VALLEY CENTER MUNICIPAL WATER DISTRICT

SEWER SYSTEM MANAGEMENT PLAN

May 17, 2010

Table of Contents

The Valley Center Municipal Water District is dedicated to preventing sanitary sewer overflows and complying with the new Statewide General Waste Discharge Requirements.

This Sewer System Management Plan (SSMP) was prepared to document standards and procedures used to operate and maintain the District's Wastewater Collection Facilities. The primary goal of the plan is to reduce, and possibly eliminate, the potential for sanitary sewer overflow events. The State Water Resources Control Board adopted a Statewide General Waste Discharge Order requiring each collection system agency to prepare and adopt an SSMP. Also included in the Order were new monitoring and reporting requirements for SSO events.

The SSMP is organized into the eleven elements listed in the GWDR (Appendix A). The state requirements are included in the beginning of each section.

The SSMP is a living document and will be periodically updated and enhanced to be effective. After each SSO event, staff will also review the event and make recommendations for modifications to the plan, as appropriate. Each year, beginning in July, District staff will review the effectiveness of the Management Plan and report its findings to the Board in October. Any recommendations for modification to the plan would be made at that time.

1. Goals

SWRCB Requirement:

The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur.

The Valley Center Municipal Water District has developed the following goals for the SSMP to be implemented to improve the management of the wastewater collection system:

- To properly manage, operate, and maintain all parts of the wastewater collection system
- To provide adequate capacity to convey peak flows
- To minimize the frequency of Sanitary Sewer Overflows (SSOs)
- To mitigate the impact of SSOs
- To meet all applicable regulatory requirements, including but not limited to notification and reporting of SSOs.

2. Organization

SWRCB Requirement:

The collection system agency's SSMP must identify:

(a) The name of the responsible or authorized representative;

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and

(c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

The Valley Center Municipal Water District is dedicated to providing a safe and reliable service to the community. The organization and communication of the District is critically important for the implementation of the SSMP. The organization chart identifies District staff members who are responsible for implementing, managing, and updating the SSMP. The communication plan identifies District staff members who are responsible for managing the SSO response, investigating the cause, and reporting the SSO to the appropriate parties. The communication plan also provides a list of key District personnel for emergencies.

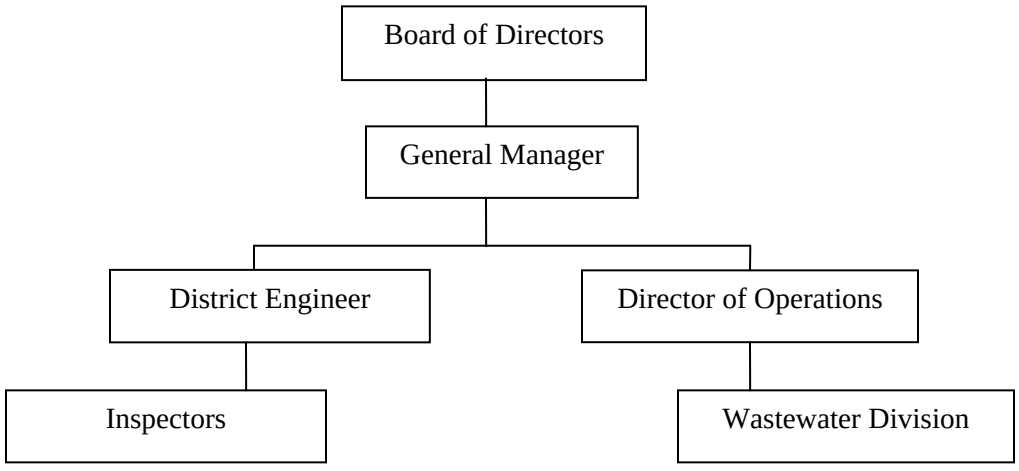

Figure 2.1 – SSMP Organization Chart

General Manager – Establishes policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, and runs day to day management of facilities. The General Manager is the legally responsible representative of the District.

District Engineer – Prepares all planning documents, manages capital improvement projects, coordinates all development and implementation of SSMP, and documents all new and rehabilitated assets.

Inspector – Ensures that new and rehabilitated assets meet agency standards; works with field crews to handle emergencies when contractors are involved, and provides verbal reports to District Engineer.

Director of Operations – Manages field operations and maintenance activities, provides relevant information to District management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

Wastewater Division – Staff preventive maintenance activities, mobilizes and responds to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

Contact Information - See Appendix 'B'

Reporting – See Appendix 'F' for Procedures for Responding to an SSO.

SSO Reporting Chain of Communication

Figure 2.2 contains a flowchart depicting the overall chain of communication for responding to and reporting SSOs, from observation of an SSO to reporting the SSO to the RWQCB. Internal chains of communication for the District emergency responders are depicted in Figure 2.2. Appendix B contains contact numbers for all entities included in the chains of communication. The SSO reporting process is described in more detail in Element 6: Overflow Emergency Response Plan.

Narrative Description of SSO Response Chain of Communication

A public observer of an SSO would typically cal the District's main office. During regular business hours, the receptionist forwards the call to the Wastewater Supervisor. The Wastewater Supervisor will mobilize a Maintenance Crew to the site.

After hours, the District main office line is transferred to an answering service. Emergency calls are directed to On-Call Duty Personnel. The Duty Person will contact

the Wastewater Supervisor in the event an SSO call is received. The Wastewater Supervisor will mobilize a Maintenance Crew to the site.

The Maintenance Crew Foreman will assess the SSO and call any additional staff required for response, cleanup, and containment, if necessary.

The Wastewater Supervisor will confirm that the SSO has been appropriately responded to and will be responsible for filing all necessary reports.

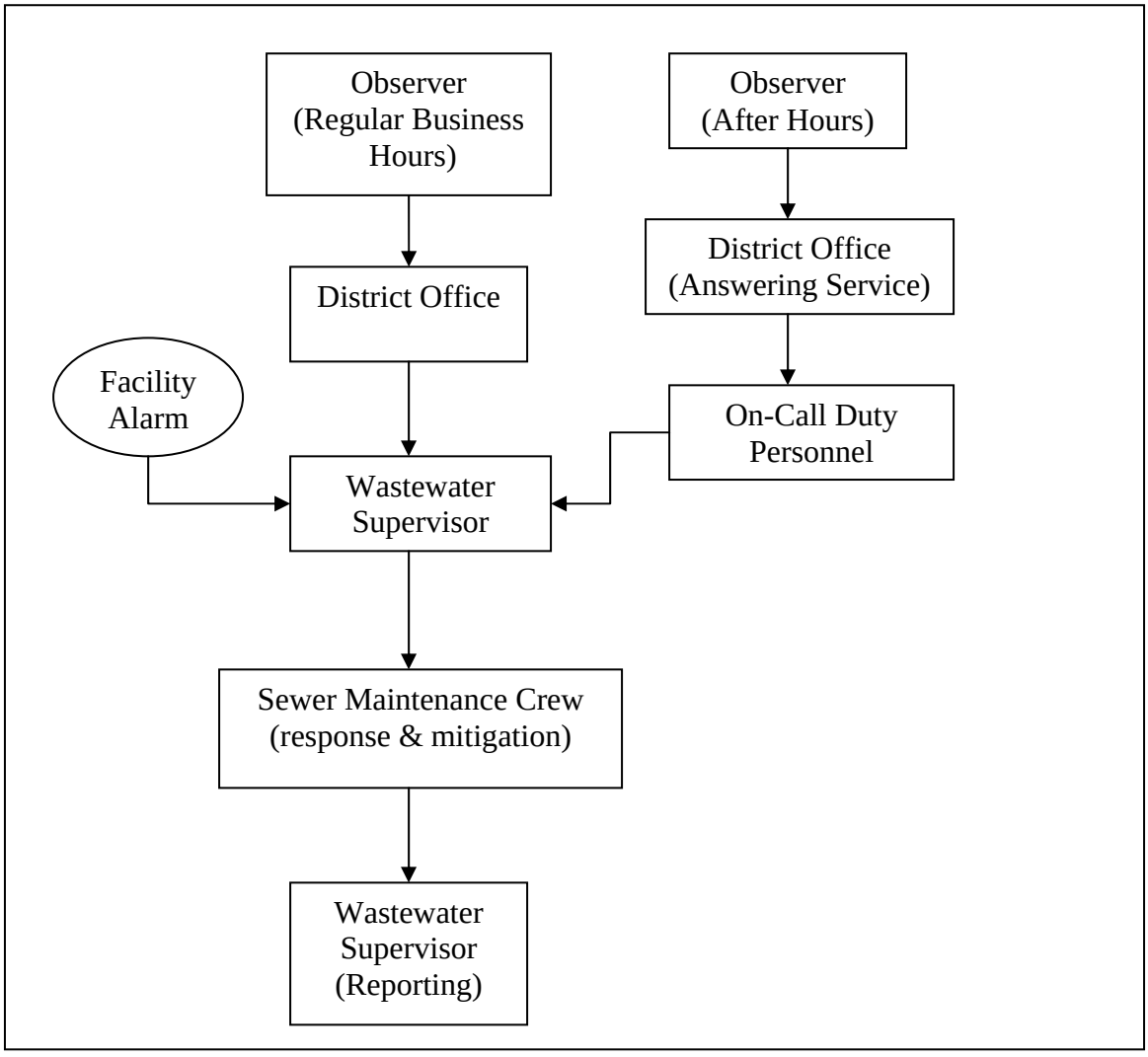

Figure 2.2 – VCMWD Chain of Communication

3. Legal Authority

SWRCB Requirement:

The collection system agency must demonstrate, through collection system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

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

The Valley Center Municipal Water District has the power to install wastewater collection facilities and to enact regulations related thereto, including the prohibition of connection of private sewer systems to the District's main without prior approval in accordance with the District's Administrative Code Articles 170, 171, and 172 (attached as Appendix C). Specific authorizations required by the State's General Waste Discharge Requirements are listed as follows:

A. Prevention of Illicit Discharges - Article 170.8 - Use of Public Wastewater System

B. Properly Designed and Constructed - All wastewater collection facilities and connections to the District's system shall be installed in accordance with the Valley Center Municipal Water District Standard Design and Construction Specifications per Article 170.5 Constriction of Collection Facilities and Article 171.5(a) Service Connection and Article 172.1 (e) - Low Pressure Wastewater Collection Systems.

C. Access for Maintenance - All District owned facilities are located within easements or rights-of-way dedicated to the District, or property owned by the Valley Center Municipal Water District. The District does not provide maintenance for privately owned wastewater facilities, with the exception of the privately owned On-Site Low Pressure Wastewater Collection Facilities. Access to and maintenance of these facilities is authorized in Article 172.

D. Fats, Oils and Grease - Per article 171.5(d) Service Connection, all privately owned restaurant facilities shall conform with Valley Center Municipal Water District's FOG

requirements. These requirements are found in a supplemental document labeled "Commercial Wastewater Discharge Program" (CWDP) (Attachment G).

E. Enforcement – Enforcement provisions of the wastewater requirements are provided in Administrative Code Article 170.10 Penalties (see Appendix C).

4. Operations and Maintenance Program

SWRCB Requirement:

The SSMP must include those elements listed below that are appropriate and applicable to the collection system agency's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;

(b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

(c) Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

(d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

A. Collection System Maps

Collection system maps are included in Appendix D. The District owns and operates two separate wastewater systems; the Lower Moosa Canyon Water Reclamation Facility and the Woods Valley Ranch Water Reclamation Facility. Maps of the each facility service area are provided, as is a collection system map showing line size, pipe material, construction date and Record Drawing Number. The Moosa collection system is divided

into five separate maps, plus an index map. Site plans for the lift stations located with in the Moosa collection system are also included. Hard copies of the record drawings showing more detailed information of the pipe line and lift station facility installations are available from the Engineering Department Map Records. Digital copies of the record drawings are available via the District's electronic document management system, GIS and are also placed on a CD for operator access in the field from portable computer equipment. The Engineering Department is responsible for maintaining the availability and accuracy of the record drawings and digital files. Procedures for updating the maps are in place when discrepancies are found in the field or when new facilities are added.

B. Operation and Maintenance Activities

The following describes the existing collection system of each treatment facility:

Woods Valley Ranch Water Reclamation Facility Collection System Summary
The Woods Valley Ranch collection system consists of 5.2 miles of 8 inch PVC sewer pipe, 109 manholes and 274 laterals. The system was placed into service in 2005.

Lower Moosa Canyon Water Reclamation Facility Collection System Summary
The Moosa collection system consists of 21.6 miles of VCP and PVC gravity collection main varying in size from 8 inch to 18 inch, 500 manholes and over 2200 laterals. Portions of the Moosa collection have been in service since the early 1970s. Two sewer lift stations are included in the system along with one subdivision that is served by a low pressure wastewater Septic Tank Effluent Pump (STEP) system. This subdivision consists of approximately 180 lots, of which, approximately 80 have been connected to the low pressure wastewater collection system. District maintenance of the privately owned on-site wastewater pumping facilities in included in an additional monthly service charge established for areas served by low pressure wastewater collection systems.

A total of approximately 2,600 feet of 4 inch force main is used to convey the lift station discharge to two separate manholes within the collection system. The force main systems were designed such that Air Vacuum/Air Release units and isolation valves were not required for the force main.

The low pressure wastewater collection system consists of approximately 4.1 miles of pressurized PVC collection main ranging in size from 2 inch to 4 inch and a pre-treatment facility just prior to its connection to the gravity sewer. The system also includes approximately 26 isolation valves, 19 air vacuum/release valves co-located with an odor adsorption bed.

The following describes the facilities used to operate and maintain the District's collection facilities:

Computerized Maintenance Management

The District is in the process of implementing Work Orders and Asset Management Software similar to the Azteca Systems, Inc. CityWorks product and its interface with GIS. Appendix H contains a brief product description of CityWorks. The Work Orders module will allow the establishment of automated work orders to be issued on a prescribed schedule to perform the preventive maintenance described in this chapter. The Asset Management module will provide notices for routine maintenance. Once the new computerized work order system is on line, this chapter will be updated to reflect the changes this tool will provide. Until that time, maintenance schedules are maintained by each department utilizing spreadsheet technology.

Sewer Pipeline Cleaning Program

The Sewer Line Cleaning Program consists of two (2) components:

Routine Cleaning

- Clean all sewer pipelines every 5 years
- This requires a cleaning rate of approximately 5.5 miles per year
- This is achieved through a current yearly contracting sewer line cleaning program, and District forces.

Targeted Cleaning

- Clean a compiled list of known problem sewer lines that has been compiled from previous problem records and video inspections.
- This list is scheduled in quarterly, bi-annual, and yearly scheduled cleaning.

Grease Traps

There are approximately 15 commercial establishments in the two service areas. These establishments are in various stages of compliance with the Commercial Wastewater Discharge Program (CWDP) adopted in 2007. A summary of the status of those installations and a location map is included in Appendix 'I'.

- Perform annual inspections per the CWDP.
- Follow up with owner on recommendations from inspections.

Manhole Maintenance Program

The Operation and Maintenance program for manholes consists of scheduled inspection and repair on an as needed basis. Manholes are inspected every five years during sewer pipeline cleaning and videoing activities. Problem areas are identified and prioritized. Typical maintenance activities consist of the following:

- Replacement of worn-out frame and cover assemblies.
- Replacement of concrete collars.
- Locate and raise to grade after street improvements.

- Inspection of interior of manholes.

Force Main/Valve Maintenance Program
Operation and Maintenance work of this Force Main System consists of the following:

- Visual inspection of all force main routes and manhole discharge points once per month.
- Verify pump operating; flow and discharge pressures are within design limits each month. Out of limit pressures and flows could indicate potential blockage or breaks and would be investigated.

Low Pressure Collection System Maintenance
District forces are in the process of converting a portion of the Rimrock subdivision's on-site Septic Tank Effluent Pump (STEP) system units to a grinder pump unit. One type of on-site STEP system installation in the subdivision, originally approved by the District, has proven to require extensive maintenance due to corrosive gases from the effluent. All new units in the subdivision will be grinder pump types. With this conversion from a STEP system to a Grinder Pump System some minor differences in operation are anticipated. The following are typical operation and maintenance activities for these facilities:

- Pigging of Low Pressure collection system lines on 5-year schedule. This will require the installation of launch and retrieval stations. This activity should commence prior to 2015.
- Weekly inspection of all air vacuum/release valve and odor absorption beds.
- Periodic irrigation of adsorption beds to maintain proper soil moisture content as determined from weekly inspections.
- Exercise all isolation valves in the system once each year.
- Respond to Private on-site Low Pressure Pump System failure alarms as required.
- Inspect On-site Low pressure Wastewater Pump Systems annually.
- Have solids removed from on-site STEP system interceptor/septic tank on five year intervals.

Lift Station Maintenance and Operation Plan
Operation and maintenance performed by the Wastewater Division of the Field Operations Department consist of the following:

- Clean wet wells utilizing vactor trucks on a quarterly basis to rid of all grease build-up that can cause pump failures and odor problems.
- Utilize degreasers, or other chemicals to eliminate grease build-up on locations where vactor trucks cannot be used to clean wet wells.
- Assist Electrical Department personnel when repairing or replacing pumps.
- Exercise all valves on all force mains once a year.

System Inspection / Video Inspection Maintenance and Operation Plan
Our current System Inspection program consists of two (2) different types of inspections which are performed regularly.

Visual Inspection:

- Visually inspect known problem areas and report any necessary work needed.
- Open manholes and visually inspect flow levels, condition of manholes, and all other operating problems detected.
- Inspect and measure flow levels and record for future capacity management information.

Video Inspection:
The District owns video inspection equipment and has trained staff on its operation.

- Video inspect sewer areas following any stoppage to locate and identify problems.
- Video inspect areas that were contracted for cleaning to evaluate quality of work by contractor.
- Video inspect areas for possible Capital Improvement Projects.
- Video inspect newly acquired sewer systems to evaluate conditions for acceptance.
- Video inspect gravity collection system every five years; 5.5 miles per year.

Operation and Maintenance Performed by Contractors and Support Departments
Services provided by other Field Operation Divisions and contractors consist of the following: Contact information for relevant District staff and contract service providers is listed in Appendix B.

- Sewage vactor truck service.
- Routine inspection of mechanical equipment.
- Pump and Motor preventive maintenance.
- Electric and Electronic Controls, in consultation with Operations, establish set points for automated equipment at lift stations.
- Supervisory Control and Data Acquisition system maintenance.
- Exercise and service emergency generators installed on site.

C. Rehabilitation and Replacement Plan

The Woods Valley Ranch collection system was videoed after being conditionally accepted and placed into service. All deficiencies that were found were rectified prior to final acceptance. Since the system was recently constructed, no rehabilitations or

replacements are required at this time. The District will re-video the system on five year intervals and schedule repairs and maintenance as required.

The Moosa collection system was completely CCTV inspected by District forces beginning in 2004 and completed in 2006. Several deficiencies were corrected through regular maintenance program activities. A study of the sanitary sewer system has been budgeted for the FY 2010-2011 budget year. All collection facilities will be evaluated and recommendations made on remaining useful life and proposed rehabilitation or replacement. It is anticipated that an Inflow and Infiltration study will be recommended to be completed within the next five years. The District will re-video the system on five year intervals and schedule repairs and maintenance as required.

D. Training Program

The District maintains a well trained work force by providing safety, technical and supervisory training.

Safety training is managed by the Field Operations Department. In addition to weekly safety meetings, there are special training seminars held periodically covering issues including traffic control, trench safety, crane operation including hand signals, and material safety data sheets. The safety record for the District's Collection System Operation is outstanding.

Technical training related to the Operation and Maintenance of the collection system is managed in two ways. First, there is the constant day to day culture of learning on the crews so the crew chiefs and lead personnel are always encouraged to share what they have learned over the years with newer employees. Second, employees are sent to outside seminars covering the operation and maintenance of collection systems. In addition, the District is active in the California Water Environment Association (CWEA) and has hosted many CWEA seminars on District premises.

The District requires certification in the field of Collection Systems Operation and Maintenance, issued by CWEA in order to advance in the Wastewater Division of the Field Operations Department.

In addition to the above, wastewater staff receive refresher training in the following areas each year:

- Video equipment operation and video inspection procedures.
- Confined Space entry
- Overflow response procedures
- Reporting procedures

E. Equipment and Replacement Parts

The Valley Center Municipal Water District has the available spare equipment and parts that can be used at all times. The District will attempt to use a uniform system of pumps, equipment, and parts to simplify the maintenance and replacement efforts.

The District has the necessary equipment to work on the sewer lines or pumping stations. In addition to small tools, the District has cleaning trucks, generators, by-pass pumps, trucks with hoists, and all the appurtenances needed to run smooth operations throughout the District area.

5. Design and Performance Provisions

This section of the SSMP discusses the design, construction and performance standards for the District's wastewater system.

SWRCB Requirement:

The collection system agency shall identify the following key items:

a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

b) Procedures and standards for inspecting and testing the installation of new sewer, pumps, and other appurtenances and for the rehabilitation and repair projects.

Wastewater Design Standards

The District's Sewer Facility Design Manual provides design criteria for gravity collection lines, lift stations, force mains and low pressure collection facilities, including general notes to be used on construction drawings and references to the construction specifications.

Wastewater Construction Specifications

Gravity wastewater collection lines are constructed in accordance with the latest edition of the Standard Specification for Public Works Construction (Greenbook). Low pressure collection lines are constructed in accordance with the District's Standard Specifications for the Construction of Low Pressure Sewer Collection Facilities. Rehabilitation of sewer facilities are completed in accordance with the standard specifications, unless otherwise approved by the District Engineer. New state of the art materials and methods would be implemented for rehabilitation projects to reduce potential SSOs during construction. HDPE fused pipe is being used for bypass lines and replacement gravity mains in areas of difficult access.

Wastewater Inspection/Testing Requirements

The District utilizes competent full time construction inspectors for implementation of all wastewater facility construction. All new installations are cleaned, mandrel tested, air tested and videoed prior to acceptance and approved for service. Manholes are air tested to determine water tightness compliance.

All tie-ins to the District's collection system are inspected by the wastewater division personnel.

Review, Updates and Distribution

The design standards and construction specifications are periodically updated to reflect improved standards or more complete detail. The Engineering Department is responsible for the review, update and distribution of the standards. As with all regulated activities of the District, the Engineering and Operations Departments are involved in ensuring that the standards provide the highest quality facilities, comply with all State requirements and provide a safe reliable service to the customer base.

6. Overflow Emergency Response Plan

This section of the SSMP discusses the District's overflow emergency response plan, which is included in full in Appendix E. This section fulfills the Overflow Emergency Response Plan requirement of the SWRCB (Element 6) SSMP requirements.

SWRCB Requirement:

The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSO's in a timely manner;

(b) A program to ensure appropriate response to all overflows;

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SS0s, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge

A. Notification

The Valley Center Municipal Water District has a 24-hour Emergency Communications Center which is available either by a direct line at (760) 749-1600 or through the answering service operator. The emergency personnel are equipped with cell phones

for immediate access during working hours as well as to available personnel during non-working hours.

B. Response

The District responds to all spills within the District whether on public or private property and to take all steps possible to prevent the spills from reaching storm drains, flood control channels, or waters of the State, all in accordance with the waste discharge requirements.

C. Reporting

In compliance with state law, the District reports all spills, regardless of size, to the Water Quality Control Board, the Department of Health (DEH), and the appropriate owners whether on public or private property, even if the spill is contained. The District believes in full disclosure of its operations and performance. The District has adopted the Waste Discharge Requirements and will fill out the appropriate forms on spill notification.

D. Training

Ongoing training for the collection system crews, operations and maintenance staff, and engineers will always be a big part of the District's proactive approach. All wastewater staff members are certified by CWEA and have on-the-job training on a regular basis.

E. Addressing Emergencies

The District has previously adopted an Emergency Response Plan (ERP) that provides a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters of man-made or natural origin. The ERP in conjunction with the Sewer overflow Emergency response plan describes how the District will address emergency operations including traffic and crowd control and communication procedures.

F. Impact Mitigation

The Valley Center Municipal Water District has recognized the importance for protection of the public from impacts that might occur due to SSOs. The District has done everything practical to ensure that the SSOs are limited and the impact on the public is minimal if any. Many temporary storage tanks and routing systems are in place already to give crews enough time to respond without any SSOs occurring. See capacity requirements section for further information on extra storage as well as SORP for responses.

Sewer Overflow Emergency Response Plan Discussion

The Sanitary Sewer Overflow Response Plan (SORP) (Appendix E) provides the overflow emergency response procedures from the receipt of a sewer overflow complaint, through response and cleanup, to reporting of the overflow to the appropriate government agencies. This document is relevant to anyone involved in the overflow response process, including the person initially receiving information about SS0s, the response field crew and supervisor, the person responsible for submitting overflow reports, and other emergency responders who could potentially be involved in the process.

The Procedures for Responding to a Sanitary Sewer Overflow (Appendix F) adopted by the Wastewater Division of the Field Operations Department provide detailed response procedures to the first responder and field crew responsible for identifying the source of the problem, correcting the cause of the overflow, and cleaning the surrounding area. The guidelines also include forms that the responder needs to fill out. This document is most relevant to maintenance staff responsible for responding to overflows.

The Procedures for Responding to a Sewer Pump Failure (Appendix G) provides brief instructions on how to respond in the event of a failure at one of the District's lift stations or at one of the privately owned Low Pressure Wastewater Systems being maintained by the District.

7. Fats, Oils and Grease (FOG) Control Program

SWRCB Requirement:

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

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

(b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;

(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

(d) Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the District has sufficient staff to inspect and enforce the FOG ordinance;

(f) An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and

(g) Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (f) above.

Because the District recognizes grease from restaurants as the number one cause of sewer line stoppages and spills, the District has developed its Commercial Wastewater Discharge Program (CWDP). This information was produced and is used in the evaluation of every restaurant discharging in the District's system. All restaurant

owners are given a package of information regarding the importance of fighting grease, facts on grease removal, and directions on trap or interceptor installations.

The District is also attempting to deliver information to the homeowners regarding grease down the sinks being a major factor. Instead, pouring grease into a jar and waiting until trash day to dispose of the grease in a sealed container.

In general, the District's Commercial Wastewater Discharge Program addresses the following topics to mitigate the collection system blockage issues stemming from Fats, Oils and Grease.

A. Identification & Sewer Cleaning

The District has identified 'hot spots' in the collection systems which are areas subject to excessive grease and are regularly checked and cleaned.

B. Source Control

Source control measures for each of the 'hot spots' identified in Section 'A' will consist of:

- Distribution of District's information for restaurant and homeowner grease control.
- Restaurants will be required to install grease traps or grease interceptors (see CWDP section).

C. Facility Inspection

- There will be scheduled and unscheduled inspections on all interceptors and traps installed in the District.
- Failed inspections will require modifications and/or more regular inspection frequencies and may result in disconnection from the District's system.

8. System Evaluation and Capacity Assurance Plan

This section of the SSMP discusses the District's capacity management efforts including system evaluation and capacity assurance plan.

SWRCB Requirements:

The collection system agency shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as appropriate design storm or wet weather events. At a minimum, the plan must include:

(a) Evaluation – actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

(b) Design Criteria – where design criteria do not exist or are deficient, undertake the evaluation identified in (1) above to establish appropriate design criteria.

(c) Capacity Enhancement Measures – the steps needed to establish a short and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe sizes, Inflow/Infiltration (I/I) reduction programs, increases in redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

(d) Schedule – the agency shall develop a schedule of completion dates for all portions of the capital improvement program in (1) and (3) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D14 of the SWRCB State General WDR for Wastewater Collection Agencies.

Woods Valley Ranch Collection System

A. Capacity Evaluation - The Woods Valley Ranch collection system was designed to serve the 170 lot Woods Valley Ranch Subdivision and Golf Course Facilities. A preliminary design report dated May 26, 1998 (and later revised in June 1999 with

final plan approval) prepared by Rick Engineering demonstrated compliance with the District's wastewater design standards. Since the collection was placed into service, no SSOs due to deficient hydraulic capacity have occurred.

B. Design Criteria – The District has established design criteria for wastewater collection facilities, both gravity and low pressure wastewater collection systems.

C. Capacity Enhancement Measures – The existing Woods Valley Ranch collection system is not designed to serve any additional areas and pipe sizes have been determined sufficient for the intended use. Capacity Enhancement Measures will focus primarily on reducing inflow and infiltration and preventing blockages through the previously described operation and maintenance programs of periodic visual and CCTV inspection, flushing and cleaning.

Proposed service area expansions include a low pressure wastewater collection system that would be connected to the treatment facility at the headworks and would not utilize the existing collection system. The preliminary design report for the expansion would ensure that the expanded headworks hydraulics would not have a detrimental effect on the existing collection system.

D. Schedule – Inspection schedules, including Visual and CCTV inspections and Inflow/Infiltration evaluations, are discussed in the section on Operation and Maintenance. Any deficiencies identified during the inspection and evaluation processes would be scheduled for immediate repair.

Lower Moosa Canyon Collection System

A. Capacity Evaluation - Developers are required to provide an evaluation of the proposed wastewater facilities prior to conceptual approval of their proposed project. The following reports have been prepared for the major collection facilities added since 1990.

- May 1990 – Rimrock Low Pressure Sewer System – W.C. Bowne
- Feb 1995 – Moosa Collection System Study – NBS/Lowry
- April 1997 – Service Area 3 – Mountain Meadow Road South – MacDonald-Stephens, Engineers, Inc.
- 1995 – Treasures Subdivision, APEC Civil Engineering, Inc.
- Oct 2000 – Islands Residential Sewer Study – RBF Consulting Engineers

Construction of the Rimrock project began in 1990 and the final phases of the project are yet to be completed. The 1995 Moosa Collection System Study evaluated facilities required for build out of the service area. Of the area studied, the Treasures and Islands projects have been completed. Portions of Service Area 3 are currently under construction and are expected to be accepted by mid 2010.

Based on the results of the past studies and an overall review of the existing collection system capacity, the collection system was found to have sufficient capacity for the existing connections and approved developments. Since reporting under the new Statewide General Waste Discharge Requirements was established in February 2007, no SSOs due to deficient hydraulic capacity have occurred.

B. Design Criteria – The District has established design criteria for wastewater collection facilities, both gravity and low pressure wastewater collection systems.

C. Capacity Enhancement – System visual and CCTV inspections have revealed several locations of potential blockage due to roots, excessive interior corrosion, and areas potentially vulnerable to vandalism. The last of the corrective projects is underway to mitigate these potential SSO events. Future capacity enhancement measures will focus primarily on reducing inflow and infiltration and preventing blockages through the previously described operation and maintenance programs of periodic visual and CCTV inspection, flushing and cleaning.

D. Schedule - Inspection schedules, including Visual and CCTV inspections and Inflow/Infiltration evaluations, are discussed in the section on Operation and Maintenance. Any deficiencies identified during the inspection and evaluation processes would be scheduled for immediate repair. Beginning in FY 2010-2011, the District will be updating its overall planning efforts to include a master plan of the Moosa Service area indicating a proposed replacement plan for aging infrastructure and evaluating overall capacity needs for future development. The master plan update is schedule for completion by June 2011.

9. Monitoring, Measurement, and Program Modifications

This section of the SSMP discusses the District's monitoring, measurement and program modification. These efforts provide guidelines for monitoring the effectiveness of the SSMP program.

SWRCB Requirements:

The collection agency shall:

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

Maintenance of Relevant Information - The Wastewater Division of the Field Operations Department with assistance of the Engineering Services Division of the Engineering Department maintains all relevant information used to establish and prioritize appropriate SSMP activities.

SSMP Implementation and Effectiveness – The Wastewater Division of the Field Operations Department and the Engineering Department are responsible for implementation of the SSMP. The Wastewater Division has overall responsibility for the operation and maintenance of the collection system, including, but not limited to, field inspections, maintenance, response to SSOs and completion of needed repairs. The Engineering Department assists with preparation of the SSMP document with input from the wastewater staff, maintains all records on the facility installation, design standards, and specifications and management of CIP upgrades to the system when required.

SSMP Evaluation - The bottom line measurement for success of the SSMP would be seeing improvement in the number and nature of Sanitary Sewer Overflows that have occurred in a given year. The following performance indicators would be used in evaluating the effectiveness of the program.

a) Number of SSOs over the past 12 months, distinguishing between dry weather overflows and wet weather overflows.
b) Volume distribution of SSOs

c) Volume contained versus total volume
d) Nature of SSO (i.e.; root, grease, debris, pipe failure, pump station failure, capacity, contractor related, other)
e) Notification and Response time on SSO
f) Inspections (visual and CCTV) completed versus planned.

SSMP Updates - As outlined in Element 10 SSMP Audits Section, the SSMP will be reviewed annually, beginning in July of each year, to insure all the provisions are implemented and the effectiveness discussed at District meetings is met. The SSMP will be updated in accordance with the results of the monitoring with recommendations by other agencies, as well as District representatives. A report of the findings of the annual review will be made to the Board of Directors each October with recommendations for modifications as appropriate.

SSO Trends - All SSOs are reported to the Regional board and all data reported for each SSO event is available through the California Integrated Water Quality System (CIWQS) database. Trend analysis of this data can be used to evaluate the effectiveness of the SSMP. Data reported since the CIWQS on-line system was initiated is summarized in Appendix K, Sanitary Sewer Overflow Event Summary.

10. SSMP Audits

SWRCB Requirements:

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

In order to use this plan effectively over time, there should be periodic internal audits. This SSMP Element identifies the District's audit plan, providing guidance for information to be reviewed in the audit.

SSMP Audits Discussion

The District Engineer, as directed by the General Manager, will initiate the audit process in July of each year. The audit process would be completed within two months and any recommendation for modifications submitted for Board approval in September. A group of concerned stakeholders from the various departments will be invited to participate. The integral, non-optional participants include personnel from the Engineering Department and Wastewater Division and the Pumps. Other staff members not involved with the operation and maintenance of the wastewater collection system will be invited to participate in the audit process as well. This mix will provide a group of involved, plus objective, reviewers for the audit process.

Audits, at a minimum, shall include:

- Review of the overall effectiveness of the SSMP
- Review of each element of the SSMP individually to judge each chapter's success at meeting the requirements of Sections D.13 of the Waste Discharge Order 2006-0003
- Identifications of any SSMP deficiencies and steps to correct them

11. Communication Program

This SSMP element identifies the District's communication program, providing guidance for information to be reviewed in the audit.

SWRCB Requirements:

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

SSMP Communications Discussion

The SSMP is available to the public on the District's web site at www.valleycenterwater.org under the Services>Wastewater Section. The public is invited to comment on the SSMP at any time through the links provided on the web site ob calling the District's office. Inquiries and comments should be direct to the Engineering Department.

The web site will be the primary source for public information and input on the SSMP. The website will provide the public with the ability to review and comment on the SSMP and the SSMP performance reports, and any updates as needed. Through the annual audit process, the Engineering Department and the Wastewater Division will review the SSMP for necessary revision and updates and web page on the District's web site will be the key resource for communicating to the public about the SSMP. The purpose of this section is to ensure that the public has the opportunity to be involved in the development and ongoing implementation of the SSMP.

The District's Engineer is responsible for the SSMP Communication Program.

The information and requirements set forth by the District shall be posted on the VCMWD website at www.valleycenterwater.org