

Sewer System Management Plan (SSMP) Update



Town of Apple Valley

September 10, 2019

RESOLUTION No. 2019-25

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, CALIFORNIA, APPROVING THE SEWER SYSTEM MANAGEMENT PLAN (SSMP) UPDATE FOR THE TOWN OF APPLE VALLEY AS REQUIRED BY THE STATE WATER RESOURCES CONTROL BOARD STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS.

WHEREAS, on May 2, 2006, the State Water Resources Control Board Order No. 2006-0003 – Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems was adopted and implemented; and

WHEREAS, the purpose of the WDR is to develop a regulatory mechanism to provide a consistent statewide approach for reducing sanitary sewer overflows; and

WHEREAS, the WDR requires a Sewer System Management Plan (SSMP) with eleven (11) separate elements; and

WHEREAS, the original SSMP was first approved by council in 2009 and is required to be updated every five (5) years; and

WHEREAS, the SSMP was last updated in 2014; and

WHEREAS, the SSMP update must be approved by the agency's governing board for certification upon its completion.

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Apple Valley, California, finds, determines and orders as follows:


Section 1. Approves the SSMP update as required by the State Water Resources Control Board Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

APPROVED and **ADOPTED** by the Town Council of the Town of Apple Valley this 10th day of September, 2019.



Larry Cusack, Mayor

ATTEST:



~~La Vonda M-Pearson, Town Clerk~~
KIEL MANGERINO, DEPUTY TOWN CLERK



Town of Apple Valley

A Better Way of Life

STATE OF CALIFORNIA

COUNTY OF SAN BERNARDINO

TOWN OF APPLE VALLEY

I, LA VONDA M-PEARSON, Town Clerk for the Town of Apple Valley, Apple Valley, California, do hereby certify that Resolution No. 2019-25, duly and regularly adopted by the Town Council at a meeting thereof held on the 10th day of September 2019 by the following vote:

AYES: Council members, Bishop, Emick, Leon, Mayor Pro Tem Nassif, Mayor Cusack.

NOES: None.

ABSTAIN: None.

ABSENT: None.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Town of Apple Valley, California, this 10th day of September 2019.

LA VONDA M-PEARSON, CMC
TOWN CLERK

By: 
Kiel Mangerino, Deputy Town Clerk

(Seal)



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Updated 9/10/19



Chapter 0.0 Introduction

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted a Statewide General Waste Discharge Requirement (WDR) and Monitoring and Reporting Program by issuing Order No. 2006-0003 (Order) (Appendix A). On July 30, 2013, Attachment A, SWRCB Order No. WQ 2013-0058-EXEC was issued amending the Monitoring and Reporting Program for Statewide General Discharge Requirements for Sanitary Sewer Systems.

The regulations in the Order were born out of a growing concern about the water quality impacts of Sanitary Sewer Overflows (SSOs), particularly those that threaten local water bodies, pose serious health and safety, or nuisance concerns. Two major components of the WDR are the requirements that owners and operators of publically owned Sanitary Sewer Systems one (1) mile long or greater apply for coverage under the Order, and that they develop and implement a Sewer System Management Plan (SSMP).

The Town of Apple Valley (Town) filed its Notice of Intent (NOI) application with the SWRCB in August 2007 in compliance with the Order. The Town subsequently received its California Integrated Water Quality System (CIWQS) Username and Password for accessing the state's on-line reporting database. The Town then completed its "collection system questionnaire", has filed all subsequent updates, and all required SSO reporting.

The original SSMP was certified by the Town Council on July 28, 2009. The SSMP must be audited at least every two (2) years and updated every five (5) years from the original adoption date by the Town Council. The Town Council adopted a five-year update of the SSMP in July 2014, and therefore, the next five-year update which this document is prepared for will be due in 2019.

The Town's SSMP is divided into 11 chapters, which closely align with the respective provisions contained in the Order. Each of the following chapters addresses one of the key elements of the SSMP program requirements. By implementing the policies and procedures contained in this SSMP, the occurrence of SSOs should decrease or possibly be avoided throughout the Town's sanitary sewer collection system.



Chapter 1.0 Town of Apple Valley SSMP Goal

The goal of the Town of Apple Valley's Sewer System Management Plan (SSMP) is to provide the framework to properly manage, operate, inspect, and maintain all components of the Town's sewer system to provide adequate sewer capacity for peak wastewater flows, protect the public health by minimizing the frequency and impact of unauthorized Sanitary Sewer Overflows (SSOs), implement standard procedures for responding to SSOs, preserve and improve the collection system to ensure dependable service now and into the future, and assure compliance with all regulatory notification and reporting requirements.



Chapter 2.0 Department Organization

2.1 Description of General Responsibilities

Town Council: Governing body; approves policy

Town Manager: Enforces policy

Public Works Manager: Legally Responsible Official (LRO), enforces policy, plans strategy, leads staff, allocates resources, prepares and controls department budget, delegates responsibility, authorizes outside contractors to perform services, reviews project plans and specifications, confers with Town engineer, and coordinates the development and implementation of the SSMP. Advises Town Council and Town Manager on issues related to the Town's sewer collection system. Official Data Submitter for SSO online reporting system.

Administrative Analyst: Provides administrative support for the Public Works Manager and Supervisors, assists with coordinating the development and implementation of the SSMP, monitors and facilitates department compliance regarding regulatory requirements/deadlines. Provides backup at the Public Works counter. Official Data Submitter for the SSO online reporting system.

Senior Administrative Assistant: Issue sewer permits, research and address sewer questions/complaints received via phone or counter, receive and document sewer plan submittal and review, provides support for Public Works Manager and Supervisors and dispatch field personnel (Maintenance Workers). The Senior Administrative Assistant is the first contact for SSOs during regular business hours via phone.

Public Works Supervisor : Manages field operations and maintenance activities, provides relevant information to the Public Works Manager, provides plan review and approval for projects that require connection to the sewer, monitors budget expenditures, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews. Estimates needed equipment and equipment maintenance. Confers with contractors and engineers on construction/maintenance problems and procedures.

Maintenance Worker: Inspects all sewer installations and connections, responds and mobilizes after receiving notifications of stoppages and SSOs (e.g., mobilize sewer cleaning equipment, bypass pumping equipment, portable generators, etc.), documents and reports SSOs, investigates sewer-related complaints from the general public. Confers with contractors and engineers on construction and maintenance problems and procedures. Monitors lift station function, conducts preventative and corrective maintenance activities

Town Engineer: Provides sewer plan review and assists with sewer policies.



2.2 Authorized Representative

The Town’s authorized representative in all wastewater collection system matters is the Public Works Manager. The Public Works Manager is authorized to certify electronic spill reports submitted to the SWRCB via the California Integrated Water Quality System (CIWQS).

The Public Works Supervisor is authorized to act in the Public Works Manager’s absence. The Administrative Analyst is also authorized to submit SSO reports and other required information to the appropriate government agencies.

2.3 Responsibility for SSMP Implementation

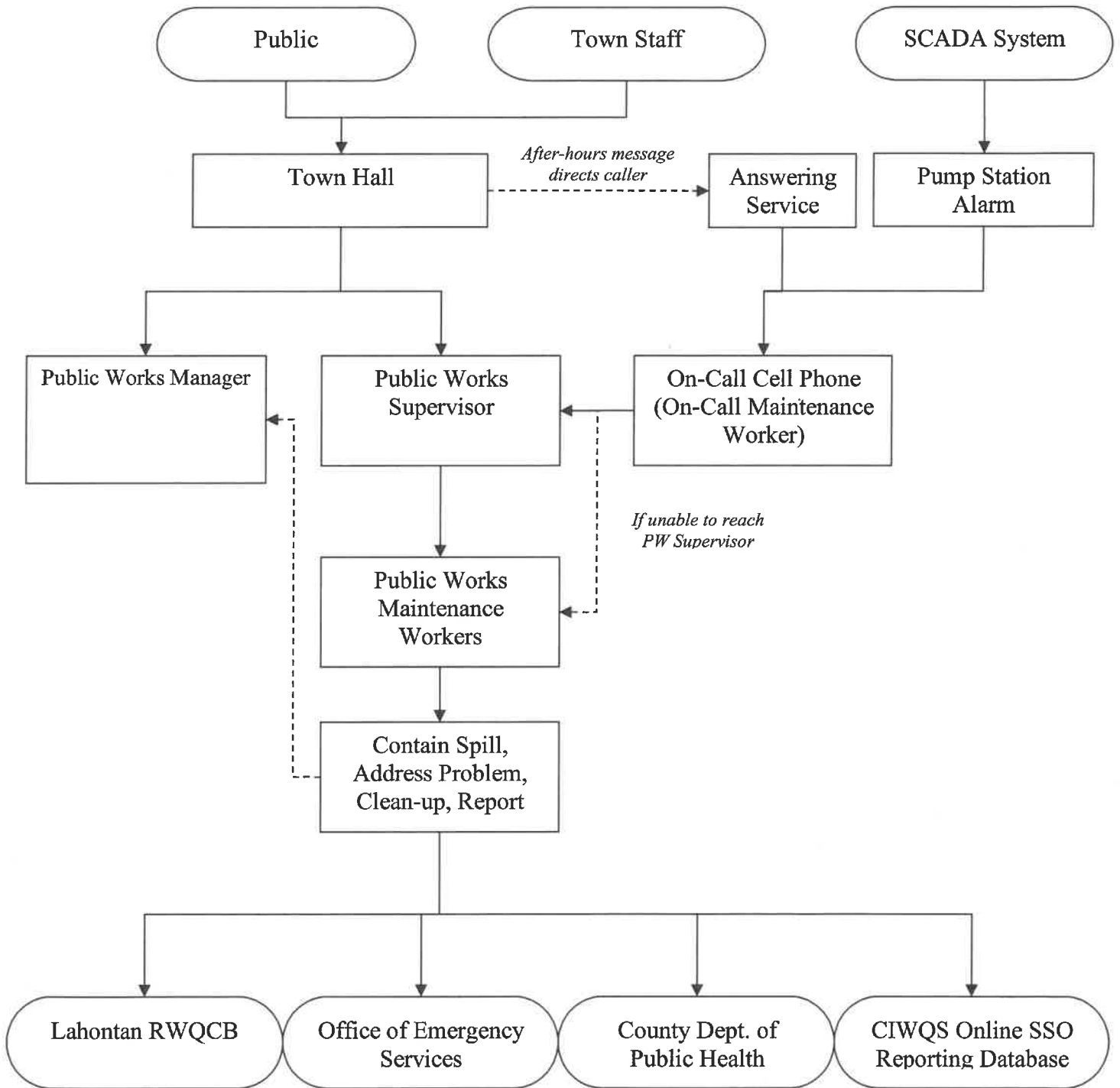
The Public Works Manager is responsible for implementing and maintaining all elements of the SSMP.

2.4 SSO Response Chain of Communication – Contact List

<i>Contact</i>	<i>Telephone</i>
Town Hall	(760) 240-7000
Public Works Manager	(760) 240-7000 ext.7504
Administrative Analyst	(760) 240-7000 ext.7610
Public Works (Main Line)	(760) 240-7000 ext.7500
Public Works Supervisor	(760) 240-7000 ext.7503
Public Works Maintenance Workers	(760) 240-7000 ext.7540
Public Works After Hours	(760) 961-6001
Wastewater On-Call Cell Phone	(760) 508-9300



2.5 SSO Response Chain of Communication





Chapter 3.0 Legal Authority

3.1 Legal Authority

The Town has the legal authority to own and operate a sanitary sewer system. The purpose of the Wastewater Department is to furnish residents and businesses with wastewater collection, treatment, and the disposal of sanitary waste. On December 13, 1977, the former Apple Valley Water District (AVWD) entered into a Joint Powers Authority (JPA) agreement with the Victor Valley Wastewater Reclamation Authority (VWVRA). The Town is the successor agency to the AVWD. The JPA agreement was amended and reinstated on December 15, 1998. The Town has entrusted the collection and treatment of the Town's wastewater to VWVRA. The Town, however, still maintains full ownership, operation and maintenance for the Town's sewer system.



The Town's Municipal Code Title 8, Section 8.12.010, adopted the California Plumbing Code, 2019 Edition, prepared and published by the California Building Standards, including Appendices thereto and installation standards incorporated therein, and made a part of this Chapter by reference.

In compliance with the WDR, this Chapter highlights the Town's legal authority to: 1) prevent illicit discharges into the sanitary sewer system; 2) require that sewers and connections be properly designed and constructed; 3) ensure access for maintenance, inspection, or repairs; 4) limit the discharges of FOG and other debris that may cause blockages; and 5) enforce any violation of sewer ordinances or Municipal Codes (MC). The legal authorities for the specific areas stipulated in the WDRs are covered in various sections of the Town of Apple Valley Sewer Ordinance discussed below:

3.2 Legal Authority to Prevent Illicit Discharges into the Sanitary Sewer System

In accordance with the Town's Sewer Ordinance No. 478, Section 10.01.070, the Town prohibits the discharge of storm water into the sanitary sewer system. Section 10.01.070 also prohibits the discharge of any non-sewage substance into the sanitary sewer system. These laws combined constitute the Town's legal authority to prevent illicit discharges into the sewer system.

3.2.1 Legal Authority to Require that Sewers and Connections be properly Designed and Constructed

Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.100 require that the design of new main-line sewers and pumping plants respectively in the Town, comply with the Town's development standards and the Town's Sewer Master Plan. The Town uses the County of San Bernardino Special Districts Department Standards for Sanitary Sewer standards. Section 10.01.110 of the Ordinance requires that the design of new laterals also conform to the requirements of the Town and County of San Bernardino Standards. Provisions and Standard Plans, all on file in the office of the Public Works Manager.



3.2.2 Legal Authority to Ensure Access for Maintenance, Inspection, or Repairs

The Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.160 grants Town officials the legal right to enter all private properties to allow unrestricted maintenance access to the public sewer infrastructure located on private property. In accordance with Section 10.01.160, the access is secured through the Town's enforcement of the requirement for legally recorded sewer easements around all public sewer located in private properties.

3.2.3 Legal Authority Limiting the Discharge of FOG and other Debris that may cause blockage

The Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.070 gives the Town the legal authority to require the installation of grease interceptors at restaurants and other establishments that generate grease and oil in the Town. Fats, oils, grease (FOG) and other substances that may, among other things clog, obstruct, fill, or necessitate frequent repairs, cleaning out or flushing of sewer facilities are prohibited in the Town's Sewer System.

Chapter 10 of the California Plumbing Code provides the Town with legal authority to require installation of interceptors where waste flow conditions necessitate the proper handling of the liquid waste stream flow to protect the sewer system and public (commonly at restaurants, industrial facilities, etc.), that generate wastes containing grease, flammable wastes, sand, solids, acid or alkaline substances, or other ingredients harmful to the building drainage system, the public or private sewer, or to public or private sewage disposal.

3.2.4 Legal Authority to Enforce any Violation of Sewer Ordinances

The Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.170, states that the Town Manager and other designated Town officials shall have the primary responsibility for enforcement. The Town may, at its option, elect to enforce the provisions of the Town's Sewer Ordinance under any methods of enforcement available, including the criminal prosecution, abatement of nuisances, civil remedies or other legal or equitable appropriate means.



Chapter 4.0 Operations and Maintenance Program

4.1 Description of the Sanitary Sewer System

The Town of Apple Valley’s sanitary sewer system covers the areas served as indicated in the sewer maps and sewer database system. The Town’s existing sewer consists of:

• 4-inch force mains	1,675 feet
• 6-inch collector sewer (in AD #2A only)	54,963 feet
• 8-inch collector sewer	546,400 feet
• 10-inch collector sewer	59,701 feet
• 12-inch collector sewer	20,321 feet
• 15-inch trunk sewer	31,693 feet
• 18-inch trunk sewer	27,863 feet
• 21-inch trunk sewer	5,546 feet
• 24-inch trunk sewer	5,447 feet
• 30-inch trunk sewer	15,385 feet
Total Length	768,994 feet (145.64 miles)

The total length of the sewer collection piping system will be increasing with growth and the Town of Apple Valley has been keeping a record of such increases. In addition, the Town of Apple Valley operates a total of eight wastewater lift stations. The Town of Apple Valley is a member of the Joint Power Agency, the Victor Valley Wastewater Reclamation Authority (VWVRA). VWVRA operates a regional interceptor sewer system and the wastewater reclamation plants.

The Town of Apple Valley’s collection system is relatively new. The majority of the system was constructed within defined areas where an “assessment district” was formed to finance the work. An older computer model was used to evaluate the capacity of the entire system. The Town updated its sewer master plan in 2013 which again evaluated the capacity of the system.

In order to ensure that the existing system has adequate capacity to serve a new development, each new project (not previously included in an assessment district) is required to have a sewer feasibility study review.

4.2 Collection System Operation and Maintenance

The collector system is regularly inspected by maintenance crews of the Town’s Public Works Department. These inspections include:

- a) Check for unauthorized tampering of the system for illegal dumping
- b) Potential odor concerns
- c) Potential overflow due to sewer back-ups from blockage due to Illegal Discharge and grease build-up (grease control will be further discussed in Section 7)
- d) Potential pipeline trench settlement.

The collection system is regularly cleaned using a hydro-cleaner system (5-year cycle). This work is



performed by in-house staff and can be contracted with an outside firm if required.

A map showing the Town's collection sewer system is available on the Town's website and at the Public Works Counter. The goal is to hydro-clean the entire system within a 5-year cycle. This map will be updated on a regular basis and/or upon the addition and final approval of sub-divisions of 200 or more homes.

Sewer inspections and cleaning are scheduled on a regular basis. The inspections and cleanings are documented and kept at the Public Works Facility. The Town owns one sewer combination cleaning truck and one CCTV inspection truck for on-going cleaning and inspection of the sewer lines.

4.3. Sewage Lift Station Operation and Maintenance

The operation and maintenance of each sewage lift station follows the design criteria at each site and the instructions provided by pump and electrical control equipment manufacturers as contained in the O & M manual(s). Sewer lift station run hour times and maintenance logs are kept on file at the Public Works Facility. Each sewage lift station is regularly inspected and maintained by maintenance crews from the Public Works Department and covers the following:

- a) Pump and drive equipment operate satisfactorily without excessive vibration, noise, and over-heating;
- b) Pump operations are within the pre-set start and stop levels in the wet well;
- c) Routine check and addition of lubricants to bearings etc;
- d) For stations with sump pump in the dry-well, check to make sure that the sump pump works;
- e) Check to make sure that the motor control equipment (such as variable frequency drives etc.) is working as designed;
- f) Perform scheduled maintenance of equipment as recommended in the O&M manuals; including verification of parts inventory.

Each small wastewater lift station is equipped with a duplex pumping system to provide for 100% standby capacity. In the event of a power outage at a specific small station, rental generator equipment will be utilized. Additionally, the Town's diesel-powered emergency pump could be used to cover such emergency situations.

Each of the larger wastewater lift stations is designed with multiple pumps to provide adequate standby capacity. In the event of power outage, each station is equipped with an emergency generator. Additionally, the Town's diesel-powered emergency pump could be used to cover such emergency situations. Each of the two larger lift stations operated by the Town has been fitted with emergency by-pass valves and a piping system. This ensures quick connection with the diesel-powered emergency pump if such operation should be required. A brief description of each of the Town's sewage lift stations is included in Appendix

Each of the sewage lift stations is being monitored by a SCADA (system control and data acquisition) system. In the event of equipment malfunction, motor failure, intrusion, etc., the staff on duty will be notified via the telemetry.



4.4. Operation and Maintenance Budget

The Town of Apple Valley Public Works Department operates the sewer collection system. The Department includes its internal full-time staff members under the supervision of the Public Works Manager. The Town Engineer assists in plan check, planning, operational assistance, and provides advice on sewer issues. Each year, based on the number of connections and wastewater flow, the Department establishes a budget sufficient to cover salary and benefits, training, system maintenance, utility expenses, vehicles/equipment, fuel and other chemical needs, and outside services.

Staff training records are maintained by the Town's Human Resources Department and Public Works Administrative staff. Staff training covers work items to be performed, safety issues, and constant surveillance for sewer blockage and potential over-flows. Safety training occurs on a bi-weekly basis. Other trainings including encouraging staff to participate in operation and maintenance sessions provided by the California Water Environment Association (Desert Mountain Section), and the California Joint Power Insurance Authority (CJPIA; on various safety and related subjects).

4.4.1 Capital Repair and Replacement Budget

The Town of Apple Valley establishes the following funds to expand and maintain the sewer system to ensure adequate capacity for current and future customers:

- Capital improvement fund is targeted for expanding trunk sewers and sewage lift stations.
- Built-in “repair and replacement” fund in the annual operating budget to accumulate capital funds for replacement of equipment and perform necessary system upgrades.
- Sewer Fees - The Town of Apple Valley has established a monthly sewer fee (see Town's sewer user charges resolution for current rate). Properties within the Town are assessed as follows:
 - Single family occupancy, each residential unit within a multiple family development, and each mobile home unit will be assessed a set monthly rate per month.
 - Each commercial shop or office with individual restroom facilities will be assessed a minimum monthly rate plus \$1.572 per fixture unit in excess of twenty (20) fixture units.
 - Commercial and industrial shops or offices with public and/or centralized sewer use facilities, will be assessed a minimum monthly rate per month plus \$1.572 per fixture unit in excess of twenty (20) fixture units.
 - Schools' monthly user fees will be calculated on the basis of total annual enrollment whereby twenty-three (23) students and/or faculty equals one (1) EDU, which is defined as twenty (20) fixture units which is assessed a set rate per EDU per month.



Chapter 5.0 Design and Performance Standards

5.1 Design & Construction Standards

The Town of Apple Valley requires that all sewers be designed in accordance with San Bernardino County Special Districts Department Standards for Sanitary Sewer. San Bernardino County has established standard plans and specifications for construction of sanitary sewers and appurtenances to ensure that sewer lines and connections are properly designed and constructed. The Town of Apple Valley requires that plans, profiles and specifications for the sanitary sewer system are prepared by a Civil Engineer licensed in the state of California and approved by the Town. Review of plans is performed by the Public Works Manager and Town Engineer, prior to approval for construction. To ensure that all sanitary sewer systems are properly constructed, the Town's Engineering Department staff conducts inspections of the actual construction work.

5.1.1 New Facility Standards

The Town Apple Valley is responsible for enforcing construction standards through its Public Works and Engineering Departments. Public Works inspection staff conducts inspections of the installation of new sewer laterals. Engineering construction inspectors perform inspections of all new sewer mains within the Town, verifying that all new collection systems adhere to the San Bernardino County Special District Department Standards.



5.1.2 Rehabilitation Standards

The Town of Apple Valley, through its Public Works Department, provides rehabilitation and inspection of deteriorated sanitary sewer collection systems. Public Works inspection staff conducts inspections of any sewer rehabilitation projects, documenting that the rehabilitated portions of the collection system meet and adhere to the San Bernardino County Special District Department Standards.

Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.100 require that the design of main-line sewers and pumping plants in the Town comply with the Town's development standards and the Town's Sewer Master Plan. The Town uses the County of San Bernardino Special Districts Department Standards for Sanitary Sewer. Section 10.01.110 of the Ordinance requires that the design of new laterals also conform to the requirements of the Town and County of San Bernardino Standards. Provisions and Standard Plans, all on file in the office of the Public Works Manager.



5.2 Inspection, Testing & Approval of New & Rehabilitated System Components

The Town requires that “As-Built” sewer plans of the completed projects be submitted prior to final approval for acceptance of sewer facilities for public use. The Town reviews the plans to ensure that routine preventative maintenance can be adequately performed.



Chapter 6.0 Overflow Emergency Response Program

6.0 Introduction

This plan summarizes the actions that Town staff must take in responding, reporting, and resolving sanitary sewer overflows (SSOs). A SSO is any overflow, spill, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs typically contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease. These substances cause surface or ground water pollution, threaten public health, adversely affect aquatic life, and impair the recreational use and enjoyment of surface waters. SSOs often occur as a result of broken pipes, equipment failure, or system overload. Prevention measures include, but are not limited to, visual inspections, monitoring and maintenance programs, employee training, and public education.

The Town of Apple Valley is responsible for operation and maintenance services of its sewer collection system, including cleaning, closed circuit television (CCTV) inspections, manhole inspections, and emergency repairs. The Town’s Public Works Department is responsible for implementing the sanitary sewer system program, which includes permitting, inspection and enforcement of illicit discharges to the public sewer system in conjunction with the Town’s Code Enforcement Division.

6.1 Spill Response Team Responsibility

Every water and sewer system can face an emergency due to unforeseen conditions. The Town of Apple Valley has organized an “Emergency Response Team” (will be referred to as “response team” in subsequent references) for its collection system. The structure of the response team along with their contact numbers are as shown in the Table below:

Role	Work Number	Ext.	After-Hours Contact #
Public Works Supervisor	(760) 240-7000	7503	(442) 243-0372
Wastewater -Maintenance Workers	(760) 240-7000	7540	(760) 961-6001
Public Works Manager	760) 240-7000	7504	(760) 981-5305
Streets – Senior Maintenance Worker	(760) 240-7000	7540	(760) 961-6001
Streets - Maintenance Workers	(760) 240-7000	7540	(760) 961-6001
Town Engineer	(760) 242-7000	7011	(760) 961-6001

In the event of a “sanitary sewer overflow” during normal working hours, the response team will be mobilized by the Public Works Supervisor via cellular telephone or two-way radio. After hours calls will be received through the Town’s 24-hour answering service. The answering service will notify the “on-call” staff via home phone or cell phone. On-call staff will contact the Supervisor who in turn mobilizes all needed team members and any required equipment. This same procedure applies to spills discovered by staff or by the public.



In addition to the response team listed above, telephone numbers of the Town's Public Works Manager and Town Engineer are also listed to be contacted to provide the necessary management support as required. The responsibilities of the individuals listed above are as follows:

- Public Works Manager – has jurisdiction over the entire Public Works staff and is responsible to the Town Manager and Town Council to ensure that all emergency responses are properly conducted.
- Public Works Engineer – provides technical support and advice as the need arises. The engineering staff will provide emergency surveys and special designs when it is necessary.
- Public Works Supervisor – responsible for managing day to day staff activities.

The training of staff to handle emergency situations (including sanitary sewer overflows) is included under training as discussed in Section 4 - Operations and Maintenance Program. Additionally, Town staff joins with the staff of the Apple Valley Fire Protection District, the Apple Valley Unified School District, and other emergency response professionals to prepare for emergency situations, at least on a quarterly basis.

6.2 Emergency Response Equipment List and Location

The following is a listing of typical SSO Response equipment and materials that will be maintained by the Town. It is not intended as an exclusive or complete listing. Equipment and materials may and will vary depending on the type of event, time of day, location, etc. Additionally, the Town will maintain an inventory of forms and materials to ensure that adequate supplies are available. Training sessions are held annually to train staff on SSO response procedures and on the safe use of the items listed below.

Documents, Forms, Etc.

- ✓ Procedures Manual for SSO response
- ✓ Event Report Forms
- ✓ List of Important Contacts



Equipment/ Inventory

- Barricades – Street & Tape
- (2) Trash Pumps & Hoses
- Contaminated Water Signs
- Sand Bags
- Blower for Confined Space Entry
- Tripod with Winch for Confined Space Entry
- Disposal Bags and ties
- Nitrite Gloves
- Eye protection
- Eye wash kit
- Flashlights
- Portable work lights (area)
- Rain Gear (Incl. Boots)/Tyvek
- Water Keys
- Air Compressor
- Bolt cutters
- Hydrant wrench
- Brooms, shovels, etc.
- Portable Pump with hoses
- Drain Plugs (Pipe Plugs)/Polls
- Bag(s) of Absorbent
- Clorox in hand sprayer or other disinfectant.

(Note: use only approved and authorized chemicals)



Because flows can occur at any time, day or night, these materials will be readily available to authorized staff.

The list above is a detailed listing of emergency response equipment available with the Public Works Department and the equipment is stored at the Public Works Facility on a trailer already loaded and ready to go. Additionally, the department keeps a list of emergency rental companies.

6.3 Overflow Corrections, Containment, Sampling, Final Clean-up, and Notification

Unauthorized Sewage Discharges, sanitary sewer overflows (spills), and vandalism of various volumes may occur from time to time in spite of concerted prevention efforts. Sanitary sewer overflows may result from blocked sewers, pipe failures, or mechanical malfunctions among other natural or man-made causes. The Town of Apple Valley is on constant alert and is ready to respond upon notification and confirmation of an overflow.



This section describes specific actions to be performed by the response team in the event of a sanitary sewer overflow. The objectives of these actions are:

- To protect public health, the environment and property from sanitary sewer overflows and restore surrounding area back to normal as soon as possible;
- To establish perimeters and control zones with appropriate traffic cones and barricades, vehicles, or use of natural topography (e.g., hills, berms, etc.);
- To promptly notify the regulatory agency's (Regional Water Quality Control Board) communication center of preliminary overflow information and potential impacts; Town staff would seek input and further instructions/recommendations from RWQCB staff.
- To contain the sanitary sewer overflow to the maximum extent possible including preventing the discharge of raw sewage into surface waters; and
- To cooperate and work with regulatory agencies to minimize The Town of Apple Valley's exposure to any regulatory agency penalties and fines.

Under most circumstances, The Town of Apple Valley will handle all response actions with its own "response team" (maintenance crews). They have the skills, training, and experience to take appropriate actions and respond in a timely manner.

Circumstances may arise when The Town of Apple Valley could benefit from the support of private-sector construction assistance should special equipment be required. The Town of Apple Valley has a list of qualified local contractors and sewer contractors to contact for assistance such as open-trench excavation and emergency fill operations.

Responsibilities of Response Team upon Arrival

It is the responsibility of the first responder at the site of a sanitary sewer overflow to protect the health and safety of the public by mitigating the impact of the spill. Should the spill not be the responsibility of the Town of Apple Valley, but there is imminent danger to public health, public or private property, or to the quality of surface waters, then prudent emergency action should be taken until the responsible party assumes responsibility and provides actions. Upon arrival at a spill, the response team shall perform the following:

- Determine the cause of the sanitary sewer overflow, e.g. sewer line blockage; pump station mechanical or electrical failure, sewer line break, etc;
- Identify and request, if necessary, assistance or additional resources to correct the overflow, or to assist in the determination of its cause;
- Determine if private property is impacted. If yes, the dispatcher should be informed so that the San Bernardino County Department of Public Health and/or the Town's Code Enforcement Department may be advised;
- Take immediate steps to stop the sanitary sewer overflow, (e.g. relieve pipeline blockage, manually operate pump station controls, repair pipe, etc.). Extraordinary steps may be considered where



overflows from private property threaten public health and safety (e.g., an overflow running off from private property into the public right-of-way); and

- Request additional personnel, materials, supplies, or equipment that will expedite and minimize the impact of the sanitary sewer overflow.

Initial Measures for Containment

Town staff will initiate measures to contain the overflowing sewage and recover, where possible, sewage which has already been discharged, minimizing impact to public health or the environment. The following actions shall be taken:

- Determine the immediate destination of the overflow, e.g. storm drain, street curb gutter, body of receiving water, creek bed, etc;
- Identify and request the necessary materials and equipment to contain or isolate the overflow, if not readily available; and
- Take immediate steps to contain the overflow, e.g., block or sand-bag storm drains, recover through vacuum truck, divert into downstream manhole, etc.
- Control access to the affected area (including barricade or caution tape etc.) if this is determined to be necessary.

Additional Measures Under Potentially Prolonged Overflow Conditions

In the event of a prolonged sewer line blockage or a sewer line collapse, a determination should be made to set up a portable by-pass pumping operation around the obstruction. The following actions will be considered:

- Appropriate measures will be taken to determine the proper size and number of pumps required to effectively handle the sewage flow.
- Continuous or periodic monitoring of the by-pass pumping operation shall be implemented immediately as required.
- Regulatory agency issues will be addressed in conjunction with emergency repairs. Consult regulatory agency staff and jointly visit impacted site to seek input.

Sampling Procedures

Samples will be collected anytime when sewage reaches any surface water, stream or creek bed, or natural wash.

- Sampling sites and frequency will be as determined based on discussions with the Regional Water Quality Control Board (which may include total coliform and fecal coliform).
- Collected samples will be taken to the selected Testing Laboratory for analysis.
- Re-sampling will be as determined by the testing laboratory or the Regional Water Quality Control Board.



Notification Procedures

After all of the necessary actions to assess the cause of spill, extent of spill, containment procedures, and sampling have been completed, the response team will coordinate with management to provide the proper notifications. In order to address an unauthorized sewage discharge event in a timely and effective manner, the following notification protocol has been established:

Category 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from the Town’s sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a municipal separate storm sewer system and are not fully captured and returned to the sanitary sewer system or not to otherwise captured and disposed of properly. Any volume of wastewater not recovered from the municipal separate storm sewer system is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin.



In the event of an unauthorized Category 1 sewage discharge, the Regional Water Quality Control Board (RWQCB) – Lahontan Region shall be verbally notified as soon as: 1) the Town has knowledge of the discharge, 2) reporting is possible, and 3) reporting can be provided without substantially impeding clean-up or other emergency measures. A written report of an SSO must be submitted to the RWQCB within ten (10) days of the event.

Within two (2) hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons** notify the California Office of Emergency Services (Cal OES) and obtain a notification control number. OES will notify the local health department when a spill notification is received.

Initial reporting of Category 1 SSO must be reported into the California Integrated Water Quality System (CIWQS) Online SSO Database as soon as possible but a draft must be submitted no later than three (3) business days after the Town is aware of the SSO. The final, certified report for Category 1 SSO’s must be submitted within fifteen (15) calendar days of the SSO end date.

Agency Name	Phone
Regional Water Quality Control Board - Lahontan Region	(760) 241-6583
California Office of Emergency Services	(916) 845-8911 or (800) 852-7550

Category 2: Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from the Town’s sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a municipal separate storm sewer system unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

In the event of an unauthorized Category 2 sewage discharge, the Regional Water Quality Control Board (RWQCB) – Lahontan Region shall be verbally notified as soon as: 1) the Town has knowledge of the



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discharge, 2) reporting is possible, and 3) reporting can be provided without substantially impeding clean-up or other emergency measures. A written report of an SSO must be submitted to the RWQCB within ten (10) days of the event.

Initial reporting of Category 2 SSO must be reported into the California Integrated Water Quality System (CIWQS) Online SSO Database as soon as possible but a draft must be submitted no later than three (3) business days after the Town is aware of the SSO. The final, certified report for Category 2 SSO's must be submitted within fifteen (15) calendar days of the SSO end date.

Category 3: All other discharges of untreated or partially treated wastewater resulting from the Town's sewer system failure or flow condition.

In the event of an unauthorized Category 3 sewage discharge, the Regional Water Quality Control Board (RWQCB) – Lahontan Region shall be verbally notified as soon as: 1) the Town has knowledge of the discharge, 2) reporting is possible, and 3) reporting can be provided without substantially impeding clean-up or other emergency measures. A written report of an SSO must be submitted to the RWQCB within ten (10) days of the event.

A Category 3 SSO must be reported into the California Integrated Water Quality System (CIWQS) Online SSO Database and be certified within thirty (30) calendar days of the end month in which the SSO occurred.

Additionally, in the event of an unauthorized sewage discharge associated with any of the circumstances detailed above, the following local water purveyors will also receive immediate verbal notification if they are affected by the SSO:

Agency Name	Phone
California - Department of Public Health Services	(916) 445-4171
San Bernardino County - Department of Public Health general line- Environmental Health Services direct line -	(800) 782-4264 (909) 884-4056
Water Purveyors (only those immediately affected by an SSO will be contacted)	
County Service Area 64 (CSA 64)	(760) 955-9885
Golden State Water Company	(800) 999-4033
Liberty Utilities	(760) 247-6484
Navajo Mutual Water Company	(800) 507-1612

Private Lateral Sewage Discharges (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately-owned sewer lateral** connected to the Town's sewer system or from other private sewer assets.

Reporting of unauthorized Private Lateral sewage discharges will be made at the discretion of the Town. Should the Town elect to report a discharge resulting from a private lateral to the Online SSO Database,



the Town must identify the sewage discharge as occurring and caused by a private lateral, and identify the responsible party (if known). It is voluntary to report a private spill to the Online SSO Database.

Cal OES should be notified of PLSDs that are greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions if the Town becomes aware of the PLSD.

6.4 SSO Flow Estimation

Calculating accurate flow estimates is important in order to determine the size and impact of a SSO. It is also important to help staff determine the amount of cleanup that is needed. Flow estimation is basically the flow rate multiplied by the amount of time the flow has occurred.

The Town has several methods available to use to determine the flow estimate for an SSO and will use which method is most appropriate for a particular spill. These methods are measured volume, number of sewer later connections, vent and pick hole measurements, and the California Water Environment Association's (CWEA) Southern Section Collection Systems Committee (SSCSC) Manhole Overflow Gauge.

Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spill and the depth is used to calculate the volume.

1. Sketch the shape of the contained wastewater.
2. Measure or pace off the dimensions.
3. Measure the depth at several locations and select and average.
4. Convert the dimensions, including depth, to feet.
5. Calculate the area.
 - Rectangle: length (feet) x width (feet)
 - Circle: {diameter (feet) x diameter (feet) x 3.14} divided by 4
 - Triangle: base (feet) x height (feet) x 0.5
6. Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.
7. Multiply the volume in cubic feet by 7.48 to convert to gallons.
8. Where it is difficult to measure wet spots on asphalt, use a depth of 0.0026' or 1/32". For wet spots on concrete, use depths of 0.0013' or 1/64" for reasonable estimates.

Example:

A 20 ft x 20 ft square wet spot on concrete equals 3.9 gallons and for asphalt is 7.8 gallons.

Counting Connections

The amount of the SSO could be estimated by counting the number of upstream sewer connections. On the sewer GIS system or sewer plans, locate the pipeline where the SSO occurred. Count all of the developed lots that are connected to the pipeline upstream of the blockage. The typical single-family residential lot may discharge 8 to 10 gallons of wastewater per hour during active times of the day. For



multi-family residential such as an apartment complex, count each apartment as a single-family residential unit. Use the higher flow number (10 gallons per hour) during typical peak flow hours and the lower flow number (8 gallons per hour) during low flow periods. Multiply the number of connections times the average flow (8 to 10 gallons per hour) times the time period (duration) that the SSO occurred.

One EDU SSO flow Sample formula: (12 hours x 10 gallons/hour = 120 gallons/12 hours), (12 hours x 8 gallons/hour = 96 gallons/12 hours), 120 gallons/12 hours + 96 gallons/12 hours = 216 gallons/24 hours.

Example of an SSO occurring on a weekday at 8:00am (peak flow period)

Number of upstream connections	22
Estimated of flow per lot	10 gallons per hour
Duration of SSO event	45 minutes
Total spill estimation:	(22 connections x 10 gallons per hour x 45 minutes (0.75) = 165 gallons

Note: This example was using 216 gallons of wastewater usage per 24 hours, per equivalent dwelling unit (EDU)

SSO Flow Estimation Tables

Table 1, low flow rates, helps to determine the estimated flow from the vent and pick holes in manhole covers. To use the chart, determine the diameter of the vent or pick hole(s) and the height of the water column coming out of the hole(s). For any given size hole and water column, the chart will provide the flow rates in cubic foot seconds (CFS), gallons per minute (GPM), or gallons per hour (GPH). The flow rate times the number of holes generating flow times the elapsed time of the SSO will determine the estimated volume of the SSO.



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Table 1 Low Flow Rates

Hole Diameter in Inches	Water Height in Inches	Q Cubic Foot Seconds	Q Gallons per Minute	Q Gallons per Hour
Vent Hole				
0.50	1/16	0.0005	0.23	14
0.50	1/8	0.0007	0.33	20
0.50	1/4	0.001	0.47	28
0.50	1/2	0.0015	0.66	40
0.50	3/4	0.0018	0.81	49
0.50	1-inch	0.0021	0.94	56
Vent Hole				
0.75	1/16	0.0011	0.51	31
0.75	1/8	0.0016	0.72	43
0.75	1/4	0.0023	1.02	61
0.75	1/2	0.0032	1.44	87
0.75	3/4	0.0039	1.77	106
0.75	1-inch	0.0045	2.04	122
Vent Hole				
1.00	1/16	0.002	0.88	53
1.00	1/8	0.0028	1.25	75
1.00	1/4	0.0039	1.77	106
1.00	1/2	0.0056	2.50	150
1.00	3/4	0.0068	3.06	184
1.00	1-inch	0.0079	3.54	212
Pick Hole Semi-Circular Area				
1.00	1/16	0.0010	0.44	27
1.00	1/8	0.0014	0.63	38
1.00	1/4	0.0020	0.89	53
1.00	1/2	0.0028	1.25	75
1.00	3/4	0.0034	1.53	92
1.00	1-inch	0.0039	1.77	106
1.00	1 1/2-inch	0.0048	2.17	130
1.00	2-inch	0.0056	2.51	150

SSCSC Manhole Overflow Gauge

The California Water Environment Association (CWEA) Southern Section Collection Systems Committee (SSCSC) created an overflow gauge to aid collection system staff in accurately determining the quantity of gallons coming out of a manhole during a sewer overflow. For more information about this method of measurement, visit www.sscsc.org/OverflowRuler.htm.



Final Cleanup

Sewer overflow sites are to be thoroughly cleaned after a spill or overflow. No readily identified residue (e.g., sewage solids, papers, rags, plastics, rubber products) is to remain. The following actions will be followed as appropriate:

- Where practical, the area is to be thoroughly flushed and cleaned of any sewage or wash-down water. Solids and debris are to be flushed, swept, raked, picked-up, and transported for proper disposal. The spill site is to be disinfected and deodorized.
- If a ponded area contains sewage that cannot be pumped dry, it may be treated with chlorine (liquid bleach or powder chlorine). If sewage has discharged into a body of water that may contain fish or other aquatic life, chlorine or other disinfectants should not be applied, and the California Department of Fish and Game will be contacted for specific instructions.

6.5 Records, Record Retention Policies & Procedures and Data Management

The Public Works Manager maintains all records of SSO's at the Public Works Facility. The Town will document the location, date and time of all SSO events and take photos. Flow site is to be secured by the use of barricades and caution tape to prevent contact by the public until the site has been thoroughly cleaned. Posting, as required, will be undertaken.



Chapter 7.0 Fats, Oils & Grease Control Program

7.1 Requirements

Each agency shall evaluate its service area to determine whether a Fats, Oils, and Grease (FOG) control program is needed. If an agency determines that a FOG program is not needed, the agency must provide justification for why it is not needed. If FOG is found to be a problem, the agency must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan will 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 removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
- g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

7.2 Fog Control Program

The FOG Control Program consists of the following 6 elements:

- A. Public education and outreach,
- B. Legal authority to prohibit illegal discharges, FOG blockages, and prevent sanitary sewer overflows (SSOs),
- C. Require installation of grease removal devices and a means to standardize their installation,
- D. Authority to inspect grease-producing facilities and enforce noncompliant facilities,
- E. Identify system locations subject to FOG blockages and establish maintenance schedules,
- F. Develop and implement source control measures for all FOG discharged to the sanitary sewer system.



7.3 Public Education and Outreach

The Town of Apple Valley regularly distributes FOG program information to its residents. FOG information is distributed periodically as a note on trash/sewer bills. FOG magnets are handed out at the Public Works counter and at Town sponsored events. FOG flyers are available at the Public Works counter. FOG prevention information is also available on the Town's website on the Public Works Wastewater Division page. All new sewer permits are accompanied by FOG flyers as well. The Town of Apple Valley plans to continuously educate the community on methods to handle FOG and to reduce the disposal of FOG into the collection system.

7.4 Legal Authority

The Town's legal authority to prohibit FOG into the sewer system is also discussed in Section 3 of this document. Discharges from industrial classification facilities are usually controlled under the terms of an industrial wastewater discharge permit, which is issued and monitored by VVWRA.

The Town of Apple Valley Sewer Ordinance No. 478, Section 10.01.070, gives the Town the legal authority to require the installation of grease interceptors/traps at restaurants and other food establishments that generate grease in the Town. Grease interceptors/traps are required at the owner's expense in all facilities which discharge liquid wastes containing grease, flammable wastes, sand and/or other wastes containing harmful ingredients in accordance with the California Plumbing Code.

Per VVWRA Ordinance 001, 08-04.2 - General Discharge Prohibitions, "No user shall introduce into the POTW (Publicly Owned Treatment Works) any pollutant or wastewater which causes pass through or interference. No user shall introduce or cause to be introduced into the POTW any of the following: any solid, semi-solid or viscous substances which may obstruct the flow of sewage, cause clogging of or adversely affect sewage pumping equipment, or sewage sludge pumping equipment, or the community sewer system, or interfere with the operation of the POTW, such as, but not limited to, grease..."

The Town's Code Enforcement Department is in the process of establishing a FOG ordinance. This ordinance will require an annual FOG permit to be issued by the Code Enforcement Department to businesses that generate FOG, such as food service establishments (FSE). Code Enforcement Officers will perform inspections which will include the assessment of the grease control device (GCD), review of manifest, related FOG service receipts and invoices, and other records relating to the cleaning, maintenance and inspection of such GCDs.

7.5 FOG Removal Devices

The Town's Building Official is authorized to monitor and enforce the terms of the Plumbing Code and require food service establishments to install grease removal devices. One of the main components for controlling FOG from nonresidential facilities is the requirement for installing FOG removal devices. The Town has a standard procedure of requiring grease removal devices based on the California Plumbing Code for new food service establishments and for tenants who make major improvements to their kitchen area. A FOG removal device can either be a grease trap or interceptor, depending on location or the size of the tenant improvement. The size and type of grease removal device are also predicated on the flow volume of the business. Additionally, restaurants are required to maintain a grease trap or interceptor cleaning log.



7.6 Inspection and Enforcement Authority

As discussed in Section 3 of this document, the Town has the legal authority to inspect and enforce the FOG program. The Town’s Wastewater Division field maintenance crew cleans and maintains approximately 150 miles of sewer line. Staff is trained to identify problem areas and determine the sources of FOG blockages. Staff will determine if one or combinations of the following remedies are required: enforcement actions, increased maintenance by the business, or public outreach and education.

7.7 Identification of FOG Blockages and Establishment of Maintenance Schedules

The Town is required to identify locations of FOG blockages and establish a routine maintenance schedule to avoid SSOs. The Town has identified the locations that routinely contain heavy concentrations of FOG, which require enhanced cleaning of the sewer lines. The Town has identified eight (8) problem areas (see table below) that are cleaned on a regular schedule; three (3) areas are cleaned monthly, 3 are cleaned on a quarterly basis, and the remaining ones are visually inspected monthly and cleaned on an as needed basis.

Assessment District	Nearest Intersection	Frequency	Remarks
Jess Ranch	Town Center & Apple Valley Rd.	Monthly	Old wet well in grass south of block wall
Jess Ranch	Town Center & Apple Valley Rd.	Monthly	Downstream MH northeast of above MH in bank parking lot
1A	Wika & Muni	Visual Monthly	In road
1B	Corwin Rd. & Wintun	Quarterly	Intersection in road
1B	Outer Hwy 18 & Hospital	Monthly	Intersection in road
1C	Hwy 18 & Tao	Quarterly	Intersection in road
1C	Outer Hwy 18 & Kasota	Quarterly	Manhole in intersection
7972	Siskiyou Rd. & Siskiyou Ct.	Visual Monthly	Northeast corner behind curb

7.8 FOG Source Control Measures

The Town is required to develop and implement source control measures for FOG control. The Town will continue to address the known FOG problem areas with inspections and cleaning. The Code Enforcement Department will develop a FOG ordinance and start issuing FOG permits to businesses to



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ensure that grease traps/interceptors are being properly maintained to help avoid FOG in the sewer system.



Chapter 8.0 System Evaluation and Capacity Assurance Plan

8.1 System Evaluation

The Town’s Wastewater Division was established to furnish residents and businesses within the Town of Apple Valley and within its sphere of influence with a reliable means of wastewater collection, treatment, and disposal. To ensure the system’s future capacity and optimize service by sewage collector lines, pump stations and related facilities, the Wastewater Division commissioned feasibility studies and capacity analysis. In addition, the Wastewater Division is responsible for establishing and enforcing rigorous construction standards and evaluating appropriate financing methods for proposed projects.

The Wastewater Division completes closed-circuit television (CCTV) inspection of the Town’s sanitary sewer system on a regular basis. This helps identify those portions of the system that require additional inspection, cleaning or maintenance.



8.2 Design Criteria and Required Capacity

The Town’s Wastewater Division has the legal responsibility for ensuring sound, logical and functional design of the public sewer infrastructure. The existing and proposed sewage collection systems were analyzed using an in-house computer database model which is based on the premise that it is more prudent to somewhat oversize sewerage facilities than to undersize them.

The Town’s Sewer Master Plan’s wastewater flow projects are based on 100% saturation development of the land served by existing and proposed sewer systems. The following land use categories and their respective average daily wastewater flow coefficients are used to establish system capacities:

Land Use Category	Flow Coefficient
Single Family Residential*	2 EDU/Acre (490 GPD/Acre)
High Density Residential	10 EDU/Acre (2,450 GPD/Acre)
Commercial/Industrial	1500 GPD/Acre
Public Facility/Schools	1200 GPD/Acre

* Residential flow development is based on 245 gallons per day (GPD) per equivalent dwelling unit (EDU).

Required Capacity- Prerequisite to Building Permit

San Bernardino County Special District Department Standards for Sanitary Sewer forms the basis upon which sewer construction plans are designed and plan checked with the Town of Apple Valley. This document provides specific information on the requirements for plan design, approval and permitting, but more importantly details requirements for sizing the sewer and designing it to established standard for proper operation. The Public Works Manager and Town Engineer provide a thorough review of all sewer plans for proposed



development and redevelopment projects in the Town ensure that: 1) sewers are properly designed with sufficient capacity for current and future base, peak and wet weather flow demands; and 2) any impact of the proposed project on the existing sewer system is mitigated prior to being approved by the Town.

8.3 Capacity Enhancement Measures

The submittal of a sewer area or capacity study is the official process for adequately sizing the sanitary sewer located within the Town. The Town requires the satisfactory completion of a capacity study by a state of California Registered Civil Engineer prior to giving approval for any project that can affect the capacity of the public system. Completed studies are required to analyze the capacity in the existing system and must include mitigation requirements for the developer to ensure adequate capacity. In addition, capacity assessments must justify the sizing of proposed lines to accommodate the peak flows from all areas tributary to the mainline sewer under consideration or pumping station, now and in the future. The approved capacity study is referenced directly by the plan checker when design plans for the new infrastructure are submitted to assure adequate capacity. All proposals for new connection to the existing sewer must also comply with the Town's policies for managing available sewer capacity.

Sewer plans for construction are designed by a state of California Registered Civil Engineer and submitted to the Town for plan check. In addition, the San Bernardino County Special District Department Standards for Sanitary Sewer are used in an iterative plan check process to ensure that the sewer will function properly now and for years to come. American Public Works Association (APWA) Greenbook standards are referenced where more detailed design data is to be specified. Permits for construction of any public sewer infrastructure are not issued until the iterative plan check process has been satisfactorily completed, thus insuring the functional design and adequate capacity of the public sewer collection system.

The Town of Apple Valley performs Closed Circuit Television (CCTV) inspections to identify pipe segments needing repairs or with infiltration/inflow (I/I) or tree root intrusion problems and areas subject to FOG blockages. A Sewer Master Plan update was completed in 2013 which identifies a Capital Improvement program, to make repairs or replacement of damaged pipes.



Chapter 9.0 Monitoring, Measurement, and Program Modifications

9.1 Monitoring

Data on all SSO events, maintenance logs, and other relevant documents/data to evaluate the effectiveness of the key SSMP program elements are on file at the Public Works Facility.

9.2 Effectiveness Evaluation

The evaluation of the Town's SSMP Program Effectiveness is based on such key performance indicators as the total number of overflows, overflow response time, reduction in repeated incidents of SSO at some location, total overflow equal to or greater than 1,000 gallons or reaching the waters of the United States, and reduction in number of overflows that are caused by sewer capacity-related problems.

9.3 Program Modification

The Town will continually update or modify the key elements of its SSMP based on the results of the above-mentioned monitoring and program effectiveness evaluations as necessary.

9.4 SSO Trending & Reductions

SSO locations are on file at the Public Works Facility. The number of gallons of each spill is also provided. This list is used for establishing SSO patterns, identifying problem areas, and for work assignment scheduling by Public Works field personnel.



Chapter 10.0 SSMP Program Audits and Certification

10.1 SSMP Audits and Updates – Introduction

This section of the SSMP outlines the process that the Town will follow in order to evaluate the effectiveness of the SSMP to identify updates that may be needed for a more effective program.

10.2 SSMP Program Audits

As part of the SSMP, the Town 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 (2) years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Town's compliance with the SSMP requirements identified in this subsection, including identification of any deficiencies in the SSMP and the recommended steps to correct them.

The Town will conduct audits and prepare a report every 2 years. The audit team may include members from other Town departments, outside agencies, and/or consultants. The scope of the audit will cover each of the major sections of the SSMP. An Audit Checklist (see table 10.1), based on the requirements of the WDR, will be utilized. The results of the audit, including the identification of any deficiencies and the steps taken or planned to correct them, will be included in an Audit Report.

10.3 SSMP Updates

The SSMP must be updated every five (5) years, and must include any significant program changes. Re-certification by the Town Council is required when significant updates to the SSMP are made.



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Table 10.1 SSMP Audit Checklist

Section	Title	Requirement	SSMP Current?	Implemented?
I	Goals	Reduce, prevent, and mitigate SSOs		
II	Organization	Designate LRO		
		Names and phone numbers for key management personnel		
		Names and phone numbers for key administrative personnel		
		Chain of communication for reporting SSOs		
III	Legal Authority	Prevent illicit discharges to sanitary sewer system		
		Require sewers and connection to be properly designed and constructed		
		Ensure access for inspection, maintenance, and repairs (includes public portion of lateral)		
		Limit discharge of FOG and debris that may cause blockages		
		Require the installation of grease removal devices		
		Ability to inspect FOG producing facilities		
		Enforce violations of the Town's sewer ordinances		
IV	O&M Program	Maintain up-to-date maps of the sanitary sewer system		
		Describe routine preventive maintenance program		
		Document completed preventive maintenance		
		Rehabilitation and replacement plan that identifies and prioritizes sanitary sewer system defects		
		Provide regular technical training for Town Wastewater division staff		



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Section	Title	Requirement	SSMP Current?	Implemented?
		Require contractors to maintain appropriate CSLB license(s) in order to perform work on the Town's sanitary sewer system		
		Maintain equipment inventory		
		Maintain critical spare part inventory		
V	Design and Performance Provisions	Design and construction standards for new sanitary sewer system facilities		
		Design and construction standards for repair and rehabilitation of existing sanitary sewer system facilities		
		Procedures for the inspection and acceptance of new sanitary sewer system facilities		
		Procedures for the inspection and acceptance of repaired and rehabilitated sanitary sewer system facilities		
VI	Overflow Emergency Response Plan	Procedures for the notification of primary responders		
		Procedures for the notification of regulatory agencies		
		Program to ensure appropriate response to all SSOs		
		Proper reporting of all SSOs		
		Procedure to ensure Town staff are aware of and follow SSO reporting procedures		
		Procedure to ensure contractor personnel are aware of and follow SSO reporting procedures		



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Section	Title	Requirement	SSMP Current?	Implemented?
		Procedures to address emergency operations such as traffic and crowd control		
		Program to prevent the discharge of sewage to surface waters		
		Program to minimize or correct the impacts of any SSOs that occur		
		Program of accelerated monitoring to determine the impacts of any SSOs that occur		
VII	Fog Control Program	Public outreach program that promotes the proper disposal of FOG		
		Plan for the disposal of FOG generated within the Town's service area		
		Demonstrate that the Town has allocated adequate resources for FOG control		
		Identification of sanitary sewer system facilities that have FOG-related problems		
		Program of preventive maintenance for sanitary sewer system facilities that have FOG-related problems		
		Identification of sanitary sewer system facilities that have FOG-related problems		
		Program of preventive maintenance for sanitary sewer system facilities that have FOG-related problems		
VIII	System Evaluation and Capacity Assurance Plan	Identification of elements of the sanitary sewer system that experience or contribute to SSOs caused by hydraulic deficiencies		
		Established design criteria that provide adequate capacity		
		Short-term CIP that address known hydraulic		



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Section	Title	Requirement	SSMP Current?	Implemented?
		deficiencies		
		Long-term CIP that address known hydraulic deficiencies		
		Procedures that provide for the analysis, evaluation, and prioritization of hydraulic deficiencies		
		The short- and long-term CIPs include schedules for the correction of each identified hydraulic deficiency		
IX	Monitoring, Measurement, and Program Modifications	Maintain relevant information to establish, evaluate, and prioritize SSMP activities		
		Monitor implementation of the SSMP		
		Measure, where appropriate, performance of the elements of the SSMP		
		Assess success of the Preventive maintenance program		
		Update SSMP program elements based on monitoring or performance		
		Identify and illustrate SSO trends		
X	SSMP Program Audits	Conduct periodic audits (every 2 years)		
		Record the results of the audit in a report		
		Record changes made and any corrective actions taken		
		SSMP must be updated every five years and recertification is required by the governing board when major edits have been made.		
XI	Communications Program	Communicate with the public regarding the preparation of the SSMP		
		Communicate with the		



Town of Apple Valley **Town of Apple Valley Sanitary Sewer Management Plan**

Section	Title	Requirement	SSMP Current?	Implemented?
		public regarding the performance of the SSMP		
		Communicate with satellite sewer systems (VWRA)		



Chapter 11.0 Communication Program

11.1 Introduction

This section of the SSMP outlines the process involved in communicating with interested members of the public regarding the development, implementation, and performance of this plan. Communication with satellite agencies is addressed as well.

11.2 Communication Program

The Town communicates the elements of the SSMP by having a copy of the SSMP listed on the Town's website. The Town welcomes any comments from the general public and other agencies. The SSMP along with the SSMP audits are on file at the Public Works Facility and at the Public Works Department counter located at the Town's Development Services Building.

11.3 SSMP Availability

The Town of Apple Valley SSMP invited public review and comment throughout the SSMP development process via the Town's website www.applevalley.org. The SSMP is available via the Town's website and is available for viewing in hard copy form at the Town's Development Services Building during regular office hours.

11.4 Communication with Satellite Agencies

The wastewater collected by the Town of Apple Valley sanitary sewer system is transported to the Victor Valley Wastewater Reclamation Authority (VWVRA) for treatment via an interceptor sewer which runs transversely through the Town. The Town is a member agency of VWVRA via a joint powers agreement and maintains communication with VWVRA on a regular basis by both administrative and Wastewater division staff.