lifts one side of the manhole cover. This is especially true of manholes where the cover is on an incline with the cover lifting on the downward side of the manhole. To estimate the volume of an SSO under these conditions, calculate the area (in square feet) from where the wastewater is escaping and the velocity (in feet per second) that the wastewater is normally traveling in the sewer at half the pipe depth. The velocity is estimated from visual observation with 2 feet/second or less being a small velocity, 4 to 5 feet/second being a medium velocity, and 7 feet/second or higher being a large velocity. Velocities in the sewer above 7 feet/second may be strong enough to blow the manhole cover off. Higher velocities also tend to raise the manhole lid higher. Next, multiply by the duration

(in seconds) that the SSO occurred. Finally, multiply by 7.48 to determine the volume of the SSO in gallons. The formula is Volume (gallons) = Area (sq. ft.) x Velocity (ft/sec) x Time (in seconds) x 7.48 (gal/cu. ft.).



Example: The measured height of the plume exiting the side ring of a 24-inch manhole is 2 inches. Based upon the data provided in the Area Calculation Chart below, a 2-inch plume from one side of a 24-inch manhole cover provides 0.524 square feet of area. The velocity of the flow is estimated at 4 ft/sec (visual observation) with the assumed duration of the flow lasting for one hour. The total amount of the SSO is estimated at 56,441 gallons (.524 x 4 x 60 x 60 x 7.48 = 56,441)

|                                                                                   |                   |
|-----------------------------------------------------------------------------------|-------------------|
| Height of plume                                                                   | 2 inches          |
| Area for 24 inch manhole                                                          | 0.524 square feet |
| Estimated velocity                                                                | 4 ft/sec          |
| Duration of SSO                                                                   | 60 minutes        |
| Conversion from cu. ft. to gallons                                                | 7.48              |
| Total estimated SSO volume                                                        | 56,441 gallons    |
| (.524 sq. ft. x 4 ft/sec x 60 minutes x 60 sec/min x 7.48 gal/cu ft = 56,441 gal) |                   |

| Area Calculation Chart |                 |                 |
|------------------------|-----------------|-----------------|
| Height of Flow         | 24 Inch Manhole | 36 Inch Manhole |
| .5 inches              | 0.131 sq. ft.   | 0.195 sq. ft.   |
| 1 inches               | 0.262 sq. ft.   | 0.391 sq. ft.   |
| 1.5 inches             | 0.393 sq. ft.   | 0.586 sq. ft.   |
| 2 inches               | 0.524 sq. ft.   | 0.782 sq. ft.   |
| 2.5 inches             | 0.655 sq. ft.   | 0.977 sq. ft.   |
| 3 inches               | 0.786 sq. ft.   | 1.173 sq. ft.   |
| 3.5 inches             | 0.917 sq. ft.   | 1.368 sq. ft.   |
| 4 inches               | 1.048 sq. ft.   | 1.564 sq. ft.   |

## Open Manhole

In large events the force of the overflowing wastewater will have sufficient pressure and volume to unseat the cover from the frame and move the manhole cover away from the manhole. Typically, when the SSO rates reach approximately 7 cfs (approximately 3,000 gpm or about 4.32 mgd), there is sufficient flow and pressure to blow off the manhole cover. To estimate the volume of an SSO where the manhole cover has been removed, the average height of the plume of wastewater exiting the manhole must be measured. This measurement is from the pavement surface close to the manhole ring to the top of the plume. Take several measurements in several locations around the ring and average the findings. If possible, and being safe to protect yourself from the open manhole, find the average height of the plume for the size of the manhole lid (24-inch or 36-inch diameter) on the Area Calculation Chart to determine the rate of flow exiting the manhole. Multiply the flow rate expressed in gallons per minute from the chart multiplied by the duration of the SSO in minutes to determine the total volume of the SSO. A photo taken at a safe distance upon arrival may help you refine your estimate.



Example: Determine the observed height of the plume at several locations around the ring of the manhole and average the results. Determine the size of the manhole cover. If the average height of the plume exiting an open 24-inch diameter manhole is 2 inches, find 2 inches on the 24-inch Manhole Cover Removed Chart. Based upon the data provided in the Manhole Cover Removed Chart, the flow in gallons per minute would be 3,444 gpm. If the duration of the flow lasted for one hour (60 minutes), the total amount of the SSO would be estimated at 206,640 gallons ( $3,444 \times 60 = 206,640$ ).

|                                                    |                 |
|----------------------------------------------------|-----------------|
| Height of plume (average) on 24-inch manhole       | 2 inches        |
| Estimated flow from chart                          | 3,444 gpm       |
| Duration of SSO                                    | 60 minutes      |
| Estimated SSO total volume                         | 206,640 gallons |
| (Est flow from chart 3,444 x 60 minutes = 206,640) |                 |

**ESTIMATED SSO FLOW OUT OF M/H WITH COVER REMOVED**

**24" FRAME**

| Water Height above M/H frame<br>H in inches | SSO FLOW |        | Min. Sewer size in which these flows are possible |
|---------------------------------------------|----------|--------|---------------------------------------------------|
|                                             | Q        |        |                                                   |
|                                             | in gpm   | in MGD |                                                   |
| 1/8                                         | 28       | 0.04   |                                                   |
| 1/4                                         | 62       | 0.09   |                                                   |
| 3/8                                         | 111      | 0.16   |                                                   |
| 1/2                                         | 160      | 0.23   |                                                   |
| 5/8                                         | 215      | 0.31   | 6"                                                |
| 3/4                                         | 354      | 0.51   | 8"                                                |
| 7/8                                         | 569      | 0.82   | 10"                                               |
| 1                                           | 799      | 1.15   | 12"                                               |
| 1 1/8                                       | 1,035    | 1.49   |                                                   |
| 1 1/4                                       | 1,340    | 1.93   | 15"                                               |
| 1 3/8                                       | 1,660    | 2.39   |                                                   |
| 1 1/2                                       | 1,986    | 2.86   |                                                   |
| 1 5/8                                       | 2,396    | 3.45   | 18"                                               |
| 1 3/4                                       | 2,799    | 4.03   |                                                   |
| 1 7/8                                       | 3,132    | 4.51   |                                                   |
| 2                                           | 3,444    | 4.96   | 21"                                               |
| 2 1/8                                       | 3,750    | 5.4    |                                                   |
| 2 1/4                                       | 3,986    | 5.74   |                                                   |
| 2 3/8                                       | 4,215    | 6.07   |                                                   |
| 2 1/2                                       | 4,437    | 6.39   |                                                   |
| 2 5/8                                       | 4,569    | 6.58   | 24"                                               |
| 2 3/4                                       | 4,687    | 6.75   |                                                   |
| 2 7/8                                       | 4,799    | 6.91   |                                                   |
| 3                                           | 4,910    | 7.07   |                                                   |

**36" FRAME**

| Water Height above M/H frame<br>H in inches | SSO FLOW |        | Min. Sewer size in which these flows are possible |
|---------------------------------------------|----------|--------|---------------------------------------------------|
|                                             | Q        |        |                                                   |
|                                             | in gpm   | in MGD |                                                   |
| 1/8                                         | 49       | 0.07   |                                                   |
| 1/4                                         | 111      | 0.16   |                                                   |
| 3/8                                         | 187      | 0.27   | 6"                                                |
| 1/2                                         | 271      | 0.39   |                                                   |
| 5/8                                         | 361      | 0.52   | 8"                                                |
| 3/4                                         | 458      | 0.66   |                                                   |
| 7/8                                         | 556      | 0.8    | 10"                                               |
| 1                                           | 660      | 0.95   | 12"                                               |
| 1 1/8                                       | 1,035    | 1.49   |                                                   |
| 1 1/4                                       | 1,486    | 2.14   | 15"                                               |
| 1 3/8                                       | 1,951    | 2.81   |                                                   |
| 1 1/2                                       | 2,424    | 3.49   | 18"                                               |
| 1 5/8                                       | 2,903    | 4.18   |                                                   |
| 1 3/4                                       | 3,382    | 4.87   |                                                   |
| 1 7/8                                       | 3,917    | 5.64   | 21"                                               |
| 2                                           | 4,458    | 6.42   |                                                   |
| 2 1/8                                       | 5,000    | 7.2    | 24"                                               |
| 2 1/4                                       | 5,556    | 8      |                                                   |
| 2 3/8                                       | 6,118    | 8.81   |                                                   |
| 2 1/2                                       | 6,764    | 9.74   |                                                   |
| 2 5/8                                       | 7,403    | 10.66  |                                                   |
| 2 3/4                                       | 7,972    | 11.48  | 30"                                               |
| 2 7/8                                       | 8,521    | 12.27  |                                                   |
| 3                                           | 9,062    | 13.05  |                                                   |
| 3 1/8                                       | 9,604    | 13.83  |                                                   |
| 3 1/4                                       | 10,139   | 14.6   |                                                   |
| 3 3/8                                       | 10,625   | 15.3   | 36"                                               |
| 3 1/2                                       | 11,097   | 15.98  |                                                   |
| 3 5/8                                       | 11,569   | 16.66  |                                                   |
| 3 3/4                                       | 12,035   | 17.33  |                                                   |
| 3 7/8                                       | 12,486   | 17.98  |                                                   |
| 4                                           | 12,861   | 18.52  |                                                   |
| 4 1/8                                       | 13,076   | 18.83  |                                                   |
| 4 1/4                                       | 13,285   | 19.13  |                                                   |
| 4 3/8                                       | 13,486   | 19.42  |                                                   |

**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.

## Pictorial Reference

Currently there are two picture charts being widely used to assist with estimating SSO volumes. The older chart is the city of San Diego's Manhole Overflow Rate Chart with the newer chart being the CWEA Southern Section Collection Systems Committee (SSCSC) Manhole Overflow Gauge. Each chart is a pictorial depiction of how an overflowing manhole appears at a given flow rate. The SSCSC Manhole Overflow Gauge has an additional picture for each flow rate showing a wide angle view of the spill area. When using either of the pictorial reference charts, select which picture most accurately represents the SSO being estimated. Use the gpm of the associated picture multiplied times the duration of the SSO to determine the total spill volume. Example: If the selected picture shows 300 gpm and the duration of SSO is 55 minutes, the total estimated spill volume would be 16,500 gallons (300 gpm x 55 min).

|                                         |                |
|-----------------------------------------|----------------|
| Selected picture volume                 | 300 gpm        |
| Duration of SSO                         | 55 minutes     |
| Total estimated SSO                     | 16,500 gallons |
| (300 gpm x 55 minutes = 16,500 gallons) |                |

*Note:* Data was obtained at training facilities where potable water was metered and photos were taken at various flow rates.

Training facilities also exist at the Orange County Sanitation District in Fountain Valley, CA.

As a reference point, an 8-inch diameter sewer flowing half full at a velocity of 2.5 ft/sec would have a flow rate of about 192 gal/min. If fully blocked, the SSO rate would be 192 gpm. For a partial blockage, the SSO rate will be less.

Other agencies have developed above ground estimating tools such as frame and cover sets that can be pressurized using potable water and simple flow meters.

# City of San Diego Manhole Overflow Picture Chart



Wastewater Collection Division  
(619) 654-4160



rev. 4/99

## Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)



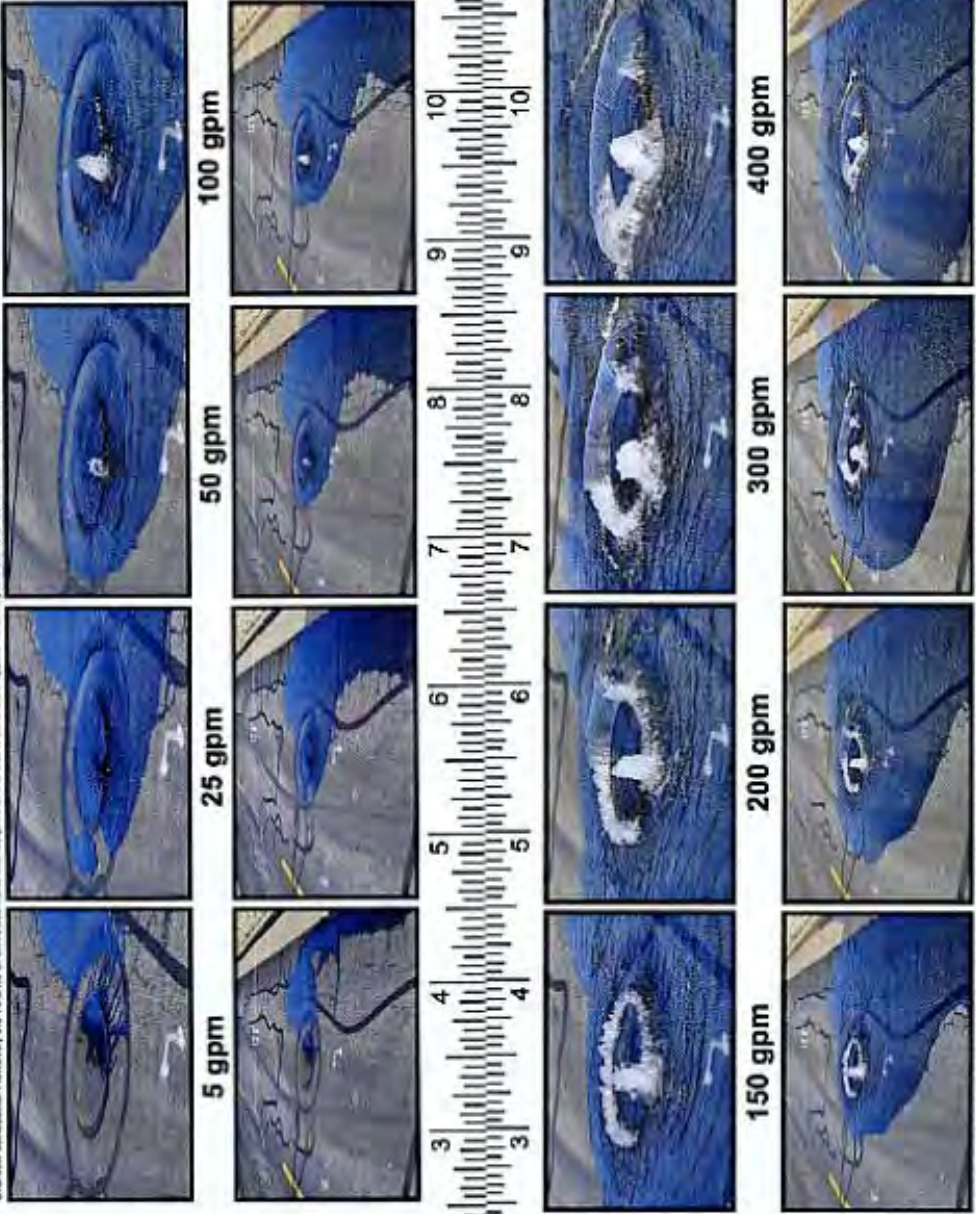
City of San Diego  
Metropolitan Wastewater Department



All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

# SSCSC Manhole Overflow Gauge

DISCLAIMER: This overflow simulation may appear differently from those in other systems because of the manhole lid disk hole configuration. Manhole lids with single or multiple disk holes may appear differently during overflow conditions. However, the volume of overflow and the height of the wet area should appear relatively the same under similar slope conditions.



DISCLAIMER: This overflow simulation may appear differently from those in other systems because of the manhole lid disk hole configuration. Manhole lids with single or multiple disk holes may appear differently during similar overflow conditions. However, the volume of overflow and the footprint of the wet area should appear relatively the same under similar slope conditions.



## SSCSC MANHOLE OVERFLOW GAUGE

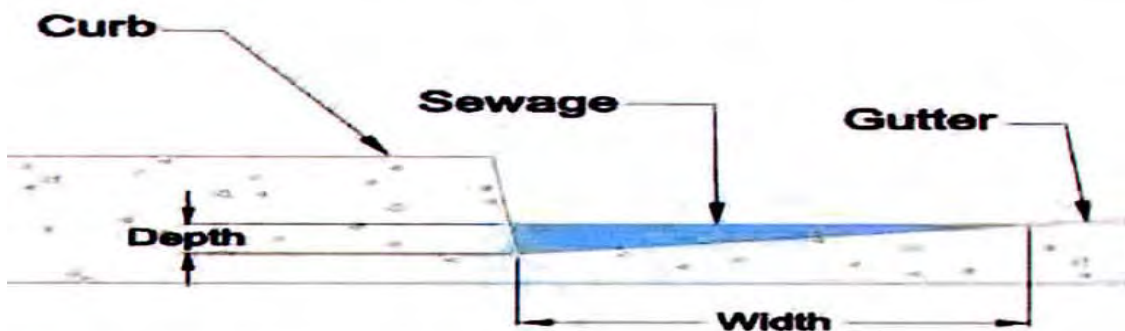


## PROVIDING QUALITY TRAINING FOR COLLECTION SYSTEM PERSONNEL SINCE 1991

Mission Statement: To continuously increase the level of professional of Collection Systems personnel involved in wastewater collection systems by providing education and training, while an active role in promoting certification, and recognizing proficiency is our first.

## Gutter Flow (Simplified Version)

Although the traditional Manning's Equation is used to calculate flows in open channels, this simplified version can be used to measure SSOs that are flowing in open channels such as ditches, curb and gutter, etc. and still achieve reasonable estimations. Two things need to be determined to utilize this method of spill estimation, the cross sectional area of the channel and the velocity of the flow in the channel. First, determine the cross sectional dimensions of the channel (width and depth of flow) to determine the area of the flow. Then determine the velocity of the flow in the channel. To determine the velocity, drop a small floating object (ping pong ball, leaf, small piece of wood, etc.) into the flow and time how long it takes the object to travel a measured distance. This should be practiced several times in a non-SSO situation, and averaged to determine the flow velocity. The velocity of the flow multiplied by the cross sectional area of the flow multiplied by the duration of the SSO will result in the approximate volume of the SSO.



$$Q = V \times A$$

$$\text{Flow (gal/min)} = \text{Velocity (ft/sec)} \times \text{Area (ft}^2\text{)} \times 7.48 \text{ gal/cu ft} \times 60 \text{ sec/min}$$

Example: If the cross section triangular area of the spill is calculated at .5 sq.ft. with the velocity measured at .25 ft. per second, the flow would be .125 cubic feet per second. Multiply times 449 (one cubic foot per second equals 449 gallons per minute) to determine the gallons per minute (56 gpm). If the SSO lasted for 35 minutes the total estimated spill volume would be 1,964 gallons.

Simplified Cross Section Area of the SSO



Estimated Triangular Area

0.5 square feet

Estimated Velocity

.25 feet per second

Duration of the SSO

35 minutes

Gallons per minute per cubic foot per second conversion

449

Total estimated spill volume

1,964 gallons

(Area .5 sq.ft. x Est velocity .25 ft. per sec. = .125 cfs x 449 = 56 gpm x 35 minutes = 1,964 estimated gallons spilled)

Gutters on steep hillsides will flow at higher velocities. Practice your estimating on flatter areas and steeper areas of your service area.

## Bucket Method

This method can be used for small spills due to partial blockages where the entire flow stream could be captured in a bucket. Estimate how many minutes it takes to fill the bucket. Dividing the volume of the bucket (in gallons) by the elapsed time to fill the bucket (in minutes). This provides the flow rate in gallons per minute (gpm). Once the gpm has been established, multiply the gpm by the total time duration in minutes of the SSO until it stopped to determine the total estimated volume of the SSO.

Example: If it takes 30 seconds (.5 minutes) to fill a 5 gallon bucket and the total spill duration was 20 minutes, the total spill volume would be 200 gallons. (5gal/.5 min = 10 gpm x 20 min = 200 gal).

Time to fill a 5 gallon bucket

30 seconds (.5 minute)

Duration of SSO

20 minutes

Estimated spill volume

200 gallons

(5 gallons every 30 seconds equals 10 gallons per minute x 20 minutes = 200 gallons)

You can practice visual estimating by filling a bucket of known volume for a measured time from a garden hose.

## Pipe Size

To calculate an SSO based upon pipe size requires the diameter of the pipe, the depth of flow in the pipe downstream of the blockage during and after the blockage, and the flow velocity in the pipe. This method calculates the amount of flow in the pipe at the same time of the day during the blockage compared to the amount of flow normally in the pipe to determine how much flow had been lost over time.

To use this method, measure the flow depth at the nearest manhole downstream from the blockage. Record the depth reading. Once the blockage has been cleared and the flow stabilized, measure the flow depth at the same manhole as before and record the reading. The attached chart can be used on various size pipelines where the velocity is 2.0 feet per second. Pipelines of other rates will have to be calculated.

To use the attached chart, find the depth of the flow during the blockage in column 1. Follow the row across to the diameter of the pipe where the blockage has occurred. The number listed will be the flow rate in gallons per minute for pipelines with a velocity of 2 feet per second. Next find the flow depth after the blockage has been removed and the flow stabilized. Move across the chart to the proper pipe size and record the flow rate for a free flowing pipeline. Subtract the flow rate from the blocked pipe from the flow rate of the free flowing pipe. The remainder will be the flow rate lost. Multiply the flow rate lost times the duration of the SSO to determine the total flow volume lost. Example: If the flow depth during the blockage of a 10-inch pipe was 1 inch, the flow rate would 25 gpm. After the blockage was cleared and the flow stabilized, the flow depth was now 5 inches then the flow rate would be 240 gpm. To determine the amount lost, subtract the gpm (pipe blocked) from the gpm (pipe cleared) ( $240 \text{ gpm} - 25 \text{ gpm} = 215 \text{ gpm}$ ) leaving the flow rate of the SSO. Multiply the remaining flow rate multiplied by the duration of the SSO in minutes to estimate the total volume of the SSO.

| Flow Depth Inches | 8" PIPE | 10" PIPE | 12" PIPE | 15" PIPE | 18" PIPE | 21" PIPE | 24" PIPE |
|-------------------|---------|----------|----------|----------|----------|----------|----------|
| 1                 | 20 GPM  | 25 GPM   | 30 GPM   | 35 GPM   | 40 GPM   | 45 GPM   | 50 GPM   |
| 2                 | 60      | 70       | 80       | 85       | 95       | 105      | 125      |
| 3                 | 110     | 125      | 135      | 150      | 175      | 185      | 210      |
| 4                 | 160     | 180      | 200      | 235      | 260      | 285      | 320      |
| 5                 | 190     | 240      | 280      | 315      | 360      | 380      | 445      |
| 6                 | 260     | 310      | 355      | 415      | 455      | 500      | 555      |
| 7                 | 290     | 370      | 425      | 495      | 570      | 620      | 695      |
| 8                 | 320     | 430      | 500      | 600      | 680      | 760      | 815      |
| 9                 |         | 465      | 575      | 690      | 800      | 890      | 965      |
| 10                |         | 490      | 625      | 775      | 905      | 1005     | 1120     |
| 11                |         |          | 685      | 870      | 1020     | 1135     | 1275     |
| 12                |         |          | 715      | 935      | 1130     | 1260     | 1410     |
| 13                |         |          |          | 1020     | 1240     | 1415     | 1580     |
| 14                |         |          |          | 1070     | 1345     | 1520     | 1690     |
| 15                |         |          |          | 1105     | 1425     | 1650     | 1850     |
| 16                |         |          |          |          | 1495     | 1760     | 1990     |
| 17                |         |          |          |          | 1550     | 1880     | 2110     |
| 18                |         |          |          |          | 1595     | 1980     | 2285     |
| 19                |         |          |          |          |          | 2050     | 2410     |
| 20                |         |          |          |          |          | 2115     | 2530     |
| 21                |         |          |          |          |          | 2160     | 2630     |
| 22                |         |          |          |          |          |          | 2700     |
| 23                |         |          |          |          |          |          | 2765     |
| 24                |         |          |          |          |          |          | 2820     |

Note: the chart assumes  $V = 2.0$  feet per second and  $n = 0.013$

1. Record the time that spill was reported.
2. Record the flow, in inches, downstream of the spill or blockage. Record the pipe size in inches. Determine flow rate in gallons per minute (GPM) using chart above.
3. Re-establish flow and allow stabilizing. Record the time that flow stabilizes and the depth of flow, in inches. Determine flow rate using chart above.
4. Subtract the flow rate calculated in #2 from the flow rate calculated in #3.
5. Multiply the result of 4 by the minutes elapsed from notification to stopping overflow.
6. Report total amount in gallons on the SSO Report.

*Note: The above chart is only for pipelines of the diameters shown and flowing at a velocity of 2.0 ft/sec.*

## Metered Flow

Estimates of the amount of wastewater spilled from a continuously metered system can be achieved utilizing upstream and downstream flow meters located close to the point where the wastewater escaped. Flow meters may be located at strategic locations throughout the wastewater collection system or at the intake or discharge of wastewater pump or lift stations. Flow metering usually occurs on pressure systems. If a spill is suspected on a metered upstream wastewater line, check the flow meter readings for abnormalities and note the time they start. Also check the flow meter readings at the downstream flow meter. If the downstream readings are lower than usual, the difference may be the amount of wastewater being lost to a spill. Abnormal pumping cycles for pump or lift stations located downstream from the spill can also be used to estimate the volume of a spill. Portable flow meters could also be installed in gravity sewers after a SSO event to help verify average flows at various times of the day when full or partial blockages may have occurred. You should also perform

this on the same day of the week that the SSO occurred. This is also a good way to understand how flows will change during the day in various parts of your system.

## **Rain Events**

Previous examples of methods throughout the document were all in dry weather situations. Rain events cause substantial difficulties for SSO responders in establishing an accurate estimate of an SSO. Infiltration into the sewer system will increase, sometimes dramatically, the system flow including the amount of the SSO. When estimating the SSO amount during a rain event, the estimate is to include only the amount of wastewater that left the collection system (this includes any clear water inflow and/or infiltration (I&I) that entered the collection system upstream of the SSO) and not any waters that the wastewater comingled with after leaving the system. Although the comingled waters are considered contaminated by the SSO and may be involved in the cleanup, they should not be considered in the estimate of the volume of sewage spilled for the event. Consult with your city or agency management or your site-specific procedures to be used during wet weather SSOs.

## **Saturated Soils**

Spills that have occurred on or migrated to grassy or dirt areas can be estimated if the area is dry and is not regularly irrigated like a field or dirt parking lot. This method is effective only during dry weather and not during or after a rain event. To estimate how much wastewater has been lost to the soil, first determine how many cubic feet of soil has been wetted. First determine the size of the area where the spill occurred. This is done in the same manner as for spills that occurred on hard surfaces and as discussed in the Measured Volume Method. Next determine how deep the soil has been saturated. To determine the depth of the soil saturation, dig several test holes with a round point shovel until dry soil is reached. Measure the depth of each hole and determine the average depth of the saturated soil. Multiply the area of the spill (in square feet) times the average depth of the soil saturation to determine the amount (in cubic feet) of saturated soil. Different types of soils will retain moisture in different amounts. Water will penetrate sandy soils quicker than clay soils and clay soils are capable of holding more moisture than sandy soils. Use an average of 18% moisture content when estimating the amount of wastewater that has saturated the soil.

Example: If the spill was contained in a dry dirt or grassy area of 10 feet by 20 feet, the area of the spill would be 200 square feet if it was a perfect rectangle (assumed). If the wastewater penetrated the soil to an average depth of 3 inches, the total amount of saturated soil would be 50 cubic feet ( $10 \times 20 \times .25 = 50$  cf.). To determine the amount of wastewater suspended in the wetted soil, multiply the 50 cubic feet times 7.48 gallons per cubic foot ( $50 \text{ cf} \times 7.48 \text{ gal/cf} = 374$  gallons). Next multiply the gallons times the average amount of moisture the soil can hold (use 18% as a rough estimate or calculate the soil moisture) to determine the actual estimated amount of wastewater that has saturated the soil ( $374 \text{ gal} \times .18 = 67.3$  gallons of wastewater contained in the soil for the area of the spill). Add the amount of wastewater estimated to be contained in the soil with the amount of surface wastewater that was removed to achieve an estimated total amount of the wastewater spill.

Simple method to calculate soil moisture content:

Equipment needed: One coffee filter; a funnel; a graduated measuring cup; a jar or bottle.

Place the coffee filter into the funnel. Place the funnel into the mouth of the jar or bottle.

Place one cup of clean dry soil from the spill site onto the coffee filter. Pour one cup (8 ounces) of water onto the soil and allow the water to drain into the jar. Once the water has stopped dripping from the funnel, remove the funnel and measure the amount of water in the jar. The difference between the amount of water in the jar and the 8 ounces originally poured over the soil is the amount of moisture the soil retained.

Example: If six and one half ounces (6.5) remained in the jar, one and one half ounce (1.5) or 18.75% remained in the soil. The soil moisture content would be 18.75%.

## **Combo Truck or Vacuum Truck Recovery**

When the spill is contained to a specific area and recovered by a combo or vacuum truck, the amount recovered can be used in calculating the amount of the original spill. If the spill is contained on a hard surface, estimate the total spill volume by what was captured by the combo or vacuum truck plus the amount that could not be captured. To estimate the amount not captured by the combo or vacuum truck, use the Measured Volume Method. For wet spots on concrete, use a depth of 0.0013 ft. or 1/64 inch. For wet stains on asphalt, use a depth of

0.0026 ft. or 1/32 inch. If the spill is contained on soil, use the Saturated Soils Method to determine how much of the spill soaked into the soil and add to the amount captured by the combo or vacuum truck.

### **Conversion Factors**

1.0 cfs = .6463 mgd

One cubic foot of water (cf) = 7.48 gallons

One cubic foot of water per second (cfs) = 448.8 gallons per minute

A cylinder 1 foot in diameter and one foot deep = 5.87 gallons

A 1 square foot triangle 1 foot deep = 3.25 gallons

One inch or 1/12 ft = .083 feet

### **Volumes Recovered with Trucks or Pumped to Tanks**

Level gauge on truck or

Known volume of the full tank or

Number of full tank trucks used during large SSO events

Use your agency's approved conversion factors, if available.

## References

California Environmental Protection Agency

<http://www.calepa.ca.gov/>

State Water Resources Control Board

<http://www.swrcb.ca.gov/>

Sanitary Sewer Overflow (SSO) Reduction Program

[http://www.swrcb.ca.gov/water\\_issues/programs/sso/index.shtml](http://www.swrcb.ca.gov/water_issues/programs/sso/index.shtml)

## Sample Worksheet

(City or Agency Name)

# SSO Volume Estimation Worksheet

SSO Address/Location: \_\_\_\_\_ Date: \_\_\_\_\_

SSO Volume Method of Estimation (check appropriate box and provide appropriate information for method used below)

Pictorial Reference Flow Rate Chart (San Diego Chart  CWEA Ruler

Vent or Pick Holes  Eyeball estimate

Measured volume  Counting Connections  Manhole Ring  Partially Covered Manhole  Open Manhole

Bucket Method  Pipe Size Method  Gutter Flow Method  Metered Flow   
Rain Event Method

Saturated Soils Method  Combo/Vacuum Truck Recovery Method

Spill Start Date: \_\_\_\_\_ Spill Start Time: \_\_\_\_\_

Spill End Date: \_\_\_\_\_ Spill End Time: \_\_\_\_\_ Total Est. Spill Volume (gal): \_\_\_\_\_

Provide a detailed description of the method(s) used to determine the SSO estimate. (Use additional sheets as needed)

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix G

### SSO Water Quality Monitoring Plan

This page is intentionally left blank.

## Appendix G

### SSO Water Quality Monitoring Plan

Constituents to be sampled are:

E. Coli, Total Fecal Coliform, Total Nitrogen, Total Dissolved Solids, Chloride, Sulfate, Iron, Manganese, Carbonaceous Biochemical Oxygen Demand, and Total Suspended Solids. The extent that these constituents can be sampled for will be determined during the pre-sampling stage.

#### *Pre-Sampling*

Step 1: Determine point SSO entered waterway.

Step 2: Photograph, map and mark the location for future sampling.

Step 3: Determine relevant samples to take based on spill conditions.

Step 4: Record the testing results.

#### *Downstream Sampling*

Conduct downstream sampling first to avoid allowing pollutants to dissipate before sample can be obtained.

Step 1: Move 50'-200' upstream of point where SSO entered waterway.

Step 2: Photograph, map and mark the location for future sampling.

Step 3: Collect relevant samples.

Step 4: Record the testing results.

#### *Upstream Sampling*

Step 1: Move 50'-200' upstream of point where SSO entered waterway.

Step 2: Photograph, map and mark the location for future sampling

Step 3: Collect relevant samples.

Step 4: Record the testing results.

## *Coliform Sampling*

Step 1: Using the specific coliform sampling bottles, take a coliform sample upstream and downstream of the SSO area well away from the bank, preferably where water is visibly flowing. Follow the sampling points detailed in “Upstream Sampling” and “Downstream Sampling” of this SOP.

NOTE Required within 48 hours of initial SSO notification if the SSO volume is equal to or greater than 50,000 gallons and has reached surface waters. Take photos of sample points, and point where spill entered waterway.

Step 2: Label the sample as a Coliform sample with the date, time, location and initials

Step 3: Place coliform grab sample in cooler, to be transported to the Desert Water Agency Laboratory.

Step 4: Take the samples to DWA’s lab and refrigerate as soon as possible. The coliform test must be performed within six hours after the samples have been taken.

Step 5: You or your supervisor must notify the lab that a coliform sample test needs to be performed. Use the DWA Emergency Procedure Call List to notify lab personnel.

## **Deliver Samples to Lab**

Step 1: Transport the cooler containing the samples and the completed form the lab.

Step 2: Lab personnel will send notification to Operations and Engineering Manager if a coliform violation is found.

Step 3: Results of the water quality testing will be uploaded to the CIWQS online spill reporting database.

Appendix H

REPORT AUDITING

This page is intentionally left blank.

