

# **MCKINLEYVILLE COMMUNITY SERVICES DISTRICT SANITARY SEWER MANAGEMENT PLAN**

Prepared for:  
McKinleyville Community Services District  
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## TABLE OF CONTENTS

<b>LIST OF APPENDICES .....</b>	<b>v</b>
<b>INTRODUCTION.....</b>	<b>1</b>
<b>ELEMENT 1: GOALS .....</b>	<b>2</b>
1.1 Regulatory Requirements for the Goals Element .....	2
1.2 SSMP Goals .....	2
<b>ELEMENT 2: ORGANIZATION .....</b>	<b>3</b>
2.1 Regulatory Requirements for the Organization Element.....	3
2.2 Organization .....	3
2.3 Authorized Representative .....	5
2.4 SSO Reporting Chain of Communication .....	5
<b>ELEMENT 3: LEGAL AUTHORITY .....</b>	<b>6</b>
3.1 Regulatory Requirements for the Legal Authority Element.....	6
3.2 MCSD Legal Authority .....	6
<b>ELEMENT 4: OPERATION AND MAINTENANCE PROGRAM .....</b>	<b>9</b>
4.1 Regulatory Requirements for the Operations and Maintenance Program Element .....	9
4.2 Maps.....	9
4.3 Preventive Operations and Maintenance Program .....	9
4.4 Rehabilitation and Replacement Program .....	11
4.5 Training.....	11
4.6 Contingency Equipment and Replacement Parts Inventory.....	12
<b>ELEMENT 5: DESIGN AND PERFORMANCE PROVISIONS .....</b>	<b>13</b>
5.1 Regulatory Requirements for the Design and Performance Provisions....	13
5.2 Standards for Installation, Rehabilitation and Repair .....	13

5.3 Standards for Inspection and Testing of New, Rehabilitated, and Repaired Facilities.....	13
<b>ELEMENT 6: OVERFLOW EMERGENCY RESPONSE PLAN.....</b>	<b>15</b>
6.1 Regulatory Requirements for the Overflow Emergency Response Plan...	15
6.2 Goals .....	15
6.3 SSO Notification Procedure.....	15
6.4 SSO Response Procedures.....	16
6.5 Public Notification .....	16
6.6 Water Quality Sampling and Testing .....	16
6.7 SSO Investigation and Documentation .....	16
6.8 SSO Reporting .....	16
6.9 Equipment .....	16
6.10 Training.....	16
<b>ELEMENT 7: FATS, OILS AND GREASE (FOG) CONTROL PROGRAM .....</b>	<b>17</b>
7.1 Regulatory Requirements for the FOG Program .....	17
7.2 Public Education and Outreach Program.....	17
7.3 FOG Source Control .....	17
7.4 Disposal of FOG .....	18
7.5 Legal Authority for FOG Program .....	18
7.6 Requirements to Install Grease Removal Devices .....	18
7.7 Authority to Inspect Grease Producing Facilities .....	18
7.8 Identification of Grease Problem Areas and Sewer Cleaning .....	18
<b>ELEMENT 8: SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN</b>	<b>19</b>
8.1 Regulatory Requirements for the System Evaluation and Capacity Assurance Plan .....	19

8.2 Capacity Evaluation .....	19
8.3 Recommended Capacity Projects .....	19
8.4 Schedule.....	20
<b>ELEMENT 9: MONITORING, MEASUREMENTS, AND PROGRAM MODIFICATIONS</b> .....	21
9.1 Regulatory Requirements for the Monitoring, Measurements, and Program Modifications.....	21
9.2 Monitoring Information .....	21
9.3 Performance Measures .....	21
9.4 Performance Monitoring and Program Changes .....	22
<b>ELEMENT 10: SSMP PROGRAM AUDITS</b> .....	23
10.1 Regulatory Requirements for the SSMP Program Audits .....	23
10.2 SSMP Audits Discussion .....	23
<b>ELEMENT 11: COMMUNICATION PLAN</b> .....	24
11.1 Regulatory Requirements for the Communication Plan .....	24
11.2 Communication Plan.....	24

## **LIST OF APPENDICES**

APPENDIX A	MCSD ARTICLE III RULES AND REGULATIONS
APPENDIX B	QUARTERLY AND SEMI-ANNUAL HYDRO-CLEAN SCHEDULE/DOCUMENTATION
APPENDIX C	MANHOLE INSPECTION DOCUMENTATION
APPENDIX D	LIFT STATION INSPECTION DOCUMENTATION
APPENDIX E	MCSD EQUIPMENT INVENTORY
APPENDIX F	MCSD OVERFLOW EMERGENCY RESPONSE PLAN
APPENDIX G	MCSD FOG INSPECTION DOCUMENTATION

## INTRODUCTION

This Sewer System Management Plan (SSMP) has been prepared in compliance with requirements of the State Water Resource Control Board (SWRCB) pursuant to Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. The WDR requires development and implementation of a written SSMP, and defines eleven mandatory SSMP elements. The WDR also defines associated monitoring, record keeping, reporting, and public notification requirements.

The McKinleyville Community Services District's (MCSD's) SSMP has been prepared with the assistance of Freshwater Environment Services (FES), as described in the agreement between the MCSD and FES dated December 27, 2010. This initial SSMP will become a living document, and should be updated as needed to reflect changes to the SSMP elements. The intent of this SSMP is to meet the requirements of the Statewide WDR.

This document presents eleven elements in the order presented in the WDR:

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

As contained in the MCSD National Pollution Discharge Elimination System (NPDES) permit, the MCSD (or District) owns and operates a secondary treatment facility. The treatment system consists of four aerated ponds followed by treatment wetlands. During the discharge season, which extends from October 1 through May 14, wastewater is discharged from Discharge Point 001 to the Mad River, a water of the United States within the Blue Lake hydrologic area 109.10 and to percolation ponds adjacent to the Mad River Estuary when the flow in the Mad River is less than 200 cubic feet per second (cfs). During summer, a portion of the wastewater treatment plant effluent is used to irrigate the Hiller storm water treatment marsh where it provides moisture to sustain wetland vegetation through the dry season. Runoff producing rainfall events cause the Hiller storm water treatment marsh to overflow into an unnamed tributary to the Mad River estuary. Prior to the onset of the wet season and storm water overflows from the marsh, the wastewater application to the treatment marsh is ceased and the treatment marsh is allowed to dry through evaporation and evapotranspiration.

## **ELEMENT 1: GOALS**

The intent of this section is to identify the goals that the District has established for its SSMP. These goals are intended to provide focus for District staff to continue proactive management of its wastewater collection system.

### **1.1 Regulatory Requirements for the Goals Element**

The WDR requires that the SSMP goals focus on proper management, operation, and maintenance of all parts of the sanitary sewer system. This will help reduce and prevent Sanitary Sewer Overflows (SSOs), as well as mitigate any SSOs that do occur.

### **1.2 SSMP Goals**

The goals of the MCSD's SSMP include:

- Maintaining or improving the condition of the collection system infrastructure in order to provide reliable services now and into the future;
- Cost-effectively minimizing infiltration/inflow (I/I) and provide adequate sewer capacity to accommodate design storm flows;
- Minimizing the number and impact of sanitary SSOs that occur;
- Preventing unnecessary damage to public and private property;
- Using funds available for sewer operations in the most efficient manner;
- Working cooperatively with local, state, and federal agencies to investigate the causes of, minimize, and mitigate the impacts of SSOs;
- Meeting all applicable regulatory notification and reporting requirements;
- Being available and responsive to the needs of the public to prevent and restore interruptions in service and to minimize public health and property impacts related to SSOs;
- Implementing regular, proactive maintenance of the system to remove and control roots, debris, fats, oils and grease (FOG) that may cause SSOs;
- Prioritizing renewal and replacement of wastewater collection system facilities to maximize their useful life and optimize capital expenditures;
- Maintaining the SSMP, which will serve as a reference for the District's sanitary sewer system management practices, and.
- Facilitate regular inspections of manholes and flows.

## **ELEMENT 2: ORGANIZATION**

The intent of this section of the SSMP is to identify the District staff members responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This section also includes the designation of the Legally Responsible Official (LRO) or authorized representative to meet SWRCB requirements for completing and certifying spill reports.

### **2.1 Regulatory Requirements for the Organization Element**

The WDR requires that the Organization element of the SSMP provides the following:

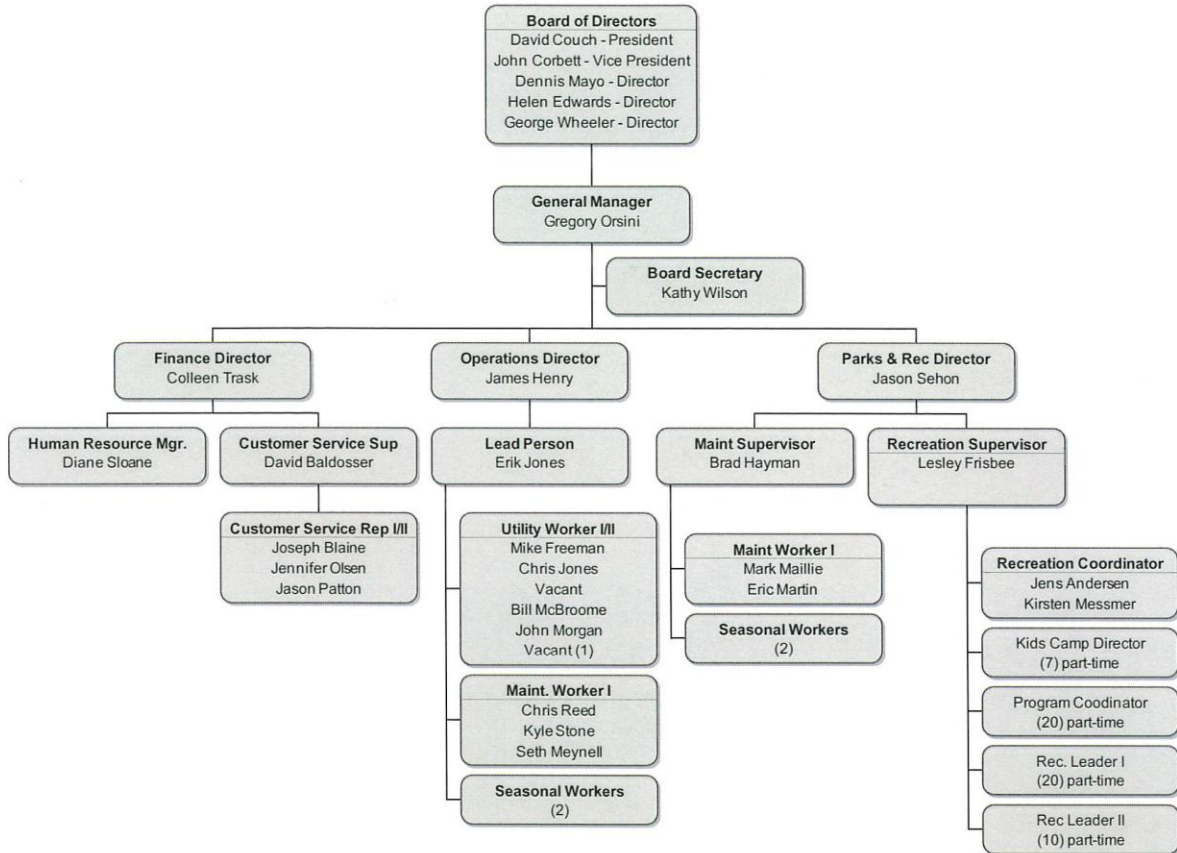
- The name of the responsible or authorized representative;
- The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and
- The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Boards and other agencies if applicable.

### **2.2 Organization**

The portion of the District's organization chart related to management, operation, and the maintenance of the wastewater collection system is shown on the next page:



**McKinleyville Community Services District**  
**Organizational Chart (Fiscal Year 2014/2015)**  
**Revised (January 9, 2014)**



A description of the roles for wastewater collection system agency staff is described below:

MCSO Board of Directors – Establishes policy.

General Manager – Enforces policy, plans strategy, directs staff, allocates resources, delegates responsibility. Along with the Operations Director, the General Manager authorizes outside contractors to perform services. The General Manager provides relevant information to the Board of Directors.

Operations Director – Manages field operations and maintenance activities, provides relevant information to the General Manager, prepares and implements contingency plans, participates in emergency response, investigates and reports SSOs, and trains field crews.

Lead Person – Oversees preventive and corrective maintenance activities, mobilize and respond to notification of stoppages and SSOs.

Contract Engineer – MCSO utilizes the services of several local and regional engineering and environmental consulting firms on an as needed basis to provide a wide range of technical support services.

Position	Name	Phone Number
General Manager	Greg Orsini	(707) 839-3251
Operation Director	James Henry	(707) 839-3251
Lead Person	Erik Jones	(707) 839-3251
Utility Workers	9 individuals and 2 seasonal	(707) 839-3251

### 2.3 Authorized Representative

The General Manager, is the Legally Responsible Official (LRO) that prepares, certifies and submits electronic spill reports to the RWQCB and SWRCB and to notify other government agencies.

### 2.4 SSO Reporting Chain of Communication

Sanitary system overflow (SSO) detection, notification, response and reporting processes will be described in Element 6.

The regulatory notification responsibility is as follows;

1. First responder (Utility Worker) collects field documentation and provides it to the Lead Person.
2. Lead Person reviews the field documentation and provides it to the Operations Director.
3. The Operations Director reviews the field documentation and prepares the necessary electronic submittals and notifications.
4. The electronic submittals are reviewed by the General Manager and certified.
5. Notifications are made by the Operations Director under the delegated authority of the General Manager.

## **ELEMENT 3: LEGAL AUTHORITY**

This element of the SSMP discusses the District's Legal Authority, including its Rules and Regulations and agreements with other agencies. This section fulfills the Legal Authority requirement for the WDR (Element 3).

### **3.1 Regulatory Requirements for the Legal Authority Element**

The requirements for the Legal Authority element of the SSMP are summarized below. The District must demonstrate, through collection system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- Prevent illicit discharges into its wastewater collection system (examples may include infiltration and inflow (I/I), storm water, chemical dumping, unauthorized debris and cut roots, etc.);
- Require that sewers and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
- Limit the discharge of fats, oils, and grease and other debris that may cause blockages; and
- Enforce any violation of its sewer ordinances.

### **3.2 MCSD Legal Authority**

#### **MCSD Rules and Regulations**

The legal authority required for the SSMP is contained within the District's Rules and Regulations. Article III of the MCSD Rules and Regulations "Sewer Services" is dedicated to the sewer system, and is included in (Appendix A). The specific Rules and Regulations that satisfy the requirements of the SSMP are identified below:

- Regulation 17. - General Provisions - Sewer;
- Regulation 18. - Use of Public Sewers Required;
- Regulation 19. - Permits And Fees;
- Regulation 22. - Building Sewers, Lateral Sewers, and Connections;
- Regulation 23. - Community Sewer Construction;
- Regulation 24. - Use of Public Sewers;
- Regulation 26. - Discharge Report, Wastewater Discharge Permits, and Administration;
- Regulation 29. - Enforcement;
- Regulation 30. - Abatement; and
- Regulation 31. - Wastewater Capital Reserve Fund.

Portions of the above Regulations are discussed in the following sub-sections as they pertain to prevention of illicit discharges, proper design and construction of sewer and connections, maintenance access, and enforcement measures.

The District has adopted the most recent version of the Unified Plumbing Code as part of the MCSD Standards and Specifications. The District is in the process of updating the MCSD Rules and Regulations. All discussions in the following sub-sections on the District's legal authority, as required by the SSMP, are based on the District's existing Rules and Regulations as of the date of this plan.

### **Prevention of Illicit Discharges**

Measures prohibiting illicit discharges are included in MCSD Rules and Regulation Article III, Sewer Use, Regulation 24, Use of Public Sewers, and Regulation 26 Discharge Report, Wastewater Discharge Permits and Administration. The specific Rules regarding prevention of illicit discharges are discussed in the sections below

**Stormwater and I/I.** The following Rules prohibits discharge of uncontaminated water, including stormwater, into a sanitary sewer through direct or indirect connection:

- Rule 24.02 Prohibitions on Storm Drainage and Ground Water;
- Rule 24.03 Prohibition on Unpolluted Water; and
- Rule 22.07 Cleanouts (All cleanouts shall be maintained watertight).

**Industrial Waste.** Regulation 26, "Discharge Report, Wastewater Discharge Permits and Administration", requires major contributing industry to obtain a permit and prohibits discharge in excess of the permit allowance. The permit issued may require pretreatment or include other provisions for wastewater quality and quantity. Additional prohibitions related to the discharge of industrial waste are listed below:

- Rule 24.01 Prohibitions on Discharge;
- Rule 24.04 Limitations on Radioactive Waste;
- Rule 24.05 Limitations on Use of Garbage Grinders;
- Rule 24.06 Limitations on Point of Discharge;
- Rule 24.07 Holding Tank Waste;
- Rule 24.08 Limitations on Wastewater Strength;
- Rule 24.09 Disposal of Unacceptable Waste;

### **Proper Design and Construction of Sewers and Connections**

Regulations pertaining to the design, construction, and inspection of building sewers and connections are included in Article III of the MCSD Rules and Regulations.

- Permit Required. A permit is required prior to constructing a building or lateral sewer or connecting to a public sewer (Rule 19.01, Rule 22.01, and Rule 23.01).
- Design and Construction Requirements. Regulation 22, Building Sewer, Lateral, Sewers, and Connections, and Regulation 23, Community Sewer Construction specifies design and construction requirements. The specific Rules regarding design and construction standards are included in Rule 22.02 through 22.10 and Rule 23.09. The MCSD does have Standard District Specifications that are available at the District Office.

- Inspection and Testing. All building sewers and laterals must be inspected by the duly authorized employee of the District, per Rule 19.07. All building sewers and laterals must be tested by the duly authorized employee of the District, per Rule 22.13.

### **Maintenance Access**

Rule 26.04 requires that property owners shall allow the District or its representative ready access at all reasonable times to all parts of the premises for the purposes of inspection or sampling or in the performance of any of their duties.

### **Limit Discharge of FOG and Other Debris**

Rule 24.08.2 established a limit of 300 mg/L fats oils and greases of animal or vegetable origin. The following Rules limits the introduction of FOG into the MCSD collection system:

- Rule 24.10 Interceptors Required;
- Rule 24.11 Preliminary Treatment of Wastes;
- Rule 24.12 Maintenance of Pretreatment Facilities;
- Rule 24.13 Availability of District Facilities;

### **Enforcement Measures**

Regulation 29 established the authority for enforcement of the MCSD Rules and Regulations including issuance of Cease and Desist Orders. Regulation 30 established the authority for abatement of public nuisances including civil liability, penalties and authority for termination of service.

### **Control of I/I from a Satellite Collection System**

The SSMP requirements state that the District must demonstrate that it has the legal authority to control I/I into its collection system, including I/I from satellite systems. MCSD does not have a satellite collection system.

### **3.3 Agreements with Other Agencies**

The SSMP requirements for legal authority are fulfilled by MCSD's Rules and Regulations. The District does not have legal agreements with any other agencies.

## **ELEMENT 4: OPERATION AND MAINTENANCE PROGRAM**

### **4.1 Regulatory Requirements for the Operations and Maintenance Program Element**

The WDR states that the District shall develop and implement an Operations and Maintenance (O & M) Program which should include the following:

- The District must maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments, manholes, pumping facilities, pressure pipes, valves, and applicable storm water conveyance facilities;
- The District must describe routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance program should have a system to document scheduled and conducted activities, such as work orders;
- The District must develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short-term and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;
- The District must provide equipment and replacement part inventories, including identification of critical replacement parts; and
- The District must provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained.

### **4.2 Maps**

The MCSD maintains a set of sanitary sewer system maps utilizing Computer Assisted Drafting (CAD) and Geographic Information System (GIS) software. The sanitary sewer system maps are updated with new and rehabilitated facilities by MCSD staff on an annual basis. Currently Humboldt County is working on mapping the storm water features in McKinleyville. Electronic copies of the maps are maintained at the field office. Hard copies of these maps are kept in the field office and in utility trucks and are used to locate and identify wastewater and storm drainage structures and to aid in the response to a SSO. When the storm water mapping data is available from Humboldt County, the District plans on having these two data sets merged into a GIS platform and will generate a combined wastewater and storm drainage atlas which will be utilized in the office and in the field.

### **4.3 Preventive Operations and Maintenance Program**

The wastewater treatment plant (WWTP) performs a variety of scheduled, preventive, predictive, and breakdown maintenance on a diverse spectrum of equipment is managed using asset management software SEMs. The main goal of maintenance activities is to ensure equipment availability and reliability to meet plant process operation requirements.

The District prioritizes its preventive maintenance activities. The preventive maintenance program includes compiling and maintaining a list of areas within the system that require repeated maintenance, referred to as “trouble spots”. The preventive maintenance program includes scheduled hydro-cleaning of the trouble spots list, regular inspection of lift stations, manholes and flows, and investigation of customer complaints.

### **Gravity Sewers**

The District currently uses in-house services for routine and emergency sewer cleaning as needed.

The primary focus of the District’s preventive maintenance activities is on sediment that accumulates in the bellies (low spots or sags in the collection system) of the sewer main forming trouble spots. Accumulations of Fats Oils and Greases is the secondary cause of restrictions in the gravity sewers. The MCSD maintains a list of trouble spots. Preventive maintenance on the trouble spots are performed and documented quarterly and semi-annually. The District maintains data tables indicating the manhole that was entered, direction of hydro-cleaning and observations. An example quarterly and semi-annual hydro-cleaning schedules and documentation is included in Appendix B.

### **Lift Stations and Force Mains**

The District’s force mains O & M program consists of periodic inspections and corrective maintenance activities conducted by District staff. Flow inspections are made periodically from the manholes located at the intersection of the force main and the gravity sewer line. The location of the manholes permits access for upstream cleaning of the force mains. Documentation of manhole inspections is contained in Appendix C.

The District’s WWTP staff is responsible for the District’s five lift stations. The District performs daily and weekly inspections of each lift station. Weekly inspections include cycling the valves, purging bubblers and recording pump hours in the lift station notebooks. Every two weeks backup generators at the lift stations are tested. Monthly lift station inspections are comprehensive and includes verification of all systems, battery charge and site inspection. Quarterly all wet wells at the lift stations are cleaned. Documentation of lift station inspections is contained in Appendix D.

The Supervisory Control and Data Acquisition (SCADA) computer system records and stores alarms automatically. The lift stations currently have Programmable Logic Controls (PLCs) that communicate alarms via radio to the SCADA computer in the District office, which utilizes a computer autodialer to call the on call pager after hours.

### **Root Control**

The District has very few problems with roots throughout the system. There are three locations where roots cause issues. One pipe was excavated and repaired and two manholes currently have root intrusion.

### **Odor Control**

The District receives very few odor complaints per year. The complaints are most often in the area of treatment lagoons in Hiller Park due to low water levels. The District has no official odor control program in place.

### **Non-Routine Maintenance**

The District utilizes in-house services for cleaning of known trouble spots. Non-routine maintenance activities include investigation and response to any complaints regarding a manhole overflow, missing or shifted manhole covers, manhole covers that are excessively noisy, residential plumbing problems, lift station malfunction, unexpected sewer odor, etc. Sewer complaints are investigated and appropriate actions are taken to resolve the source of the problem.

### **Special Needs Maintenance**

The District has a hot spots sewer cleaning program for identified problematic line segments to prevent blockages and SSOs with a quarterly and semi-annual cleaning cycle. Frequencies of cleaning cycles may be adjusted based on the observations during the sewer cleaning. The frequency will be shortened for line segments with moderate to heavy accumulations and extended for line segments with lesser accumulations.

### **Emergency Maintenance**

The District's collection system facilities have periodically experienced blockages and/or SSOs that require unplanned maintenance under emergency conditions. The District has developed emergency response procedures contained within Element 6.

### **Information Systems/Data Collection**

The District currently tracks assets and maintenance activities with an electronic work order system and assets management software published by SEMS Technology (SEMS Software Suite).

## **4.4 Rehabilitation and Replacement Program**

The District utilizes a combination of inspection activities to assess the condition of sewer assets including:

- Routine (daily) aboveground inspections of the collection system facilities, and lift stations to identify defects, damage or other identified problems;
- CCTV is used for inspections of trouble spots, any new installation, and 11 months after installation of new connections;
- Manhole inspections are completed every two years,
- A capacity analysis model is currently being developed by SHN Consulting Engineers & Geologists (SHN); and
- Smoke testing and dye testing is used based on manhole inspections to monitor and reduce I/I.

Given the relative young age of the MCSD collection system (less than 25 years) the District currently does not have any identified rehabilitation and replacement projects. When problems are encountered the policy is to "fix when found". Fixed assets are tracked and funding is allocated annually for sewer asset upgrades.

## **4.5 Training**

The WWTP has developed a comprehensive Operator Training Program that expands the abilities of the operational staff, resulting in better service to the public. WWTP operating staff attends the trainings. The MCSD has a matrix indicating staff, certifications, renewal dates, and



continuing education requirements that is maintained by Human Resources staff. The MCSD offers numerous in-house training programs and participates in the California Water Environmental Association (CWEA) certification program which requires ongoing continuing education to maintain certifications. MCSD has weekly safety meetings.

The trainings include:

- CPR;
- First Aid;
- 40 hour Hazardous Waste Operators Certification;
- Chlorine Safety;
- Driver Safety;
- Blood borne pathogen training;
- Confined Space Entry;
- Trenching Training;
- Back Safety;
- Excavation shoring;
- Sexual harassment training;
- Flagging Training; and
- Lockout/Tagout procedures.

The status of operator certification at the treatment plant for 2012 include four Grade IIs, and three Grade I operators.

#### **4.6 Contingency Equipment and Replacement Parts Inventory**

The District has a wastewater equipment inventory list contained in Appendix E. The District currently has equipment on hand to bypass sewer failures and lift station failures, such as portable pumps, and quick connections for hoses. MCSD maintains an inventory of basic replacement parts including oil filters and air filters. Additional equipment or critical replacement parts can be acquired locally from equipment rental companies or can be overnight delivered from various vendors. The District has enough replacement parts to rebuild the pumps at all of the lift stations if necessary.

## **ELEMENT 5: DESIGN AND PERFORMANCE PROVISIONS**

The intent of this section of the SSMP is to document the District's design and performance provisions.

### **5.1 Regulatory Requirements for the Design and Performance Provisions**

The WDR requires the Design and Performance element of the SSMP provide the following:

- The District must have design and construction standards and specifications for the installation of new sewer systems, lift stations and other appurtenances; and for the rehabilitation and repair of existing sewer systems; and
- The District must have procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

### **5.2 Standards for Installation, Rehabilitation and Repair**

The MCSD complies with this provision of the WDR through the use of the MCSD Rules and Regulations as listed below.

Regulation 22 Building Sewers, Lateral Sewers, And Connections

Rule 22.02 Design and Construction Requirements

Design and construction of building sewers and lateral sewers shall be in accordance with the rules, regulations and ordinances of the District.

Regulation 23 Community Sewer Construction

Rule 23.09 Design and Construction Standards

Minimum standards for the design and construction of sewers within the District shall be in accordance with the applicable provisions of the ordinances, rules, and regulations heretofore or hereinafter adopted by the District, copies of which are on file in the office of the General Manager.

In addition the MCSD maintains a Board approved set of Standards and Specification with details that was revised and approved in 2003. The MCSD has the goal of updating the Standards and Specification by 2013.

The MCSD Standard Specifications dated 2003 indicates the following:

- The District hereby adopts the Uniform Plumbing Code (latest edition) as a guide and supplement to this regulation. Any item not covered herein shall be referred to the code for a determination.

### **5.3 Standards for Inspection and Testing of New, Rehabilitated, and Repaired Facilities**

The MCSD complies with this provision of the WDR through the use of the MCSD Rules and Regulations as listed below.

Rule 22.06. Old Building Sewers

Old building sewers may be used in connection with new buildings only when they are found, upon examination and test by the Manager, to meet all requirements of the District.

Rule 22.13. Testing

All building sewers and lateral sewers shall be tested in strict accordance with rules, regulations and ordinances of the District.

**RULE 23.11. Completion Of Sewer Required**

Before acceptance of any sewer line by the District and prior to the admission of any wastewater into the system, the sewer line shall be tested and shall be complete in full compliance with all requirements of the accepted specifications and to the satisfaction of the Manager.

## **ELEMENT 6: OVERFLOW EMERGENCY RESPONSE PLAN**

The intent of this section of the SSMP is to document the District's Overflow Emergency Response Plan (OERP) contained in Appendix F.

### **6.1 Regulatory Requirements for the Overflow Emergency Response Plan**

The District shall develop and implement an Overflow Emergency Response Plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- Proper notification procedures so that the 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 prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Adopted Amended Monitoring and Reporting Requirements State Water Resources Control Board Order Number WQ 2008-0002-EXEC. All SSOs shall be reported in accordance with this Order, the California Water Code, other State Law, and other applicable Regional Water Board WDR or National Pollution Discharge Elimination System (NPDES) permit requirements. The SSMP should identify the officials who will receive immediate notification;
- Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

### **6.2 Goals**

The District's goals with respect to responding to SSOs are:

- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO; and
- Meet the regulatory reporting requirements.

### **6.3 SSO Notification Procedure**

The processes that are used to notify the District of the occurrences of an SSOs are contained in Section 2.0 of the OERP (Appendix F).

#### **6.4 SSO Response Procedures**

The overflow response procedures that are employed by the District are contained in Section 3.0 of the OERP (Appendix F).

#### **6.5 Public Notification**

The public notification processes that are employed by the District are contained in Section 3.6 of the OERP (Appendix F).

#### **6.6 Water Quality Sampling and Testing**

Water quality sampling and testing procedures that are employed by the District are contained in Section 3.7 of the OERP (Appendix F).

#### **6.7 SSO Investigation and Documentation**

SSOs investigation and documentation procedures are contained in Section 4.0 of the OERP (Appendix F).

#### **6.8 SSO Reporting**

The internal and external reporting process for SSO events are contained in Section 5.0 of the OERP (Appendix F).

#### **6.9 Equipment**

A description of the equipment used to respond to SSOs is contained in Section 5.0 of the OERP (Appendix F).

#### **6.10 Training**

A Description of the training to support the OERP is contained in Section 5.0 of the OERP (Appendix F).

## **ELEMENT 7: FATS, OILS AND GREASE (FOG) CONTROL PROGRAM**

The intent of this section of the SSMP is to document the District's FOG Program and identify program additions.

### **7.1 Regulatory Requirements for the FOG Program**

The District shall evaluate its service area to determine whether a FOG control program is needed. If the District determines that a FOG program is not needed, the District must provide justification for why it is not needed. If FOG is found to be a problem, the District must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. The FOG source control program shall include the following as appropriate:

- An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the District has sufficient staff to inspect and enforce the FOG ordinance;
- An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified above.

### **7.2 Public Education and Outreach Program**

The MCSD provides public education and outreach during monthly interceptor inspections conducted by MCSD staff. MCSD provides additional FOG information to the community through inserts in their billings, monthly newsletter and on the District webpage.

### **7.3 FOG Source Control**

The MCSD has an active and successful FOG source control program that includes monthly inspections that are documented by MCSD staff. If it is determined by the Inspector that an interceptor need maintenance the Lead Person provides a verbal notice to maintain (pump and remove contents of the interceptor). Documentation of MCSDs FOG inspections is included in Appendix G . If an interceptor is continually in need of maintenance the Lead Person can require an increased maintenance frequency. Following the notice to maintain an interceptor the operator must fax a copy of documentation that the interceptor has been maintained.

#### **7.4 Disposal of FOG**

Currently there are three FOG haulers in the area including Footprint Recycling, North State Rendering, and Steve's Septic. FOG generated within the MCSD sanitary sewer service area will be transported for disposal by one of the three above listed haulers.

#### **7.5 Legal Authority for FOG Program**

MCSD Regulation 24, Rule 24.08.2 prohibits discharge of oil and grease to a public sewer in concentrations greater than 300 mg/L. MCSD Regulation 24 Rule 24.10 of the MCSD Rules and Regulations requires an interceptor when necessary and also includes requirements for maintaining interceptors.

#### **7.6 Requirements to Install Grease Removal Devices**

The MCSD Regulation 24 Rule 24.10 requires an interceptor when necessary and includes requirements for maintaining interceptors.

#### **7.7 Authority to Inspect Grease Producing Facilities**

The MCSD Regulation 24 Rule 24.10.05 contains the authority for the District to inspect grease producing facilities.

The MCSD Regulation 26 Rule 26.04 additionally contains the authority for the District to inspect any user.

#### **7.8 Identification of Grease Problem Areas and Sewer Cleaning**

The MCSD maintains a list of trouble spots, primarily caused by low spots in the sewer mains. Preventive maintenance on the trouble spots are performed and documented monthly. Examples of the trouble spot list and documentation are included in Appendix B.

## ELEMENT 8: SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

This section of the SSMP discusses the District's capacity management measures, and recommended capacity improvement projects.

### 8.1 Regulatory Requirements for the System Evaluation and Capacity Assurance Plan

The WDR requirements for the System Evaluation and Capacity Assurance element of the SSMP are summarized below:

- **Evaluation:** The District must identify actions needed to evaluate those portions of the sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows, estimates of the capacity of key system components, hydraulic deficiencies, and the major sources that contribute to the peak flows associated with overflow events.
- **Design Criteria:** Where design criteria do not exist or are deficient, the agency should undertake the evaluation identified in the Evaluation section above to establish appropriate design criteria.
- **Capacity Enhancement Measures:** The agency must identify the steps needed to establish a short- and long-term Capital Improvement Plan (CIP) to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
- **Schedule:** The agency shall develop a schedule of completion dates for all portions of the CIP developed in the Evaluation, Design Criteria and Capacity Enhancement Measures sections above. This schedule shall be reviewed and updated at least every five years.

### 8.2 Capacity Evaluation

The District is working with SHN Engineers and Geologists to develop a hydraulic model of the MCSD sanitary sewer collection system. MCSD has a goal of having the hydraulic model completed by December 2013. The resulting model will document the condition and capacity of the existing wastewater infrastructure, determine future facility requirements, and develop recommendations for near-term and longer-term improvements.

### 8.3 Recommended Capacity Projects

The MCSD sanitary sewer collection system is relatively young (less than 25 years) and the District currently has identified the following capacity projects;

- Line 5 between manholes (MH) 5-2 and 5-3;
- Line 6.3 between MH 6-17 and MH 6-6; and
- Line 6 between MH 6-3 and MH 6-4.

When problems are encountered the policy is to "fix when found". Fixed assets are tracked and funding is allocated annually for sewer asset upgrades. Following completion of the hydraulic model some capacity projects may be identified.



#### **8.4 Schedule**

The District has identified specific areas (listed above) that will require capacity expansion of the collection system if funding is available. If funding is not available, it is planned and approved during the next fiscal year.

## **ELEMENT 9: MONITORING, MEASUREMENTS, AND PROGRAM MODIFICATIONS**

This section of the SSMP discusses parameters the District tracks to monitor the success of the SSMP and how the District plans to keep the SSMP current.

### **9.1 Regulatory Requirements for the Monitoring, Measurements, and Program Modifications**

The WDR requirements for the Monitoring, Measurement, and Program Modifications element of the SSMP are summarized below:

- 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 preventive maintenance program;
- Update program elements, as appropriate, based on monitoring or performance evaluations; and
- Identify and illustrate SSO trends, including: frequency, location, and volume.

### **9.2 Monitoring Information**

The District will maintain information that can be used in SSMP performance monitoring through the CIWQS database administered by the State and Regional Water Quality Control Boards to track information under the statewide general SSO order. All CIWQS information is available through the Public Reports portal at:

[http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/publicreports.html](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.html)

### **9.3 Performance Measures**

The indicators that the District will use to measure the performance of its wastewater collection system and the effectiveness of its SSMP are:

- Total number of SSO locations per 100 miles of sewer;
- Volume of spilled wastewater recovered (million gallon (MG) per year) compared to total volume of wastewater spilled (MG/yr); and
- Volume of spilled wastewater discharged to surface waters (MG/yr) compared to total volume of wastewater spilled (MG/yr).

These parameters were selected because they are straightforward, quantitative, and focused on results. These parameters are also available to both District staff and the public at all times through the CIWQS system.

Additional performance measures include programs that the MCSD is developing for implementation as a result of the SSMP development process. These programs include:

Future Activity and Schedule	Completion Date
<ul style="list-style-type: none"> <li>When the storm water mapping data is available from Humboldt County, the District has a goal of having these two data sets merged into a GIS platform and will generate a combined wastewater and storm drainage atlas which will be utilized in the office and in the field.</li> </ul>	<b>2013</b>
<ul style="list-style-type: none"> <li>The District has the goal of updating the District constructions Standards and Specification by 2013.</li> </ul>	<b>2013</b>
<ul style="list-style-type: none"> <li>The District has the goal of completing the development of a hydraulic model used to evaluate system capacity by December 2011</li> </ul>	<b>December 2011</b>

#### **9.4 Performance Monitoring and Program Changes**

The SSMP should be updated periodically to maintain current information, and programs need to be enhanced or modified if they are determined to be less effective than needed. The District will annually evaluate the performance of the wastewater collection system using the performance measures listed in Section 9.3. The District will review the successes and needed improvements of the SSMP as part of the SSMP biannual audit, described in Element 10.

District staff will update critical information, such as contact numbers and the SSO response chain of communication, as needed. A comprehensive SSMP update will occur every 5 years, as required by the SWRCB.

## **ELEMENT 10: SSMP PROGRAM AUDITS**

The intent of this section of the SSMP is to document the District's auditing program.

### **10.1 Regulatory Requirements for the SSMP Program Audits**

The WDR requirements for the SSMP Program Audits element of the SSMP are summarized below:

- The District shall conduct periodic internal audits appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the District's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

### **10.2 SSMP Audits Discussion**

The District will audit its SSMP every two years. The first audit will be completed prior to March 1, 2013 and will cover calendar years 2011 and 2012. The audit will determine whether the SSMP meets the current requirements of the WDR, whether the SSMP reflects the District's current practices, and whether the District is following the SSMP.

The audit will be conducted by a team consisting of the MCSD Staff. The audit team may also include, outside agencies, and/or contractors. The scope of the audit will cover each of the sections of the SSMP.

The results of the audit will be included in the Audit Report. The Audit Report may contain information about successes in implementing the most recent version of the SSMP and identify revisions that may be needed for a more effective program. Information collected as part of Element 9 Monitoring, Measurement, and Program Modifications will be used in preparing the audit. Tables, figures, and/or charts may be used to summarize information about these indicators.

The District will update its SSMP at least every five years. The first update will be completed on or before March 1, 2016.

The District will determine the need to update its SSMP more frequently based on the results of the biannual audits and the performance of its sanitary sewer system using information from the Monitoring and Measuring Program. In the event that the District decides that an update is warranted, the process to complete the update will be identified at that time. The District will complete the update within one year following identification of the need for the update.

The District Staff will seek the approval from the District Board of Directors for any significant changes to the SSMP. The authority for approval of minor changes such as employee names, contact information, or limited procedural changes is delegated to the Operations Director.

## ELEMENT 11: COMMUNICATION PLAN

The intent of this section of the SSMP is to identify a plan to communicate information regarding the District's SSMP activities to the public. The plan includes a process for the public to receive SSMP information as well as provide input to the District on the SSMP.

### 11.1 Regulatory Requirements for the Communication Plan

The WDR requirements for the Communication Plan element of the SSMP are summarized below:

- The District shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP;
- The communication system shall provide the public the opportunity to provide input to the District as the program is developed and implemented; and
- The District shall create a plan of communication with systems that are tributary and/or satellite to the District's sanitary sewer system.

### 11.2 Communication Plan

The District has several methods for communicating information to and receiving information from the public. The following methods have been identified as alternatives that would be effective as part of the District's Communication Plan.

- **District Website** – The District will evaluate the use of a webpage on the District's existing website to facilitate the transfer of information to the public regarding the SSMP. This webpage would include the entire SSMP, audit performance information, and associated information. The webpage would also serve as a venue for soliciting input from the public on the SSMP.
- **Quarterly Newsletter** – An annual notice regarding the sanitary sewer system performance can be included in the quarterly newsletters. The notice would contain general SSMP information. The notice could also refer the customers to the District website for additional details, if an SSMP webpage is implemented.
- **Notices in Public Spaces** – Notices of the SSMP project could be posted and handouts made available in public spaces such as the District Office and library. Information will reference the District's website with additional information.
- **Board of Directors Meetings** – Board of Directors Meetings are public meetings. General SSMP information and updates on sanitary sewer system performance could be added as a regular discussion item on the Board of Directors agenda.