Sewer System Management Plan

Rancho Murieta Community Services District

California Integrated Water Quality System Project (CIWQS) Place ID: 647697

DEVELOPED: SEPTEMBER 2009

FINAL DRAFT

2365 Iron Point Road, Suite 300
Folsom, CA 95630

Updated by Rancho Murieta Community Services District

December 2019

Previous update 7/2014

No.	Elements of SSMP	Description	Due Date	Status
	Application for Permit Coverage	Public agencies (Enrollees) that own or operate sanitary sewer systems within the State of California were required to apply for coverage under the general Waste Discharge Requirements (WDRs). A legally authorized representative must complete and submit an application package provided by the State Water Board.	November 2nd, 2006	Complete
	Reporting Program Registration	Enrollees must obtain a CIWQS SSO Database account, with Username and Password, complete the "Collection System Questionnaire," and begin reporting of all sanitary sewer system overflows complying with Order No. WQ-2008-0002, Amended Monitoring and Reporting Requirements	November 2nd, 2007	Complete
	Development Plan and Schedule	Indicates the responsible District Staff and provides a schedule for meeting the deadlines of eleven elements of SSMP. Requires a public hearing and formal adoption by the Enrollee's governing board. After adoption, Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the signed form to the State Water Board.	November 2nd, 2007	Complete
1.0	**Goals**	**Identifies the District's goal for SSMP and summarizes District's action plan in meeting this goal.**	**November 2nd, 2007**	**Complete**
2.0	**Organization**	**Identifies responsible District staff within the CSD organization.**	**November 2nd, 2007**	**Complete**
(a)	Identify the Enrollee's responsible principal executive officer, ranking elected official, or authorized representative (either by name or by position). This individual shall represent the Enrollee in all pertinent matters and shall sign and certify all applications, reports, and other information provided to the State Water Board, either in written or electronic format.			Complete
(b)	Names and telephone numbers of management, administrative, and maintenance staff responsible for implementing specific measures of the SSMP. Identify lines of authority using and Organization Chart or similar document with a narrative explanation.			
(c)	Listing of the chain of communication for SSO reporting, from initial receipt of a complaint to electronic reporting in the CIWQS Online SSO Database to notification of appropriate health and regulatory agencies			
3.0	**Legal Authority**	**Provides legal authority to District staff in managing, operating, and maintaining the sewer collection system.**	**November 2nd, 2009**	**Complete**
(a)	Prohibition of illicit discharges such as infiltration/inflow, chemical dumping, debris, etc. into the sanitary sewer system			SC #1.02, 3.07, 8.00
(b)	Requirement that all sewers and connections be properly designed and constructed (such as in accordance with established design criteria, standard plans, and standard specifications).			SC # 4.00

No.	Elements of SSMP	Description	Due Date	Status
(c)	Requirement that the public agency be granted access to any lateral owned or maintained by the public agency for maintenance, inspection, or repairs, whether the lateral is located on private or public property.			SC # 3.05, 4.13
(d)	Limitations on the discharge of fats, oil, grease (FOG) or other debris that may cause blockages in the sanitary sewer system leading to SSOs.			SC # 8.03, 8.07
(e)	Ability to enforce any violation of the sewer ordinances.			SC # 10.00
4.0	**Operation and Maintenance Program**	**Provide detail procedures and implementation plan in effectively operating and maintaining the sewer collection system**	**November 2nd, 2009**	**Complete**
(a)	Maintain up-to-date sanitary sewer system map.			Complete
(b)	Describe routine O&M activities performed by public agency staff and by contractors. Include a system to prioritize cleaning frequency of known problem areas and a system to compare scheduled vs. actual cleaning activities.			Complete
(c)	Develop rehabilitation/replacement plan to identify and prioritize system deficiencies. Identify short-term and long-term actions required to correct each deficiency. Include appropriate condition assessment program with tasks such as regular manhole inspection and CCTV inspection to identify and rank system deficiencies. The R/R plan should focus on sewer reaches most at risk of collapse or blockage. Develop a CIP that includes projected costs and an implementation schedule. Evaluate available funding mechanisms to evaluate financial resources.			Complete
(d)	Describe available staff training resources and identify additional needs. Require proper training of contractors.			Complete
(e)	Develop equipment inventory and prepare list of critical replacement parts.			Complete
5.0	**Design and Performance Provisions**	**Provides design and construction standards and specifications for the new and rehabilitation of the sewer collection system**	**May 2nd, 2010**	**Complete**
(a)	Reference design and construction standards for new and/or rehabilitated sanitary sewers, pump stations, and appurtenances.			Complete
(b)	Develop procedures for inspecting and testing new and/or rehabilitated sanitary sewers, pump stations, and appurtenances.			Complete
6.0	**Overflow Emergency Response Program**	**Provides a detail cleanup and notification procedures to take during an SSO event.**	**November 2nd, 2009**	**Complete**
(a)	Notification procedures allowing primary responders and regulatory agencies to be alerted of SSOs in a timely manner.			Complete
(b)	Describe the Enrollee's overflow response program.			Complete
(c)	Procedures for notifying regulatory agencies and other potentially impacted agencies in the event of an SSO that could affect public health or reach the waters of the State. List specific names and phone numbers of individuals who will make the contacts and the agency individuals to be contacted. Include procedures for reporting the SSO through the CIQWS Online SSO Database, and identify the individual responsible for entering the data.			Complete
(d)	Training procedures for staff and contractor personnel regarding use of the Overflow Emergency Response Plan.			Complete

No.	Elements of SSMP	Description	Due Date	Status
(e)	Procedures to address emergency conditions as necessary to safely respond to and clean an overflow. Examples of emergency conditions include traffic control and crowd control.			Complete
(f)	Steps to contain overflows, prevent discharge to waters of the U.S., and mitigate potential environmental damage.			Complete
7.0	**Fats, Oils and Grease Control Program**	**Provides a detail procedure to monitor, inspect and enforce the FOG ordinance on food generating facilities**	**November 2nd, 2009**	**Complete**
(a)	Public education outreach program implementation plan and schedule.			Complete
(b)	List of acceptable FOG disposal facilities. Identify additional facilities needed if current facilities are inadequate.			Complete
(c)	Legal authority to prohibit discharge of FOG to the sanitary sewer system.			Complete
(d)	Installation requirements for grease removal device, design standards, maintenance requirements, BMP requirements, record keeping and reporting procedures.			Complete
(e)	Authority to inspect grease producing facilities and enforce FOG ordinance. Address adequacy of staff to inspect and enforce.			Complete
(f)	Identify sewer system reaches most susceptible to FOG-related blockages. Establish appropriate cleaning schedule for each susceptible reach.			Complete
(g)	Source control measures for each source (typically Food Handling Facilities) that could discharge FOG to the sanitary sewer reaches identified as susceptible to FOG-related blockages.			Complete
8.0	**System Evaluation and Capacity Assurance Plan**	**Provides detail analysis and generates a CIP list for the sewer collection system during the dry and wet weather flow conditions. It provides various capacity enhancement measures establishing the short- and long-term CIP list, schedule and budgetary information.**	**May 2nd, 2010**	**Complete**
(a)	Estimate peak flows of key sewer system components and identify reaches with insufficient hydraulic capacity.			Complete
(b)	Establish appropriate design criteria.			Complete
(c)	Develop short-term and long-term CIP to address identified hydraulic deficiencies. Prioritize correction of identified deficiencies, analyze alternatives for correcting, establish an implementation schedule, and verify that adequate funds are/will be available.			Complete
(d)	Develop schedule of completion dates for the CIP.			Complete
9.0	**Monitoring, Measurements, and Program Modifications**	**Provides detail information on how the District tracks the performance of various SSMP programs. It outlines the performance indicators in monitoring these programs. It will provide various suggestions to further refine the SSMP programs.**	**May 2nd, 2010**	**Complete**
(a)	Maintain relevant data used to establish and prioritize appropriate SSMP activities.			Complete
(b)	Monitor implementation of SSMP vs. schedule. Measure effectiveness of SSMP elements where quantifiable.			Complete

No.	Elements of SSMP	Description	Due Date	Status
(c)	Assess preventative maintenance program.			Complete
(d)	Update SSMP program elements as necessary based on monitoring or performance evaluations.			Complete
(e)	Identify and illustrate SSO trends, including location, frequency, and volume.			Complete
10.0	**Program Audits**	**Provides detail information and summarizes the findings from auditing the SSMP once every two years.**	**Jan 2nd, 2010**	**Complete**
11.0	**Communication Program**	**Provides a detail communication program informing District customers and the public on the development, implementation and performance of the SSMP.**	**Sept, 2010**	**Complete**
	Final SSMP and Implementation Program Certification	The Final SSMP and the Enrollee's implementation program for the SSMP must be adopted by the Enrollee's governing board at a public meeting following a public hearing. After adoption, Enrollee's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the signed form to the State Water Board.	May 2nd, 2010	Complete
	5 yr.-Annual Update	The SSMP must be updated every five years. If significant program changes occur, the SSMP must be re-adopted by the Enrollee's governing board. Enrollee shall re-certify the SSMP in the Online SSO Database, and print, sign, and mail the appropriate form to the State Water Board.	Sept, 2015 and thereafter	Complete 7/20/2014

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1.0 Executive Summary

Sewer System Management Plan

The Rancho Murieta Community Services District (District) is required to comply with the State Water Resources Control Board (SWRCB), Order No. 2006-0003 DWQ and amendment Order No. WQ 2008-0002-EXEC, entitled "General Waste Discharge Requirements for Sanitary Sewer Systems" (WDR). This technical memorandum (TM) describes the goals of the Sanitary Sewer Management Plan (SSMP) in light of this regulation.

Purpose

The purpose of the statewide WDR is to:

1. Provide a consistent and unified statewide approach for the reporting and tracking of sanitary sewer overflows (SSOs);
2. Establish consistent and uniform requirements for SSMP development and implementation; and
3. Facilitate consistent enforcement of the WDR regulation and violations.

The District is required to properly fund, manage, operate and maintain all parts of the sewage collection system owned and/or operated by the District. District staff responsible for the operation and maintenance of the sewage collection system shall possess the appropriate level of knowledge, skills, and abilities, verifiable through participation in a validated program at all times.

Background

The District operates the Rancho Murieta Wastewater Reclamation Plant (WWRP) which provides wastewater treatment for the community of Rancho Murieta. Raw wastewater sources are residential homes and commercial facilities, such as stores and restaurants located within the community. There are no industrial dischargers to the WWRP.

The collection system consists of gravity sewer lines which flow to lift stations located throughout the community. Six of the lift stations are located on the north side of the Cosumnes River and fire are located south of the river. Main Lift North, Mail Lift South, and 6-B sewer collections stations pump their waste directly to the WWRP through force mains. As of this update, the District currently serves a total of 2,545 residential units and 326 non-residential units encompassing an area of 3,500 acres.

The District retained HDR Engineering, Inc. (HDR) to prepare the original SSMP. The regulations can be found on the web here:
http://www.waterboards.ca.gov/water_issues/programs/sso/

Sewer System Management Plan

A critical part of the WDR is to prepare a plan and schedule to properly manage, operate, and maintain all parts of the District's sanitary sewer system to reduce, prevent, and mitigate SSOs, as well as private lateral sewer discharges (PLSDs). The District is required to develop and implement the SSMP document and revise and update it every two years.

2.0 Element 1 – SSMP Goals

Sewer System Management Plan

The Rancho Murieta Community Services District (District) is required to comply with the State Water Resources Control Board (SWRCB), Order No. 2006-0003 DWQ, entitled "General Waste Discharge Requirements for Sanitary Sewer Systems" (WDR), and subsequent Order No. WQ 2013-0058-EXEC. This chapter describes the goals of the Sewer System Management Plan (SSMP) in light of this regulation.

Purpose

The purpose of the WDR is to:

- Provide a consistent and unified statewide approach for the reporting and tracking of Sanitary Sewer Overflows (SSOs).
- Establish consistent and uniform requirements for SSMP development and implementation.
- Facilitate consistent enforcement of the WDR & MRP regulation and violations.
- The District shall properly fund, manage, and operate and maintain all parts of the sewage collection system owned and/or operated by the District. Staff and/or contractors responsible for the operation and maintenance of the sewage collection system shall possess the appropriate level of knowledge, skills, and abilities, verifiable through participation in a validated program at all times.

Goals

The District's goals for the SSMP are:

- To properly manage, operate, and maintain all portions of the District's wastewater collection system;
- To provide adequate capacity to convey peak wastewater flows;
- To minimize the frequency of Sanitary Sewer Overflows (SSOs);
- To mitigate the impacts that are associated with any SSO that may occur; and
- To comply with all applicable regulatory requirements for SSO notification and reporting.

Element 2 – SSMP Organization

Sewer System Management Plan

Requirements

The SWRCB requires that each sewer agency designate an authorized representative to be responsible for the agency's Sewer System Management Plan (SSMP) related activities. It also requires having the names and telephone numbers for the management and administrative positions responsible for implementing specific measures of the SSMP. An organization chart, applicable to the SSMP, is also required.

Authorized Representative

Edward Crouse represents the District as its General Manager/Engineer. The District General Manager/Engineer oversees the Director of Field Operations who is authorized to submit SSO reports to the appropriate government agencies and is responsible for implementing and maintaining all elements of this SSMP.

During regular business hours, contact number is 916- 354-3700. After hours, contract Security Department Dispatch at 916-354-3473.

Position Descriptions

General Manager – Enforces policy, plans strategy; leads staff; allocates resources, delegates responsibilities; authorizes outside contracts to perform services; serves as a departmental public information officer.

Director of Field Operations – Manages field operations and maintenance activities; updates and maintains the SSMP; provides relevant information to agency management; prepares and implements contingency plans; leads emergency response; Reports on CIWQs; trains field crews. Prepares wastewater collection system planning documents; manages the Capital Improvement Program (CIP); documents new and rehabilitated assets; coordinates development and implementation of SSMP. The District has designated the Director of Field Operations as the District's WDR authorized representative.

Utility Supervisor – Manages Utility Workers; oversees F.O.G program; manages collection system maintenance; leads emergency response; investigates and reports SSOs CIWQS; LRO for reporting SSOs on CIWQS.

Utility Workers – Staff that conduct preventive and corrective maintenance activities; mobilize and respond to notification of stoppages and SSOs.

Chief Plant Operator – Manages Plant Operators & Equipment Mechanic; coordinates maintenance activities related to sewer pumping stations and force mains; assists in emergency response; LRO for reporting SSOs on CIWQS.

Plant Operators – Staff that operates and maintains daily operations of collection system facilities as well as responds to emergency alarms and situations.

Environmental Compliance Worker – This is a newly created position for the District that is currently vacant but actively looking to be filled. This position will serve to provide service and reporting for SSMP compliance, among other duties.

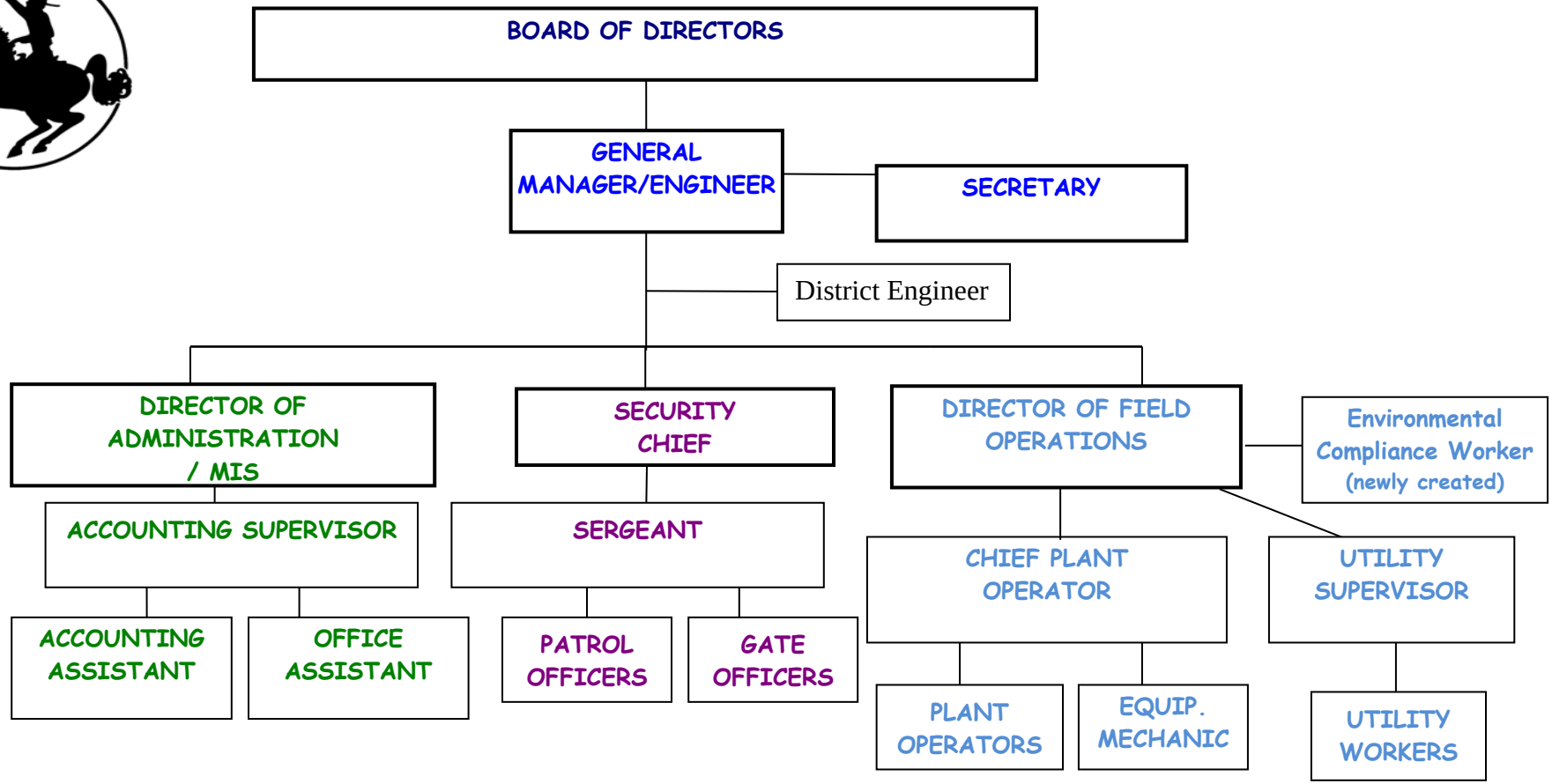


Figure 2-0-1. Rancho Murieta CSD - Organization Chart

Element 3 - Legal Authority

Sewer System Management Plan

Requirements

This element describes the legal authority of the District, through sewer use ordinances, to implement the provisions of the Sewer System Management Plan (SSMP) to:

- Prevent illicit discharges into the sanitary sewer system;
- Require proper design and construction of new and rehabilitated sewers and connections;
- Ensure access for maintenance, inspection, or repairs for all portions of lateral connections owned by the District;
- Limit the discharge of fats, oils, and grease (F.O.G) and other debris that may cause blockages in the sanitary sewer system; and
- Enforce any violation of the District's sewer ordinances.

Legal authority is one of the most important elements of an SSMP. Without adequate legal authority to own and operate a public sewer system, an agency will not be able to effectively manage the sewer collection system, insure adequate construction of new sewers, solve operation and maintenance problems, interact with the public, regulate the developers, and ultimately reduce SSOs. The District's sewer ordinance (Sewer Code) granting these powers were updated in June of 2008. Chapter 15 of the Sewer Code outlines how the District has the legal authority to own, operate, and maintain the WWRP and sanitary sewer system. The Sewer Code addresses illicit discharges, including fats, oils, and grease (FOG) and illegal connections to the sanitary sewer collection system. Violation of the Sewer Code is a punishable offense.

Provisions

The following sections of Chapter 15 of the Sewer Code specifically relate to the requirements of the SSMP:

Section 1.00 – General Provisions

1.02 Scope of Service. The provisions of this Chapter shall apply to sanitary sewer facilities and service in, upon or affecting the territory of the Rancho Murieta Community Services District, and the design, construction, alteration, use, and maintenance of public sanitary sewers, pumping equipment and facilities, treatment plants and facilities, connections and services and all system appurtenances; the disposal of sewage and drainage of buildings; the issuance of permits

and the collection of fees therefore; fees to pay for the costs of checking plans, inspecting construction, and making record plans of the facilities permitted hereunder; providing penalties for violation of any of the provisions hereof, and all other necessary or related matters.

Section 3.00 – General Policies

3.05 Access to and Inspection of the Collection System:

a. The District shall have access at all reasonable times to the collection system, whether located on or off the customer's premises, for the purpose of inspecting, installing, maintaining, operating, removing, or taking other necessary actions relating to the collection system.

b. No person shall be allowed to interfere or otherwise hinder the District's inspection, installation, maintenance, operation, removal, or other lawful or necessary District activity regarding the collection system.

c. No person shall place on any sewer easement any obstruction, such as wires, fences, trees, or buildings, which may impeded or other-wise interfere with the collection system owned by the District. Upon the District's written request, such obstruction shall be immediately removed by the violator at no cost to the District or at the Districts' option, shall be removed by the District at the violator's expense.

3.06 Unsafe Apparatus or Damaging Conditions: If an unsafe or hazardous condition is found to exist on the customer's premises, or if the customer's use of sewer service is found to be detrimental or damaging to the District or its customers, the District may discontinue sewer service without notice, provided that the District notify the customer immediately of the reasons for the discontinuance and the corrective action to be taken by the customer before service can be restored.

3.07 Fraudulent Use of Service: When the District has discovered that a customer has obtained sewer service by fraudulent means or has diverted the sewer service for unauthorized use; the service to that customer may be discontinued in the manner set forth in Section 10.00 herein. The District shall not be required to restore service until the customer has complied with all rules and requirements of the District and the District has been reimbursed for the full amount of the service rendered and the actual or estimated costs to the District incurred by reason of the fraudulent use.

Section 4.00 – District Construction Requirements

4.06 District Construction Standards: All work performed on installing any portion of the collection system and all acts, including design and construction, relating thereto shall comply with the District standard specifications. Copies of the standards are on file with the District office.

4.13 Inspection of Construction:

a. The General Manager, or their designee, shall have the right to inspect all work on the collection system during and subsequent to its construction. When construction is completed; the work must be inspected and approved in writing by the Manger, or their designee, before the newly constructed facilities may be connected to the District's collection system. No construction shall be covered at any time unless it has been inspected and approved by the District. No facilities shall be connected to the District's lateral or main line unless the District has performed testes indicating the new construction is satisfactory and the facilities have been cleaned of all debris accumulated from construction operations.

b. The applicant shall give the District at least forty-eight (48) hours advance notice, Saturdays, Sundays and holidays excluded, of when it wishes the District to perform an inspection. If work is inspected and deemed inadequate, the District shall so notify the applicant in writing and identify the deficiencies in the project.

4.14 Final Approval of Construction: When the District determines that all work done under the permit and the main line extension agreement, if any, has been constructed according to and meets the requirements of all applicable provisions of this Code, the agreement, and any other District rules and regulations, and subsequent to the payment of all fees, the Manager, or their designee, shall authorize the issuance of a certificate of final inspection and completion.

Section 8.00 – Prohibited Use of Collection System

8.01 Drainage into Sanitary Sewers Prohibited: No leaders from roofs, surface drains for rain water or storm sewers shall be connected to any sanitary sewer. No surface, storm water, artesian well flows, cooling water or unpolluted industrial process waters shall be permitted to enter any sanitary sewer by any device or method whatsoever.

8.02 Wastes Prohibited in Public Sewer. No person shall discharge or cause to be discharged any of the following wastes to any part of the collection system.

a. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive solid, liquid or gas.

b. Any waste containing toxic or poisonous solids, liquids, or gases in sufficient quantity either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans, or create a public nuisance.

c. Any waste having a pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment or personnel of the District.

d. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the collection system, such as, but not limited to ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, disposable diapers, feathers, tar, plastics, wood, un-ground garbage, paper dishes, cups, containers, etc. either whole or ground by garbage grinders.

8.03 Types of Waste Which May be Prohibited. No person shall discharge or cause to be discharged the following described substances, materials, or wastes if it appears likely in the opinion of the General Manager that such wastes may harm the collection system, sewage treatment process or equipment, or can endanger personnel or property or create a public nuisance. In forming an opinion as the acceptability of these wastes, the General Manager shall give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers to which they discharge, sewer material, treatment process, treatment plant capacity and other pertinent factors. The substances so subject to prohibition include, but are not limited to:

a. Any liquid or vapor having a temperature higher than 150^{o} F.

b. Any water or waste which may contain more than 100 milligrams per liter of fat, oil, or grease.

c. Any garbage that has not been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in the collection system, with no particle greater than one-half inch in any dimension.

d. Any waters or wastes having a pH higher than 9.0 or having any other corrosive property capable of causing damage or hazard to structure, equipment and personnel of the District.

e. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials in the sewerage works.

f. Any septic tank sludge, unapproved RV waste, or other digested sludge.

g. Any wastes containing phenols or other taste or odor producing substances, in concentrations exceeding limits which may be established by the Board.

h. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits set by the Board in compliance with State or Federal regulations.

i. Materials which exert or cause:

1. Unusual concentrations of inert suspended solid.

2. Excessive discoloration.

3. Unusual Biochemical Oxygen Demand (B.O.D), chemical oxygen demand (C.O.D), chlorine requirements, or any product in such quantities as to constitute a significant load on the sewage treatment plant.

4. Unusual volume of flow or slugs. As used herein, slug shall mean any discharge of water, sewage or waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes or more than five (5) times the average twenty-four (24) hours concentration or flow during normal operation.

j. Wastes containing substances which are not amenable to treatment by the sewage treatment process employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of the Regional Water Quality Control Board, Central Valley Region.

8.04 Acceptance of Deleterious Wastes. If any wastes containing the characteristics listed in Section 8.03 which in the judgment of the General Manager may have a deleterious effective upon the sewerage works, process, equipment, or receiving water, is to be discharged to the collection system, the General Manager may do one or more of the following:

a. Require pretreatment to an acceptable condition prior to discharging to the collection system.

b. Require control over the quantities and rates of discharge.

c. Require payment, in an amount established by the Board to cover the added cost of handling and treating the wastes.

8.05 Pretreatment or Equalization of Flow. If the General Manager recommends pretreatment or equalization of flow, the design and installation of the plants and equipment shall be subject to the review and approval of the District and no construction of such facilities shall commence until District approval is obtained in writing.

8.06 Maintenance of Pretreatment Facilities. Where pretreatment facilities are provided for any waters or wastes, unless otherwise provided, they shall be maintained continuously in satisfactory and effective operation by the owner at the owner's expense and to the satisfaction of the District.

8.07 Interceptors Required.

a. (1) Grease, oil and sand interceptors shall be required, installed and maintained at the customer's expense when in the opinion of the General Manager, or their designee, they are necessary for the proper handling of liquid wastes, grease, or any objectionable waste, sand and other harmful ingredients; except that such interceptors shall not be required for buildings used exclusively for residential purposes. All interceptors shall be of a type and capacity approved by the Manager, and shall be so located as to be readily and easily accessible for cleaning and inspection.

(2) Monthly Fees: For those existing food preparation and cooking facilities where the costs of installation of a grease interceptor would be prohibitive, a charge to cover the costs for the District to handle grease from these facilities [shall be assessed]. Fees will be charged with the regular billing cycle as follows:

Rancho Murieta Country Club	4.03
Rancho Murieta Lodge	0.86
Rancho Murieta Country Store	2.30
Rancho Murieta Plaza	2.59
Rancho Murieta Village Clubhouse	1.73
Rancho Murieta Training Center	3.16

b. (1) Notwithstanding Section 8.07(a), every restaurant, the Training Center, and every other District customer, excluding residential customers, whose premises are used for food preparation and cooking, shall have a sand, oil and grease interceptor installed in the manner and time specified herein.

(2) A District customer, who is required to have an installed sand, oil and grease interceptor pursuant to Section 8.07(b) and who obtains a sewer permit from the District on or after this Ordinance's effective date, shall have an installed and operational interceptor approved by the District prior to connecting with the District's water or sewer system.

(3) A District customer, who is required to have a sand, oil and grease interceptor pursuant to Section 8.07(b) and who had a sewer permit prior to this Ordinance's effective date, shall have an installed operational interceptor approved by the District within one hundred twenty (120) days of this Ordinance's effective date.

c. All sand, oil and grease interceptors shall be designed and constructed according to the following specifications:

(1) Interceptors shall conform to the requirements of the Uniform Plumbing Code and this Ordinance.

(2) Interceptors shall be designed and constructed in accordance with District's standards and shall be approved by the District Engineer prior to connection with the District's sewer system.

(3) Interceptors shall be designed in accordance with the following criteria:

A. Size: Interceptor detention time shall be the greater of (1) total number of fixture units x 7.5 gpm/fixture unit; or (2) dishwasher rated flow rate (gpm x 30 minutes). Interceptors shall be at least 4'0" high and have a minimum freeboard of 12-inches below the soffit of the roof Interior dimensions of the first compartment of an interceptor shall be a minimum of 2'6" wide

and 4'0" long. Interior dimensions of the last compartment shall be TO" long by a minimum of 2'6" wide. Compartment walls shall be the same height as the design water surface of the interceptor.

B. Type: Exterior type interceptors shall be required. "Under-the ink" models are not acceptable. All fixture drains, except floor drains from the kitchen area, shall be connected to the interceptor. All restrooms shall be plumbed separately and connected to the building sewer downstream of the interceptor.

C. Location: Interceptors shall be located outside of the structure and as close as possible to the source of sand, oil or grease. Interceptors shall be located to facilitate the ease of maintenance and inspection. Interceptors placed in areas subject to vehicular traffic shall be designed for H20 loadings. Interceptors shall be located near a hose bib. The final location shall be approved by the District prior to installation.

D. Construction: Interceptors shall be constructed with reinforced concrete and shall contain at least two compartments. Each compartment shall have a 24-inch diameter gasketed airtight standard manhole frame and cover. Each manhole shall have a pre-cast concentric cone and pre-cast 30-inch diameter extension rings. Interceptors shall have a minimum cover of 24-inches below finish Grade. Manholes shall be located directly above inlet piping and interior compartment walls. Scum boards shall extend from the top of compartment walls to the base of the manhole extension rings. All interceptor piping and fittings shall be of ductile iron material. Piping and fittings shall be the same diameter as the building sewer line (4-inch diameter minimum). A two-way cleanout shall be provided on the interceptor outlet pipe. The outlet shall be at least 4-inches below the inlet elevation.

E. The use of pre-approved precast interceptors or automatic mechanical grease removal systems may be allowed with the prior written approval of the District Engineer.

d. No interceptor shall be approved by the District unless its design either conforms to the specifications herein or is, prior to installation, approved in writing by the District Manager, or their designee.

e. Failure to install and adequately maintain a sand, oil and grease interceptor in the time and manner specified in this Section shall be grounds for termination of District water and/or sewer service according to applicable law.

f. All customers with installed interceptors shall provide the District with an annual report of monthly interceptor and cleaning activity.

g. The District has the right to periodically test and inspect any interceptor, as well as request service reports for interceptor cleaning.

h. All customers with installed interceptors shall add grease digesting bacteria to the interceptor as may be required by the District.

i. Any person who improperly disposes sand, oil, grease or other objectionable waste into the District sewer system shall be liable for the cost of any damage caused thereby to the District system, including the costs of cleaning out the deposited material.

8.08 Maintenance of Interceptors. Unless otherwise provided, all grease, oil and sand interceptors shall be maintained by the owner, at the owner's expense, in continuously efficient operation at all times.

8.09 Control Manholes. When required by the General Manager, the owner of any property served by the District and carrying industrial wastes shall install a suitable control manhole in the private sewer line to facilitate observation, sampling and measurement of wastes. Such manholes, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the General Manager. The manhole shall be installed by the owner at the owner's expense, and shall be maintained by the owner so as to be safe and accessible at all times.

8.10 Measurements and Tests. All measurements, tests and analyses of the characteristics of waters and wastes to which reference is made in this Chapter shall be determined in accordance with the latest edition of "Standard Methods of the Examination of Water and Wastewater", and shall be determined at the 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 main line to the point at which the lateral is connected.

Section 10.00 Enforcement Disconnection and Restoration of Service

10.01 Enforcement. The General Manager shall enforce the provisions of this Chapter and, for such purpose, shall have the powers of the peace officer, if deputized or if authorized by law. Such power shall not be regarded as limitations on or otherwise affecting the powers and duties of the County Health Officer.

10.02 Violation of Chapter. In the event of a violation of any laws, ordinances, rules or regulations of the State of California, the County of Sacramento or the District, respecting the subject matter contained herein, the District shall notify in writing the person or persons causing, allowing, or committing such violation within five (5) days after receipt of such notice, and the General Manager shall have the authority to disconnect the property served from the District Sewer System, in the manner set forth herein.

10.03 Public Nuisance. Continued habitation of any building or continued operation of any commercial or industrial facility in violation of the provisions of this or any other Chapter, rule or regulation of the District is hereby declared to be a public nuisance. The District may cause proceedings to be brought for the abatement of the occupancy of the residence, building, industrial, or commercial facility during the period of such violation.

10.04 Disconnection. As an alternative method of enforcing the provisions of this or any other Chapter, rule or regulation of the District, the General Manager shall have the authority to disconnect the customer from the District's collection system, without liability to the District in the following manner:

a. At least ten (10) days before the proposed disconnection of any service, a customer shall be provided with written notice of the procedure for and the availability of an opportunity to discuss the reasons for the proposed disconnection of service.

b. After notice has been given as specified in subparagraph (a) and prior to disconnection of service, a customer shall have the opportunity to discuss the reason for the disconnection with- an employee designated by the District who shall be empowered to review disputed bills, rectify errors, and settle controversies pertaining to disconnection of service.

c. No service shall be disconnected by reason of delinquency in payment of bills on any Saturday, Sunday, legal holiday, or any time during which the District's office is not open to the public.

10.05 Settling Disputes. The General Manager is hereby authorized to review disputes pertaining to any matters for which service may be disconnected and to adjust errors and settle disputes pertaining to such matters.

10.06 Public Nuisance and Abatement. During the period of any disconnection, the habitation of such disconnected premises by human beings shall constitute a public nuisance, which shall authorize the District to bring proceedings for the abatement of the occupancy of the premises during the period of the disconnection. In such event, and as a condition of restoring service, the District shall be paid reasonable attorney's fees and costs of suit arising from such action, plus any other necessary charges for or incurred in the restoration of service.

10.07 Restoration of Service. When service under this Chapter has-been disconnected for any reason, the service shall not be restored until all unpaid sums are paid in full, plus all District expenses for disconnection and restoring the service, plus a twenty five-dollar ($25) restoration fee.

10.08 Recovery of Costs. In the event that the District is required to bring legal action to enforce any provision of this Chapter, including but not limited to the collection of delinquent fees and charges, the District shall be entitled to recover its reasonable attorney's fees, interest and other costs of suit.

10.09 Means of Enforcement Only. The District hereby declares that the foregoing procedures are established as a means of enforcement of the terms and conditions of its ordinances, rules and regulations, and not as a penalty.

10.10 Cumulative Remedies. All remedies set forth herein for the collection and enforcement of rates charges, and penalties are cumulative and may be pursued alternatively, concurrently, or consecutively.

10.11 Misdemeanor. A violation of any provision of this Chapter is a misdemeanor, punishable by a fine not to exceed five hundred dollars ($500) or by imprisonment in the County Jail not to exceed six (6) months, or both. Each and every day, or part of a day that a violation of the Chapter continues, shall be deemed as separate offense hereunder and shall be punishable as such.

Element 4 – Operations and Maintenance

Sewer System Management Plan

Requirements

This Element of the SSMP discusses the District's documented performance measures and activities associated with the preventative maintenance performed on its sanitary sewer system. This Element of the SSMP fulfills the following requirements of both the Regional Water Quality Control Board and State Water Board:

- Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater pumping and piping facilities.
- Each wastewater collection system agency shall allocate adequate resources for the operation, maintenance, and repair of its collection system.
- Each wastewater collection system shall prioritize its preventative maintenance activities and establish a routine preventative operation and maintenance schedule. Describe routine preventative maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The preventative maintenance program should have a system to document scheduled and conducted activities, such as work orders.
- Each wastewater collection system agency shall identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them. The program should include regular visual and TV inspections of manholes and sewer pipes, and system for ranking the conditions of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short-and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.
- Each wastewater collection system agency shall provide contingency equipment to handle emergencies and spare/replacement parts intended to minimize equipment/facility downtime.

- Each wastewater collection system agency shall provide training on a regular basis for its staff in collection system operation, maintenance, and monitoring.
- Implement an outreach program to educate commercial entities involved in sewer construction or maintenance about the proper practices for preventing blockages in private laterals. This requirement can be met by participating in a region-wide outreach program.

Collection System Description

The Rancho Murieta Community Services District is located along the eastern border of Sacramento County. The community encompasses 3,500 acres, of which approximately 2,000 acres are used for residential development. The 2010 Census indicated the population of the community at 5,488. As of this update, the number of sewer connections the District currently serves is 2,595.

The District's sewer system includes approximately 175,556 linear feet (22.26 miles) of gravity pipeline and 13,238 linear feet of sewer forcemain (2.5 miles), the majority of which have been constructed since the mid-1970s. The hilly terrain in Rancho Murieta requires that several pump stations be used to convey wastewater to the treatment plant. There are two categories of sewer pump stations: local and regional. Local pump stations are much smaller than regional pump stations. Local pump stations have a capacity of less than 50 gallons per minute (gpm) and are typically used to convey a small number of residents' wastewater over a ridge to a nearby gravity collection system. Regional pump stations have a minimum capacity of 100 gpm. Rancho Murieta has a total of thirteen (13) lift stations. The location of the lift stations are shown in Exhibit 4-1. Five pump stations were proposed in the Master Plan, with characteristics outlined in Table 4-1.

Table 4-1B. Future Proposed Rancho Murieta Regional Pump Stations

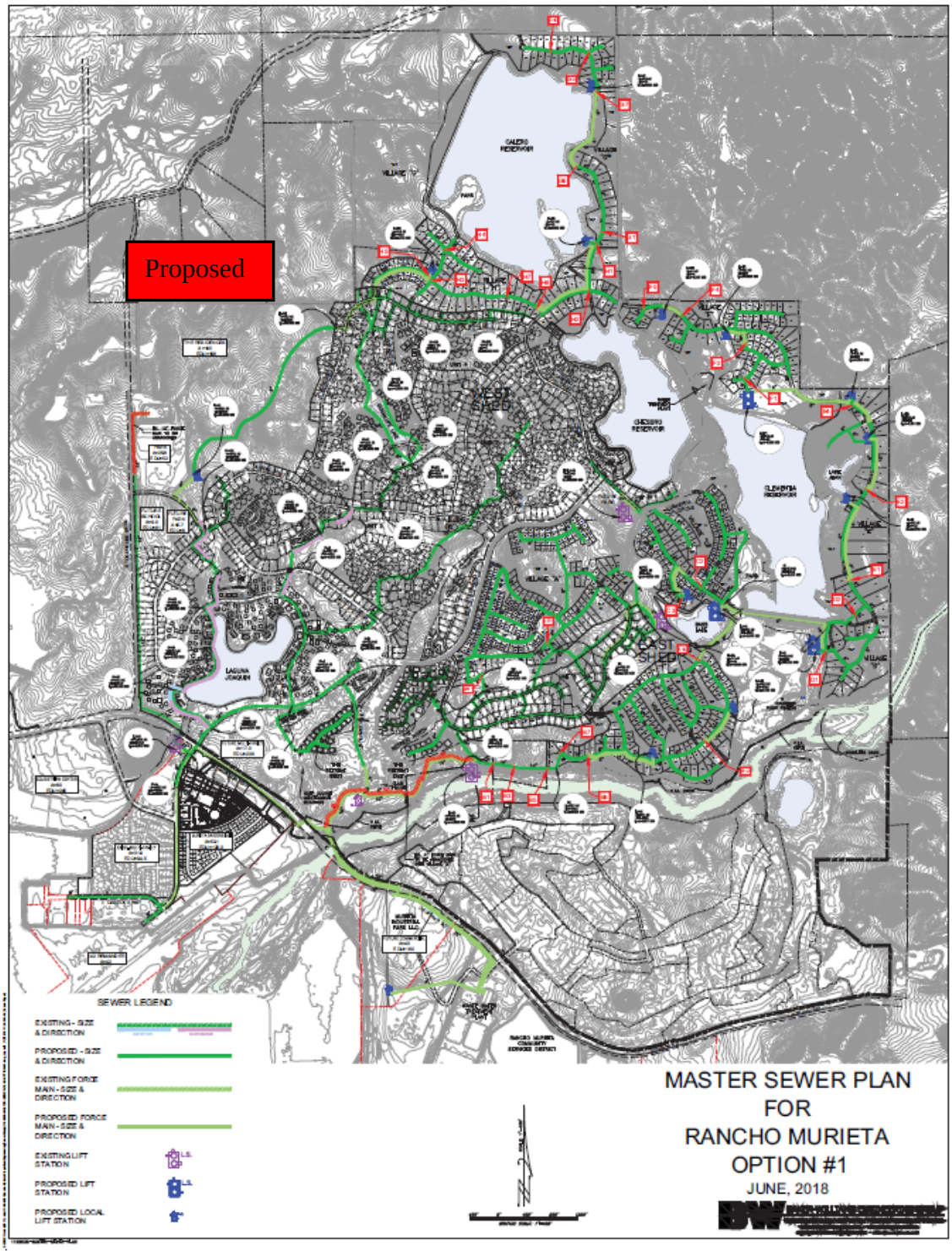
Minimum Operating Capacity (gpm)	Location
84	The Estates at Lake Chesbro
363	River Canyon Estates
443	River Canyon Estates
647	Unit 6, Increase Existing Pump System
388	The Residence at Murieta Hills

Exhibit 4-1A Force Main Pump Station is a general map of the Rancho Murieta sewer service areas.

MLN	1010 X 2 (3RD Pump future)
MLS	505 x 2
6b	115 gpm x 2

Future System

Proposed development plans may add up to 14 new sewer lift stations, an eliminate one existing one. These plans are currently under review.



Collection System Maps

The District is divided into six (6) Units on the North, eleven (11) Units on the South, a commercial area and mobile home village, and new development at the Murieta Gardens, the various residential developments. Record drawings of each Unit are maintained in the District office. The record drawings show the details of the existing sewer system including gravity sewers, forcemains, manholes, pump stations, and valves. The District has also begun putting the system sewer plans in an Autocad format as a starting point for a possible GIS system.

Preventative Operations and Maintenance

Most cleaning and preventative maintenance measures are performed by District staff, with some of it contracted out. Approximately one quarter of the District's collection system is cleaned annually. Known problematic areas (hot spots) are cleaned by District staff on an as-needed basis. The District uses a hydro jetting unit, capable of cleaning lines up to 8 inches, for scheduled cleanings. For lines greater than 8 inches the District contracts to have the lines cleaned. The District also has an inspection camera that is used to inspect the sewer system for damage, infiltration, roots, and cleanliness, which helps identify problematic areas that should be added to the routine cleaning schedule.

Pump stations are equipped with automated alarm systems which will notify the appropriate personnel when a problem occurs. Emergency generators are operated and inspected monthly. Pump station equipment is inspected on a daily basis.

Collection system maintenance and inspections logs are tracked by the Field Operations staff members, and are kept at the District office. A sample inspection service order is included in Exhibit 4-2,to be changed to an electronic service order format in the future

Rehabilitation and Replacement Plan

The 2003 Master Plan and subsequent Preliminary Design Report (PDR) outlined several recommended improvements to the sewer system that would be needed to accommodate the remaining planned developments within the Rancho Murieta community. The recommended improvements included new gravity sewers, new force mains, new manholes, and new pump stations as necessary to accommodate the future development.

Potential Capital Improvements to the collection system are considered by the Board. If approved, repairs to the sewer system are completed and paid for by the District's General Sewer Reserve Fund.

Staff Training

All staff responsible for maintaining the wastewater collection system is required to be trained in the following areas:

- Confined space
- 8 Hr. HAZWOPER
- Fall protection
- Respiratory protection
- CCTV inspection
- Sewer line jetting

District staff responsible for the sewer system are committed to remaining current with efficient and safe practices of operating wastewater systems and undergo additional training opportunities as necessary.

Equipment

The following is a list of the equipment the District has available for maintaining the collection system:

- US Jetter trailer capable of cleaning lines or removing blockages
- Spill Response Kit:
  - 3” trash pump and discharge hose
  - Sand bags and sand
  - Utility trailer capable of hauling all items in the spill response kit, including other utility equipment.
- Ditch Witch FX30 vacuum trailer with a 500 gallon tank and 50 gallons pressure washing tank.
- Portable generator
- Jackhammer
- Air compressor
- Locator
- Metal Detector
- Common pipes, fittings and repair bands
- Pump Station Maintenance
- Spare pumps
- Impellers
- Fuses
- Bearings

- Light bulbs

The District has the ability to rent a backhoe and maintains all necessary personal protective equipment. For excavations that require a backhoe, the District has a local contractor on call. The District also uses the services of an outside contractor for sewer blockage cleaning if necessary. Inventory is checked monthly and restocked when used or as needed.

EXHIBIT 4-1

Map of Sewer Collection Stations

EXHIBIT 4-2

Sample Inspection Work Order

RANCHO MURIETA COMMUNITY SERVICES DISTRICT № 27288

☐ Complaint
☐ Inquiry
☐ Security ☐ Water ☐ Wastewater ☐ Storm Drain ☐ Roads ☐ Levees ☐ Other _____

Priority
☐ 1 ☐ 2 ☐ 3

Date _____ Time _____ By _____ Account # _____

Name _____ Lot# _____

Address _____

Home Phone _____ Work Phone _____ Employee to: _____

Meter # _____ Size _____ Location _____

I.D.# _____ Previous Read: _____ Current Read: _____

Location of Work: _____

Description: _____

_____

_____

Corrective of Action: _____

_____

_____

_____

_____

_____

_____

Action by: _____ Date: _____ Supervisor _____ Date: _____

Invoice to: Name _____ Escrow # _____

Address _____

_____ Zip Code _____ Phone # _____

_____

Service Supervisor _____ Date _____

Accounting ☐ Invoice # _____ Date _____

By: _____

Filing Date _____ By: _____

MATERIALS & EQUIP.			
NO	ITEM	EA.	TOT.

OUTSIDE CONTRACTOR			
HR	CONTRACTOR	$	TOT.

CSD LABOR			
HRS	EMPLOYER	$	TOT.

Subtotal Materials _____
Subtotal O.S. CONST. _____
Total _____

Plus % ____ O.H. _____
Subtotal Labor _____
TOTAL INVOICE _____

Element 5 - Design and Performance Provisions

Sewer System Management Plan

Requirements

Proper design and installation of sewer system pipelines and appurtenances is one of the most important aspects in maintaining a functioning, problem-free sewer system. A properly designed and installed sewer system can minimize system deficiencies that could create or contribute to future overflows and reduce operation and maintenance requirements.

In accordance with WDR 2006-0003, each wastewater collection agency shall identify minimum design and construction standards and specifications for the installation of new sewers, pump stations, force mains, and other appurtenances, and for the rehabilitation and repair of existing sewer systems. In addition, procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances, shall be described in the SSMP.

The following sections describe the District's method of utilizing design and construction standards, along with a routine inspection and testing program, to ensure the quality of the sewer collection system is maintained.

Design and Construction Standards

The District has Standard Construction Specifications governing all construction work both under the direct and indirect inspection of the District and for construction of private improvements within the Districts rights of ways or easements. These standards, which were adopted in 1993, and currently going through an update, can be purchased through the District office.

Sections GS-1 through GS-11 of the Standard Specifications covers contractual issues, while material and construction specifications for the sewer system are provided in Sections SS-1 through SS-127. Sections SS-65 through SS-80 (pages 162 through 176 of the District Standard Construction Specifications) outlines the design and construction criteria that shall be used for sewer installations within the District service area.

Additional standards, not included in the District's Standard Construction Specifications, utilized by the District are the Sacramento County Design Specifications, which can be found on Sacramento County's sewer website (www.sacsewer.com). The District uses Sacramento

County Standards for the installation and rehabilitation of pump stations, and design criteria for gravity piping and forcemains.

A copy of the District's Standard Construction Specifications Table of Contents, Sewer Design Specifications, and pertinent standard drawings are provided in Exhibit 5-1, 5-2, and 5-3, respectively.

Inspection and Testing

Per the Sewer Code Section 3.05 and General Specifications section GS-5, the District maintains the right to have access to any part of the collection system within the District's service at any reasonable time for the purpose of inspecting or taking necessary action with regards to the collection system.

During construction, the General Manager preserves the right to inspect all work and materials used on the collection system during and subsequent to its construction. The District requires that all work be inspected, tested, and approved, in writing, by the General Manager before the newly constructed facilities may be connected to the District's collection system.

EXHIBIT 5-1

Standard Construction Specifications

Table of Contents

EXHIBIT 5-2

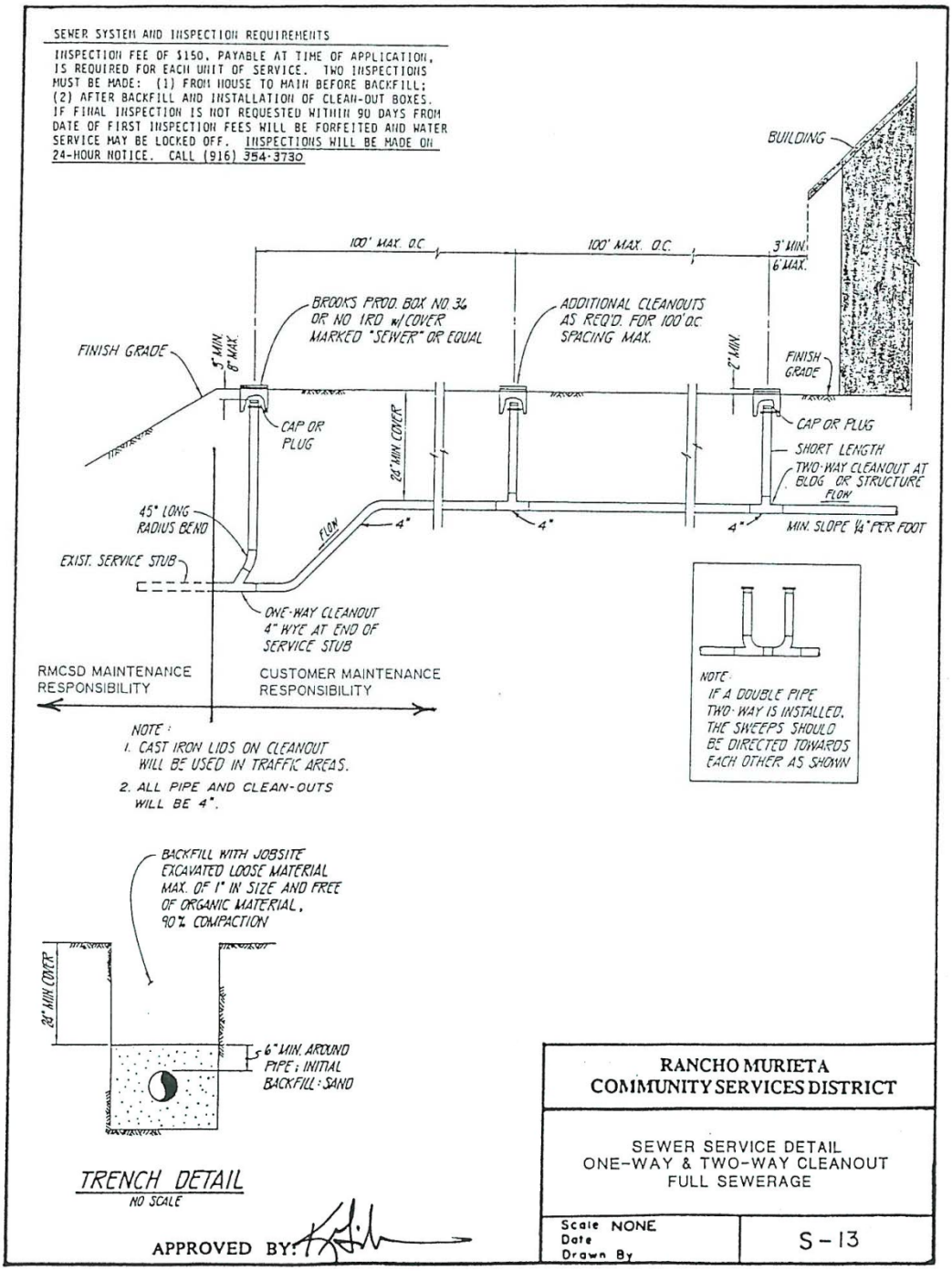
Standard Construction Specifications

Sewer Design Specifications

EXHIBIT 5-3

Standard Construction Specifications

Select Standard Drawings



Element 6 – Overflow Emergency Response Plan

Sewer System Management Plan

Requirements

This chapter describes the sanitary sewer Overflow Emergency Response Plan (OERP) for the District. The following overflow response plan includes:

- Procedures for reporting and notifying Sanitary Sewer Overflows (SSOs);
- Implementation plan to respond to SSOs;
- Steps to prevent overflows from reaching surface waters, and to minimize or correct any adverse impact from SSOs; and
- Training program to familiarize staff with OERP procedures

Notification

Reporting Requirements

The District is required to report all SSOs that result from a failure or flow condition in any portion of a sanitary sewer system under their ownership or management. For the purposes of reporting, SSOs fall into one of three categories: Category 1, Category 2, and Category 3. The definitions for each Catergory are listed in the table below.

CATEGORIES	DEFINITIONS [see Section A on page 5 of SSS WDRs for SSO definition]
CATEGORY 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: Reach surface water and/or reach a drainage channel tributary to a surface water; or Reach a municipal separate storm sewer system 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 municipal separate storm sewer system is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond).
CATEGORY 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a municipal separate storm sewer system 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 **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the SSO Database.

All SSOs are reported on the State of California Waterboard's Sanitary Sewer Overflow eReporting Program (http://ciwqs.waterboards.ca.gov/). The following link provides the latest notification and reporting requirements based on the State Water Resources Control Board (SWRCB):
http://www.waterboards.ca.gov/water_issues/programs/sso/docs/discharger_workbook.pdf

The District will follow the most current guideline provided by the SWRCB. This report replaces the previous Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order No. 2006-0003-DWQ. The amended WDR requires the District to report any SSO to:

(a) the State Office of Emergency Services at (800) 852-7550; and

(b) enter data into the California Integrated Water Quality System (CIWQS) Online SSO Database, certified by the District's Legally Responsible Official (LRO).

Sanitary Sewer Overflow Reporting

The SSO must be reported as shown in the table below.

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION (see section B)	Within 2 hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons** notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING (see section C)	Category 1 SSO: Submit Draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. Category 2 SSO: Submit Draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. Category 3 SSO: Submit Certified report within 30 calendar days of the end of month in which SSO occurred. "No Spill" Monthly Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month in which no SSOs occurred. Collection System Questionnaire: Update and Certify every 12 months.	Enter data into the California Integrated Water Quality System (CIWQS) Online SSO Database (http://ciwqs.waterboards.ca.gov/) , certified by enrollee's Legally Responsible Official(s).

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

Monthly No-Spill Reporting Procedure

The State Department of Water Resources requires that monthly reports shall be filed online to document that no sewer overflow events occurred during that specific month. The website for filing the monthly no-spill report is: https://ciwqs.waterboards.ca.gov/. Specific instructions for logging into CIWQS and reporting an SSO are provided the Districts Wastewater Reclamation Plant Operations Manual.

The District submits no-spill reports online for every month they do not have an SSO event.

SSO Standard Operating Procedure

Notification & Response

Working Hours

During working hours, personnel are notified of an overflow by phone from the District's Security personnel, who are typically notified by the public, a resident, or by the pump station's alarm systems.

Upon arrival to the site, District personnel will investigate the situation to verify that it is a sewer overflow. During normal work hours, they will then notify the on-duty supervisor who will then have the closest person to the shop respond to the overflow site with the utility trailer and sewer spill equipment (Jetting Trailer and/or Ditch Witch Vacuum Trailer). The supervisor or on-call staff will also have other staff respond to the site of the overflow, as needed.

After Hours

If the SSO is detected after hours, the person responding to the call will notify the on-call Utility Worker to resolve the problem. If necessary, Roto Rooter may be called out to clear the blockage.

Figure 6-1 is the District's Emergency Response Chain of Command for SSOs.

Clean Up Procedure

Once the trailer has arrived on site, a 3-inch trash pump is initiated to pump sewage from the manhole up gradient of the blockage to the next manhole down gradient. Once pumping has been started, or if there are available responders to assist, a 2-inch trash pump is taken down stream, along with sand bags. Sand bags will be assembled in the drainage ditch or gutter, in a location safely away from where the ditch or gutter may discharge. The 2-inch pump will be used to remove all remaining sewage that may have spilled into the drainage ditch, gutter or collected behind the assembled sandbags. Once the majority of the spill has been removed with the 2-inch trash pump, flow from a nearby fire hydrant is used to flush the drainage ditch, while the 2-inch pump continues to withdraw the flow from the ditch. Flow from the hydrant is continued until there are no signs of the overflow detected in the flush water. The drainage ditch is inspected and any remaining debris is removed.

The Ditch Witch trailer vacuum may be used in conjunction with or in replacement of trash pumping depending on the volume of sewage spilt. The pressure washer system built into the Ditch Witch may also be used to clean a spill area. Any sewage captured by the Ditch Witch is then discharged into Pond 1 at the Wastewater Plant for treatment.

Clean Up Response & Warning Sign Posting

Dry Weather Conditions

1) Warning Signs: Signs warning the public of a sewage release are to be posted in the affected area. Signs shall include, at a minimum, the wording of "Raw Sewage". These signs can be obtained at the wastewater treatment plant. In the event that a sign needs to be posted immediately and one is not readily available, a sign can be hand written and posted until it can be replaced.

2) Warning Sign Removal: Warning signs shall remain posted until County Health or Regional Board staff authorizes their removal, or until receiving water sample results indicate background levels (levels as determined by upstream samples) have been attained.

3) Sewage Flow Containment: If possible, all sewage flows will be contained and diverted to the nearest sanitary sewer or removed by vactor truck.

4) Sewage Solids Cleanup: After the flows have been stopped and repairs made, rake the area to be inspected and/or vactored any remaining sewage solids.

5) Cleanup Flushing: The affected area shall be flushed with clean water. All flush water and any disinfectants shall be contained and subsequently pumped to the nearest sanitary sewer or removed by vactor truck. Disinfectants may be used so long as runoff does not occur that may cause toxicity to fish and wildlife.

6) Receiving Water Sampling: If the spill or overflow volume exceeds 10,000 gallons, sampling should be conducted both upstream and downstream of the point where sewage has entered the receiving water. Samples are to be analyzed for Fecal Coliform, Dissolved Oxygen and Ammonia Nitrogen.

Wet Weather Conditions

The response cleanup and warning sign posting procedures given above for Dry Weather Conditions should be followed, except that step 5 (Flushing) may be omitted if deemed impractical.

Sewer Back-Up Into a Private Residence

The District will take reasonable measures to ensure the habitability of a residence or business should there be a back-up of sanitary sewage into the building caused by a blockage of a District-owned sanitary sewer main. The following is an overview of the procedures to be utilized by the District in the event of an overflow that occurs into a private residence:

Operating Procedure (Response)

Upon notification of a sanitary sewer main blockage with an accompanying back-up onto private property, the Director of Field Operations will immediately dispatch the on-call collection system utility worker to the event site, who will take appropriate measures to identify whether the cause of the blockage is within the district-owned sewer system or within the privately-owned building lateral. If the blockage is determined to be in the District's sewer main, then the District personnel will remove the blockage from the District's main.

Operating Procedure (Clean up)

If it is determined, upon assessment of the situation, that the SSO was caused by a blockage of the District's sewer main and not the private residence lateral, and the SSO presents a health or safety threat to the inhabitants of the residence, as determined by the Director of Field Operations, a contracted clean-up and restoration company will be called out to clean the area where the SSO occurred. The District will not be responsible for clean-up of an SSO that occurs due to the blockage of a private sewer lateral pipeline.

Overflow Emergency Response Plan Training

The District's collection system staff is trained in OERP by senior staff members as new employees are hired onto the crew. Staff must also keep current on emergency procedures such as confined space entry, flagging, traffic control, and first aid/CPR.

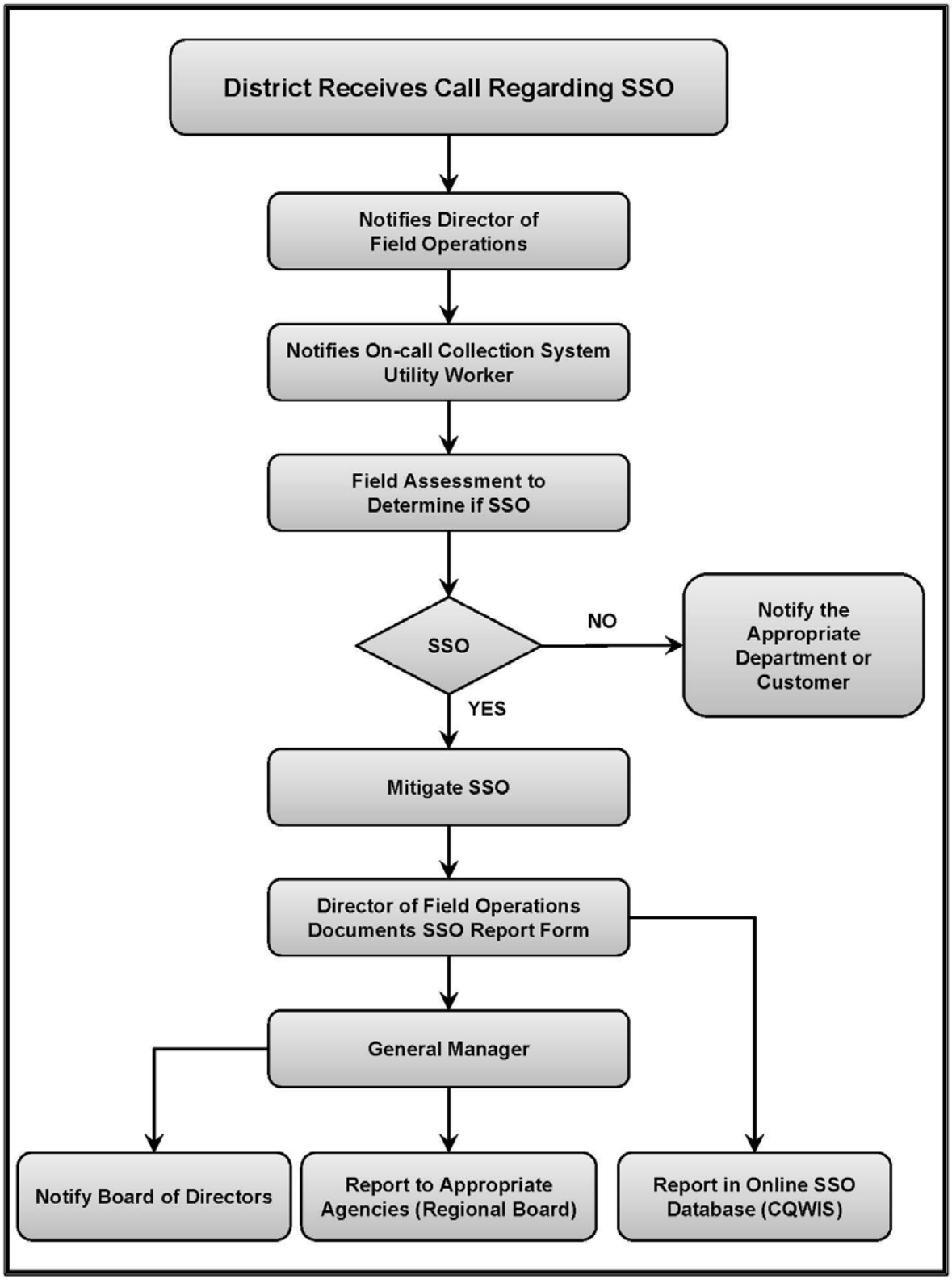


Figure 6-1. Emergency Response Chain of Command

EXHIBIT 6-1

Sample SSO Report Form

Sewage Spill Response Evaluation

(Page 1 of 3)

Rancho Murieta Community Services District

First knowledge of incident: (Date/Time) _____/_____

Staff arrival time: (Date/Time) _____/_____

Estimated spill start: (Date/Time) _____/_____

Incident Ended: (Date/Time) _____/_____

Estimated Duration (Time) _____

Estimated volume of spill/bypass _____ gallons

Volume reaching surface waters _____ gallons

Volume recovered? _____ gallons

Volume soaked into ground? _____ gallons

Show rational for volume.

Notes:

_____

_____

If spill is ongoing, please notify Office of Emergency Services and Regional Water Quality Control Board on a daily basis until spill can be stopped. Leave message if no answer.

Must call within 2 hours of learning of spill if over 1,000 gallons!

1) Reported to: CA Office of Emergency Services (800) 852-7550 (Date/time) _____

Name of person _____ Control # _____

2) Reported to: California Regional Water Quality Control Board

Guy Childs (916)464-4648 or Main number (916)464-3291 (Date/time) _____

Name of person _____

Weather conditions: _____

Source of spill/bypass (check one): _____Sanitary Sewer _____Pump Station _____WWTP
_____Private Lateral cleanout Other (explain)_____

Level of treatment (check one): ____ None ____Primary Treatment

____ Secondary Treatment ____ Tertiary Treatment ____ Chlorination Only

Did spill/bypass reach surface waters? _____Yes _____No (If Yes, please list the following)

Name of surface water_____

(Page 2 of 3)

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9

Did spill/bypass result in a fish kill? _____Yes _____No

If yes, what is the estimated number of fish killed? _____

Samples taken? _____Yes _____No

If so, what were they analyzed for? _____

Sample results:_____

Health warnings posted? _____Yes _____No

Please provide the following information:

1. Location of spill/bypass: _____

_____

_____

2. Cause of spill/bypass: (*private lateral cleanout, manhole, both?)*

_____

_____

_____

_____

3. Did you have personnel available to perform initial assessment 24 hours/day (including weekends and holidays)?

Yes _____ No _____

4. How long did it take to make an initial assessment of the spill/overflow after first knowledge?

_____ Hours _____ Minutes

How long did it take to get a repair crew onsite?

_____ Hours _____ Minutes

Please explain the time taken to make initial assessment: _____

_____

_____

5. Action taken to contain spill, clean up waste, and/or remediation of the site: _____

_____

_____

_____

(Page 3 of 3)

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10

6. Were the equipment and parts needed to make repairs readily available?

Yes _____ No _____ If no, please explain why: _____

_____

_____

_____

7. If the spill/overflow occurred at a pump station, or was the result of a pump station failure, was the alarm system functional at the time of the spill? Yes _____ No _____ if the alarm system did not function, please explain why: _____

_____

_____

_____

8. Repairs made are: Permanent _____ Temporary _____

Please describe what repairs were made. If the repairs are temporary, please indicate a date by which permanent repairs will be completed, and notify the Regional Office within 7 days of the permanent repair: _____

_____

_____

9. What actions have been made to prevent this discharge from occurring again in the future?

_____

_____

_____

10. Comments: _____

_____

Other notifications: _____

Person reporting spill/bypass: _____ Phone Number: _____

Signature_____ Date: _____

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11

Spill response plan kept on file on District's network here:

T:\Treatment Public folder\Operations Manuals and Info\Collections System\@Sewer Spill Contingency Plan v.9 2017.pdf

Element 7 - Fats, Oils, and Grease (FOG) Control Program

Sewer System Management Plan

Requirements

Fats, oils, and grease (FOG) are discharged to sanitary sewer systems by residential users, food handling facilities, and other commercial and industrial establishments. Commonly, FOG can cause pipe blockages leading to sanitary sewer overflows (SSO). The State Water Resources Control Board (SWRCB) requires that each wastewater collection system agency evaluate its service area to determine whether a FOG control program is needed to reduce the risk of SSO. If it is determined that a FOG control program is required, it shall be developed as part of the SSMP and include the following:

- An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- A plan 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, Best Management Practices (BMPs) 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 as a problem.

The District has determined that a FOG control program would be beneficial and an inspection program has been implemented . This Element of the SSMP outlines the District's procedure

for minimizing and monitoring FOG in their collection system, fulfilling the requirements of both the SWRCB and the Regional Water Board.

Public Outreach

The District has developed a flyer discussing the detrimental affects FOG can have on a collection system. The flyer also outlines important facts with regards to FOG, and simple methods the public can employ to be responsible with household FOG. The flyer is included in Exhibit 7-1 and is available to all District users through the Rancho Murieta Community Services District website (www.ranchomurietacsd.com).

In addition, annual reminders are provided in the District's newsletter and may be included with monthly Board updates and with the billing statements.

FOG Disposal

The District requires that oil and grease interceptors and traps be maintained by the owner, and describes in the aforementioned flyer how to properly dispose of the waste product from household cooking oils and grease. The Sacramento Rendering Company (SRC) serves the Rancho Murieta Community. SRC provides containers for FOG storage and collects the containers when they are full. SRC is also capable of pumping grease interceptors of FOG, when necessary. SRC is located at 11350 Kiefer Blvd. (approximately 12 miles from Rancho Murieta). For further information contact Alan Groves at SRC: (916) 363-4821.

Vehicular oils may be collected from users and appropriately disposed of free of charge for District users by the District's solid waste collection and disposal service.

Legal Authority

Both the District and sewer system customers have the responsibility to minimize the amount of FOG that enters the sanitary and storm sewer systems from residential, commercial, and industrial sources. Section 8.07 of the District Code outlines the requirements for grease, oil and sand interceptors within the District's sewer system and is summarized in Element 3, Legal Authority.

Design & Construction Standards

Design and installation specifications and maintenance requirements of sand, oil and grease interceptors are outlined in Section 8.07 of the District Code, which is presented in Element 3.

Inspection and Staffing

The Districts upholds the right to periodically test and inspect any interceptor. It is required that all customers with installed interceptors conduct monthly maintenance and cleaning of interceptors and provide documentation of these activities on an annual basis. Should it be discovered that a customer is improperly disposing FOG, they shall be liable for the cost of any

damage caused to the District, per the District Code Sections 8 and 10, presented in Element 3. The District's FOG maintenance program inspection form is included in Exhibit 7-2.

Identification and Sewer Cleaning

Thus far, problem areas have not been identified within proximity of commercial food handling facilities, which would indicate FOG-related blockages. However, should a segment be identified as a problematic area due to FOG, it will be added to the District's routine cleaning schedule along with other problematic sections.

Source Control

In an effort to control the amount of deleterious wastes discharged into the sewer system, District customers who are required to have a sand, oil and grease interceptor must have it installed and approved by the District prior to connecting with the District's water or sewer system.

If, for some reason, FOG is discharged into the collection system, the District will likely require pretreatment to a predetermined condition prior to discharge, establish a limit of the quantity discharged, or institute payment to the District to account for the additional cost associated with handling and treating of the supplemental waste.

EXHIBIT 7-1

"No FOG" Public Outreach Flyer

http://www.ranchomurietacsd.com/water/DowntheDrain.php

NO FATS NO OILS NO GREASE

COOKING GREASE

is one of the primary causes of residential pipeline and District sewer main clogs, which could result in sewer spills throughout the District's Wastewater Sewerage area. The spilled sewage has the potential to reach the Cosumnes River, causing unsafe conditions and temporary closures. All cooking oils disposed of improperly can cause problems in the sewer system. These include

- Frying oil
- Salad oil
- Meat drippings
- Bacon fat
- Greasy leftovers

IMPORTANT FACTS

- Cooking grease coats pipelines similar to the way that fatty foods clog human arteries. The grease clings to the inside of the pipelines, eventually causing complete blockage.
- Costly home plumbing bills are often the result of grease-clogged pipelines. Residential pipelines clog easily since they are only 2" to 4" in diameter.
- Many people are unaware that pouring hot water and detergent down the drain only breaks up grease temporarily. Grease should NEVER be poured down the drain. If small amounts of grease accidentally get into our drain, flush immediately with COLD water.
- Flushing grease down the toilet also causes sewer backups.

By following a few simple steps, you can help prevent costly sewer problems in the future.

Step 1 All cooking oil should be poured into an old milk carton, frozen juice container or other non-recyclable package, and disposed of in the garbage.

Step 2 Dishes and pots that are coated with greasy leftovers should be wiped clean with a disposable towel prior to washing or placement in dishwashers.

Step 3 Instead of putting fat trimmings from meat in the garbage disposal, put them in a trashcan. Always put cooking grease containers and greasy towels in a plastic bag before disposing of them in your trash bag. NEVER dispose of cooking grease directly into your automated trash compactor.

Report Spills

If you see or smell something you think might be a sewer spill, report it immediately by calling 916-354-3700. Be prepared to describe the location and the nature of the problem.

Rancho Murieta Community Services District

EXHIBIT 7-2

FOG Program Maintenance Reporting Form

T:\Treatment Public folder\Operations Manuals, Info. and SOPs\Collections System\F.O.G Inspections

Inspection Checklist

Number	Item Description	Field Data (where appropriate)	Compliance Status[1]
1.	The establishment has implemented a training program to ensure that the BMPs are followed.		
2.	"No Grease" signs are posted in appropriate locations.		
3.	The establishment recycles waste cooking oil and can provide records of this.		
4.	Water temperatures at all sinks, especially the pre-rinse sink before the mechanical dishwasher or the sinks in the three-sink system are less than 140° F. Measure and record temperature.		
5.	The establishment "dry wipes" pots, pans, and dishware prior to rinsing and washing.		
6.	Food waste is disposed of by recycling or solid waste removal and is not discharged to the grease traps or interceptors.		
7.	Grease trap(s) is cleaned regularly. Note and record the frequency of cleaning.		

8.	Grease trap cleaning frequency is documented on a maintenance log (obtain a copy of the document).		
9.	Grease interceptor does not contain greater than 1/3 the depth in grease accumulation. Estimate and record amount of grease in interceptor.		
10.	Grease interceptor does not contain greater than 1/4 the depth in sediment accumulation. Estimate and record amount of sediment in interceptor if possible.		
11.	Grease interceptor is cleaned and maintained regularly. Note and record frequency of cleaning.		
12.	Grease interceptor cleaning and maintenance frequency is documented on a maintenance log (obtain a copy of the document).		
13.	Outdoor grease and oil storage containers are covered and do not show signs of overflowing.		
14.	Grease and oil storage containers are protected from discharge to storm drains.		
15.	Absorbent pads or other materials (not free flowing material such as cat litter) are used to clean up any spills or leakages that could reach the storm drain.		
16.	Storm drain catch basins show no signs of grease or oil.		
17.	The roof shows no signs of grease and oil from the exhaust system.		
18.	Exhaust system filters are cleaned regularly, which is documented by cleaning records. Note and record frequency of cleaning.		
NOTES			

Inspector:_____ Establishment:_____
Signature:_____ Address:_____
Date:_____ Contact Name:_____
Time Inspection Started:_____ Phone:_____
Time Inspection Completed:_____

[1]An entry should be made for each item using the following codes:

- "C" – Compliance with the item
- "V" – Violation of the item (provide explanation in the notes)
- "NA" – Not applicable (provide explanation in the notes)
- "NC" – Not checked (provide explanation in the notes)

Rancho Murieta CSD

FATS, OILS, AND GREASES (FOG) PROGRAM MAINTENANCE REPORTING FORM

Reporting Period:_____

Date	Maintenance Performed (Inspection or Cleaning)	Performed By:(Company or Employee)	Gallons Removed	Disposal Facility	Manager's Signature

Company Name: _____

Submitted By: _____

Site Address: _____

Receive BMP Information: _____ Signature Required _____

Notes & Comments: _____

_____

Element 8 - System Evaluation and Capacity Assurance Plan

Sewer System Management Plan

Requirements

The requirements for the System Evaluation and Capacity Assurance Plan (SECAP) section of the SSMP are as follows:

- Each wastewater collection system agency shall establish a process to assess the current and future capacity requirements for the collection system facilities.
- Each wastewater collection system agency shall prepare and implement a capital improvement plan to provide hydraulic capacity of key sewer system elements under peak flow conditions.

Service Area

The service area of the District collection system is essentially the incorporated limits of the 3,500 acres or the Rancho Murieta community. In 2003, when the Master Plan was developed, the community serviced approximately 2,500 residential units and a population of over 4,500 persons. As of this update, the District has 2595 sewer connections.

WWRP Flows

A summary of historical total wastewater average daily inflow at the WWRP is provided in table below.

Table 8-1. Historical WWRP Flows

Year	Average Daily Inflow (MGD)
2010	0.49
2011	0.50
2012	0.44
2013	0.40
2014	0.38
2015	0.36

Year	Average Daily Inflow (MGD)
2016	0.40
2017	0.48
2018	0.41

MGD = Million Gallons per Day

The Integrated Water Master Plan explains how wastewater contributions have decreased from approximately 0.3 acre-ft/year per connection (late 1980's) to 0.22 acre-ft/year per connection (current). Therefore, the current annual wastewater contribution rate of 0.22 acre-ft/year per connection equates to an average annual wastewater contribution of approximately 195 gpd per equivalent dwelling unit (EDU). However, the District uses a unit wastewater average dry water production rate of 210 gpd per EDU to be conservative for planning purposes.

System Evaluation

In August of 2003, an Infrastructure Master Plan (Master Plan) was prepared by MacKay and Somps Infrastructure Group. This Master Plan provided an evaluation of the District's existing water, sewer, and drainage systems in order to determine the required improvements needed for development of the remaining undeveloped parcels within Rancho Murieta.

According to the Master Plan, the collection system piping is sized to accommodate the peak wet weather flow (PWWF) at 70% full. The system is designed to meet a minimum velocity of two feet per second during peak dry weather flow (PDWF) and a maximum velocity of ten feet per second at PWWF. These criteria were used to identify potential improvements. The master plan estimates the capital cost of the improvements to be $4.1 million (2003 $) for new pipelines, pumping stations, and system upgrades.

For preparation of additional proposed development and the District's disposal needs at buildout, the Recycled Water Program – Preliminary Design Report (PDR) was developed in 2017 to plan out what would be needed in a phased approach. Its summary of projects and estimated costs are shown below.

No.	Improvement	Estimated Cost ($)[a]
Phase 1 Recycled Water Improvements		
1	Recycled Water SCADA Control System	250,000
2	Equalization Basin Potable Water Air Gap	76,000
3	Recycled Water Pumping Station	1,045,000
4	District Headquarters Conversion	20,000
5	Northwest Recycled Water Transmission Main	1,441,000
6	Lookout Hill Booster Pumping Station	612,000
7	Escuela Park Conversion	16,000
8	Stonehouse Park Conversion	36,000
9	Lookout Hill Recycled Water Storage Tank	545,000
10	North Main Gate Conversion	18,000
11	Commercial Loop Conversion	*TBD*
	Phase 1 Subtotal (Estimated Construction Cost)	**4,060,000**
12	Soft Costs – 32.5% (Admin., Reg., Eng., Construct Man.)	1,319,500
	Phase 1 Total (Project Cost)	**5,380,000[b]**
Buildout Recycled Water Improvements		
13	SCADA Upgrades	82,000
14	Disinfection Facilities Upgrade	665,000
15	North Golf Course Conveyance System	1,620,000
16	Bass Lake Tank	1,216,000
17	Bass Lake Booster Pumping Station	625,000
18	Seasonal Storage Reservoir Expansion	830,000
19	Van Vleck Sprayfield 4	890,000
20	DAF Pumping Replacement	100,000
	Buildout Subtotal (Estimated Construction Cost)	**6,030,000[c]**
21	Soft Costs – 33% (Admin., Reg., Eng., Construct Man.)	1,960,000
	Buildout Total (Project Cost)	**7,990,000**
Phase 1 and Buildout Recycled Water Improvements		
	Grand Total (Phase 1 and Buildout)	**13,400,000[d]**
	Estimated Number of New Equivalent Residential Units	2,213
	Estimated Cost per Connection ($/ERU)	**$6,055**

[a] Estimated costs based upon Engineering News Record (ENR) 20 City Average Construction Cost Index (CCI) at 10,385 (August 2016)
[b] Compared to $10,014,000 ($9,100,000 adjusted for inflation) as described previously in the District's Title XVI Recycled Water Feasibility Study
[c] Compared to $15,055,000 as described previously in the District's Title XVI Recycled Water Feasibility Study
[d] Compared to $25,070,000 as described previously in the District's Title XVI Recycled Water Feasibility Study

An overview of proposed future development capital improvement projects (CIP) for various areas to serve new development is presented below.

New Development Required System Improvements – Residences of Murieta Hills

- Increase pipes along the west side of Laguna Joaquin and within Lago Drive from 8 inches to 10 and 12 inches to accommodate additional flows from Murieta Hills development.
- Install new forcemain along Stonehouse Drive to accommodate additional flows from Murieta Hills development. Utilizing this improvement recommendation would necessitate constructing a pump station near Escuela Drive.

Commercial Site

- Construct pump station at development of commercial site, to discharge wastewater to existing pump station located near the firehouse.

Village H (Estates at Lake Calero)

- Route wastewater flows from the estates at Lake Calero through Murieta Hills. This alternative would require an assessment of the pump station, gravity piping, and forcemains in Murieta Hills to ensure adequate capacity.

Village B (River Canyons)

- Two pump stations (#3 and #4) are required to convey wastewater to existing pump station #5, from where it is pumped to the sewage treatment plant. These two pump stations would also accommodate wastewater flows from Clementia, Chesbro, and the Highlands.

Village C (The Highlands)

- Wastewater will flow through piping, located between Bass Lake and Lake Clementia, towards pump station #3. A local pump station may be required to service low areas next to Lake Clementia.

Village D (Clementia)

- Wastewater will flow from the Estates at Lake Clementia toward pump station #3. A local pump station may be required to service low areas next to Lake Clementia.

Village F (Chesbro)

- Wastewater from the Estates at Lake Chesbro will flow towards pump station #2, from which flows will be directed towards the collection system in the Highlands.

Future WWRP Improvements to Address New Development Disinfection Facilities

- The current layout in the chlorine contact basin provides adequate contact time, per Title 22 requirements, for only 2.3 mgd. Capacity must be increased to build out conditions of 3 mgd by building a newly expanded chlorine contact basin of approximately 147,000 gallons. The Recycled Water Program – Preliminary Design Report (PDR) estimated the capital costs to be $665,00 in 2017.

Storage Capacity

- The District currently has 728 ac-ft of storage capacity, of which 600 is allocated for current 100 yr-return needs. At build out 900 ac-ft per the PDR of seasonal secondary storage will be needed, with previous Master Plan noting 965 ac-ft.
- . Approximately 172 ac-ft of additional seasonal storage capacity is required at build-out for the District service area per the PDR. Estimated cost from the PDR for this reservoir expansion was $3,407,000.

Disposal Capacity

- Anticipated additional wastewater produced by new growth at build out requires that discharge capacity be increased to 970 per the PDR, with previous Master Plan noting 965 ac-ft. Table of production and disposal capacities from PDR shown below:

Development/Proposed Recycled Water Use Area	Description	Projected RW Demand (AFY)	Wastewater Production (AFY)
Existing Recycled Water Use Areas			
Exising Development			
Rancho Murieta North & South Golf Courses	18-hole golf courses (~250 ac)	550	380.9
Van Vleck Ranch	Field 1 (~49ac), Field 2 (~25ac), Field 3 (~22 ac)	215	
Sub Total		**550* / 765****	**380**
Phase 1 Proposed Expanded Recycled Water Use Areas (~2016-2020)			
Infill	0.05 MGD allocation assumed	0	56.0
Main Northgate	Conversion to recycled water	2.8	0.0
District Office[a]	Conversion to recycled water	5.4	0.0
Retreats (North, East and West)	84 residential units	15.1	19.8
Murieta Gardens	78 residential units, commercial equivalent to 227 residential units	30.5	71.9
Stonehouse Park (4-acre park)	Conversion to recycled water	36.2	0.0
Escuela Park (4-acre park)	Conversion to recycled water	12.1	0.0
Commercial Loop (to be developed)	*Potential conversion to recycled water; could be 20 to 30 AFY demand; require coordination with Owner to proceed*		
	Phase 1 Sub Total	**102**	**148**
	Sub Total	**650* / 865****	**530**
Phase 2 Proposed Expanded Recycled Water Use Areas (~2020-2025)			
Village A	167 residential units	56.5	39.3
Village B	167 residential units	64.6	39.3
Village C	130 residential units	49.6	30.6

Development/Proposed Recycled Water Use Area	Description	Projected RW Demand (AFY)	Wastewater Production (AFY)
Village D	42 residential units	0	9.9
Village E	43 residential units	0	10.1
Village F	95 residential units	0	22.3
Village G	53 residential units	0	12.5
Village H	122 residential units	0	28.7
Riverview	140 residential units	0	32.9
Lakeview	99 residential units	0	21.4
Apartments	170 residential units	23.8	23.3
Residences of Murieta Hills	198 residential units	73.8	46.6
Industrial/Commercial/Residential	160 equivalent residential units	50.9	37.6
Van Vleck Ranch	Sprayfield 4	410	
	Phase 2 Sub Total	**320* / 730****	**355**
	Grand Total	**970* / 1,595****	**885**

* Beneficial reuse

** Beneficial reuse plus Van Vleck sprayfield disposal demands

Historical Performance of the Collection System

Occasional sanitary sewer overflows have occurred in the District due to root intrusions and debris. There is one known specific reache of hydraulic restriction in the District's collection system, west of Lindero Lane in the North Unit 1 development. Some areas do have limited hydraulic gradients, which have caused issues when excessive debris is present. These areas have been added to the "hot spots" list for maintenance. The table below shows the recent number of SSOs per year.

Indicator	2014	2015	2016	2017	2018	2019
Number of SSOs (total)	4	2	2	1	1	2*

Element 9 - Monitoring, Measurements, and Program Modifications

Sewer System Management Plan

Requirements

In accordance with SWRCB requirements, each wastewater collection system agency shall monitor the effectiveness of the SSMP and update and modify SSMP elements to keep them current, accurate, and available for audit, as appropriate. The following describes the District's procedure for monitoring the effectiveness of the SSMP and the procedures used to minimize Sanitary Sewer Overflows.

Monitoring

In order to monitor the effectiveness of the SSMP, the District has selected a procedure whereby specific parameters are documented and compared on an annual basis. These parameters will provide quantitative, focused results that indicate the overall success of the SSMP, or conversely, the underlying problems that may then be further investigated. Table 9-1 lists each SSMP element, the overall purpose of the SSMP element, and the specific parameters that the District plans to track that will help in evaluating the effectiveness of the SSMP. The District will track each of these parameters, the results of which will be included in the Key Performance Indicator (KPI) Checklist, shown in Exhibit 9-1.

Table 9-1. SSMP Monitoring Parameters

SSMP Element	Summary of Element Purpose	KPI
1.0 Goals	Establish priorities of the District and provide focus for District Staff	• As part of Element 10 – Program Audits, reconsider Goals and evaluate potential changes
2.0 Organization	Document organization of District staff and chain of communication for SSO response	• As part of Element 10 – Program Audits, update Organization Chart as staff changes or reorganizations occur
3.0 Legal Authority	Ensure the District has sufficient legal authority to properly maintain the system	• None needed

4.0 Operations and Maintenance Plan	Minimize blockages and SSOs by properly maintaining the system and keeping the system in good condition	• Total number and volume of SSOs • Number of repeat SSOs (same location as any previous SSO, regardless of year of occurrence) • Total number of mainline blockages • Causes of blockages and time since last cleaning • Number of pump station failures • Causes of failures • Number of pipe failures • Causes of failures • Length of pipe CCTV'd 3-yr backlog for rehabilitation and repair projects
5.0 Design & Construction Standards	Ensure new facilities are properly designed and constructed	• None needed
6.0 Overflow Emergency Response	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	• Average and maximum response time • Percent of total overflow volume contained or returned to sewer
7.0 Fats, Oil, and Grease Control	Minimize blockages and overflows due to FOG	• Number of blockages due to FOG • Number of overflows due to FOG (linked to SSO Identification Number) • Number of FOG producing facilities inspected • Percent of FOG producing facilities found to be in compliance
8.0 Capacity Management	Minimize SSOs due to insufficient capacity by evaluating the system capacity and implementing necessary projects	• Number of SSOs due to capacity limitations or wet weather (linked to SSO Identification Number) • Date of completion of most recent capacity evaluation • 3-year backlog for capacity improvement projects
9.0 Monitoring, Measurement, and Program Modifications	Evaluate effectiveness of SSMP, keep SSMP up-to-date, and identify necessary changes	• As part of Element 10 – Program Audits, evaluate tracking of KPI and effectiveness in determining effectiveness of SSMP
10.0 Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis	• Date of completion of last annual audit
11.0 Communication Plan	Communicate with the public and satellite agencies	• Number of contacts initiated by the public • Percentage of positive comments

The District will use the KPI listed in the above Table 9-1 to assist in completion of the annual SSMP program audit described in Element 10. The District will also continue to track additional information, such as customer complaints and length of pipe cleaned, to assist in evaluation of the SSMP effectiveness.

SSMP Modifications

The SSMP will be updated periodically to maintain current information. The District will review the success and/or necessary improvements of the SSMP as part of the annual SSMP program audit. The District 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.

EXHIBIT 9-1

Key Performance Indicator (KPI) Checklist

SSMP Key Performance Indicators

	2014	2015	2016	2017	2018
Total number of SSO's	4	2	2	1	1
Number of repeat SSO's (same location as any previous SSO, regardless of year of occurrence)	2	0	1	0	1
Total number of mainline blockages	4	2	2	1	1
Number of pump station failures	0	0	0	1	0
Cause of pump station failure	0	0	0	0	0
Number of pipe failures	0	0	0	0	0
Cause of pipe failures	Debris, Roots	Debris, Roots	Roots, debris, Wipes	Cleaning Wipes	Cleaning Wipes
Length of pipe CCTV'd	5,790	8,744	1,693	1,656	2,168
Length of Sewer Lines Cleaned	45,648	61,717	78,139	42,979	60,247
Percentage of total overflow volume contained or returned to sewer	32%	17%	1%	0%	20%
Number of blockages due to FOG	0	0	0	0	0
Number of overflows due to FOG	0	0	0	0	0
Number of FOG producing facilities inspected	8	8	9	9	9
Percent of FOG producing facilities found to be in compliance	87.5%	100%	100%	100%	100%
Number of SSOs due to capacity limitations or wet weather	0	0	0	0	0
Date of completion of most recent capacity evaluation	2003	2003	2003	2003	2003

Element 10 - Program Audits

Sewer System Management Plan

Requirements

State Water Resources Control Board (SWRCB) requirements state that each wastewater collection system agency shall conduct an audit of their SSMP at least every two years. The periodic audits shall be at a level of detail commensurate with the size of the Enrollee and the number of SSOs experienced, and shall identify any deficiencies in the current SSMP and describe the steps required to correct those deficiencies (if applicable). The program audit shall cover the period from the previous program audit to the current date. The Enrollee shall prepare a written report to be kept on file. The report must be made available to employees of the Regional Water Quality Control Board in the event of an investigation.

Audits

The District's Director of Field Operations will lead the audit of the District's SSMP on an annual basis. Calendar year 2010 was the first year to be audited.

Each of the major sections of the SSMP will be addressed during the audit. An audit checklist, provided as Exhibit 10-1, shows the categories to be evaluated. Where results of the evaluation indicate deficiencies, corrective measures will be developed. The results of the audit will be included in an Annual Audit Report. A hardcopy of the Annual Audit Report will be printed and filed at the District office and kept on the District network under ..\Sanitary Sewer Management Plan.

SSMP Updates

The District will determine the need to update its SSMP based on the results of the program audit and the performance of its wastewater collection system. The overall measurement of program effectiveness will be a reduction in the frequency and volume of SSOs since the previous audit period. Corrective measures will be developed for all Program deficiencies identified, and the corrective actions, including a schedule for implementation of changes, will de documented in the Annual Audit Report. The full SSMP will be updated every five (5) years, at a minimum, in accordance with the requirements of WDR 2006-0003.

EXHIBIT 10-1

Audit Checklist

Sewer System Management Plan Annual Audit Checklist
(Adapted from format developed by Bay Area Clean Water Agencies)

Name of agency	Rancho Murieta Community Services District
Date of audit	
Name of auditor	
System Overview	
LF of gravity sewer mains	
LF of force mains	
Total LF of all sewer lines	
Number of pump stations	
Population served	
Current average monthly single family residential sewer rate	

1. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? **YES / NO**

2. If you answered NO to question 1, describe content and schedule for updates, or provide additional comments for a YES response.

2. ORGANIZATION

Reference Material
- Organization Chart
- Phone list

3. Is the SSMP up-to-date with agency organization and staffing contact information? **YES / NO**

4. If you answered NO to question 3, describe content and schedule for updates, or provide additional comments for a YES response.

3. LEGAL AUTHORITY

Reference Material
- Municipal Code
- Enforcement actions

5.	Does the SSMP contain up-to-date information about the District's legal authority?	**YES / NO**
6.	Does the District have sufficient legal authority to control sewer use and maintenance?	**YES / NO**
7.	If you answered NO to questions 5 or 6, describe content and schedule for necessary changes, or provide additional comments for a YES response.	

4. OPERATIONS AND MAINTENANCE

A. COLLECTION SYSTEM MAPS

Reference Material
- Collection system map

8.	Does the SSMP contain up-to-date information about the District's maps?	**YES / NO**
9.	Are the District's collection system maps complete, up-to-date, and sufficiently detailed?	**YES / NO**
10.	If you answered NO to questions 8 or 9, describe content and schedule for necessary changes, or provide additional comments for a YES response	

B. RESOURCES AND BUDGET

Reference Material
- Current Capital Improvement Plan (CIP)
- Current operating budget

11.	Does the SSMP contain up-to-date information about the District's resources and budget?	**YES / NO**
12.	Are the District's resources and budget sufficient to support effective sewer system management?	**YES / NO**
13.	Do the District's planning efforts support long-term goals?	**YES / NO**

14. If you answered NO to questions 11, 12, and/or 13, describe content and schedule for necessary changes, or provide additional comments for a YES response.

C. PRIORITIZED PREVENTATIVE MAINTENANCE

Reference Material

- Cleaning schedules
- List or map of potential problem area
- Work orders
- Incident reports
- Customer feedback

Table 1. Annual Preventative Maintenance Activities

Maintenance Activities	Linear Feet/Year			
	2010	2011	2012	2013
CCTV				
Rodding				
Flushing				
Dye - Smoke testing				

15. Does the SSMP contain up-to-date information about the District's preventative maintenance activities? **YES / NO**

16. If you answered NO to question 15, describe content and schedule for necessary improvements to preventative maintenance activities. **YES / NO**

D. SCHEDULED INSPECTIONS AND CONDITION ASSESSEMNT

Reference Material

- Inspection reports
- Infiltration and Inflow (I/I) monitoring studies and reports
- Pipe and manhole condition data

17. Does the SSMP contain up-to-date information about the District's inspection and condition assessment? **YES / NO**

18. Are the District's scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies? **YES / NO**

19. If you answered NO to questions 17 and/or18, describe content and schedule for necessary changes, or provide additional comments for a YES response.

E. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

Reference Material
- Funds spent on equipment and materials
- Equipment and parts inventory

20. Does the SSMP contain up-to-date information about equipment and replacement inventories? **YES / NO**

21. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? **YES / NO**

22. If you answered NO to questions 20 and/or 21, describe content and schedule for necessary arrangements, or provide additional comments for YES response.

F. TRAINING

Reference Material
- Employee training records

23. Does the SSMP contain up-to-date information about the District's training expectations and programs? **YES / NO**

24. Do supervisors believe that their staff is sufficiently trained? **YES / NO**

25. Are staff satisfied with the training opportunities and support offered to them? **YES / NO**

26. If you answered NO to questions 23, 24, and/or 25, describe contend and schedule for necessary improvements, or provide additional comments for YES response.

G. OUTREACH TO BUILDING CONTRACTORS

Reference Material
- Fliers/mailings
- Mailing lists

27. Does the SSMP contain up-to-date information about the District's outreach to plumbers and building contractors? **YES / NO**

28. Has the District conducted or participated in any outreach activities to plumbers and building contractors? **YES / NO**

29. If you answered NO to questions 27 and/or 28, describe content and schedule for future activities, or provide additional comments for YES response.

Table 2. Number of Permits issues to plumbers or contractors

Year	No. Permits*
2010	
2011	
2012	
2013	
2014	

*Specifically permits that could impact District facilities.

5. DESIGN AND CONSTRUCTION STANDARDS

Reference Material
- Design and construction standards
- Ordinances

30. Does the SSMP contain up-to-date information about the District's design and construction standards? **YES / NO**

31. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? **YES / NO**

32. If you answered NO to questions 30 and/or 31, describe content and schedule for necessary revisions, or provide additional comments.

6. OVERFLOW EMERGENCY RESPONSE PLAN

Reference Material
- Data submitted to CIWQS
- Service call data

Table 3. Annual SSO Statistics

Indicator	2010	2011	2012	2013	2014
Number of SSOs (total)					
Wet season SSOs					
Dry season SSOs					
Number of SSOs by volume (gallons)					
<10					
10 – 99					
100 – 999					
1000 – 9999					
>10,000					
Total SSO Volume					
Volume reaching waters of the State					
Volume not contained but not reaching waters of the State					
Volume recovered					
Net volume (total minus recovered)					
Number of SSOs per 100 mile of sewer per year					
Volume of SSOs per 100 mile of sewer per year					
Total Volume conveyed to the plant (million gal)					
Total volume SSO / Total volume conveyed (gal)					
Number of SSOs (by Cause)					
Blockages:					
Roots					
Grease					
Debris					
Debris from Laterals					
Animal Carcass					
Construction Debris					
Multiple causes					
Infrastructure failure					
Inflow & Infiltration					
Electrical Power Failure					
Flow Capacity Deficiency					
Natural Disaster					

Indicator	2010	2011	2012	2013	2014
Bypass					
Cause Unknown					
Average Emergency Response Times, minutes					
Business Hours					
Notification to arrival on site					
Notification to complete clearage					
Non-business hours					
Notification to complete clearage					
Number of locations with multiple SSOs					

33. Does the SSMP contain an up-to-date version of the District's Overflow Emergency Response Plan? **YES / NO**

34. Considering the information in Table 3, is the Overflow Emergency Response Plan effective in handling SSOs? **YES / NO**

35. If you answered No to questions 33 and/or 34, describe content and schedule for necessary revisions and implementation, or provide additional comments for YES response.

7. FATS, OILS, AND GREASE (FOG) CONTROL PLAN

Reference Material
- List or map of FOG sources in service area
- List or map of potential problem areas
- Cleaning schedules
- Restaurant inspection reports or summaries
- Data submitted to CIWQS
- Service call data

Table 4. FOG Control Statistics

	2010	2011	2012	2013	2014
Number of SSOs caused by FOG					
Number of FOG inspections completed					

36. Does the SSMP contain up-to-date information about the District's FOG program? **YES / NO**

37. Considering the information in Table 4, is the FOG program effective in documenting and controlling FOG sources? **YES / NO**

38. If you answered NO to questions 36 and/or 37, describe content and schedule for necessary changes, or provide additional comments for YES response.

8. CAPACITY MANAGEMENT

Reference Material
- Capacity assessment reports
- CIP
- SSO data

Table 5. SSOs Caused by Hydraulic Limitations

	2010	2011	2012	2013	2014
Number of SSOs caused by capacity limitations					

39. Does the SSMP contain up-to-date information about the District's capacity assessment? **YES / NO**

40. Has the District completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system? **YES / NO**

41. If you answered NO to questions 39 and/or 40, describe content and schedule for necessary activities, or provide additional comments for YES response.

9. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

42. Does the SSMP contain up-to-date information about the District's data collection and organization? **YES / NO**

43. Is the District's data collection and organization sufficient to evaluate the effectiveness of the SSMP? **YES / NO**

44. If you answered NO to questions 42 and 43, describe content and schedule for necessary improvements, or provide additional comments for a YES response.

10. SSMP AUDITS

45. Will this Audit be completed annually and filed with the SSMP report? **YES / NO**

11. COMMUNICATION PROGRAM

Reference Material
- Mailings and mailing lists
- Website
- Other communication records such as newspaper ads, site postings, or other outreach
- Customer feedback

46. Does the SSMP contain up-to-date information about the District's public outreach activities? **YES / NO**

47. Does the SSMP contain up-to-date information about the District's communications with satellite and tributary agencies? **YES / NO**

48. Has the District effectively communicated with the public and other agencies about the SSMP, and addressed feedback? **YES / NO**

49. If you answered NO to questions 46, 47, or 48, describe content and schedule for necessary improvements, or provide additional comments for YES response.

Element 11 - Communication Program

Sewer System Management Plan

Requirements

The State Water Resources Control Board requires that the District communicate, on a regular basis, with the public on the development, implementation, and performance of the SSMP. The communication system shall provide the public the opportunity to provide input to the District as the program is developed and implemented.

This section of the SSMP outlines the process involved in communicating with interested members of the public regarding development, implementation, and performance of this plan.

Communication During Development

During the development of the SSMP, the District will develop a webpage dedicated to inform the public about the District's SSMP process. The website will provide useful information on the District's SSMP such as upcoming dates for completion of the SSMP document as well as information regarding where the public may comment and inquire about the SSMP process.

Communicating Sewer System Performance

As the SSMP document is completed, the SSMP website will provide a link to the finished document for the public to download, access, and review. Results from the District's periodic SSMP audits will also be posted on the website, as they become available.

The District is required to report SSOs to the California Integrated Water Quality System (CIWQS). The electronic SSO data, as well as information regarding regulatory actions, is available to everyone at: https://ciwqs.waterboards.ca.gov.

The District will report the performance of its sanitary sewer system to the Board of Directors annually at a regular scheduled meeting, and the performance information will be included in the minutes of that public meeting.

In addition to the website and the annual update, the District may consider utilizing several different strategies to determine the best avenue for public outreach and education for their customers. The District may develop advertising material such as posters, flyers and/or brochures that will be used to communicate the proper use and maintenance of residential and commercial sewer lines.