

---

# Table of Contents

---

|  |           |
|--|-----------|
| <b>1.0 Introduction</b> .....  | <b>1</b>  |
| 1.1. Sewer System Management Plan .....                                      | 1         |
| 1.2. Sanitary Sewer System Facilities .....                                  | 1         |
| 1.3. Definitions, Acronyms, and Abbreviations .....                          | 6         |
| 1.4. References .....  | 12        |
| <b>Element I: Goals</b> .....  | <b>13</b> |
| I-1: SSMP Goals.....   | 13        |
| I-2: References .....  | 13        |
| <b>Element II: Organization</b> .....  | <b>14</b> |
| II-1: Organizational Structure .....   | 14        |
| II-2: Authorized Representatives.....  | 15        |
| II-3: Responsibility for SSMP Implementation and Maintenance .....           | 18        |
| II-4: SSO Reporting Chain of Communication .....                             | 19        |
| II-5: References .....   | 20        |
| <b>Element III: Legal Authority</b> .....                                    | <b>21</b> |
| III-1: District Summary and Evaluation of Legal Authority .....              | 21        |
| III-2: Agreements with Other Agencies .....                                  | 23        |
| III-3: References .....  | 23        |
| <b>Element IV: Operations and Maintenance Program</b> .....                  | <b>24</b> |
| IV-1: Collection System Mapping .....  | 24        |
| IV-2: Computer Asset Maintenance Management System (CMMS) .....              | 25        |
| IV-3: Preventive Operation and Maintenance.....                              | 26        |
| IV-3.1: Gravity Sewer Maintenance.....                                       | 27        |
| IV-3.1.1: Pipe Condition Assessment.....                                     | 30        |
| IV-3.1.2: Manhole Inspection and Maintenance Program.....                    | 32        |
| IV-3.2: Lift Station Maintenance.....  | 33        |
| IV-3.3: Force Mains.....   | 34        |
| IV-3.4: Collection System Siphons .....                                      | 34        |
| IV-3.5: Root Foaming.....  | 35        |
| IV-4: Private Sewer Laterals .....   | 36        |
| IV-5: Rehabilitation and Replacement Program .....                           | 36        |
| IV-6: Training.....  | 36        |
| IV-7: Equipment and Replacement Parts .....                                  | 37        |
| IV-8: Outreach to Sewer Service Contractors.....                             | 37        |
| IV-9: References.....  | 37        |
| Supplement IV-1: Lift Station and Force Main Assessment Checklist.....       | 38        |
| Supplement IV-2: Capital Improvement Program (in thousands of dollars) ..... | 42        |
| Supplement IV-3: Major System Equipment Inventory*.....                      | 43        |
| Supplement IV-4: Critical System Replacement Parts Inventory* .....          | 44        |
| <b>Element V: Design and Performance Provisions</b> .....                    | <b>45</b> |
| V-1: Design Criteria for Installation, Rehabilitation and Repair .....       | 45        |
| V-1.1: New Pipe and Appurtenances .....                                      | 45        |
| V-1.2: Lift Station and Force Mains.....                                     | 45        |

|  |           |
|--|-----------|
| V-1.3: Private Sewer Systems and Private Laterals .....                        | 45        |
| V-2: Inspection and Testing Criteria .....                                     | 45        |
| V-2.1: New and Rehabilitated Lift stations .....                               | 45        |
| V-3: References .....  | 46        |
| <b>Element VI: Overflow Emergency Response Plan .....</b>                      | <b>47</b> |
| VI-1: Purpose .....  | 47        |
| VI-2: Policy .....   | 47        |
| VI-3: Goals .....  | 48        |
| VI-4: Full Overflow Emergency Response Plan .....                              | 48        |
| VI-5: Authority and References .....   | 48        |
| <b>Element VII: Fats, Roots, Oils, and Grease (FROG) Control Program.....</b>  | <b>49</b> |
| VII-1: Nature and Extent of FROG Problem .....                                 | 49        |
| VII-2: Response to WDR Requirements .....                                      | 51        |
| VII-3: References .....  | 53        |
| <b>Element VIII: System Evaluation and District Assurance Plan.....</b>        | <b>54</b> |
| VIII-1: System Evaluation - Collection System Master Plan.....                 | 54        |
| VIII-2: Design Criteria .....  | 55        |
| VIII-3: District Enhancement Measures – Capital Improvement Program.....       | 56        |
| VIII-4: Schedule .....   | 56        |
| VIII-5: References .....   | 56        |
| <b>Element IX: Monitoring, Measurement, and Program Modifications .....</b>    | <b>57</b> |
| IX-1: Performance Measures.....  | 57        |
| IX-2: Baseline Performance .....   | 57        |
| IX-3: Mains, Lift Stations, and Force Mains.....                               | 58        |
| IX-4: Performance Monitoring and Program Changes .....                         | 61        |
| IX-5: References.....  | 61        |
| <b>Element X: SSMP Program Audits.....</b>                                     | <b>62</b> |
| X-1: Audits .....  | 62        |
| X-2: SSMP Updates .....  | 63        |
| X-3: References .....  | 63        |
| <b>Element XI: Communication Program.....</b>                                  | <b>64</b> |
| XI-1: Communication during SSMP Development and Implementation .....           | 64        |
| XI-2: Communication with Regional and Joint Wastewater Collection Systems..... | 64        |
| XI-3: References.....  | 64        |
| <b>Appendices.....</b>   | <b>65</b> |
| Appendix A: Sewer System Management Plan Adoption Documents .....              | 66        |
| Appendix B: Sewer System Management Audit Reports .....                        | 77        |
| Appendix C: Sewer System Management Audit Checklist.....                       | 78        |
| Appendix D: Sewer System Management Plan Change Log.....                       | 84        |
| Appendix E: Overflow Emergency Response Plan (OERP).....                       | 85        |
| Appendix F: Water Quality Monitoring Plan.....                                 | 86        |
| Appendix G: Regulatory Reference Documents .....                               | 87        |

## ATTACHMENT A

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

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

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

#### A. SUMMARY OF MRP REQUIREMENTS

**Table 1 – Spill Categories and Definitions**

| CATEGORIES                              | DEFINITIONS [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]   |
|---|--|
| CATEGORY 1                              | Discharges of untreated or partially treated wastewater of <b>any volume</b> resulting from an enrollee's sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> <li>• Reach surface water and/or reach a drainage channel tributary to a surface water; or</li> <li>• Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).</li> </ul> |
| CATEGORY 2                              | Discharges of untreated or partially treated wastewater of <b>1,000 gallons or greater</b> resulting from an enrollee's sanitary sewer system failure or flow condition that <b>do not</b> reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.   |
| CATEGORY 3                              | All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.  |
| PRIVATE LATERAL SEWAGE DISCHARGE (PLSD) | Discharges of untreated or partially treated wastewater resulting from blockages or other problems <b>within a privately owned sewer lateral</b> connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be <b>voluntarily</b> reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.  |

**Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements**

| ELEMENT   | REQUIREMENT   | METHOD  |
|---|---|---|
| <b>NOTIFICATION</b><br>(see section B of MRP)             | <ul style="list-style-type: none"> <li>• Within two hours of becoming aware of any Category 1 SSO <u>greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water</u>, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.</li> </ul>   | Call Cal OES at:<br>(800) 852-7550  |
| <b>REPORTING</b><br>(see section C of MRP)                | <ul style="list-style-type: none"> <li>• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.</li> <li>• Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.</li> <li>• Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred.</li> <li>• SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.</li> <li>• "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.</li> <li>• Collection System Questionnaire: Update and certify every 12 months.</li> </ul> | Enter data into the CIWQS Online SSO Database ( <a href="http://ciwqs.waterboards.ca.gov/">http://ciwqs.waterboards.ca.gov/</a> ), certified by enrollee's Legally Responsible Official(s). |
| <b>WATER QUALITY MONITORING</b><br>(see section D of MRP) | <ul style="list-style-type: none"> <li>• Conduct water quality sampling <u>within 48 hours</u> after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.</li> </ul>  | Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.  |
| <b>RECORD KEEPING</b><br>(see section E of MRP)           | <ul style="list-style-type: none"> <li>• SSO event records.</li> <li>• Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.</li> <li>• Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.</li> <li>• Collection system telemetry records if relied upon to document and/or estimate SSO Volume.</li> </ul>  | Self-maintained records shall be available during inspections or upon request.  |

## **B. NOTIFICATION REQUIREMENTS**

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

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.
2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:
  - i. Name of person notifying Cal OES and direct return phone number.
  - ii. Estimated SSO volume discharged (gallons).
  - iii. If ongoing, estimated SSO discharge rate (gallons per minute).
  - iv. SSO Incident Description:
    - a. Brief narrative.
    - b. On-scene point of contact for additional information (name and cell phone number).
    - c. Date and time enrollee became aware of the SSO.
    - d. Name of sanitary sewer system agency causing the SSO.
    - e. SSO cause (if known).
  - v. Indication of whether the SSO has been contained.
  - vi. Indication of whether surface water is impacted.
  - vii. Name of surface water impacted by the SSO, if applicable.
  - viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
  - ix. Any other known SSO impacts.
  - x. SSO incident location (address, city, state, and zip code).
3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).
4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

### **1.3. Definitions, Acronyms, and Abbreviations**

#### **Asbestos Cement Pipe (ACP)**

#### **Best Management Practices (BMP)**

Refers to the procedures employed in commercial kitchens to minimize the quantity of grease that is discharged to the sanitary sewer system. Examples include scraping food scraps into a garbage can and dry wiping dishes and utensils prior to washing.

#### **Calendar Year (CY)**

#### **Capital Improvement Plan (CIP)**

Refers to the document that identifies future capital improvements to CVWD's sanitary sewer system.

#### **Cast Iron Pipe (CIP)**

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

Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

#### **Chief Executive Officer (CEO)**

#### **Clean Water Act (CWA)**

#### **California Water Environment Association (CWEA)**

#### **Closed Circuit Television (CCTV)**

Refers to the process and equipment that is used to internally inspect the condition of gravity sewers.

#### **Computerized Maintenance Management System (CMMS)**

Refers to the computerized maintenance management system that is used by CVWD to plan, dispatch, and record the work on its sanitary sewer system. SEDARU is the propriety software CVWD uses for workflow management.

#### **Cucamonga Valley Water District (CVWD or District)**

#### **District Code (DC)**

#### **Ductile Iron Pipe (DIP)**

#### **Division of Water Quality (DWQ)**

Refers to the State of California Division of Water Quality of the State Water Resources Control Board.

#### **Environmental Protection Agency (EPA)**

**Fats, Roots, Oils, and Grease (FROG)**

Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system. Roots are associated with typical urban development.

**First Responder**

Refers to the field crew or the On-Call personnel that are CVWD's initial response to an SSO event or other sewer system emergency.

**Fiscal Year (FY)**

Means a 12-month periods beginning July 1<sup>st</sup> and ending June 30<sup>th</sup>.

**Food Service Establishment (FSE)**

Refers to commercial or industrial facilities where food is handled/prepared/served that discharge to the sanitary sewer system.

**General Waste Discharge Requirements (WDR)**

Refers to the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, dated 5/2/2006.

**Geographical Information System (GIS)**

Refers to CVWD's data management system utilized to capture, store, analyze, and manage geospatial data associated with CVWD's sanitary sewer system assets.

**Global Positioning System (GPS)**

Refers to a field device it that is recommended to determine the longitude and latitude of sanitary sewer overflows for use in meeting CIWQS reporting requirements.

**Grease Removal Device (GRD)**

Refers to grease traps and grease interceptors that are installed to remove FROG from the wastewater flow at food service establishments.

**International Association of Plumbing and Mechanical Officials (IAPMO)**

**Inland Empire Utility Agency (IEUA)**

**Infiltration/Inflow (I/I)**

Refers to water that enters the sanitary sewer system from storm water and groundwater.

- Infiltration enters through defects in the sanitary sewer system after flowing through the soil.
- Inflow enters the sanitary sewer without flowing through the soil. Typical points of inflow are holes in manhole lids and direct connections to the sanitary sewer (e.g. storm drains, area drains, and roof leaders).

**Joint Powers Agreement (JPA)**

**Lateral**

See Private Sewer Lateral

**Legally Responsible Official (LRO)**

Person(s) formally designated by CVWD to be responsible for formal reporting and certifying of all reports submitted to the CIWQS.

**Lift Station (LS)**

A facility that lifts sewage into CVWD gravity sanitary sewer collection system.

**Manhole (MH)**

Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

**Mainline Sewer**

Refers to CVWD publicly owned wastewater collection system piping that is not a private lateral connection to a user.

**Monitoring, Measurement, and Plan Modifications (MMPM), SSMP Element IX**

**Monitoring and Reporting Program (MRP)**

State Water Resources Control Board WQ-2013-0058-EXEC effective September 9, 2013.

**National Association of Sewer Service Companies (NASSCO)**

**Notification of an SSO**

Refers to the time at which CVWD becomes aware of an SSO event through observation or notification by the public or other source.

**National Pollutant Discharge Elimination System (NPDES)**

**Nuisance**

California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all the following requirements:

- a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
- b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
- c. Occurs during, or as a result of, the treatment or disposal of wastes.

**Office of Emergency Services (OES or Cal OES)**

Refers to the California State Office of Emergency Services.

**Operations and Maintenance (O&M)**

**Overflow Emergency Response Plan (OERP or SSOERP)**

**Pipeline Assessment and Certification Program (PACP)**

Refers to the NASSCO certification program that is used for the evaluation and condition assessment of sewer lines and appurtenances from closed circuit televising of the lines and appurtenances.

**Polyvinylchloride Pipe (PVC)**

**Preventive Maintenance (PM)**

Refers to maintenance activities intended to prevent failures of the sanitary sewer system facilities (e.g., cleaning, CCTV, repair, etc.).

**Private Sewer Lateral (PSL)**

The sewer pipeline from the plumbing of a building to a CVWD collection line, including portions that extend across public rights-of-way and the saddle, wye or other physical connection to the collection line. Private sewer laterals are privately owned and maintained.

**Private Lateral Sewage Discharges (PLSD)**

Sewage discharges that are caused by blockages or other problems within a privately-owned sewer service lateral.

**Property Damage Overflow**

Refers to a sewer overflow or backup that damages a private property owner's premises.

**Public Owned Treatment Works (POTW)**

**Reinforced Plastic Mortar Pipe (RPM)**

**Sanitary Sewer Backup (Backup)**

A wastewater backup into a building and/or on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

**Sanitary Sewer Overflows (SSO)**

Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

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

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

**NOTE:** Wastewater backups into buildings caused by a blockage or other malfunction of a private sewer lateral are not SSOs.

**SSO Categories:**

**Category 1:** Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:

- Reaches surface water and/or drainage channel tributary to a surface water; or
- Reaches a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

**Category 2:** Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

**Category 3:** All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

**Sanitary Sewer System or Sewer System**

Refers to the sanitary sewer facilities that are owned and operated by CVWD

**Santa Ana Regional Water Quality Control Board (SARWQCB)**

**Sensitive Areas**

Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health.

**Sewer Master Plan (SMP)**

**Sewer Service Lateral**

Refers to the piping that conveys sewage from the building to the sanitary sewer system

**Sewer System Management Plan (SSMP)**

**Standard Operating Procedures (SOP)**

Refers to written procedures that pertain to specific activities employed in the operation and maintenance of the Sanitary Sewer System.

**Standard Specifications**

Refers to the latest edition of the CVWD Design Standards and Standard Details for Construction.