

Coachella Valley Water District



Sanitary Sewer Management Plan

December 1, 2015

Preface

This Sewer System Management Plan (SSMP) describes the management of the Coachella Valley Water District's (CVWD) sewer collection system. The SSMP is written to minimize the number of Sanitary Sewer Overflows (SSO).

On July 31, 2007, CVWD's Board of Directors approved a Sewer System Management Plan Development Plan and Schedule (Development Plan). The SSMP has been developed in accordance with the Development Plan. The Development Plan is dated June 19, 2007 and it is available in CVWD File 0732.31 and on CVWD's J: drive under public documents. Subsequent revisions and audits are tracked on Attachment A to this document and updated at a minimum with each 5-year Plan revision.

The SSMP is required by the State Water Resources Control Board (SWRCB) Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR 2006-0003) enacted May 2, 2006. A new Attachment A, State Water Resources Control Board Order No. WQ 2013-0058 EXEC, was issued and its requirements are included in this SSMP and the Sanitary Sewer Overflow Response Plan (SSORP). The purpose of WDR 2006-0003 is to reduce SSOs. CVWD's SSO history is not unusual or above average compared to other agencies in the State. A large portion of CVWD's sanitary sewer system is relatively new and this, coupled with dedicated staff, accounts for the moderate overflow history. The principles and practices required by WDR 2006-0003 will assist CVWD to maintain and improve upon this overflow pattern.

The SSMP is organized to follow the required Plan elements as listed in WDR 2006-0003:

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

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Chapter 1. Introduction

This SSMP and the schedules included where applicable, when fully implemented, will provide for a properly managed, operated, and maintained sanitary sewer system. As such, sanitary sewer overflows will be reduced and effects mitigated.

All portions of CVWD's wastewater collection system will be managed, operated, and maintained:

1. To provide adequate capacity to convey the peak wastewater flows.
2. To minimize the frequency of SSOs.
3. To mitigate the impacts that are associated with any SSO that may occur.
4. To meet all applicable regulatory notifications and reporting requirements.
5. To provide exceptional customer service to the residents and businesses served.

Applicable schedules included are:

1. The SSMP is audited every two years to ensure that the plan components are adequate, up-to-date, and implemented.
2. The SSMP is updated every five years to ensure that it is up-to-date and includes any audit findings that directed change to the plan; it is re-certified by the Board of Directors.
3. The SSORP, which is incorporated into the SSMP by reference, is reviewed, and updated as needed, every year to ensure that all emergency and response steps, references, responsibilities, and contacts are current.
4. Employee certification and other training schedule
5. Monthly, Quarterly, and Semi-Annual Sewer Pipeline Repeat Cleaning Schedule

Chapter 2. Organization

CVWD was formed in 1918 under the County Water District law. It is governed by a five member board of directors, elected at large to four year terms. CVWD is a multi-function agency, providing the following services: domestic water, sanitation collections and treatment, agricultural irrigation and drainage, storm water protection, and groundwater management. CVWD's general organizational chart is shown on Figure 1.

All work of CVWD is done under the direction of the General Manager. However, for the purposes of the wastewater collection system, the following parties are identified as responsible for the indicated areas. Contact information can be found in Section 5 of the current SSORP.

Authorized Representative

All applications, reports or information shall be signed by CVWD's authorized representative, the Director of Operations, the Assistant Director of Operations, or the Assistant General Manager. Each has been duly authorized in accordance with the requirements of Section J of State Water Resources Control Board Order No. 2006-0003 in a July 20, 2015 Delegation of Authority letter submitted to the California Regional Water Quality Control Board

Management, Administrative and Maintenance Responsibilities

As a multi-function district, CVWD has found efficiencies in distributing responsibilities through different specialized departments. This distribution of responsibilities is suited more to the abilities of the department personnel, rather than separating departments according to function. The daily work of the wastewater collections system, like the other functions of CVWD, is performed across virtually all department lines at CVWD.

The Operations Department is responsible for the daily operations and maintenance of the wastewater collection system. Collection line maintenance and repair, response to SSOs, preparation of the SSMP and SSORP, lift station piping, site maintenance and new connections are all the responsibility of the Operations Collections Department.

Working directly with the Director of Operations is the Assistant Director of Operations overseeing all functions of the Sanitation Section including supervising the Collections System Supervisor. The Collection System Supervisor and assigned staff in the Collections Branch of the Sanitation Section are responsible for all reporting, including SSO reporting and are required to possess California Water Environment Association Certification in Collections Systems Maintenance.

CVWD's Trades and Support Department is a group of skilled tradespersons who perform their specialized work across department boundaries, affecting each CVWD function. In general, Trades and Support includes the motor pool, building trades, and grounds keeping. Specific to the collections system, Trades and Support includes the Electronics shop which is responsible for SCADA, the electrical systems, electrical maintenance, and repair. The Mechanical shop is responsible for pump and

mechanical device maintenance and repair. The Electronic Shop Supervisor, Electric Shop Supervisor, and the Mechanical Shop Supervisor report to the Director of Trades and Support.

The Engineering Department is key in the operation and maintenance of the collections system. The Sanitation Engineering division is responsible for system design and capacity assurance. The Sanitation Engineer Manager reports to the Director of Engineering.

The Source Control Division, which implements the Fats, Oil, and Grease (FOG) Program, reports to the Environmental Services Department

Working with the Director of Finance, each department prepares annual budgets that are submitted to the general manager and then the board of directors for approval.

Chain of Communication for Reporting SSOs

Please see the fold out Flow Chart for the SSORP (Figure 2). When a possible SSO is reported, an Emergency Coordinator is notified. A Remediation Team is sent to the site to evaluate the complaint. If it is determined that there is a SSO, an incident commander assumes responsibility for containment, cleanup and repair. The General Manager, the Public Information Officer and the Claims and Safety Officer are also notified. The Emergency Coordinator works with the Reporting Coordinator who is responsible for preparing a report which will be entered electronically in to the California Integrated Water Quality System (CIWQS). The Director of Operations electronically enters and certifies the final report.

Management Responsible Contact Information

Name	Title	Phone Number
Juan Martinez	Collections Supervisor	(760) 902-4392
Mike Garcia	Assistant Director of Operations	(760) 668-8177
Dan Farris	Director of Operations	(951) 801-8191
Katie Evans	Director of Communications & Conservation	(760) 668-8177
Anthony Zamudio	Safety & Training Manager	(760) 832-0073
Christopher Chaffin	Claims Manager	(760) 397-3497
Carlos Paiz	Safety & Training Manager	(760) 835-4087
Robert Cheng	Assistant General Manager	(760) 485-9003
Jim Barrett	General Manager	(760) 404-6589

Coachella Valley Water District Operations-Sanitation Department

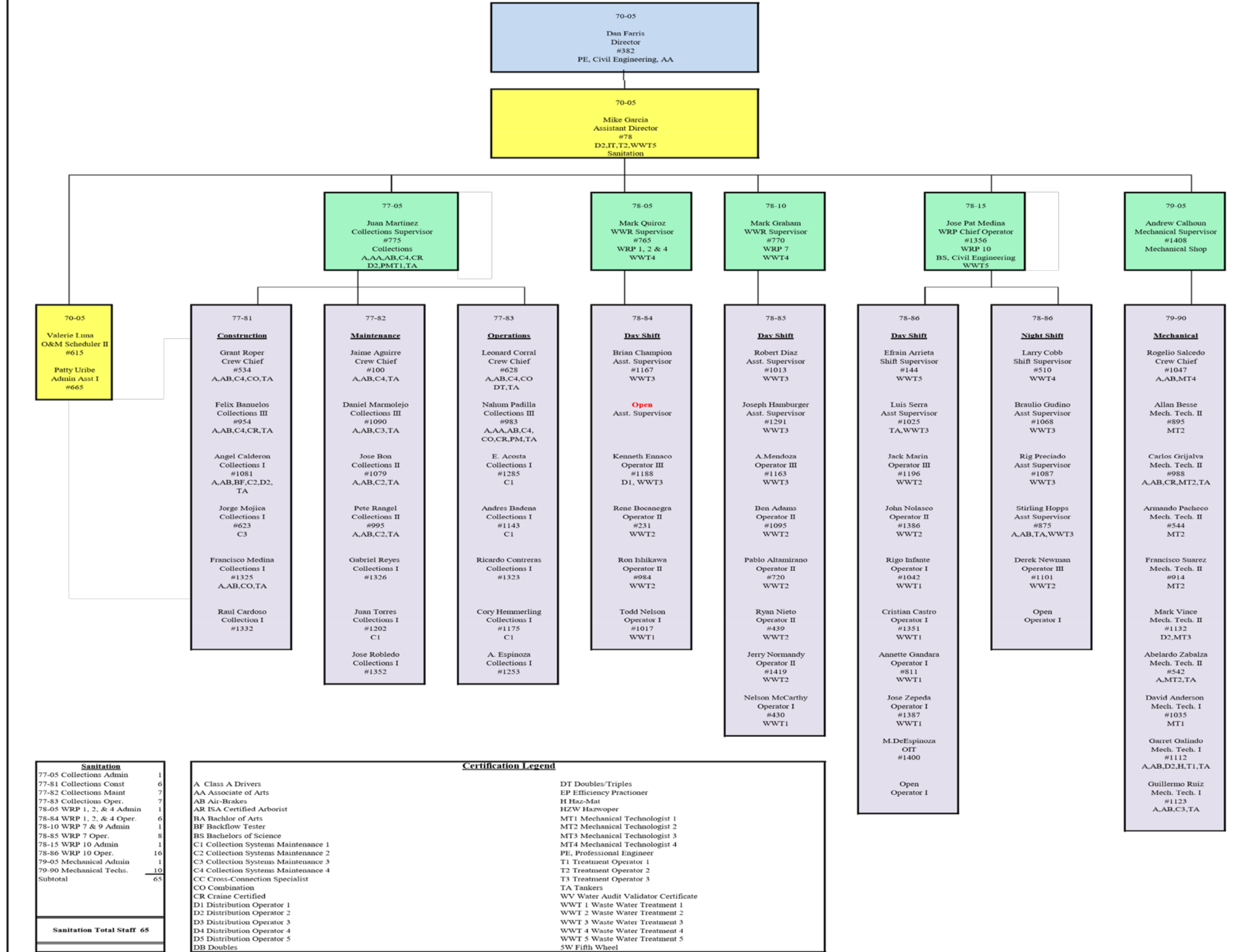


Figure 1

LEGEND

TCO = TELEMETERING CONTROL OPERATOR

WS = WATER SERVICE

EC = EMERGENCY COORDINATOR

REGULAR WORK HOURS:

- a) Juan Martinez
- b) Mike Garcia
- c) Robert Cheng
- e) Jim Barrett

NIGHTS AND WEEKENDS

- a) Sanitation Standby Supervisor
- b) Incident Commander, Staff Standby Person
- c) Assist. General Manager
- d) General Manager

IC= INCIDENT COMMANDER

- a) Mike Garcia
- b) Dan Farris
- c) Robert Cheng
- d) Jim Barrett

PUBLIC INFORMATION OFFICER

- a) Katie Evans

SAFETY & CLAIMS PERSONNEL-REGULAR WORK AND /OR NIGHTS AND WEEKENDS

- a) Anthony Zamudio
- b) Christopher Chaffin
- c) Carlos Paiz

REPORTING COORDINATOR-REGULAR WORK HOURS

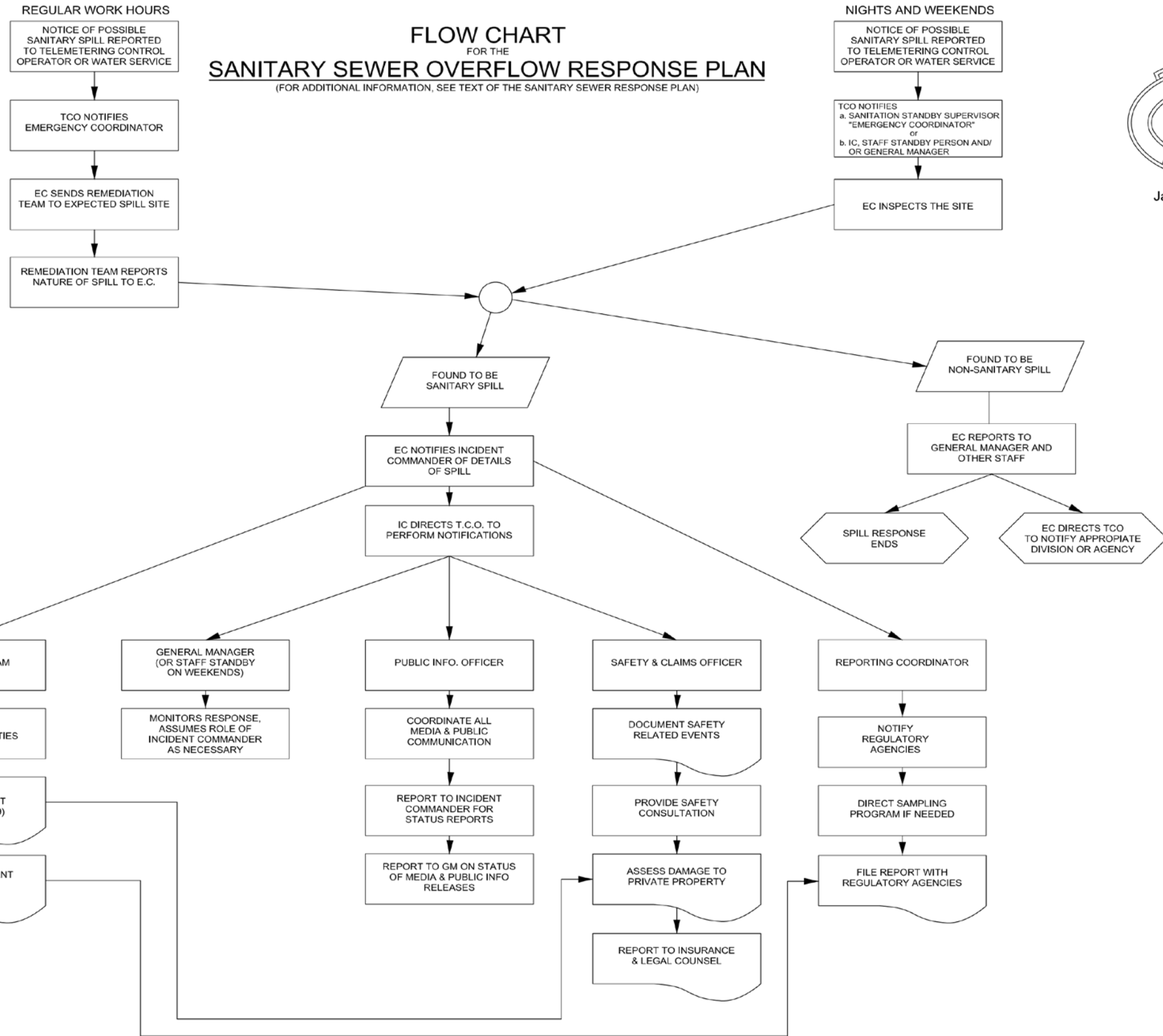
- a) Juan Martinez
- b) Mike Garcia
- c) Dan Farris

AFTER HOURS / NIGHTS / WEEKENDS

- a) Staff Standby

- [Rectangle] = ACTION
- [Parallelogram] = DECISION
- [Rounded Rectangle] = DOCUMENT
- [Hexagon] = STOP
- [Circle] = CONNECTOR

FLOW CHART
FOR THE
SANITARY SEWER OVERFLOW RESPONSE PLAN
(FOR ADDITIONAL INFORMATION, SEE TEXT OF THE SANITARY SEWER RESPONSE PLAN)



January 20, 2018

Figure 1

Chapter 3. Legal Authority

The Sanitation mission of CVWD is authorized under California Water Code Division 12, Part 5, Chapter 1, Article 6, et. seq. (Section 31100, et. seq.). In addition to this State law, CVWD has Ordinance 1427, Regulations Governing Sanitation Service, in place.

This Sanitary Sewer Management Plan is required to demonstrate that CVWD has the proper legal authorities for specific concerns listed in Waste Discharge Requirement 2006-0003, and references Parts 3, 9, and 10; including Part 2 as indicated below.

- (a) Part 9, prohibits listed discharges
- (b) Part 3, Section 3-1.1.1 requires sewers be installed in accordance with the requirements of the governing agency
- (c) Part 2, Section 2-2.1 allows properly credentialed CVWD personnel to enter all premises for any purpose properly connected with CVWD's operation
- (d) Part 9, Section 9-1 2) prohibits any waters or wastewater which contain more than 150 mg/L of fat, oil, or grease
- (e) Part 10, establishes procedures as a means of enforcement of the terms and conditions of the ordinance

Ordinance 1427 as described in Chapter 3 is the updated version of ordinance 1138. This ordinance was adopted on 2/23/16. CVWD Ordinance 1427 is updated periodically, and at the time of this printing, the most current compilation of the ordinance is a February 2018 edition; which includes approved amendments. An update to the published ordinance is anticipated in 2023. This update will incorporate all amendments since 2018 into the body of the published ordinance. When this update is completed in 2023, Chapter 3 will be revised to include the ordinance in its entirety. Anyone desiring a copy of Ordinance 1427 may contact CVWD's Document Management Department at (760) 398-2651 extension 2536, where the ordinance is retained in file number 0032.3.

Chapter 4. Operation and Maintenance Program

This chapter of the SSMP is the Operation and Maintenance program for CVWD's sanitary sewer collection system. The collection system is to be operated and maintained to accomplish the Goals stated in Chapter 1 of the SSMP.

The collection system has approximately 107,000 services and serves approximately 265,000 customers. The system collects municipal waste from residential and commercial users, delivering the collected wastewater to one of five Wastewater Reclamation Plants. The system includes approximately 1,100 miles of sewer, 34 lift stations and approximately 17,000 manholes. Total wastewater flow in 2014 was 15.4 million gallons per day and it is expected to increase in the future.

This Operation and Maintenance Plan is divided into five parts. These parts follow the prescribed elements listed in Waste Discharge Requirement 2006-0003.

Part 1 – Mapping

Part 2 – Preventive Operation and Maintenance

Part 3 – Rehabilitation and Replacement

Part 4 – Training

Part 5 – Equipment and Replacement Parts Inventories

Part 1 - Mapping

CVWD maintains up to date mapping of its sanitary sewer collection system in several formats.

The backbone of the mapping is CVWD's plat sheets. The plat sheets are organized in quarter sections of land, showing the collection system components, including lateral locations, pipeline sizes, and maintenance holes with rim elevation, lift stations and air-relief valves. The plat sheets also include references to the record drawings of the facilities. The plat sheets are available in printed, hard copy format, printed at 1" = 200' or 1" = 400' scale. The plat sheets are also available electronically. The electronic versions have hot links to the digital record drawings.

In addition to the plat sheets, CVWD has developed a Sewer Collection System Master plan which includes modeling and addition mapping on the system and is in the process of developing and implementing a GIS program. Mapping as well as the GIS from this effort has, and will continue to be made available to all CVWD departments.

All mapping is maintained by the Engineering Department.

Part 2 - Preventive Operation and Maintenance

CVWD has developed plans for routine preventive maintenance both by in-house resources and by contractors. This plan was developed by the Operations Department and records are maintained within the Operations Department showing that the work of the preventive maintenance plan has been accomplished.

Computerized Maintenance Management

CVWD has begun the basic Work Orders Module of SunGard Public Sector enterprise resource planning computer based management system. 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. Once the new computerized work order system is fully operational, this chapter will be updated to reflect the changes this tool will provide.

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 220 miles per year.
- This is achieved through a current yearly contracting sewer line cleaning program, and in-house resources.

Targeted Cleaning

- Clean a compiled list of known problematic sewer lines that have been compiled from previous problem records and video inspections.
- The cleaning is scheduled at monthly, quarterly, semi-annual and annual intervals.
- The targeted cleaning currently includes approximately 88,523 linear feet or 16.77 miles of various sizes of sewer lines.
- See attached Repeat Cleaning Listing.

Maintenance Hole Program

This Operation and Maintenance program consists of a full time working group that repair and maintain approximately 17,000 existing maintenance holes. All maintenance work is performed on an as needed basis.

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

Force Main/Valve Maintenance/Air Vacuum Units Maintenance Program

CVWD operates approximately 85 miles of force mains that convey sewage to different wastewater treatment plants. These force mains vary in size from six inches (6”) to eighteen inches (18”) in diameter. The force main systems also include approximately 100 Air Vacuum/Air Release units and system operating valves through-out the system.

Operation and Maintenance work of this Force Main Systems consist of the following:

- Visual inspection of all force mains and air vacuum units at a minimum of two (2) times per week.
- Cleaning, flushing and making all necessary repairs to all air vacuum units quarterly at a minimum, or sooner as needed.
- Locate, mark, and exercise all valves on all force mains once a year.

Lift Stations Maintenance and Operation Plan

CVWD currently operates and maintains 30 sewage lift stations throughout the collection system. The lift stations are operated and maintained by two different departments, Collection Systems and Trades and Support, within CVWD.

Operation and Maintenance performed by the Collection Systems Section of the Operations Department:

- Make Operational decisions concerning diversion and pumping of flows between the different treatment plants in consultation with the chief plant operators,
- Clean wet wells utilizing Vactor trucks on a regular basis: monthly, quarterly or sooner if needed, to rid wet wells of all grease and debris build-up that can cause pump failures or obnoxious odor problems,
- Install and maintain emergency by-pass set-ups for engine driven portable pumps.
- Utilize degreasers or other chemicals to eliminate grease build-up on locations where Vactor trucks cannot be used to clean wet wells, and
- Assist Electrical and or Mechanical Department personnel when repairing or replacing pumps.

Operation and Maintenance performed by the Trades and Support Department:

- Routine inspection of mechanical equipment,
- Pump and motor preventive maintenance,
- Electric and electronic controls maintenance, in consultation and agreement with Operations, to establish set points for automated equipment at lift stations, and
- Supervisory Control and Data Acquisition (SCADA) system maintenance

System Inspection / Video Inspection Maintenance and Operation Plan

The current System Inspection program consists of two different types of inspections, visual and video, which are performed regularly.

Visual Inspection:

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

Video Inspection:

CVWD owns one state of the art video inspection vehicle with a fully trained operating crew. CVWD also owns a portable short-run camera that can be utilized by many crews.

- Video inspect sewer areas following any stoppage to locate and identify problem,
- Video inspect areas that were contracted for cleaning to evaluate quality of work by contractor,
- Video inspect areas for possible capital improvement projects, and
- Video inspect newly acquired sewer systems to evaluate conditions and as-built.

Part 3 – Rehabilitation and Replacement

CVWD produces an updated five year Capital Improvement Budget (CIB) each year. The CIB includes both capital improvement projects and capital replacement projects.

Capital improvement projects are for those facilities that are constructed to meet increased demands on CVWDs' collection system resulting from increases in the customer base. These types of projects are typically funded through developer impacts fees. CVWD charges a Sanitation Capacity Charge (SCC) on a per unit basis for new development to fund capacity increases in the collections and treatment facilities. CVWD also accepts in-kind, developer constructed facilities which offset all or a portion of the SCC.

Capital replacement projects are for the replacement of existing facilities that have reached the end of their efficient useful life. Capital replacement projects are funded through the monthly sewer service rates. When it is effective to do so, a project may be constructed wherein an existing facility is reconstructed with increases in capacity. A project such as this may be funded through a combination of developer impact fees and rates.

Not all capital replacement projects are constructed through the CIB process. Many items, such as a lift station pump/motor replacement for example, will be done entirely through CVWD's operating budget. The operating budget is utilized for capital replacement projects typically when the cost is below \$50,000 or the majority of the work is to be done by in-house resources.

Each year, in January, the Operations Department and the Trades and Support Department are asked to nominate projects for the CIB. The Engineering Department also uses the collections system computerized model to identify potential bottlenecks or other deficiencies which should be addressed in the CIB. The Engineering Department is responsible for prioritizing projects within the CIB. The Finance Department is responsible for assuring the prioritized projects can be funded in the years proposed in the CIB. By working together, the four departments can develop a CIB that includes the input of all involved, setting the priorities on a fundable schedule meeting the goals of this SSMP.

Part 4 – Training

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

Safety training is managed by CVWD's Human Resources 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 Safety Data Sheets. The safety record for CVWD's Collections 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 different 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, CVWD is active in the California Water Environment Association (CWEA) and has hosted many CWEA seminars on CVWD premises.

CVWD requires certification in the field of Collection Systems Operation and Maintenance issued by CWEA in order to advance in the Collection Systems career path. In the Collection Systems Division of the Operations Department, there are currently 20 certified employees. There are seven employees that hold the highest level of Grade IV; three employees with Grade III certifications, five employees with Grade II certifications, five employee with a Grade I certification and one employee actively pursuing certification.

In the Trades and Support Department continuing education in electrical safety, electric principles, electronic technology advances, programmable logic controller programming and mechanical training that includes theory and principles of pumps and process equipment, safety, and related areas of study are a high priority. CVWD requires certification in the field of Mechanical Technology issued by CWEA in order to advance in the mechanical technologist career path. There are eleven employees that are currently certified in Mechanical Technology through CWEA which include three employees who hold the highest level of Grade IV, six employees with Grade II certifications, two employees with a Grade I Plant Maintenance certification, and one employee pursuing certification.

2014 / 2015 Training	Date	Mike Garcia Assistant Director of Operations	Juan Martinez Collections Supervisor	Grant Roper Crew Chief	Jaime Aguirre Crew Chief	Leonard Corral Crew Chief	Felix Banuelos Collections III	Nahum Padilla Collections III	Jose Obeso Collections II	Jesus Castillo Collections II	Dan Marmolejo Collections II	Pete Rangel Collections II	Guillermo Ruiz Collections II	Jose Bon Collections II	Cory Hemmerling Collections Systems I	Angel Calderon Collections I	Jorge Mojica Collections I	Juan Torres Collections I	Ricardo Moreno Collections I	Andres Badena Collections Trainee	
Certification																					
Grade IV Mechanical Technologist		X																			
Grade II Electrical Instrumentation Technologist		X																			
Grade I Plant Maintenance			X																		
Collections Systems Maintenance Grade IV		X	X	X	X	X	X	X			X								X		
Collections Systems Maintenance Grade III															X						
Collections Systems Maintenance Grade II									X			X	X	X		X	X	X			
Collections Systems Maintenance Grade I																					
2014 Training																					
Collections Workshop, Miramar, CA	01/08/14															X					
Traffic Control, PD Ops Building	01/21/14			X			X			X					X	X	X				
Hazard Communication Standard (HCS) PD Ops Building	01/28/14			X												X					
Confined Space Training, PD Ops Building	02/19/14			X					X							X	X				
Hazwoper Training, PD Ops Building	3/3-6/14						X														
Collections Workshop, Menifee, CA	03/26/14																X				
TCP Training, Coachella Corp Office	04/15/14																				
Confine Space Rescue Training, PD Ops Building	04/03/14						X														
LAMP II Lateral Launcher Training, PD Yard	04/17/14																				
Fork Lift Training- PD Yard	05/14/14																				
Haaker Vactor Training, Haaker Equipt Yard/La Verne	05/14/14	X					X									X					
Supervisor Training, CVWD SR Bldg.	5/15/2014		X	X																	
MS4 Training, CVWD SR Bldg.	5/19/2014			X												X	X				
Respiratory Protection, WRP 10	6/11/2014															X					
Microsoft Outlook Training , CVWD SR Bldg.	6/27/2014		X	X																	
Discipline and Due Process Skelly Hearing, CVWD SR Bldg.	7/10/2014	X	X	X	X	X															
Asbestos Training, PD Ops Building	7/11/2014			X																	
Asbestos Cement Pipe Training, PD Ops Building	7/11/2014		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Asbestos Cement Pipe Training, PD Ops Building	6/16/2014																				
CPR/ First Aid Training, PD Ops Building	7/22/2014	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vactor Training, Coachella Yard	8/11/2014				X		X	X	X	X	X	X	X	X	X	X	X	X			
Haz Mat Training, PD Ops Building	9/10/2014						X									X	X				

Workers Comp Training, H.R.	9/18/2014	X	X	X	X	X																	
Load Securement CHP, PD Ops Building	10/7/2014			X			X		X	X	X	X	X	X									
PVC Training, WRP 10	10/14/2014																						
Pump Training, El Centro	10/23/2014																						
AQMD Training, CVWD SR Training Room	10/30/2014			X																			
Trench Safety Training- PD Ops Building	11/14/2014			X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mark and Locate Training, PD Ops Building	11/17/2014			X																			
Underground Utility Locating	11/18/2014		X																				
Updated P-Card Training, SR Training Rm	12/15/2014			X																			
Annual Pesticide Training, CVWD Coachella	12/23/2014			X																			
2015 Training																							
Non- Potable Suite Supervisor Training, CVWD SR	1/8/2015	X	X	X																			
Stepladder Training, WRP 10	1/8/2015	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Effective Preventative Sewer Maintenance, Santa Ana	1/15/2015																						
Flagger Training, City of LQ	2/12/2015															X							
Just Drive Distraction Driving, CVWD SR Training Rm	2/18/2015	X		X												X	X						
Single & Extension Ladders, WRP 10	3/5/2015	X					X																
Collections Workshop, Coachella Sanitary Dist.	3/19/2015			X																			
Collections Workshop, Menifee, CA	3/25/2015																X						
Incident Command Systems Training, PD Ops Bldg.	3/31/2015																						
Underground Utility Locating, Terra Lago, Indio	4/1/2015						X																
CWEA Conference in San Diego Ca.	4/27/2015	X																					
Supervisor Training, Cathedral City	5/7/2015	X	X	X																			
SCBA Training, WRP 10	5/21/2015															X							
MSHCP Habitt Training, CVWD SR Training Rm	6/5/2015			X			X									X							
Facility Pollution Prevention Prog. (FPPP) CVWD SR	6/15/2015															X							
Business Writing Class, CVWD SR Training Rm	7/21/2015						X																
Gas Detector Training, CVWD SR Training Rm	7/23/2015			X			X									X	X						
Forklift Workshop, WRP 10	9/3/2015			X			X									X	X						
Tri- State Seminar, South Point Las Vegas	9/22-24/2015			X							X					X							
Tough Built Training- PD Ops Bldg.	10/14/2015			X																			
Pesticide Training, CVWD Coachella	10/14/2015														X	X	X	X	X	X	X	X	X

2014 / 2015 Training	Date	Mike Garcia Assistant Director of Operations	Juan Martinez Collections Supervisor	Grant Roper Crew Chief	Jaime Aguirre Crew Chief	Leonard Corral Crew Chief	John Hale Collections III	Felix Banuelos Collections III	Nahum Padilla Collections III	Jose Obeso Collections II	Jesus Castillo Collections II	Dan Marmolejo Collections II	Pete Rangel Collections II	Guillermo Ruiz Collections II	Jose Bon Collections II	Jim Sloan Collections I	Eric Torres Collections Systems I	Cory Hemmerling Collections Systems I	Angel Calderon Collections I	Jorge Mojica Collections I	Juan Torres Collections I

Certification																										
Grade IV Mechanical Technologist		X																								
Grade II Electrical Instrumentation Technologist		X																								
Grade I Plant Mintenance			X																							
Collections Systems Maintenance Grade IV		X	X	X	X	X											X									
Collections Systems Maintenance Grade III							X	X												X						
Collections Systems Maintenance Grade II									X													X	X	X	X	
Collections Systems Maintenance Grade I										X														X		
2014 Training																										
Collections Workshop, Miramar, CA	01/08/14																				X		X			
Traffic Control, PD Ops Building	01/21/14			X											X		X	X	X	X	X					
Hazard Communication Standard (HCS) PD Ops Building	01/28/14			X											X			X								
Confined Space Training, PD Ops Building	02/19/14			X													X		X	X						
Hazwoper Training, PD Ops Building	3/3-6/14						X											X								
Collections Workshop, Menifee, CA	03/26/14															X			X							
TCP Training, Coachella Corp Office	04/15/14															X										
Confine Space Rescue Training, PD Ops Building	04/03/14						X																			
LAMP II Lateral Launcher Training, PD Yard	04/17/14														X											
Fork Lift Training- PD Yard	05/14/14													X												
Haaker Vactor Training, Haaker Equipt Yard/La Verne	05/14/14	X					X														X					
Supervisor Training, CVWD SR Bldg.	5/15/2014			X	X																					
MS4 Training, CVWD SR Bldg.	5/19/2014				X											X	X		X	X						
Respiratory Protection, WRP 10	6/11/2014															X	X		X							
Microsoft Outlook Training , CVWD SR Bldg.	6/27/2014			X	X																					
Discipline and Due Process Skelly Hearing, CVWD SR Bldg.	7/10/2014	X	X	X	X	X																				
Abestose Training, PD Ops Building	7/11/2014				X											X										
Abestose Cement Pipe Training, PD Ops Building	7/11/2014		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Abestose Cement Pipe Training, PD Ops Building	6/16/2014															X										
CPR/ First Aid Training, PD Ops Building	7/22/2014	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Vactor Training, Coachella Yard	8/11/2014				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Haz Mat Training, PD Ops Building	9/10/2014						X											X	X		X	X				
Workers Comp Training, H.R.	9/18/2014	X	X	X	X	X																				
Load Securment CHP, PD Ops Building	10/7/2014				X											X	X	X	X	X						
PVC Training, WRP 10	10/14/2014															X	X									
Pump Training, El Centro	10/23/2014																X									
AQMD Training, CVWD SR Training Room	10/30/2014				X																					
Trench Safety Training- PD Ops Building	11/14/2014				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Mark and Locate Training, PD Ops Building	11/17/2014				X																					
Underground Utility Locating	11/18/2014			X											X											
Updated P-Card Training, SR Training Rm	12/15/2014				X																					
Annual Pesticide Training, CVWD Coachella	12/23/2014				X												X									
2015 Training																										
Non- Potable Suite Supervisor Training, CVWD SR	1/8/2015	X	X	X																						
Stepladder Training, WRP 10	1/8/2015	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Effective Preventative Sewer Maintenance, Santa Ana	1/15/2015															X										
Flagger Training, City of LQ	2/12/2015																		X							
Just Drive Distraction Driving, CVWD SR Training Rm	2/18/2015	X		X											X	X		X	X							

Single & Extension Ladders, WRP 10	3/5/2015	X				X												
Collections Workshop, Coachella Sanitary Dist.	3/19/2015			X														
Collections Workshop, Menifee, CA	3/25/2015																	X
Incedent Command Systems Training, PD Ops Bldg.	3/31/2015										X							
Underground Utility Locating, Terra Lago, Indio	4/1/2015					X												
CWEA Conference in San Diego Ca.	4/27/2015	X																
Supervisor Training, Cathedral City	5/7/2015	X	X	X														
SCBA Training, WRP 10	5/21/2015									X	X			X				
MSHCP Habitt Training, CVWD SR Training Rm	6/5/2015			X		X				X	X			X				
Facility Pollution Prevention Prog. (FPPP) CVWD SR	6/15/2015									X	X			X				
Business Writing Class, CVWD SR Training Rm	7/21/2015					X												
Gas Detector Training, CVWD SR Training Rm	7/23/2015			X		X					X			X		X		
Forklift Workshop, WRP 10	9/3/2015			X		X					X			X		X		
	9/22-																	
Tri- State Seminar, South Point Las Vegas	24/2015			X					X					X				
Tough Built Training- PD Ops Bldg.	10/14/2015			X														
Pesticide Training, CVWD Coachella	10/14/2015									X	X	X	X	X	X	X	X	X

Part 5 – Equipment and Replacement Parts Inventories

CVWD maintains a warehouse in Coachella where many of the critical replacement parts are stored. In addition, parts are stored in storage containers at the Palm Desert facility and at Wastewater Reclamation Plant (WRP) #10 in Palm Desert.

CVWD has a policy of keeping parts on hand that could be required to keep the collection system operating. Critical parts lists are developed based on manufacturer recommendations for mechanical equipment. Parts are also kept on hand so that repairs can be made on each type and size of pipe, including fittings that are in CVWD's system. Many parts are readily available at local vendors. In determining which parts are needed to be on CVWD premises, key factors such as lead time are taken into account.

CVWD's new SunGard Public Sector computer based inventory management system can list parts on hand.

Repeat Cleaning Record Sheets

Following are examples of the repeat cleaning record sheets that are used by field personnel as they perform inspections and cleaning. When it is determined that a location needs to be cleaned more often due to excess FOG build-up or other such reason, it is added to the cleaning schedule at whatever frequency is required to maintain a suggested.

Monthly Repeat Cleaning

Location: Various Locations Including Lift Stations

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Corral Road C.C.	45211	14394	1843	8	Monthly			
Eleanora Ln R.M	55124	5299	761	8	Monthly			
Siphon Avenida Rancho Las Palmas R.M.	56181	6638	834	10	Monthly			
6" DIP Siphon Florentina Dr R.M.	56184	21727	400	6	Monthly			
Desert Crossing Center P.D.	56192	20808	1867	8	Monthly			
New York Ave P.D.C.C. P.D.	56132	3992	535	8	Monthly			
Camino De Paco Desert Horizons C.C I.W.	56221	11228	677	8-10	Monthly			
Vista Del Sol & Mountain Cove Dr I.W.	57193	8974	600	8	Monthly			
Ave 30 & Avenida Juarez Cathedral City	45161	16824	305	8	Monthly			
Total Monthly			7822					
Lift Stations					Time	Date Cleaned	Condition	Employee No.
WRP#9 L/S 80-01								
Pavilions L/S 80-16								
Regency Homes L/S 80-20 R.M.								

Quarterly Repeat Cleaning

Location: Cathedral City

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Cathedral Canyon Estates C.C.	45284	12131	250	8	Quarterly			
Total Cathedral City			250					

Quarterly Repeat Cleaning

Location: Indian Wells

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Ralps 2 Cook & Hwy111	56214	10246	975	8	Quarterly			
Esmeralda Hotel	56231	14189	1662	12	Quarterly			
Grand Champs	56232	13557	613	8	Quarterly			
Betty Barker	57193	26773	118	18	Quarterly			
Fairway Drive	56233	9061	855	10	Quarterly			
Total Indian Wells			4223					

Quarterly Repeat Cleaning

Location: La Quinta

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Kohl's Center L.Q.	57301	18866	715	8	Quarterly			
Kohl's Center L.Q.	57301	18865	1160	8	Quarterly			
Kohl's Center L.Q.	57301	18589	895	8	Quarterly			
Point Happy La Quinta.	57193	29684	1000	8/10	Quarterly			
Wal-Mart La Quinta.	57293	29304	938	8	Quarterly			
Wal-Mart La Quinta.	57293	29307	1080	8	Quarterly			
Wal-Mart La Quinta.	57293	29305	579	8	Quarterly			
Wal-Mart La Quinta.	57293	29306	1148	8	Quarterly			
Avenida Fernando La Quinta.	56363	11202	1037	10	Quarterly			
Mazatlan La Quinta.	56363	10729 10730	1558	10	Quarterly			
Mazatlan La Quinta.	56363	9686 9685	871	8	Quarterly			
Mazatlan La Quinta	6611	9682	1046	10/1 2	Quarterly			
Mazatlan to Ave 50th	6611	8773	433	18	Quarterly			
Calle Cadiz L.Q.	6763	15180	658	10	Quarterly			
Desert Club Dr L.Q.	6763	15180-A 15180-B	1315	10	Quarterly			
Vons Plaza	57193	10171	1385	8	Quarterly			
Total La Quinta			15818					

Quarterly Repeat Cleaning

Location: Palm Desert

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Carl's Jr. to Sage Ln P.D.	56203	5858	1085	8	Quarterly			
Sage Ln to Lupine Dr P.D.	56203	5857	772	8	Quarterly			
San Anselmo Ave P.D.	56202	1500 1501	1777	8	Quarterly			
Albertson Center Ave 42 & Washington St	56131	17874	1311	8	Quarterly			
Total Palm Desert			4945					

Quarterly Repeat Cleaning

Location: Rancho Mirage

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Pavilion Center	45361	18843	717	8	Quarterly			
Motel 6 R.M. Area	45344	8483 8484	1762	8	Quarterly			
Jensens R.M.	5531	6364	462	8	Quarterly			
Kobes R.M.	5531	6331	1655	8	Quarterly			
Desert Braemar R.M	5531	6330	886	8	Quarterly			
Desert Braemar R.M	5531	6328	812	8	Quarterly			
R.M. Mobile Home Rancho Mirage.	5522	1000	686	8	Quarterly			
R.M. Nursery to Ave 39 Rancho Mirage.	5522	1000	1190	10	Quarterly			
Las Casuelas Restaurant R.M.	5523	6335	627	8	Quarterly			
Wallys Area R.M.	55131	6333	895	8	Quarterly			
Rancho Palmers Dr Rancho Mirage	55131	19087	760	8	Quarterly			
The River Rancho Mirage.	55131	19088	561	8	Quarterly			
Post Office to Bob Hope Dr R.M.	55131	19086	864	8	Quarterly			
Torremolinos Dr Rancho Mirage.	56184	7102 6940	401	8	Quarterly			
Juan Carlos Dr R.M.	5674	7080	178	8	Quarterly			
Total Rancho Mirage			12456					

Quarterly Repeat Cleaning

Location: Thousand Palms

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Algoquin	46201	14861	200	6	Quarterly			
San Lucas	46203	14872	90	6	Quarterly			
Costco	46194	22686	474	8	Quarterly			
Costco	46194	17328	77	8	Quarterly			
Total Thousand Palms			753					

Quarterly Repeat Cleaning

Location: Night Work – Various Locations

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Dinah Shore @ Cathedral Canyon Dr.	45281	11036	733	10	Quarterly			
Corral & Date Palm	45211	14394	250	8	Quarterly			
Bob Hope Dr & Gerald Ford Dr.	45361	22435	657	10	Quarterly			
Fred Waring Dr & Monterey Ave.	56191	10310	450	8	Quarterly			
Fred Waring Dr & San Anselmo Ave.	56202	15000	300	8	Quarterly			
Country Club Dr & Cook St.	5644	19820	200	12	Quarterly			
Portola Ave & Alessandro Dr.	56201	8445	350	8	Quarterly			
Fred Waring Dr & Tennessee	56133	3983	450	10	Quarterly			
Cliff House HWY 111, Indian Wells	57193	18245	250	8	Quarterly			
Calle Tampico & Desert Club Dr	6763	15180A	250	10	Quarterly			
Calle Tampico & Bermudas	6763	29648	350	8	Quarterly			
Total Night Locations			4240					
Total Quarterly Cleaning			43883					

Semi-Annual Repeat Cleaning

Location: Various Locations Throughout CVWD

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Truck Wash to Varner Rd	46183	15115	671	15	Semi-Annual			
Varner Road	46183	13625	1424	15	Semi-Annual			
Varner Road	46192	13625	1255	15	Semi-Annual			
Date Palm Plaza	45164	18264	623	8	Semi-Annual			
Date Palm Plaza	45164	14302	768	8	Semi-Annual			
Food 4 Less Center	45281	16370	1141	8	Semi-Annual			
Food 4 Less Center	45281	16776	1045	8	Semi-Annual			
Mission Hills Plaza	45284	8431	523	8	Semi-Annual			
Bananas	5531	8102	100	8	Semi-Annual			
Mirage Cove to Peterson Rd	5522	6324	671	12	Semi-Annual			
Peterson Rd	5523	6323	680	15	Semi-Annual			
Desert Cove	5523	6322	1004	15	Semi-Annual			
San Jacinto Dr	55131	19088	500	15	Semi-Annual			
Rancho Las Palmas Hotel	56182	6642 6641	744	15	Semi-Annual			
Rancho Las Palmas Hotel	56182	7088	796	8	Semi-Annual			
Magnesia Falls	56183	8124	1100	8	Semi-Annual			
Rancho Las Palmas Center	56182	6941	442	8	Semi-Annual			
Pizza Hut / Wal-Mart	56192	13889	561	8	Semi-Annual			

Semi-Annual Repeat Cleaning (Cont.)

Location: Various Locations Throughout CVWD

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Painters Path Center	56183	8448	640	8	Semi-Annual			
Vons Center to Edgehill	56191	10262	540	8	Semi-Annual			
Vons to Edgehill	56192	6960	947	8	Semi-Annual			
Westfield Mall	56191	10309	2279	8	Semi-Annual			
Monterey Ave Between HWY 111 & Fred Waring	56191	10312 10311	2431	8	Semi-Annual			
Plams to Pine	56194	8346	475	8	Semi-Annual			
Palms to Pine	56194	8180	415	8	Semi-Annual			
Rite-Aid Center	56194	8180	1041	8	Semi-Annual			
Lupine Dr to Jensen Center	56203	5856	1011	10	Semi-Annual			
Jensen Center to President Center	56204	5854	949	10	Semi-Annual			
Presidents Plaza	56204	5853	998	10	Semi-Annual			
Presidents Plaza to Portola	56204	5853 5852	694	10	Semi-Annual			
Portola Alley to El Paseo	56213	5852	825	10	Semi-Annual			
Alley Castellli's	56202	14979 14978	2528	8	Semi-Annual			
Allesandro & De Anza Way	56201	15027 15028 12975 13682 10137	1954	8	Semi-Annual			
Waring Center (Ross) P.D.	56183	18608 18605	1208	8	Semi-Annual			
Ralphs to Cook & HWY 111	56214	10246	975	8	Semi-Annual			

Semi-Annual Repeat Cleaning (Cont.)

Location: Various Locations Throughout CVWD

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Kohl's Center	57194	18868	513	8	Semi-Annual			
Kohl's Center	57194	18867	1878	8	Semi-Annual			
Kohl's Center	57301	18590	715	8	Semi-Annual			
2 nd St Mecca	7983	13235	800	8	Semi-Annual			
3 rd St Mecca	7983	13236	786	8	Semi-Annual			
4 th St Mecca	7983	13248	1200	8	Semi-Annual			
5 th St Mecca	7983	13250	1200	8	Semi-Annual			
Total Semi-Annual			41050					

Total All Repeat Cleanings

Location: Various

Address	Plat Sheet	Line No.	Total LF Sewer Cleaned	Pipe Size	Cleaning Schedule	Date Cleaned	Condition	Employee No.
Monthly			9127					
Quarterly			43883					
Semi-Annual			41601					
Total All Repeat Cleanings			94611					

Chapter 5. Design and Performance Provisions

This section of the SSMP discusses the CVWD's use of established guidelines, standards and specifications for design, construction, rehabilitation, repair and inspection of sanitary sewer systems and appurtenances. CVWD has maintained guidelines, standards, and design and performance provisions for many years. These take the form of two documents; the Standard Specifications for the Construction of Sanitary Sewer Systems (Standard Specifications), and the Development Design Manual (DDM).

The Standard Specifications provide direction on the installation of new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems. Procedures and standards for the inspection and testing of these are also included in CVWD's Standard Specifications. The DDM assists design engineers working on tracts, subdivisions and other developments which require approval by CVWD.

CVWD's Standard Specifications along with the DDM meet or exceed the requirements of WDR 2006-0003. Since both of these documents are distributed to a larger set of users than this SSMP, they are hereby included in this SSMP by reference and not reproduced herein.

Within CVWD's Standard Specifications, the technical conditions are discussed in Part II, and special provisions discussed in Part III. The detail drawings for the collection system are demonstrated in Part III of the specification. Within the DDM, general information, requirements, design requirements and drawing requirements are discussed.

Both CVWD's Standard Specifications and the DDM are the responsibility of the Engineering Department for update, review and distribution. As with all regulated activities, the Engineering and Operations Departments are involved in ensuring that the maintenance of this document meets State requirements. Anyone desiring a copy of CVWD's Standard Specifications and the DDM may contact the Operation Department's office assistant, at (760) 398-2651 extension 3429.

Chapter 6. Overflow Emergency Response Plan

Prior to the implementation of the SWRCB's WDR 2006-0003 CVWD developed a SSORP to document its emergency response to a SSO. . CVWD's SSORP meets the requirements of WDR 2006-0003, and its newly revised Attachment A, State Water Resources Control Board Order No. WQ 2013-0058 EXEC, and it is hereby included in this SSMP by reference. Because the distribution of the SSORP is wider than the distribution of this SSMP and since affected employees are encouraged to keep copies of the SSORP readily available, it was decided to keep the SSORP as a separate publication. If CVWD were to incorporate the SSORP into the SSMP, updates would need to be simultaneous, printing costs would increase and field employees would need to carry heavier volumes in their respective vehicles.

WDR 2006-0003 requires certain specific minimum components to be included in the SSORP.

Notification of first responders and the appropriate response are covered in Part 5, Spill Response, of the SSORP.

Proper notification of regulatory and other potentially affected agencies is also covered in Part 5 Spill Response. Reporting is the responsibility of the Operations Department, Sanitation Collections group. Part 6 of the SSORP incorporates CVWD's Water Reclamation Plant Notification Procedures by reference. The SSORP and Water Reclamation Plant Notification Procedures are distributed in the same notebook.

Training in the aspects and procedures of the SSORP is discussed in Part 7, Personnel Training.

Emergency operations and spill containment are addressed in Part 5 of the SSORP.

CVWD's SSORP is the responsibility of the Operations Department for update, review and distribution. As with all regulated activities of CVWD, the Environmental Services Department is instrumental in ensuring the maintenance of this document meets State requirements. Anyone desiring a copy of CVWD's current SSORP may contact the Operations Department Schedule Coordinator at (760) 398-2651 extension 3529 or Office Assistant at extension 3429 to obtain a copy.

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

CVWD has evaluated its service area and determined that a FOG program is appropriate for the Coachella Valley. The urbanized portion of the Coachella Valley is characterized as a residential, golf and tourism community. There is little industry, and no heavy manufacturing. The FOG program reflects this community. Attachment B is the CVWD FOG Program Description.

CVWD's FOG program is implemented by the Source Control Division of the Environmental Services Department.

The requisite sections of the FOG Program are as follows:

- (a) Public education and outreach is accomplished through the efforts of the Communications Department, Water Reclamation Plant #10 public tours, and the Source Control Division, which perform the following:
 - i. Water Reclamation Plant (WRP) #10 public tours are offered and include discussions about the proper way to dispose of household FOG.
 - ii. Proper FOG disposal in the home is included in the 2014-2015 (and other) Annual Reviews, which are mailed out to all domestic water customers in June each year; are available in public locations (senior centers, city halls, libraries, etc.) and are distributed at community events as well as CVWD lobbies and are available for online orders at CVWD web site.
 - iii. Flyers designed to educate about proper FOG disposal have been created and are distributed to the general public (public events, CVWD lobbies, and ordered online).
 - iv. FOG disposal information has been included in the domestic water newsletter, the Water News, and distributed as a bill insert.
 - v. The Source Control inspectors perform a principal education and outreach role with food service establishments and residents regarding best management practices as it relates to FOG handling and disposal.
- (b) FOG from all WRPs is collected and managed properly; it is either contained in grits and screenings, which is sent to a landfill, or collected at a central waste pile, again where it is sent to a landfill. FOG handling for each WRP is described in detail in the Solids Management Plan, Attachment C.
- (c) The legal authority at Ordinance 1138, Part 9, 9-1, Prohibited Discharges, #2) prohibits wastewater containing more than 150 milligrams per liter of FOG.
- (d) The legal authority at Ordinance 1138, Part 9, 9-5 requires grease interceptors.
- (e) The legal authority at Ordinance 1138, Part 2-2.1 authorizes inspections; Part 10-2 addresses violations. The Source Control Division is adequately staffed to conduct inspections and to pursue enforcement as needed.
- (f) Sanitary sewer systems with additional cleaning requirements are identified and placed on "repeat" cleaning schedules if needed. (See Part 5 above)
- (g) The CVWD FOG program includes the requirements for appropriately sized grease interceptors, maintenance specifications, and sewer inspections for repeat cleaning.

Chapter 8. System Evaluation and Capacity Assurance Plan

CVWD has prepared a Sewer Collection System Master Plan (Master Plan) study that meets the requirements of WDR 2006-0003. Since this Master Plan is larger than the distribution of the SSMP, it is hereby included in this SSMP by reference.

The Master Plan evaluates those portions of the sanitary sewer system with hydraulic deficiencies that can and may lead to a SSO. The steps needed to establish a short and long-term CIB to address identified hydraulic deficiencies, including prioritization; alternative analysis and a schedule of all portions of the CIB are put forward. This Master Plan highlights CVWD's existing sewer collection system and establishes design and planning criteria. Capacities of the existing sewer collection system are evaluated with the use of hydraulic modeling software existing deficiencies and proposed improvements to enhance system reliability are summarized.

The Master Plan contains five chapters, followed by appendices that provide supporting documentation for the information presented in the report. The chapters are briefly described below.

Chapter 1 – Introduction. This chapter presents the background on the Master Plan and its objectives.

Chapter 2 – Existing System and Hydraulic Model. This Chapter presents an overview of CVWD's sewer collection system. The chapter also describes the development and calibration of CVWD's sewer hydraulic model. This model was used for identifying existing system deficiencies and for recommending enhancements.

Chapter 3 – Planning and Design Criteria. Design criteria presented in this chapter provides the basis for the capacity of the wastewater collection system. Historical flows at CVWD's water reclamation plants were reviewed and analyzed to determine daily, monthly, and seasonal fluctuations experienced by the sewer system. The developed criteria address the sewer system capacity, acceptable pipe gravity slopes, and acceptable depths of flow within pipes.

Chapter 4 – Evaluation and Proposed Improvements. This chapter presents the results of the capacity evaluation of the sewer collection system. The chapter also presents improvements to mitigate existing system deficiencies and for servicing future growth. These improvements are recommended based on the system's technical requirements, cost effectiveness, and operational reliability.

Chapter 5 – Capital Improvement Budget. This chapter presents the recommended CIB for CVWD's sewer collection system. The program is based on the evaluation of the sewer collection system and on recommended projects described in the previous chapters. The CIB was phased to the planning horizon year of 2030.

A copy of the Master Plan may be obtained by contacting Armando Rodriguez, Principal Sanitation Engineer, or the current Engineering Department Manager

The Engineering Department will continually monitor and update this Master Plan in order to meet the changing needs of the community as well as changes in condition of the facilities.

Chapter 9. Monitoring, Measurement, and Program Modification

Records that can be used to establish and prioritize SSMP activities will be maintained in the Collections System Division of the Sanitation Branch of the Operations Department. The records will also be filed with CVWD's records management system under file number 0732.31.

CVWD has implemented the SunGard Public Sector enterprise wide computerized business management application. Included in SunGard is the Work Order or WF system. By utilizing the SunGard WF, accurate records are kept showing the work accomplished relevant to the SSMP activities. Reports can then be generated and compared to the tasks outlined in the SSMP to measure compliance.

As the SunGard system continues to mature, the maintenance activities planned in the SSMP can be set as automatically triggered routing maintenance activities, on a predetermined schedule. A report showing the schedule can be generated and then periodic reports can be generated showing success against the schedule.

Evaluation of the success of the SSMP is a continual process. As each section of CVWD works on different aspects of the sewer collection system, each employee will evaluate the success as planned and consider suggestions for constant improvement.

The bottom line measurement for success of the SSMP is the number and nature of SSOs. CVWD maintains a database of SSO events and performs trend analysis to evaluate the effectiveness of the SSMP.

Table 2 shows the number of SSO's in each of the three categories that have been reported by CVWD since Region 7 began implementation of on-line reporting in the CIWQS on September 2, 2007. This table will be updated annually, each January. The associated volumes of these SSO's are also shown. As shown in the table, 22 SSO's have been reported by CVWD from September 2007 to October 2015, – 59 within CVWD's collection system and 1 from a private spill. The volume of these spills has ranged from 0 to 632,000 gallons.

The overall assessment of CVWD's sewer collection system during this period indicates a general reduction in the number and volume of SSO's with no significant correlation between spill frequency and facility locations.

As a result of monitoring and measuring the success of the SSMP, program modifications may be indicated. Modifications to the Plan must be approved by the Director of Operations. The Director of Operations will determine if the modification warrants approval by the General Manager prior to implementation.

Month	Month and Year	Number of SSO's reported by CVWD	Private	Number of CVWD SSO's	Number of CVWD Category 1 SSO's	Number of CVWD Category 2 SSO's	Number of CVWD Category 3 SSO's	Force Main	Blow Off	Air Vac	Pump Station	Gravity Main	Total Volume (gallons)	Cat 1. Volume (gallons)	Cat 2. Volume (gallons)	Cat 3. Volume (gallons)
1	Sep-07	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
2	Oct-07	1	0	1	1	0	0	1	0	0	0	0	3,000	3,000	-	-
3	Nov-07	3	1	2	1	1	0	0	1	0	1	0	250,100	250,000	100	-
4	Dec-07	1	0	1	1	0	0	0	0	0	0	1	4,000	4,000	-	-
5	Jan-08	1	0	1	0	1	0	0	0	1	0	0	970	-	970	-
6	Feb-08	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
7	Mar-08	1	0	1	0	1	0	0	0	0	0	1	15	-	15	-
8	Apr-08	2	0	2	0	2	0	0	0	0	1	1	1,200	-	1,200	-
9	May-08	1	0	1	1	0	0	0	0	1	0	0	4,000	4,000	-	-
10	Jun-08	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
11	Jul-08	1	0	1	0	1	0	0	0	0	0	1	800	-	800	-
12	Aug-08	2	0	2	1	1	0	0	0	2	0	0	11,330	11,300	30	-
13	Sep-08	1	0	1	0	1	0	0	1	0	0	0	920	-	920	-
14	Oct-08	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
15	Nov-08	2	0	2	2	0	0	1	0	1	0	0	155,500	155,500	-	-
16	Dec-08	2	0	2	0	2	0	0	0	0	0	2	550	-	550	-
17	Jan-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
18	Feb-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
19	Mar-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-

20	Apr-09	1	0	1	1	0	0	0	0	0	0	1	500	500	-	-
21	May-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
22	Jun-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
23	Jul-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
24	Aug-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
25	Sep-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
26	Oct-09	4	0	0	0	0	0	0	0	0	0	0	-	-	-	-
27	Nov-09	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
28	Dec-09	2	0	2	0	2	0	0	0	0	0	2	755	-	755	-
29	Jan-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
30	Feb-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
31	Mar-10	1	0	1	1	0	0	1	0	0	0	0	1,500	1,500	-	-
32	Apr-10	1	0	1	1	0	0	0	0	0	0	1	3,700	3,700	-	-
33	May-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
34	Jun-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
35	Jul-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
36	Aug-10	1	0	1	0	1	0	0	0	0	0	1	300	-	300	-
37	Sep-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
38	Oct-10	1	0	1	1	0	0	0	0	0	0	1	300	300	-	-
39	Nov-10	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
40	Dec-10	2	0	2	2	0	0	0	0	0	0	2	632,777	632,777	-	-
41	Jan-11	1	0	1	1	0	0	1	0	0	0	0	6,000	6,000	-	-
42	Feb-11	4	0	4	2	2	0	2	0	0	0	2	1,705	480	1,225	-
43	May-11	1	0	1	1	0	0	1	0	0	0	0	10,600	10,600	-	-

44	Sep-11	1	0	1	0	1	0	0	0	0	0	1	900	-	900	-
45	Nov-11	1	0	1	0	1	0	0	0	0	0	1	510	-	510	-
46	Jan-12	1	0	1	0	1	0	0	0	1	0	0	225	-	225	-
47	Mar-12	1	0	1	0	1	0	0	0	1	0	0	425	-	425	-
48	Jun-12	1	0	1	1	0	0	0	0	0	0	1	350	350	-	-
49	Jul-12	1	0	1	0	1	0	0	0	0	0	1	700	-	700	-
50	Dec-12	1	0	1	0	1	0	1	0	0	0	0	500	-	500	-
51	Jan-13	1	0	1	0	1	0	0	0	0	0	1	250	-	250	-
52	Mar-13	1	0	1	0	1	0	1	0	0	0	0	400	-	400	-
53	Apr-13	1	0	1	0	1	0	0	0	1	0	0	35	-	35	-
54	May-13	1	0	1	0	1	0	0	0	1	0	0	850	-	850	-
55	Jun-13	2	0	2	0	2	0	0	0	1	0	1	900	-	900	-
56	Jul-13	1	0	1	1	0	0	1	0	0	0	0	300	300	-	-
57	Aug-13	1	0	1	1	0	0	1	0	0	0	0	21,000	21,000	-	-
58	Oct-13	3	0	3	0	0	3	0	0	0	0	2	1,095	-	-	1,095
59	Feb-14	1	0	1	0	0	1						50			50
60	Apr-14	2	0	2	1	1	0					1	9,100	100	9,000	
61	Sep-14	3	0	3	1	2	0						218,250	75	218,175	
62	Mar-15	1	0	1	0	0	1	0	0	1	0	0	100	-	-	100
63	Oct-15	2	0	2	0	0	2	0	0	1	0	1	80	-	-	80

Chapter 10. SSMP Program Audits

Audits are required every two years, at a minimum, to: 1) evaluate the effectiveness of the Plan and, 2) to evaluate whether or not CVWD is in compliance with the Plan. In keeping with good audit practices, the audit must: 1) identify any deficiencies (also known as findings or recommendations), and 2) correct those deficiencies.

Audits should be conducted during or about the same timeframe so that the two-year requirement is accomplished. Audits generally can take from one to three months to complete. Thus, audits for this Plan should be performed during the 4th quarter of every even numbered year (e.g., October-November-December 2014, 2016, 2018, etc.)

The Collections Systems Supervisor, as directed by the Director of Operations, will initiate the audit process, which should include:

1. Delegation of a lead auditor
2. Determine the scope of the audit
3. Determine audit team members as follows:
 - a. Selected persons from the Collections Systems Divisions – Required
 - b. Selected person(s) from the Environmental Services Division – Required
 - c. Other personnel from appropriate departments as dictated by the audit scope
 - d. Determine the audit approach (what evaluations will be performed to test compliance?)(e.g., checklists, interviews, inspections, records reviews)
 - e. Lead auditor will make assignments/deadlines to implement audit approach
 - f. Assignments will be completed and results documented (completed checklists, inspection logs, interview sheets, or report write-ups, etc.)
 - g. Deficiencies will be itemized and corrective actions determined
 - h. Corrective actions will be completed, documented, and included in the audit file
 - i. Any needed Plan updates should be included in the findings – even if the Plan is not due for revision. Corrective Action closure of these types of findings can be accomplished with the creation of a draft Plan revision that will not necessarily be completed until it is due at a later date. The “draft” revision pages can serve as the documentation of closure.
 - j. CVWD’s overflow history will be reviewed as part of the audit process and if appropriate, the Communications Program will be elevated to respond to the requirements of the changing conditions.

Audits are not punitive, but an opportunity to ensure that the Plan is adequate and the ability to fully implement the Plan is working as intended.

The Director of Operations will review the final audit and corrective action closures.

Chapter 11. Communication Program

CVWD's SSMP Communication Program addresses the SSMP provision outlined in Section D of SWRCB Order No. 2006-0003. In particular, CVWD will communicate on a regular basis with interested parties on the implementation and performance of this SSMP. The communication program allows interested parties to provide input.

The SSMP is available to the public on the CVWD website at www.cvwd.org. The public is invited to comment on the Plan at any time through the website or by calling CVWD at (760) 398-2651.

The website will be the primary source for public information and input on the SSMP. The website will provide the public the ability to review and comment on the SSMP and the SSMP performance reports, and any updates as needed. CVWD's Operations Department will review the SSMP at least annually for necessary revisions or updates. Revisions will be provided to the Communications Department to update the website.

The website is advertised on all CVWD's customer and stakeholder communication materials. When it is necessary to communicate to tributary and/or satellite systems (such as Desert Water Agency in the Cathedral City Cove area or Valley Sanitary District), CVWD will utilize existing committees of the Colorado River Basin Section (CORBS) of the California Water Environment Association (CWEA).

CVWD has a good record when it comes to SSOs. The number of overflows is within reasonable limits and the overflows have not resulted in community health hazards. Therefore, the Communications Program has been designed with an appropriate level of community involvement. CVWD's overflow history will be reviewed as part of the audit process and if appropriate, the Communications Program will be elevated to respond to the requirements of the changing conditions.