Sewer System Management Plan

February 2025 / FINAL

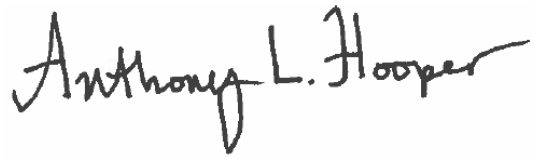
Sewer System Management Plan

February 2025 / FINAL

Digitally signed by Ryan F. Orgill
Contact Info: Carollo Engineers, Inc.
Date: 2025.02.27 11:08:56 -08'00'

CERTIFICATION

I certify under penalty of law that this Sewer System Management Plan, and the subparts contained herein, comply with the requirements set forth in the General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Order No. WQ 2022-0103-DWQ within the time frames identified in the schedule provided in WDRs. I further certify that this document and all attachments were prepared under the County of San Diego's direction and supervision in accordance with its policies and procedures to assure that qualified personnel properly provided, evaluated, and incorporated the information reflected in this document, that the information included in this document is, to the best of my knowledge and belief, true, accurate, and complete, and that this document has been duly presented to and approved by the San Diego County Sanitation District Board of Directors on the 9th day of April 2025.



2-27-2025

Date

Anthony Hooper
LUEG Program Manager

ACKNOWLEDGEMENTS

The County of San Diego would like to acknowledge the following individuals for their outstanding efforts and contributions, which resulted in the creation of this document. The comprehensive plans included herein reflect the County's on-going commitment to the effective and efficient operation, maintenance and management of its wastewater collection system and achieving the County's goals and objectives.

County of San Diego

Anthony Hooper	LUEG Program Manager
Sumedh Bahl	Group Program Manager

Carollo Engineers

Jeffrey Weishaar	Principal-in-Charge
Andrew Frost	Client Service Manager
Ryan Orgill	Project Engineer
Andrew Frost	Project Manager
Michael Wetterau	Engineer
Harini Narayanan	Staff Engineer
Kevin Christensen	GIS Support

Contents

Appendices

Tables

Figures

Abbreviations

2015 FOG Study	2015 Fats, Oil, and Grease Characterization Study
BMP	best management practice
Board	Board of Supervisors
CAO	Chief Administrative Officer
CCR	California Code of Regulations
CCTV	closed-circuit television
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
Control Program	Sewer Pipe Blockage Control Program
County Code	San Diego County Code of Regulatory Ordinances
County of San Diego	County
CWA	Clean Water Act
CWC	California Water Code
CWEA	California Water Environment Association
DEHQ	Department of Environmental Health and Quality
d/D	depth-to-diameter
Director	Director of Public Works
District	San Diego County Sanitation District
DPW	Department of Public Works
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute
FOG	fats, oil, and grease
FSE	food service establishment
General Order	General Order for Sanitary Sewer Systems Order No. WQ 2022-0103-DWQ
GIS	Geographic Information System
JSA	Julian Service Area
LRO	Legally Responsible Official
LUEG	Land Use and Environment Group
Metro	City of San Diego's Metropolitan Wastewater Department
MPRO	Media and Public Relations Office
O&M	operations and maintenance
O&M Program	County of San Diego Operations and Maintenance Program
Ordinance	Ordinance Number 10423
PVSA	Pine Valley Service Area
Regional Water Board	Regional Water Quality Control Board

SERP	Spill Emergency Response Plan
SSMP	Sewer System Management Plan
SSO	sanitary sewer overflow
State Water Board	State Water Resources Control Board
SVSA	Spring Valley Service Area
WAS	Water Agencies' Standards
WDID	Waste Discharge Identification
WDRs	Waste Discharge Requirements
WWTP	wastewater treatment plant

SECTION 1 INTRODUCTION AND GOALS

This Sewer System Management Plan (SSMP) has been prepared in compliance with the requirements of the State Water Resources Control Board (State Water Board) Statewide Water Discharge Requirements (WDRs) General Order for Sanitary Sewer Systems Order No. WQ 2022-0103-DWQ[1] (General Order). The General Order serves as statewide WDRs and supersedes the previous State Water Board Order No. 2006-0003-DWQ and amendments thereafter. The General Order is enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). For the General Order, a sanitary sewer system includes, but is not limited to, a combination of pipelines, valves, lift stations, manholes, siphons, wet wells, diversion structures, and/or other auxiliary pertinent infrastructure, upstream of a wastewater treatment plant (WWTP) headworks. A sanitary sewer system includes:

- Laterals owned and/or operated by the Enrollee.
- Satellite sewer systems.
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks, and diversion structures.

Through the General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States.
- Comply with specifications, and notification, monitoring, reporting, and recordkeeping requirements in the General Order that implements the federal Clean Water Act (CWA), the California Water Code (CWC)[2], and water quality control plans and policies (including Regional Water Board Basin Plans) and policies.
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills.
- Eliminate discharges of sewage to waters of the State through effective implementation of an SSMP.
- Monitor, track, and analyze spills for ongoing system-specific performance improvements.
- Report noncompliance with this General Order per reporting requirements.

An Enrollee is a public or private entity that has obtained approval for regulatory coverage under this General Order, including:

- A federal or state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - Greater than one mile in length (each individual sanitary sewer system).
  - One mile or less in length where the State Water Board or a Regional Water Board requires regulatory coverage under this Order.
- A private company that owns and/or operates a sanitary sewer system of any size where the State Water Board or a Regional Water Board requires regulatory coverage under this Order.

[1] Statewide Sanitary Sewer Systems General Order No. WQ 2022-0103-DWQ.
[2] The California Water Code.

The General Order specifies the following requirements with respect to the Introduction section of the SSMP:

The goal of the SSMP is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

The SSMP must include a narrative Introduction section that discusses the following items:

Regulatory Context. The SSMP Introduction section must provide a general description of the local sewer system management program and discuss SSMP implementation and updates.

Update Schedule. The SSMP Introduction section must include a schedule for the Enrollee to update the SSMP, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

Sewer System Asset Overview. The SSMP Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies).
- Service area boundary.
- Population and community served.
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons.
- Structures diverting stormwater to the sewer system.
- Data management systems.
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals.
- Estimated number or percent of residential, commercial, and industrial service connections.
- Unique service boundary conditions and challenge(s).

The SSMP Introduction section must provide reference to the Enrollee's up to-date map of its sanitary sewer system.

This chapter presents an overview of the need for this SSMP. A list of abbreviations used in this SSMP has been provided to assist the reader to understand the information presented.

1.1 Sewer System Management Plan Element Update Schedule

Table 1 is the County of San Diego's (County's) schedule to update their SSMP, conduct internal audits, annual submittals and service are boundary map. In addition, the Table 1 schedule has milestones for incorporation of activities addressing prevention of sewer spills and completing areas of the SSMP that are deficient.

Table 1 SSMP Schedule(1)

Tasks	Frequency	Due Date
Annual Report	Annual	April 1, 2025
Sanitary Sewer System Service Area Boundary Map(2)	One Time	December 31, 2025
SSMP Update	Six years	May 2, 2025
SSMP Audit	Three years	November 2, 2027(3)
SSMP Audit	Three years	November 2, 2030(4)
SSMP Update	Six years	May 2, 2031

Notes:
(1) Sources: Section 5.4 of the General Order; Section 3.11 of Attachment E1 of the General Order.
(2) Electronic Sanitary Sewer System Service Area Boundary Map Specifications: Link.
(3) Audit Period: May 3, 024 to May 2, 2027.
(4) Audit Period: May 3, 2027 to May 2, 2030.

1.2 Service Areas

In 2010, the Board of Supervisors (Board) consolidated five sanitation districts and four maintenance districts into a single agency which is referred to as the San Diego County Sanitation District (District). Harmony Grove was included within the District's sewer service areas but was reorganized into Rincon Del Diablo Municipal District on June 12, 2019 per LAFCO File Number R017-10. Table 2 lists the eight current sewer service areas, while Figure 1 shows the sewer service areas. Today, the County provides sewer service for approximately 35,281 residential customers and 2,556 commercial customers within the unincorporated communities of the County.

Table 2 District Sewer Service Areas

County Service Areas	
Alpine	Campo
Lakeside	East Otay Mesa
Spring Valley	Winter Gardens
Julian	Pine Valley

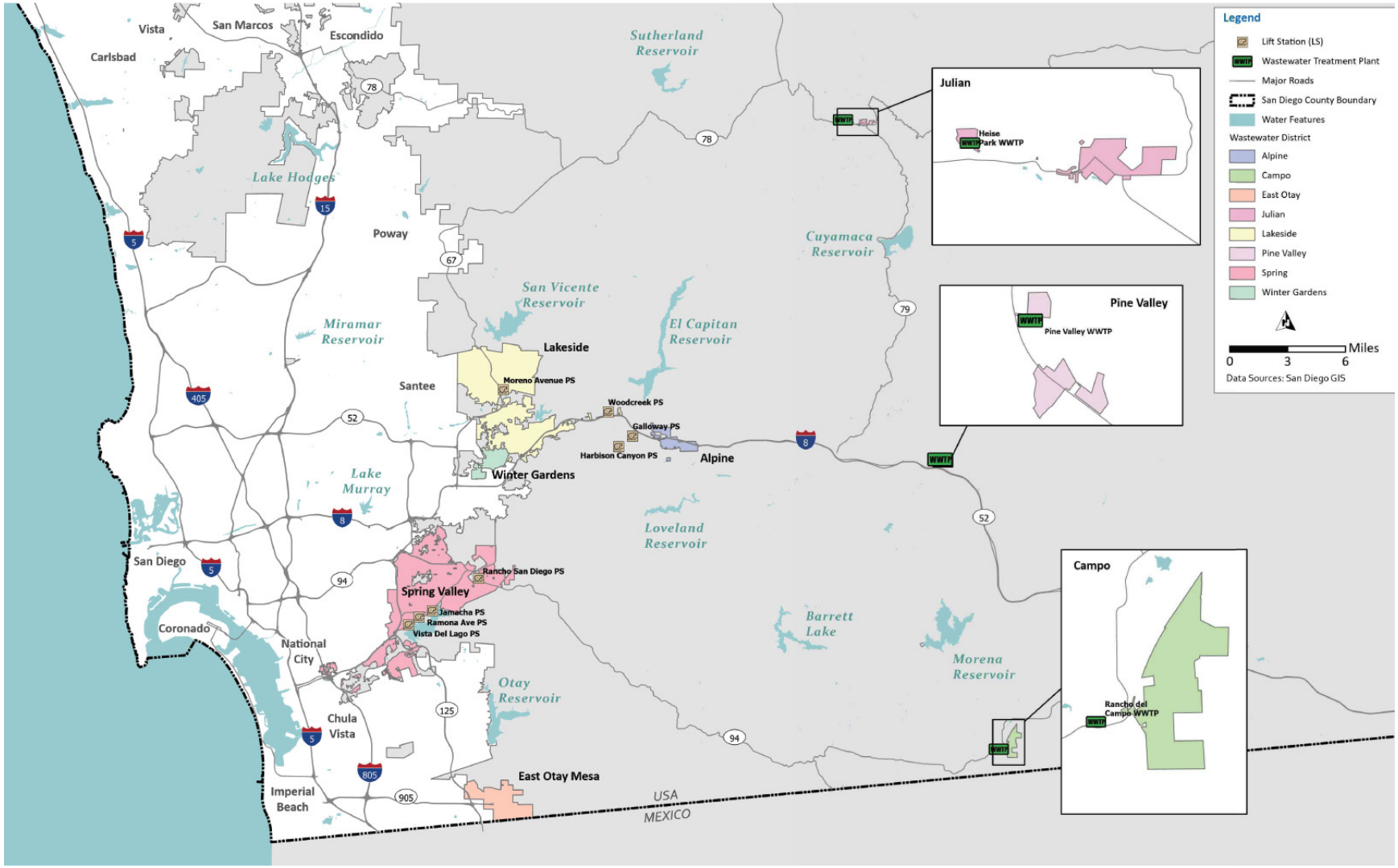


Figure 1 San Diego Sanitation District Service Areas

Since the certification of the SSMP in June 2015 and the consolidation into one agency, the County also eliminated several of the Waste Discharge Identification (WDID) numbers originally associated with the various sanitation and maintenance districts. Whereas previously, the County system was registered under six WDIDs, it is now registered under three WDIDs. The County Service Areas and the respective WDID numbers under which each service area is registered, are summarized in Table 3. The following provides a summary of the wastewater collection facilities within the service areas based on County's Geographic Information System (GIS).

Table 3 County Service Areas and WDID Numbers

County Service Areas	WDID Number
County Collection System	9SSO10662
Alpine Service Area	
Lakeside Service Area	
Spring Valley Service Area	
Winter Gardens Maintenance District	
East Otay Mesa Service Area	
Campo Water & Sewer Service Area (Rancho Del Campo CS)	9SSO10689
Julian Service Area (Julian Water Pollution Facility)	9SSO10673

1.2.1 Spring Valley Service Area

The Spring Valley Service Area (SVSA) was formed as the Spring Valley Sanitation District in 1952 to operate and maintain the sewage collection and conveyance facilities for the unincorporated communities of Spring Valley, Casa de Oro, and Sweetwater. The areas are of an urban/suburban nature, and most require access to sewer collection facilities. The communities are located east and west of Highway 125, and north and south of Highway 94. The Spring Valley Sanitation District was recently consolidated into the San Diego County Sanitation Division and renamed the SVSA.

The SVSA is approximately 20 square miles in area, with an estimated population of 85,500 residents in year 2020 (2013 Master Plan, ATKINS). The service area is bounded by the cities of San Diego, La Mesa, Lemon Grove, National City, and Chula Vista. Ultimately, the sewage collected is conveyed to the City of San Diego's Metropolitan Wastewater Department (Metro) system for treatment.

Most of the collection system consists of 8-inch diameter pipe. The largest collection trunk is 54 inches in diameter. In addition to the Spring Valley Outfall, SVSA also operates and maintains 271 miles of sewer collection and transmission facilities, four lift stations including the Jamacha, Ramona Avenue, Vista Del Lago, and Rancho San Diego Lift Stations, and one flowmeter station (SV08).

1.2.2 Lakeside Service Area

The Lakeside Sanitation District was formed in 1955 to operate and maintain the public sewer system for the unincorporated community of Lakeside. Recently, the Lakeside Sanitation District was consolidated into the District and is located east and west of Highway 67 and north of Interstate 8, approximately 21 miles east of the City of San Diego within the upper San Diego River Basin. The service area includes approximately 7.9 square miles with an estimated population of approximately 46,910 residents in

year 2020 (2013 Master Plan, ATKINS). The limits of the service area are generally defined by the Upper San Diego River to the north, the Winter Gardens Service Area and the cities of El Cajon and Santee to the south and west, and the El Monte/Lake Jennings/Dunbar Lane areas to the east. The collected sewage is conveyed to the City of San Diego's Metro system for treatment.

Much of the collection system consists of 8-inch diameter pipe. The largest collection trunk is 42 inches in diameter. The Lakeside Service Area includes two lift stations including the Wood Creek Pump Station and the Moreno Avenue Pump Station and one flowmeter station.

1.2.3 Alpine Service Area

The Alpine Sanitation District was formed in 1952 to operate and maintain the public sewer system for the unincorporated community of Alpine. The Alpine Sanitation District was recently consolidated into the County Sanitation District and is located in the eastern foothills of the County, approximately 30 miles east of the City of San Diego. Most of the Alpine watershed is located within the Sweetwater River System, which drains into the San Diego Bay. The service area is comprised of approximately 1.4 square miles with an estimated population of 5,000 residents. The Alpine Service Area also provides outside services to a subdivision and elementary school located along Harbison Canyon Road. A lift station pumps sewage from this site to the Galloway Pump Station where it joins the Alpine Service Area discharge. Ultimately, the sewage collected is conveyed to the City of San Diego's Metro system for treatment.

Overall, the Alpine Service Area includes approximately 21 miles of sewer collection and transmission facilities, which consist primarily of 8-inch diameter pipe, two lift stations including the Galloway and Harbison Canyon Lift Stations. The largest sewer main in the collection system is 12 inches in diameter.

1.2.4 Julian Service Area

The Julian Service Area (JSA) was formed as the Julian Sanitation District in 1945 in the unincorporated mountain community of Julian. Julian is located approximately 60 miles northeast of San Diego along Highways 78/79. The service area is 0.19 square miles in size. The estimated population of JSA in the year 2020 is approximately 236 residents (2013 Master Plan, ATKINS).

The JSA sewer collection system consists of 6-inch and 8-inch sewer mains and primarily serves the Julian central business district area. The sewer collection system includes approximately 3 miles of sewer pipe and a gravity conveyance line which transports sewage to the JSA Wastewater Treatment Facility. The treatment facility is located approximately 1 mile west of Julian off of Highway 78.

1.2.5 Pine Valley Service Area

The Pine Valley Service Area (PVSA) was formed as the Pine Valley Sanitation District in 1968 and is located approximately 45 miles east of San Diego in the eastern portion of San Diego County off of Interstate 8, Pine Valley Road, and Old Highway 80. The PVSA incorporates approximately 0.04 square miles, consists of approximately 0.5 miles of 8-inch sewer collection pipe which conveys wastewater to a treatment plant, and serves an estimated population of approximately 43 permanent residents as well as non-residents and students (2013 Master Plan, ATKINS).

As the system facilities within the service area do not meet the minimum sewer system length requirements per the General Order, the PVSA is not registered under a specific WDID. A summary of the

service area is included as County Wastewater Management Section staff is responsible for the maintenance, operation, and management of the PVSA system.

1.2.6 Winter Gardens Service Area

The Winter Gardens Service Area was established as the Winter Gardens Sewer Maintenance District in January 1964 to provide sewer collection services to the Winter Gardens area. The Winter Gardens Service Area is bounded by Lakeside to the east, Santee to the west and El Cajon to the south. With the consolidation into the District, the service area's estimated population in year 2020 is approximately 11,570 (2013 Master Plan, ATKINS), consists of approximately 23 miles of wastewater pipelines that range in diameter between 6 and 15 inches, one flowmeter station, and is close to build out with little area remaining for future growth. Sewage flows are collected and conveyed to the City of San Diego's Metro system for treatment.

1.2.7 East Otay Mesa Service Area

The East Otay Mesa Sewer Maintenance District was established in June 1999 and consolidated into the District as the East Otay Mesa Service Area to provide sewage collection services for the unincorporated East Otay Mesa area. At present, the backbone sewer system consists of one sewer outfall, approximately 4 miles in length. Additional facilities are currently planned and flows are anticipated once planned projects are completed. The flows are conveyed to the City of San Diego's Metro system for treatment.

1.2.8 Campo Water and Sewer Service Area

The Campo Water and Sewer Maintenance District was established in 2007 to provide a more efficient governance structure for the previously existing service area and consolidated into the District as the Campo Service Area located in the unincorporated community of Campo. The service area currently consists of approximately 7 miles of sewer that range between 4 and 12 inches in diameter. A gravity conveyance line transports sewage to an Wastewater Treatment Plant. The estimated population in year 2020 was 784 residents (2013 Master Plan, ATKINS).

1.3 Sewer System Asset Overview

Collectively, the District's wastewater collection and conveyance system includes approximately 432 miles of pipeline, 8,200 maintenance holes, and eight lift stations. Table 4 provides a summary of the approximate length of pipeline per service area while Table 5 provides a summary of the County operated and maintained lift stations. An up-to-date map of the County's sanitary sewer system can be provided to the State and/or Regional Water Boards upon request.

Table 4 Approximate Length of Pipeline per County Service Area

County Service Area	Pipeline Length (feet)[1]	Pipeline Length (miles)
Alpine	114,453	21.2
Lakeside	542,043	102.7
Spring Valley	1,432,607	271.3
Pine Valley	2,726	0.5

County Service Area	Pipeline Length (feet)[1]	Pipeline Length (miles)
Julian	14,996	2.8
Campo	35,993	6.8
East Otay Mesa	22,421	4.2
Winter Gardens	122,646	23.2
Total	**2,287,885**	**432.7**

Notes:
(1) Based on County GIS of San Diego GIS System as of December 2017.

Table 5 County Maintained Lift Stations

Service Area	Lift Station	Address	City/State/Zip
Spring Valley	Jamacha	9903 Jamacha Boulevard	Spring Valley, CA 91978
	Ramona Avenue	411 Ramona Avenue	Spring Valley, CA 91978
	Vista Del Lago	9041 Camino Lago Vista	Spring Valley, CA 91978
	Rancho San Diego	11971 Singer Lane	Spring Valley, CA 91978
Alpine	Galloway	444 Arnold Way	Alpine, CA 92001
	Harbison Canyon	215 Bridle Court	Alpine, CA 92001
Lakeside	Moreno Avenue	10955 Moreno Avenue	Lakeside, CA 92040
	Woodcreek	15935 Spring Oak Road	El Cajon, CA 92021

Sewage generated within the Campo Service Area, JSA, and PVSA are treated via County owned WWTPs, while sewage in the Alpine, East Otay Mesa, Lakeside, Spring Valley, and Winter Gardens service areas is conveyed through the City of San Diego's Metro system by inter-jurisdictional agreement.

Table 6 provides a summary of the locally-based plants managed and operated by the County. Since the General Order pertaining to the SSMP include requirements for wastewater collection systems, specific operations and maintenance (O&M) information pertaining to the County's WWTPs and the sewer lift stations are not included in this document.

Table 6 County Maintained Treatment Plants

Treatment Facility	Address	City/State/Zip
Rancho Del Campo WWTP	31035 Forrest Gate Road	Campo, CA 92006
Julian WWTP	2840 Highway 78	Julian, CA 92036
Pine Valley WWTP	Pine Valley County Park, Old Highway 80	Pine Valley, CA 91962

1.4 Data Management Systems

This section summarizes the data management systems that the County uses, including the software program.

- Environmental Systems Research Institute's (ESRI's) ArcGIS - Software solution for developing an inventory of the County's wastewater collection system assets documents the horizontal and vertical

locations of sewer collection system facilities, as well as the attributes of various sewer system components.

- Cityworks - Web GIS-centric enterprise asset management system to manage, track, analyze and score infrastructure assets.
- GraniteNet - Software solution for managing the condition of assets, scheduling inspections and reviewing the condition of assets as well as control the process of inspecting and analyzing infrastructure.
- SmartCovers - Web-based smart technology that provides real-time remote sewer overflow monitoring via a reliable satellite communications system.
- Maintenance Hole Inspections.

1.5 Ownership and Operation Responsibilities

The San Diego County Sanitation District owns the collection system sewer mains, maintenance holes, lift stations and associated mains. The Wastewater Management Section of the County's Department of Public Works operates, maintains and manages the sewer system. Property owners own and maintain their own laterals.

1.6 Unique Service Area Boundaries and Challenges

The service areas listed in Table 2 differ significantly as each responds to historical circumstances, legal requirements, the extent of existing/projected growth, and the condition of conveyance and treatment facilities.

1.7 SSMP Elements and Organization

This SSMP includes detailed information demonstrating the County's efforts to comply with each of the mandatory and applicable elements required for its SSMP. The organization of this document is consistent with the SWRCB guidelines and includes the following 11 General Order elements:

- (i) Introduction.
- (ii) Organization.
- (iii) Legal Authority.
- (iv) Operations & Maintenance.
- (v) Design and Performance Provisions.
- (vi) Spill Emergency Response Plan.
- (vii) Sewer Pipe Blockage Control Program.
- (viii) System Evaluation, Capacity Assurance, and Capital Improvements.
- (ix) Monitoring, Measurement and Plan Modifications.
- (x) Internal Audits.
- (xi) Communication Program.

Supporting information for an element is included as links and appendices to the SSMP, as applicable. Generally, information expected to require relatively frequent updates that can be modified without formal action is included in appendices.

SECTION 2 ORGANIZATION

The General Order specifies the following requirements with respect to the Organization section of the SSMP:

> The SSMP must identify organizational staffing responsible and integral for implementing the local SSMP through an organization chart or similar narrative documentation that includes:
>
> - The name of the Legally Responsible Official as required in Section 5.1 of the General Order.
> - The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific SSMP elements.
> - Organizational lines of authority.
> - Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. For example, county health officer, county environmental health agency, and State Office of Emergency Services.

This section identifies the representative responsible from the County for the implementation of this SSMP. It also includes an organizational chart and a chain of communication for reporting spills.

2.1 Legally Responsible Official

Section 5.1 of the General Order requires that the County designate at least one Legally Responsible Official (LRO). The LRO should have knowledge and expertise of the enrolled sanitary sewer system and is authorized to serve as a duly authorized representative. The LRO must have responsibility over management of the entire sanitary sewer system and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The LRO must:

- Possess a recognized degree or certificate related to O&M of sanitary sewer systems.
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training, and experience.

The LRO is responsible for electronically certifying, on the County's behalf, all applications, reports, the SSMP and corresponding updates, and other information submitted electronically into the online California Integrated Water Quality System (CIWQS)[3] Sanitary Sewer System Database. The Land Use and Environment Group (LUEG) Program Manager within the Engineering Services Division's Wastewater Management Section is the authorized representative, also known as the LRO, and is responsible for the

[3] California Integrated Water Quality Systems

execution of compliance actions required under the General Order. Appendix B provides the names and contact information for the individuals referenced in this section.

The LRO may designate one or more individuals as a Data Submitter for reporting spill data. The LRO shall authorize the designation of Data Submitter(s) through the online CIWQS database. The LRO shall submit any changes to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F of the General Order. If the LUEG Program Manager is unavailable, the County has established two Data Submitter to handle the duties of the authorized representative. The Data Submitter includes the Director of Public Works (Director) and Deputy Director of the Engineering Services Division.

2.2 Governance

The County's elected governing body is composed of a Board consisting of five elected members. Each member is elected to a four-year term, with terms overlapping. The Board develops the policies of the County and is responsible for appointing a Chief Administrative Officer (CAO) to oversee the daily operations of the County. The County CAO is appointed by the Board and is directly responsible to the Board for the administration and daily operations of all County functions. The Board must approve the completed SSMP prior to certification and ultimately share the responsibility for the effective and efficient management of the sanitary sewer system. Figure 2 shows the County's organizational chart.

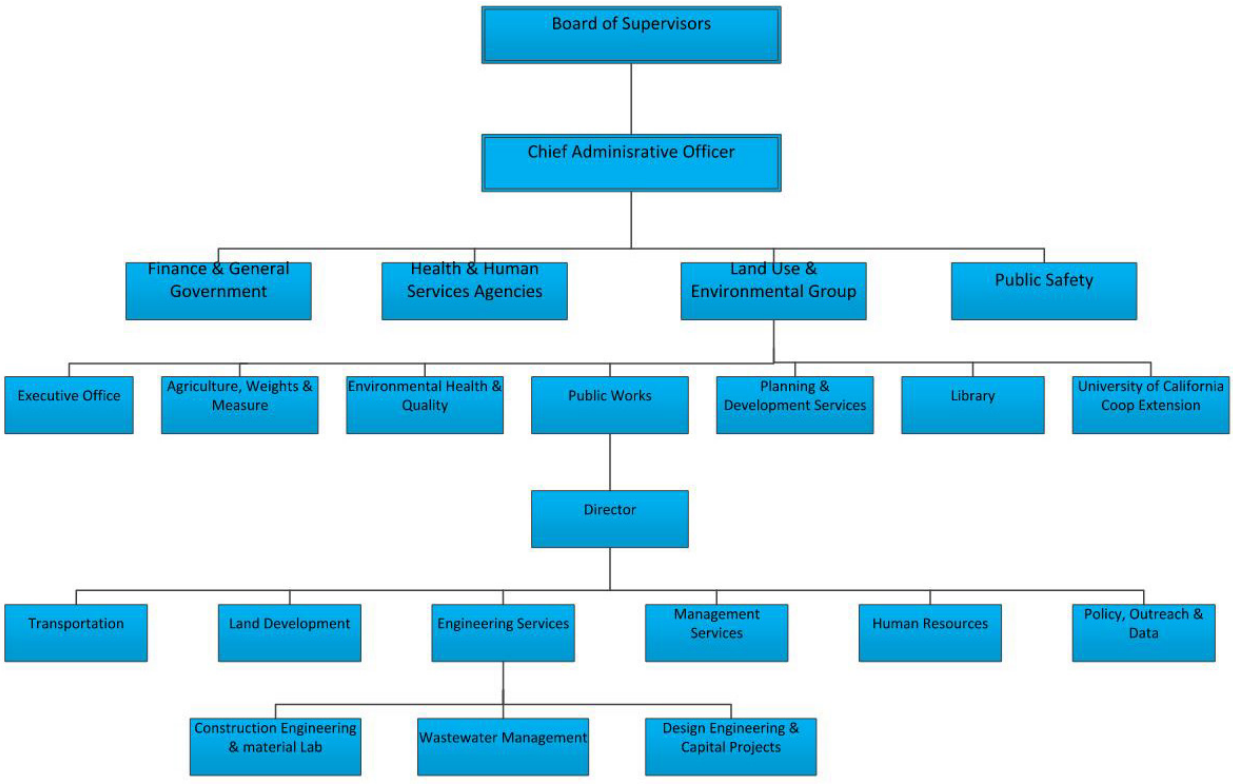


Figure 2 County of San Diego Overall Organization Chart

2.2.1 Chief Administrative Officer

The CAO acts under the administration of the Board and is subject to its direction. The CAO provides overall administrative leadership, supervision, and control of County business. In addition, the CAO directs and coordinates, through departments and offices, all County program planning, development, and implementation, and directs the preparation, review, presentation, and control of all County and special district budgets.

The CAO provides program and financial decision-making support to the Board, allocates financial resources within Board policy, presents reports and provides recommendations to the Board and other legislative organizations, represents the County, acts as liaison with other public and private agencies, committees, and task forces, and provides information to the media, public, and agency representatives on County-wide activities or issues.

2.3 Land Use and Environment Group

The LUEG is comprised of six departments whose functions range from building and maintaining county infrastructure to protecting our environment and public health, and from promoting agriculture and consumer protection. LUEG's six departments are listed below:

- Agriculture, Weights & Measures.
- County Library.
- Environmental Health and Quality.
- Parks and Recreation.
- Planning & Development Services.
- Public Works.

Under policy direction of the CAO, the LUEG's General Manager oversees and leads the County's operations, long-term operating strategy, master planning, Capital Improvement Program (CIP), and department budgets. The General Manager of LUEG serves to unify the County's efforts in land use, environmental protection and preservation, recreation, and infrastructure development and maintenance.

2.3.1 Land Use & Environment Group's General Manager

Under policy direction of the CAO, the General Manager of LUEG plans, directs, organizes, executes, and evaluates the overall activities of the County's LUEG to assist the CAO in the direction and coordination of County operations, program planning, development, and implementation. The General Manager of LUEG reviews and approves departmental budget requests, delivers the group budget to the CAO and the Board, directs budget and personnel control-related activities, including the development of workload and staffing reports, directs organizational and procedural studies and the preparation of recommendations, consults with and advises County department heads and others on administrative policy, organization, and procedures, prepares reports and correspondence, acts as liaison with other public and private agencies and provides information to County departments, the public, the media, and agency representatives on departmental activities. The General Manager of LUEG represents the CAO in the absence of, or at the direction of the CAO, and works with other department heads in support of the goals of the CAO and the Board.

The LUEG is comprised of departments responsible for planning for growth in population, housing, employment, recreational and infrastructure needs, assessment of environmental impacts including enforcement of environmental regulations, and preserving the viability of business.

2.4 Department of Public Works

The Department of Public Works (DPW) Falls under the LUEG. The DPW serves the unincorporated County by maintaining roads, sidewalks, and bridges; providing wastewater and other environmental management services; keeping road drainage systems and flood control channels clear; operating traffic signals and streetlights; managing eight airports; maintaining closed landfills and burn sites, and inspecting private developer construction sites and work performed in the County's right-of-way. The Department of Public Work organizational structure consists of the following five Divisions:

- **Engineering Services.** Construction engineering, design engineering, capital projects, wastewater management, and bid opportunities
- **Land Development.** Surveying, watershed protection program, flood control, recycling, and private development construction inspection
- **Management Services.** Environmental services, inactive landfill management, special districts, and management support services.
- **Transportation.** Airports, road maintenance, traffic engineering, field engineering, and loss mitigation.
- **Policy, Outreach, and Data.**

The Director reports directly to the General Manager of LUEG and oversees the five Divisions. Figure 2 illustrates the DPW organizational structure.

2.4.1 Director of Public Works

The Director plans, directs, manages and oversees the activities and operations of the DPW. The Director coordinates assigned activities with other County departments and outside agencies and provides administrative support to the General Manger of LUEG.

The Director is responsible for planning, directing, organizing, coordinating, and evaluating the overall activities of the DPW. The Director manages the development and implementation of county-wide policy and procedures related to public works functions, directs the development and implementation of department plans and programs, reviews and approves negotiated contracts for outside services or equipment, reviews program efforts, and evaluates division progress.

The Director is also responsible for developing the department's annual budget and monitoring revenue and expenditure transactions, conducting fiscal analysis and preparing cost projections, identifying operational problems and formulating appropriate solutions, preparing reports and correspondence, acting as liaison with other public and private agencies and providing information to County departments, the public, and agency representatives on departmental activities and issues, and providing courteous, high-quality service to members of the public by personally responding to requests for service or making appropriate referrals.

2.5 Engineering Services Division

The Engineering Services Division falls under the DPW. The Engineering Services Division provides a verity of professional level project management, engineering and construction contract services for roads, bridges, drainage, water, wastewater and utilities in the unincorporated area of the County. The Engineering Services Division is comprised of the following five Sections Construction Engineering, Design Engineering, Capital Projects, Wastewater Management, and Bid Opportunities. The Deputy Director of the Engineering Services Division oversees these five Sections and reports directly to the Director.

2.5.1 Deputy Director of Engineering Services Division

Under administrative direction of the Director, the Deputy Director of Engineering Services plans, organizes, and directs the activities of the Section providing services in the areas of wastewater. The Deputy Director develops and implements countywide policies and procedures related to the Department of Public Work's engineering services. The Deputy Director directs the development and implementation of departmental plans and programs, reviews and approves negotiated contracts for outside services or equipment, reviews the division's efforts and direction, and evaluates program progress.

The Deputy Director of Engineering Services oversees the division's annual budget, conducts fiscal analysis and prepares cost projections, identifies operational problems and formulates appropriate solutions, prepares executive and technical reports and correspondence, acts as liaison with other public and private agencies and provides information to county departments, the public, and agency representatives on departmental activities and issues. Additionally, the Deputy Director of Engineering Services performs special studies and projects as assigned by the Director.

2.6 Wastewater Management Section

The Wastewater Management Section falls under the Engineering Services Division. The Wastewater Management Section is responsible for the operation and overall administration of the District. The County's Board serves as the District's Board of Directors for governance matters. Under the direction of the Director, staff performs day-to-day operational activities and District administration. The Director provides general oversight, planning, and direction for the District. Under the direction of the Director, staff performs day-to-day operational activities and District administration.

The organizational chart presented on Figure 3 shows the sections and positions identified within the County's Wastewater Management Section that are responsible for concurrently implementing and managing various components of plans and procedures required to satisfy the elements of the SSMP. Additionally, the County staff from the Engineering, District Administration, and CIP sections provide some staff and technical support for the Wastewater Management Section to assist in the implementation of various SSMP elements.

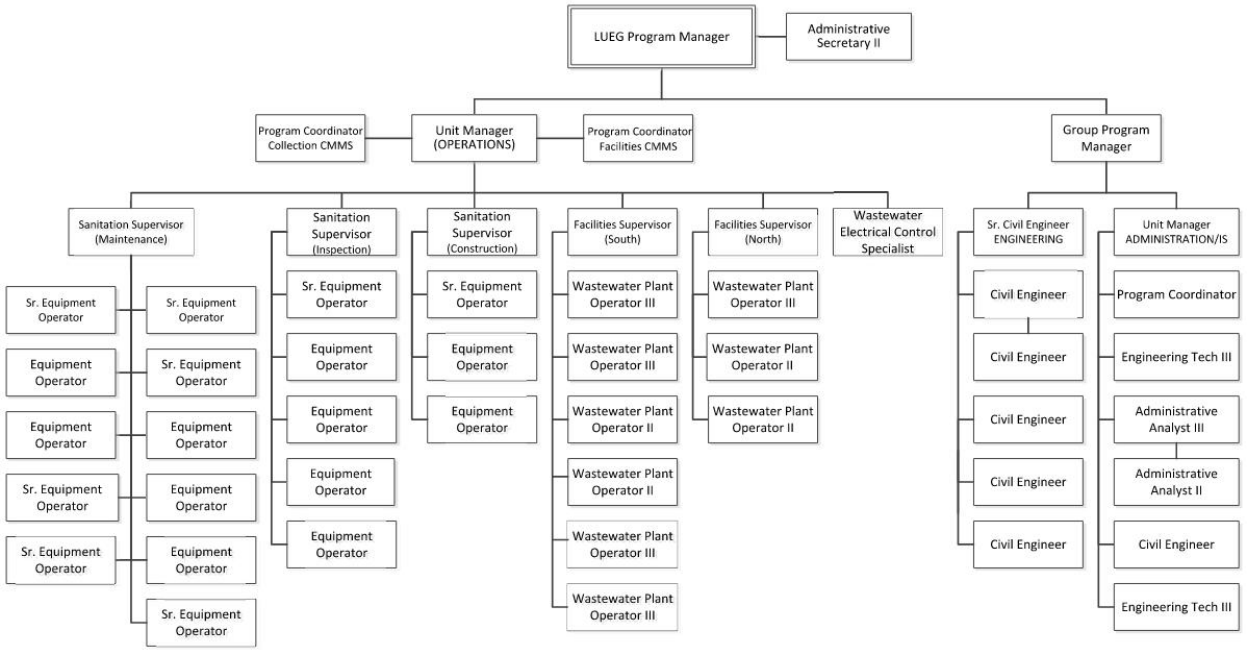


Figure 3 Wastewater Management Section Organization Chart

2.6.1 LUEG Program Manager

Under the administrative direction of the Deputy Director of Engineering Services or the Director, the LUEG Program Manager coordinates, develops, implements, manages, and monitors LUEG programs, projects and activities. The LUEG Program Manager is responsible for formulating and administering County policies as it relates to such programs, projects and activities. The LUEG Program Managers directs, organizes, and coordinates multi-disciplinary professional and/or non-professional staff in carrying out a variety of programs including financial, budgetary (recommending service delivery levels and resource needs), and related administrative functions.

The LUEG Program Manager directs the development and implementation of short and long-range countywide and departmental plans and objectives relative to the program's functions, directs the development, implementation, and monitoring of appropriate performance indicator data collection and analysis, monitors the program's progress toward accomplishing objectives, and reviews and evaluates the program's work, and risks.

The LUEG Program Manager oversees the program's annual budget and monitors revenue and expenditure transactions, prepares executive and technical reports and correspondence, acts as a liaison with other public and private agencies, provides information as needed to County and non-county departments, agencies, and the public, performs special studies and projects as assigned by the Deputy Director, Assistant Director, or Director, supervises subordinate managers, supervisors, and staff, and acts in the absence of the Deputy Director or Assistant Director.

2.6.2 Administrative Secretary II

Responsible for providing personal secretarial and administrative support assistance to unclassified managers or managers with significant administrative responsibility, which includes serving as a division chief, formulating and implementing department policy, and acting as a liaison with a variety of outside agencies.

2.6.3 Group Program Manager

The Group Program Manager facilitates and assist the LUEG Program Manager with the development and implementation of the short and long-term capital improvement program, administer sewer accounts, prepares operational budget, and represents the Wastewater Program in a variety of interdepartmental and community outreach. The Group Program Manager also coordinates and communicates with executive management, formulates departmental policies and ordinances, collaborates with County stakeholders, performs fiscal management, controls personnel-related matters and acts on behalf of the LUEG Program Manager in their absence.

2.6.4 Unit Manager of Wastewater Operations

Under general direction, the Unit Manager of Wastewater Operations is responsible for managing all activities and directing staff assigned to the Wastewater Management Section. The Unit Manager of Wastewater Operations formulates and administers policies and programs and coordinates operations related to wastewater facilities.

The Unit Manager of Wastewater Operations plans, directs, and coordinates the activities of staff involved in operating, repairing, and maintaining County wastewater facilities, evaluates the work of subordinate supervisors and support staff, reviews wastewater system activities to confirm conformation with safety practices, regulations, and ordinances, estimates costs associated with wastewater facility repair and construction projects and recommends materials, supplies, and equipment for procurement.

2.6.5 Program Coordinator

Program Coordinator oversees the CMMS system for the Wastewater Operations. They assign work orders to operators, review work orders for performed work for completeness and notes made on the work order for any follow-up actions, and check inventory levels. Review the data in CMMS to ensure all preventative and corrective maintenance is being done and adjust maintenance schedules as deemed appropriate. They also develop and administer contracts for procurement of goods and services for the Wastewater Operations unit. Additionally, they prepare and file required reports to the California Water Control Resources Board.

2.6.6 Sanitation Supervisor

A Sanitation Supervisor plans, assigns, and supervises sanitation crews involved in the operation, construction, repair, inspection, and maintenance of sewerage systems in various county sanitation districts and sewer maintenance districts. Under the general supervision of the Unit Manager, the Sanitation Supervisor supervises Senior Equipment Operators, Equipment Operators, Sewer Construction Maintenance Workers, or Public Work Trainees involved in the operation and maintenance of the sewage

collection system. The Sanitation Supervisor will supervise the activities of a large split crew or several split crews.

2.6.7 Senior Equipment Operator

The primary function of a Senior Equipment Operator is to maintain the County's wastewater collection system. The Senior Equipment Operator operates a variety of sewer maintenance equipment and hand tools used to repair and/or maintain sewers, performs minor servicing repair and equipment, operates closed-circuit television (CCTV) equipment, maintains traffic signs and assists with traffic control, maintains mileage and service records, performs sewer investigations that include smoke testing and dye testing.

Under the general supervision of the Sanitation Supervisor, a Senior Equipment Operator provides technical guidance and training to sewer maintenance equipment operators and workers, directs the work of subordinate classes during split crew operations, completes reports and inventories, and may input information into the Computerized Maintenance Management System (CMMS). Some Senior Equipment Operators may lead a split crew and supervise lower-level staff.

2.6.8 Equipment Operator

Under general supervision, an Equipment Operator operates a variety of sewer maintenance equipment and hand tools used to repair or maintain sewers, performs minor servicing repair and equipment, operates CCTV equipment, maintains traffic signs, assists with traffic control, maintains mileage and service records, and performs sewer investigations that include smoke and dye testing. The Equipment Operator is responsible for maintaining records and drawing intersection maps to show the location of utility structures.

2.6.9 Facilities Supervisor

The Wastewater Facilities Supervisor is responsible for assigning, reviewing, and evaluating the work of subordinate staff, inspecting, coordinating, and participating in the daily operation and maintenance of wastewater pump station tasks, operating and directing others on the mechanical regulation of equipment controlling the flow and treatment of sewage or sludge, and ensuring that working orders are carried out in the plant or assigned unit of the plant according to the readings of meters, gauges and other control and measuring devices.

Under general supervision, the Wastewater Facilities Supervisor is certified as a Grade V, or Grade III at a minimum, WWTP Operator by the State Water Board and is responsible for performing technical duties related to the operation and maintenance of WWTPs, wastewater pumping stations, and potable water distribution systems, and related work as required.

2.6.10 Wastewater Plant Operator III

Under general supervision, a Wastewater Plant Operator III possess a Grade III WWTP Operator certificate and may be assigned responsibility for a geographical district to perform technical duties related to the operation, maintenance and installation of rural WWTP systems including pumping stations and for to perform related work as required.

The Wastewater Plant Operator III is responsible for a wide variety of tasks, including skilled WWTP operations, routine plant maintenance, laboratory, routine housekeeping duties at a treatment plant, daily operation and maintenance of wastewater pump station, and operation and maintenance of all segments of WWTP processes including primary, secondary, effluent disposal by percolation beds or spray irrigation, handling of solids by use of digester, drying beds, and landfill disposal. He may perform routine maintenance duties to machinery and equipment, prepares logs and reports, and assumes the duties of a Wastewater Facilities Supervisor during their absence.

2.6.11 Wastewater Plant Operator II

Under general supervision, a Wastewater Plant Operator II is responsible for a wide variety of tasks including the operation, maintenance and installation of rural WWTP systems and pumping stations. Responsibilities include operating and maintaining wastewater pump stations and all segments of WWTP processes, including primary and secondary, effluent disposal, handling of solids by use of digester, drying beds and landfill disposal, and routine treatment plant maintenance and housekeeping duties.

A Wastewater Plant Operator II possesses a Grade II or higher WWTP Operator certificate and carries out working orders in the plant or assigned unit of the plant according to the readings of meters, gauges, and other control and measuring devices.

2.6.12 Wastewater Plant Operator Trainee

Under immediate supervision, a Wastewater Plant Operator Trainee learns how to operate, maintain, and repair plant equipment and acquire experience to obtain state certification. Responsibilities include skilled WWTP operations, routine plant maintenance, laboratory, and routine housekeeping duties at a treatment plant.

2.6.13 Wastewater Electrical Control Specialist

The Electrical Specialist is responsible for overseeing and maintaining electrical and electronic systems and equipment at County sewerage facilities, ensuring the continued operation of all electrical/electronic systems, equipment and devices supporting County water systems, sewage treatment plants, pumping and metering stations, and providing technical guidance and advising on electrical and instrumentation devices.

The Electrical Specialist uses, maintains, calibrates, and repairs pneumatic and electronic testing and measuring instruments, and repairs electronic equipment following blueprints and manufacturers' specifications. Additionally, he examines construction plans and specifications and recommends any changes necessary to comply with electrical codes.

2.6.14 Senior Civil Engineer

Under general direction, the Senior Civil Engineer is responsible for managing highly visible and sensitive projects, and for supervising subordinate engineering staff performing a variety of projects. The Senior Civil Engineer plans, assigns, trains, instructs, assists, supervises, and evaluates the work of professional and technical staff, prepares technical and engineering correspondence and reports, and provides technical expertise on matters pertaining to policies, procedures, practices and standards, plans, organizes, directs and controls resources assigned to best accomplish the assigned functions within

budget and at maximum effectiveness, and enforces the appropriate County policies and Director's Letters of Instructions.

2.6.15 Civil Engineer

Under general supervision, the Civil Engineer performs complex engineering research and design project work and is responsible for a wide variety of engineering projects or programs. The Civil Engineer serves as a group lead/supervisor, by preparing engineering plans, specifications, and cost estimates related to departmental projects and programs, prepares engineering documents and specifications for a variety of projects, reviews and checks engineering design drawings for construction, repair, and maintenance projects, calculations, and contractors' shop drawings.

2.6.16 Assistant Engineer

Under general supervision, an Assistant Engineer provides support to Civil Engineers on complex engineering project work. An Assistant Engineer supports tasks, such as, preparing engineering plans, specifications, and cost estimates related to departmental projects and programs, prepares engineering documents and specifications for a variety of projects, reviews and checks engineering design drawings for construction, repair, and maintenance projects, calculations, and contractors' shop drawings.

2.6.17 Unit Manager of Administration

Under general direction, the DPW Unit Manager of District Administration is responsible for managing all activities and directing staff assigned to a major section within a division of DPW. The DPW Unit Manager formulates and administers policies and programs, and coordinates activities related to wastewater operations activities.

The DPW Unit Manager of District Administration plans, directs, supports, and coordinates various activities required for ensuring the operation, repair, and maintenance of County wastewater facilities, evaluates the work of support staff, and is involved with wastewater system-related activities.

2.6.18 Engineering Technician III

Under general supervision, the Engineering Technician III performs a wide variety of para-professional engineering work that requires a substantial degree of independent performance in field, laboratory, or office settings, and involves the selection or adaptation of standard procedures or equipment. The Engineering Technician assists in the preparation of contracts, contract plans, and specifications employing varying techniques and equipment; prepares quantity lists; computes progress estimates, and progress payments; maintains contract or enforcement files; performs general office engineering work, such as handling inquiries for information and complaints; issues sewer related permits; performs research; and maintains engineering, surveying, correspondence, and legal records.

The Engineering Technician may also type simple forms; perform field inspections of construction projects for adherence to standards; issue violation notices, stop work orders, and citations related to enforcement; examine, check, and analyze grading plans, subdivision maps, parcel maps, and records of surveys to ensure completeness and accuracy in accordance with laws, regulations, and ordinances.

2.6.19 Administrative Analyst III

The Administrative Analyst III provides manager and executives with general administrative support in a wide variety of areas such as, but not limited to, financial management, budget preparation, purchasing, contract administration and monitoring, cost benefit analysis, personnel, general administration, and special projects requiring quantitative and analytical skills.

Most work is performed in compliance with countywide operating policies and procedures, and local, state and federal regulations. The Administrative Analyst III provides supervision and direction to subordinate analysts and clerical staff. Under direction, the Administrative Analyst III advises and assists higher-level management with day-to-day operations of a department or section of a department and performs the most complex administrative and analytical work requiring interpretation and the use of discretion in the application of specialized knowledge and resources to accomplish work.

2.6.20 Administrative Analyst II

The Administrative Analyst II provides managers and executives with general administrative support in a wide variety of areas such as, financial management, budget preparation, purchasing, contract administration and monitoring, cost benefit analysis, personnel, general administration, and special projects requiring quantitative and analytical skills.

Most of the work is performed in compliance with countywide operating policies and procedures, and local, state and federal regulations. Under general supervision, the Administrative Analyst II is expected to exercise judgment within guidelines and to independently provide management with the expertise necessary to identify, evaluate, and resolve organization and administrative problems, including recommending changes in policies and procedures and developing methods for implementation.

2.7 County Communication Structure for Collection System Issues

Communication of activities is important to keep managerial staff informed of successes and potential problems. Additionally, implementation of the various elements of the SSMP will require constant coordination between the various sections identified in the organizational chart. Therefore, clearly identifying the specific positions and staff as well as establishing communication protocols is necessary so that appropriate personnel are properly informed to respond to sanitary sewer system related issues in the most effective and efficient manner.

2.7.1 SSMP Communication Structure

Continual communication among the Public Works Operations and Engineering Services Divisions as well as along the levels of hierarchy facilitates and supports activities that allow the Public Works Operations Division to inform the appropriate staff about the operation and management of the collection system.

Generally, the communication plan will follow the chain of command identified in the organizational chart. Specific levels of authority will be required to facilitate implementation and enforcement of the plans and procedures developed for the SSMP. As the various plans and procedures are implemented, an assessment of the effectiveness of the plans will best be determined by the labor force that executes and evaluates the immediate impacts of the plans and procedures. Efficient and timely responses will be

essential so that the adopted plans and procedures are effective for the management and operation of the wastewater system.

2.7.2 Spill Response and Communication Structure

A communication structure related specifically to a spill responding and reporting is discussed in Section 7 of this SSMP and more thoroughly documented in Appendix C, which contains a copy of the County's Spill Emergency Response Plan (SERP).

SECTION 3 LEGAL AUTHORITY

The General Order specifies the following requirements with respect to the Legal Authority element of the SSMP:

> The SSMP must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:
>
> - Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oil, and grease; and trash, including rags and other debris that may cause blockages.
> - Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure.
> - Require that sewer system components and connections be properly designed and constructed.
> - Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee.
> - Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures.
> - Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

This section serves to confirm that the County has the authority, through ordinances, services agreements, or other legally binding procedures, to conform to the requirements of the General Order.

3.1 Background for Legal Authority

The CWC of the California Code of Regulations (CCR), the Federal CWA of the United States Code, and the California WDR grant the County the authority to establish codes, agreements, policies, and procedures for the construction, operation, and maintenance of a wastewater collection system, and the ability to enforce the necessary requirements. Below is a discussion of the relevant sections granting the County this authority.

3.1.1 California Water Code Section 13271, California Code of Regulations

Section 13271 of the CWC, Title 23 of the CCR, prohibits the discharge of sewage and hazardous material into the waters of the State and requires the proper notification of authorized agencies in the event of a spill. Entities which do not properly follow the requirements of this section may be found guilty of a misdemeanor and punished by fine, imprisonment, or both.

3.1.2 Clean Water Act, Section 1251 of Chapter 33 of the United States Code

In 1972, the federal Congress enacted the Federal Water Pollution Control Act, commonly known as the CWA. The CWA prohibits the discharge of pollutants, including sewage, into public waters of the United States. The federal government has the authority to enforce compliance with the CWA via specific permits, such as National Pollutant Discharge Elimination System permits, as well as court action such as administrative orders and consent decrees.

3.1.3 Code of Federal Regulations, Title 40, Protection of the Environment

The Environmental Protection Agency (EPA), in its general pretreatment regulations (40 Code of Federal Regulations Part 403) prohibits any user from discharging solid or viscous pollutants, such as fats, oil, and grease (FOG) waste, in amounts which will cause obstructions (blockages) to the flow in the wastewater system and interfere with the operation of the wastewater system.

3.1.4 California Waste Discharge Requirements

On May 2, 2006, the State Water Board adopted the Statewide General WDRs for Sanitary Sewer Systems, Order No. 2006-0003. The WDRs are applicable to all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than 1 mile in length that collect and/or convey untreated or partially treated wastewater to publicly owned treatment facilities in the state of California. Specifically, the WDRs require all affected agencies, municipalities, counties, districts, and other public entities to take a proactive approach to confirm a system-wide operation, maintenance, and management plan is established to effectively reduce the potential, quantity, and frequency of spills that may occur and impact surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

In 2023, the General Order serves as statewide WDRs and supersedes the previous State Water Board Order No. 2006-0003-DWQ and amendments thereafter. The General Order is enforceable by the State and Regional Water Boards. For the General Order, a sanitary sewer system includes, but is not limited to, a combination of pipelines, valves, lift stations, manholes, siphons, wet wells, diversion structures, and/or other auxiliary pertinent infrastructure, upstream of a WWTP headworks.

3.2 Code of Regulatory Ordinances

The legal authority to operate, maintain, and manage the County's wastewater collection originate from the powers granted by the State and Federal governments and are codified in the San Diego County Code of Regulatory Ordinances[4] (County Code). The following sections reference the relevant County Code ordinances as they relate to the SSMP requirements.

3.2.1 Illicit Discharges

Division 8 of Title 6, of the County Code establish the County's authority to prohibit illicit discharges into the County's wastewater collection system. The following is a list of a list of these ordinances (for the complete text of the ordinances, see the County Code).

- Section 68.162, Limitations on Use of Sewer.
- Section 68.163, Opening Maintenance Hole.
- Section 68.209, Throwing Refuse in Maintenance Holes Prohibited.

3.2.2 Design and Construction Requirements

The County Code establishes the County's authority to require sewer system components and connections be properly designed and constructed. The following is a list of a list of these ordinances (for the complete text of the ordinances, see the County Code).

- Title 6, Division 1, Food:
  - Section 61.104, Permit Required from Department.
  - Section 61.106, Plan Review Fee.
- Title 6, Division 8, Unified Program Seage and Solid Waste Disposal:
  - Section 68.145, Sewers in County Highway.
  - Section 68.146, Sewers in State Highway.
  - Section 68.147, Main Line Sewers.
  - Section 68.160, Pumping and Treatment Plants.
  - Section 68.157, Materials and Construction.
  - Section 68.159, Work and Plans Shall Conform.
  - Section 68.161, Connecting Sewer in Undedicated Street.
  - Section 68.204, Persons Authorized to Make Sewer Service Lateral Connections-Fees.
  - Section 68.207, Connection to be Made of Specified Materials.
- Title 9, Division 4, County Plumbing Code:
  - Section 94.1.001, Adoption of the County Amends to the Plumbing Code Portion of the California Building Standards Code.
  - Section 94.1.004, Adoption of the Appendices A, B, D, G and I of the California Plumbing Code.

[4] San Diego County Code of Regulatory Ordinances

3.2.3 Maintenance, Inspection, and Repair Access

The County Code does not expressly document access requirements for the maintenance or repair of the wastewater collection system. Instead, accessibility is specific for sewage pumping and treatment plants and for the inspection of construction work performed under this section. The access requirements for maintenance and repairs of the wastewater collection system are managed through the plan review and permitting procedures for new sewer service where County staff confirms that sewer system facilities are constructed to specific standards within the public right-of-way or within easements. The following sections include a summary of the County's existing codes and ordinances as included in Title 6, Division 8 (for the complete text of the ordinances, see the County Code).

- Section 68.154, Deposit for Inspection and Testing.
- Section 68.156, Inspection by Director.
- Section 68.158, Maintenance Instructions.
- Section 68.203, Enforcing Agent.
- Section 68.206, Inspections of Sewer Connections.

3.2.4 Enforcing Violations

Title 1, Division 1, titled General Provisions, Division 6 titled Appeals and Nuisance Abatement, and Division 8 titled Administrative Remedies include provisions, policies, and procedures for implementing and enforcing violations of the County Code. Additionally, Title 6, Division 8 titled Health and Sanitation allows the County to revoke permits issued. Additionally, the Department of Environmental Health and Quality (DEHQ) enforces the Health and Safety Code sections pertaining to Retail Food activities, collectively known as CalCode.

The following are the specific sections of the County Code that establish the County's authority to enforce violations of the County Codes as they pertain to the wastewater collection system:

- Title 1, Division 1 - General Provisions:
  - Section 11.111, Public Nuisance.
  - Section 11.116, Violations-Criminal Penalties.
  - Section 11.121, Violations - Criminal, Civil, and Administrative Remedies.
- Title 1, Division 6 - Appeals and Nuisance Abatement:
  - Section 16.202.5, Administrative Procedures.
  - Section 16.209, Hearing Procedure.
  - Section 16.210, Hearing Officer's Determination.
- Title 1, Division 8 - Administrative Remedies:
  - Section 18.104, Administrative Citations.
  - Section 18.106, Amount of Fines.
  - Section 18.201, Authorization and Purpose.
  - Section 18.203, Civil Penalties.
- Title 6, Division 8 - Sewage and Refuse Disposal:
  - Section 68.160, Director to Enforce.
  - Section 68.202, Enforcing Agent.

- » Section 68.210, Cost of Removing Obstruction Charged to Property Owner in Certain Cases.
- » Section 68.211, Revocation of Permits and Disconnection of Facilities.
- » Section 68.212, Notice.

3.3 Board of Supervisors - Ordinances and Policies

The District operates under several ordinances that were adopted by the Board. The four primary ordinances adopted are as follows:

- Ordinance No. 10423, San Diego County Sanitation District Establishing Provisions for the Use of District Sewage Facilities[5].
- Ordinance No. 10840, San Diego County Sanitation District Fees and Changes for the Provision of Sewer Service[6].
- Ordinance No. 10788, An Ordinance of the San Diego County Sanitation District Relating to Fees and Deposits[7].
- Ordinance No. 10850, An Ordinance of the Board of Directors of the San Diego County Sanitation District Authorizing Pass-Through of Increases in Certain Sewer Rates[8].

In addition to ordinances, the District receives guidance on a variety of policy matters related to sewer services, planning and development, and financial criteria in the form of Board Policies. There are ten Board Policies related to sewer issues and can be found on the County's website[9].

3.4 Service Agreements

The County has executed agreements with the eight service areas that address the conveyance, treatment, and disposal of wastewater. Service areas and persons requiring wastewater collection service by the County are required to comply with the County's codes, design criteria, and construction standards. The County Board acts as the board for each of the service areas.

3.5 Storm Drain Coordination

The County manages and operates most of the stormwater infrastructure within their service area. Thus, communication and coordination are interdepartmental. The County's Waste Management and Watershed Protection programs meet quarterly to find opportunities to collaborate, including, but not limited to, spill containment and best practices for preventing spills from entering stormwater collection system and bodies of water.

If a spill were to occur outside of the County's stormwater collection system service area, then the County may communicate and coordinate with the City of San Diego, City of Chula Vista, City of National City, City of El Cajon, and City of Santee.

---

[5] Ordinance No. 10423
[6] Ordinance No. 10840
[7] Ordinance No. 10788
[8] Ordinance No. 10850
[9] Board of Supervisors Policies Related to Wastewater and Sewer Issues

SECTION 4 OPERATIONS AND MAINTENANCE PROGRAM

The General Order specifies the following requirements with respect to the O&M Program element of the SSMP:

> The SSMP must include the items listed below that are appropriate and applicable to the Enrollee's system.
>
> **Updated Map of Sanitary Sewer System.** An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.
>
> **Preventive Operation and Maintenance Activities.** A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors. The scheduling system must include:
>
> - Inspection and maintenance activities.
> - Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems.
> - Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.
>
> The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.
>
> **Training.** In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:
>
> - The requirements of the General Order.
> - The Enrollee's Spill Emergency Response Plan procedures and practice drills.
> - Skilled estimation of spill volume for field operators.
> - Electronic CIWQS reporting procedures for staff submitting data.
>
> **Equipment Inventory.** An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

This section contains a description of the County's operation and maintenance program, including mapping, preventative maintenance, inspection, training, and equipment inventory.

In 2020, the County developed a comprehensive document titled *County of San Diego Operations and Maintenance Program* (O&M Program) and is included in Appendix A. The purpose of the O&M Program was to provide a comprehensive document with the specific details of the activities and procedures that personnel follow to implement the program. A well-planned, documented, and executed O&M Program

can provide the optimum level of maintenance activities for the least total maintenance cost. The following components are included in this O&M Program:

- Inventory and Mapping of the Wastewater Collection System Assets.
- SmartCover System Monitoring System.
- Seasonal and Rain Event Triggered Vulnerability Asset Review.
- Preventative Maintenance Program.
- FOG Reduction and Management Program.
- Wastewater System Inspection and Assessment Program.
- CIP Project Identification.
- Cityworks CMMS.
- Equipment and Replacement Part Inventories.
- Training Program.

4.1 Sanitary Sewer System Mapping

Chapter 2 of the O&M Program provides details on the County's procedures for maintaining an up-to-date sanitary sewer system map that meet the requirements of the General Order. The County maintains a comprehensive map of its sanitary sewer collection facilities in a GIS format using ESRI's ArcGIS software to develop a GIS database of the facilities. The GIS database was developed using their assessor parcel map books, as-built drawings, and record drawings. Revisions and/or updates to the GIS database are typically identified by operations and engineering staff while performing routine operation and maintenance activities. Discrepancies between information contained on the GIS/as-built/record drawings/assessor's parcel map books and field conditions are manually documented on the map books. The map book pages containing comments are submitted to the GIS staff for updating of electronic files. The GIS department developed a formal standard operating procedure for updating GIS information.

In accordance with section 5.14 of the General Order, the LRO shall submit to the State and Regional Water Boards an up-to-date electronic spatial map of its sewer system service area boundaries, including the location of the wastewater treatment facilities using CIWQS. The State Water Board prepared map specifications that can be found on their website[10]. Table 6 contains the due date for this submittal.

4.2 Preventative Maintenance Program

The County's sanitary sewer system, as do other aging utilities serving mature communities, has required frequent maintenance due to age, extended use, debris accumulation, and tree root intrusion. To minimize and prevent system blockages and preserve and extend the useful life of the sanitary sewer system, the County's Preventive Maintenance Program has primarily included the routine cleaning of its wastewater pipelines. The County's Preventive Maintenance Program includes scheduled cleaning and root control and is further documented in Chapter 3 of the O&M Program (Appendix A).

[10] Electronic Sanitary Sewer System Service Area Boundary Map Specifications

4.2.1 Mechanical Cleaning

The cleaning and inspection of the wastewater collection system is performed on a 36-month schedule. Pipes 16 inches and smaller are cleaned mechanically or Hydro-jetted. Sewer lines greater than 16 inches in diameter are inspected by other established industry methods to confirm flows are not being obstructed. Cleaning efforts are assigned and documented daily through the Cityworks CMMS. Documented information pertaining to sewer main cleaning activities include lineal footage cleaned, pipe size, pipe length, type of debris removed, names of staff performing the cleaning, and any additional pertinent information.

4.2.2 Root Treatment

Pipelines identified as locations with root intrusion problems are cleaned and routinely evaluated. As locations are identified as requiring cleaning for root control, pertinent information is recorded in the Cityworks CMMS database.

The County has a root control program that consists of chemical root treatment. The need and frequency of the root treatment is based on information captured during ongoing maintenance and televising of the system.

4.3 Inspection and Condition Assessment Program

Regular and systematic inspection and assessment of sanitary sewer system facilities provides a means to monitor the condition of the facilities, the effectiveness of the maintenance operations, and provides a basis for identifying and scheduling capital improvements. In addition, the overall assessment can be used to determine the funding required to repair, rehabilitate, and replace an aging collection system and to prioritize the allocation of funds and optimize the expenditure and efforts to operate a sewer collection system. The County's Inspection and Condition Assessment Program is further documented in Chapter 6 of the O&M Program (Appendix A).

4.3.1 Use of SmartCover Monitoring System

The County currently has 70 SmartCovers in place. The purpose of the SmartCovers is to reduce the risk of a spill by alerting the County on rising flow trends within the maintenance hole. SmartCovers is a device that has an antenna attached on the maintenance hole cover and a sensor that monitors the height of the sewage flow at the maintenance hole invert. The flow information is transmitted wirelessly to mobile phone applications as well as desktop computers. The information transmits flow trends, alerts, and alarms. The SmartCovers are placed strategically within the system at remote environmentally vulnerable locations, at known spill locations, and Special Maintenance Sites.

4.3.2 System Inspection and Assessment

The County employs CCTV technology for the inspection of its pipelines. The CCTV inspections are performed to identify potential defects, determine the effectiveness of the cleaning efforts, and confirm contractor compliance with County design and construction standards. The County's CCTV trucks are equipped with GraniteNet software developed by Cues. Generally, condition assessments of the sewer

pipelines is performed in the field during the CCTV inspection process. Permanent records of the inspections are captured using the GraniteNet software.

In addition to sanitary sewer inspections, the County also inspects maintenance holes. A maintenance hole inspection is conducted in conjunction with regular cleaning and pipeline inspection efforts. Maintenance holes are visually inspected by the field crew. All maintenance hole inspections are scheduled and documented using Cityworks CMMS. A maintenance hole with detected defects are noted and the information is provided to the Sanitation Supervisor for tracking and reporting purposes. The County's goal for Maintenance Holes inspection to be conducted during routine cleaning and pipeline inspection efforts.

4.4 Computerized Maintenance Management System

The County utilizes Cityworks for the record keeping system of all sewer system operation and maintenance activities. This system integrates the GIS system, identifying the entirety of the collection system, along with collections equipment, material, and labor. Daily work orders are created and sent to the Equipment Operators for all task's assigned, which include CCTV, mechanical cleaning, root treatment, construction repairs, spill response, training, along with all other daily assignments. The information gathered from the daily work orders includes the production and cost for all activities. Daily progress reports are submitted electronically to approve and track progress of maintenance activities pertaining to wastewater collection facilities. The County's CMMS is further documented in Chapter 9 of the O&M Program (Appendix A).

4.5 Training Program

Training programs are developed to confirm that personnel are well-trained to implement all applicable and necessary components of County-established programs and successfully achieve established strategic goals. County District Engineering staff are trained on the provisions of the wastewater O&M policies, procedures, safety policies, and the equipment used. Additionally, District Engineering staff are encouraged to obtain Wastewater Treatment Certification through California Water Environment Association (CWEA). Training includes "on-the-job" training in conjunction with bi-weekly "tailgate" meetings to discuss safety issues.

Training programs are developed to confirm that personnel are well-trained to implement all applicable and necessary components of County established programs and successfully achieve established strategic goals. County District Engineering staff are trained on the provisions of the wastewater O&M policies, procedures, safety policies, and the equipment used. Additionally, District Engineering staff are encouraged to obtain Wastewater Treatment Certification through CWEA. Training includes "on-the-job" training in conjunction with bi-weekly "tailgate" meetings to discuss safety issues.

The LUEG Program Manager shall schedule training sessions annually to inform and refresh staff on the requirements of the General Order. In addition, the LUEG Program Manager shall schedule SERP practice drill quarterly to determine the operations staff's ability to respond to a spill and meet regulatory requirements. The LUEG Program Manager may schedule additional practice drills if operations staff is not meeting the expectations during a spill or a practice spill drill.

The LRO and designated Data Submitters shall review guidance material developed by the State Water Board annually. The following is a list of guidance material developed by the State Water Board and is included on their website[11]:

- Guidance: Category 1 Spill.
- Guidance: Category 2 Spill.
- Training Video - Submitting Category 1 and 2 Draft Spill Report.
- Training Video - Submitting Category 1 and 2 Certified Spill Report.
- Guidance: Category 3 Spill.
- Guidance: Category 4 Spill.
- Guidance: Enrollee Owned/Operated Lateral Spills.
- Guidance: Submit and Certify an Annual Report.

4.6 Equipment and Replacement Part Inventories

The District Engineering Division maintains an inventory of vehicles and replacement parts. The inventory of vehicles and equipment available for performing the daily routine O&M of the County's wastewater collection system includes the type and quantity of the equipment.

SECTION 5 DESIGN AND PERFORMANCE PROVISIONS

This section presents the County's relevant design and construction standards, as well as standards for the inspection and testing of new sewers, pumps, and other appurtenances and for rehabilitation projects as required by the General Order. The General Order specifies the following requirements with respect to the Design and Performance Provision element of the SSMP:

> The Plan must include the following items as appropriate and applicable to the Enrollee's system:
>
> **Updated Design Criteria and Construction Standards and Specifications.** Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in the System Evaluation, Capacity Assurance and Capital Improvements of the General Order, the procedures must include component-specific evaluation of the design criteria.
>
> **Procedures and Standards.** Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

This section presents the County's design and construction standards, as well as its standards for the inspection and testing of new sewers, pumps, and other appurtenances, and for rehabilitation projects.

[11] General Order Compliance Tools and Guidance

5.1 Design and Construction Standards and Specifications

Criteria for the design and construction of new, rehabilitated, and replaced sewer system facilities, including main, tie-ins, service laterals, cleanout, maintenance holes, and other system appurtenances, are necessary to confirm the proper operation of the wastewater collection system. The County design standards should be used in conjunction with current drawings, specifications, and codes for the planning, design, and construction of wastewater infrastructure.

The District utilizes the City of San Diego's Sewer Design Guide[12] and the Water Agencies' Standards[13] (WAS) for the planning and design of sewer facilities. Design information, such as maintenance hole separation requirements, minimum pipe slopes, and pipe material, can be found in the above-mentioned references. The Sewer Design Guide and WAS both include design guidance for sewer lift stations, force mains, and rehabilitation. In addition to the design guides referenced above, the District utilizes various standard drawings and specifications. Below is a list of standards and specifications with a brief description of each.

- **San Diego Regional Standard Drawings**[14]**.** Is a set of drawings that have been presented, reviewed, and approved by a committee that is comprised of the County's 18 cities, the County, Municipal Districts, and Utility Companies. The purpose of the committee is to provide regional construction standards for San Diego area agencies.
- **San Diego County Design Standards**[15]**.** Is a set of drawings published by the DPW. In areas under the jurisdiction of San Diego County, which includes the entire Sanitation District, these drawings take precedence over the Regional Standard Drawings.
- **Standard Specifications for Public Works Construction (Greenbook).** Is a set of specifications related to construction practices. The District utilizes these specifications for sewer construction. The Greenbook includes three main sections; 1) Provisions, 2) Materials, and 3) Methods.
- **City of San Diego's Supplement to the Greenbook**[16] **(Whitebook).** Contains additional specifications to the "Greenbook" and serves as a City Supplement. The District utilizes certain sections of the Whitebook related to wastewater infrastructure.
- **State of California, Department of Transportation (Caltrans) Standard Specifications and Standard Plans.** The District utilizes the specifications found in Cal-Trans's Standard Specifications (2015 & 2018) and the drawings found in Caltrans' Standard Plans (2018).

All public sewer mains constructed within the County or under contract to the County shall be constructed in accordance with Title 6 of the County Code. Section 68.159 of the County Code codifies the County's current design and performance criteria. All work be performed, and all plans and specifications required under the provisions of Chapter 1 in Division 8 of the County Code shall conform to the requirements prescribed by the San Diego Regional Standard Drawings and the Greenbook.

[12] City of San Diego Sewer Design Guide
[13] Water Agencies' Standards
[14] San Diego Regional Standard Drawings
[15] San Diego County Design Standards
[16] San Diego Supplement to the Greenbook (Whitebook)

Design considerations not included in the references mentioned shall require prior approval from the County before design can begin and prior to final acceptance.

5.1.1 Inspecting and Testing

The County's County Code, design guides, drawings, and specifications contain the procedures and standards for the inspection of newly constructed wastewater infrastructure. Section 68.156 of Article 5 of the County Code requires that all work done under the provisions of Chapter 1 of Division 8 shall be subject to inspection by and shall meet the final approval of the Director. This section also requires compliance with the applicable provisions of the County Plumbing Code.

As mentioned earlier in the County Code, all work done (construction) shall conform to the requirements prescribed by the San Diego Regional Standard Drawings and the Greenbook. The Greenbook includes procedures and standards for inspecting and testing the installation of sewer mains and related appurtenances and for the rehabilitation and repair of existing sanitary sewer systems. The Greenbook requires that all mainline sewers, service laterals and structures be tested in the presence of a County inspector and in accordance with Section 306-1.4.4 and Mandrel Test per Section 306-1.2.12. The Greenbook includes inspection and testing criteria for various pipe materials and installation methods. Section 500-1.2.6 requires the Engineer to review the pipeline inspection video submitted by the Contractor to verify the pipeline point repair or replacement when retained for construction and installation of wastewater pipelines and maintenance holes before backfilling.

Compliance with the Greenbook requires the contractor performing work on the County's sewer facilities to be responsible for conducting a CCTV inspection for all new and rehabilitated sanitary sewer systems and other appurtenances. Final acceptance of the sewer lines will be subject to the internal television inspection.

SECTION 6 SPILL EMERGENCY RESPONSE PLAN

The General Order specifies the following requirements with respect to the SERP element of the SSMP:

The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner.
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State.
- Comply with the notification, monitoring and reporting requirements of the General Order, State law and regulations, and applicable Regional Water Board Orders.
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained.
- Address emergency system operations, traffic control and other necessary response activities.

- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system.
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State.
- Remove sewage from the drainage conveyance system.
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters.
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery.
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event.
- Conduct post-spill assessments of spill response activities.
- Document and report spill events as required in the General Order.
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

Section 5.12 of the General Order requires that within six months of the Adoption Date of the General Order, the Enrollee shall update and implement its SERP, per Attachment D, Section 6 of the General Order. A SERP has been developed for the County to comply with the requirements of the General Order. A copy of the County's SERP can be found in Appendix C. This plan is intended to be updated and modified by the County once a year to more closely reflect operating conditions and changes that may occur in spill response procedures. This Section summarizes the major aspects of the SERP as relevant to the specific General Order requirements.

6.1 Spill Classification

A spill is defined as any overflow, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. An individual spill's notification, monitoring, and reporting requirements vary based on the individual spill's category. There are four categories of spills with requirements as established by the General Order:

- **Category 1 Spill:** A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under the General Order that results in a discharge to:
  - A surface water, including a surface water body that contains no flow or volume of water.
  - A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.
  - Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.
  - A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per Section 3.1 of Attachment E1 (Notification, Monitoring, Reporting, and Recordkeeping Requirements) of the General Order.

- **Category 2 Spill:** A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water:
  - A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 2 spill.
- **Category 3 Spill:** A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water:
  - A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.
- **Category 4 Spill:** A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water:
  - A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.
- **Private Lateral Sewage Discharges:** A private lateral sewage discharge spill is a sewage discharges that are caused by blockages or other problems within a privately owned lateral.

6.2 Spill Notification Procedures

The County's SERP contains the procedures utilized by the County to notify appropriate staff in a timely manner. During business hours, all telephone calls or complaints for actual or possible spills are routed directly to the Standby Duty Supervisor from the County's Operations Center Hotline. During non-business hours, weekends, and designated County holidays, calls will be routed directly to the Standby Duty Supervisor. If the Standby Duty Supervisor is not available or non-responsive, then the Standby Duty Operator is notified.

In addition, the County's lift stations and SmartCovers are equipped with alarms that transmit signals directly to the Facilities Operations staff during business and non-business hours. After receiving notification of an alarm activation at a lift station, the Standby Duty Operator or the Standby Duty Supervisor will proceed to the lift station to assess and resolve the situation. If assistance is required, they will contact additional operations staff for assistance.

6.2.1 Public Advisory

The County DEHQ has primary responsibility for determining when to post notices of polluted surface waters or ground surfaces that resulted from uncontrolled wastewater discharges from its facilities. The DEHQ may also decide and direct Wastewater Management Section staff to post notices. The postings do not necessarily prohibit the use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination.

The posting of notices shall be done as soon as practical following the initial response to the overflow. Signs should be posted on either side of the point of entry where sewage entered the body of water or public facility and the nearest public access point to that body of water or public facility. Examples of signs are included in Attachment H of the SERP, contained in Appendix C.

Should additional notification of sewage contamination be deemed necessary, County Wastewater Management Section staff shall, in cooperation with the County's Media and Public Relations Office

(MPRO), provide further notices through the use of pre-scripted notices made available to be printed or electronic news media for immediate publication or airing, or by other measures, such as door hangers. Examples of pre-scripted notices, which are included in Attachment I of the SERP contained in Appendix C, should be modified to accurately reflect the conditions at the time of publication and/or airing.

6.3 Spill Response Procures

The County prepared the SERP that establishes formal procedures for County staff to contain, correct, and clean up spills. The SERP is intended to provide the County with a comprehensive document that includes components necessary for minimizing the effects of spills on the environment while protecting the public's health and safety. The SERP includes a strategy for mobilizing labor, material, tools, and equipment to contain, mitigate, and clean up residuals from a spill and correct or repair any condition that may cause or contribute to an unpermitted sewage discharge. Figure 4 summarizes the process presented in the SERP and offers response procedures, including notification and request of additional resources as required in the event of a large spill, is included, and offers a concise overview of the steps required to quickly respond to an actual or possible spill event.

The SERP provides the guidance to facilitate and confirm the proper response to any type of potential spill occurrence. The SERP includes a strategy for the Wastewater Management Section staff to mobilize labor, material, tools, and equipment to contain, mitigate, and clean up residuals from a spill and correct or repair any condition that may cause or contribute to an unpermitted sewage discharge. Appropriate mitigation measures to contain the spill and recover spilled sewage to minimize the impact to the public or environment are included. Additionally, County staff will implement monitoring measures and perform a thorough assessment of the site for potential future spills and to prevent spills from reoccurring. The efforts serve to minimize and correct any adverse impact on the environment that may potentially result from a spill.

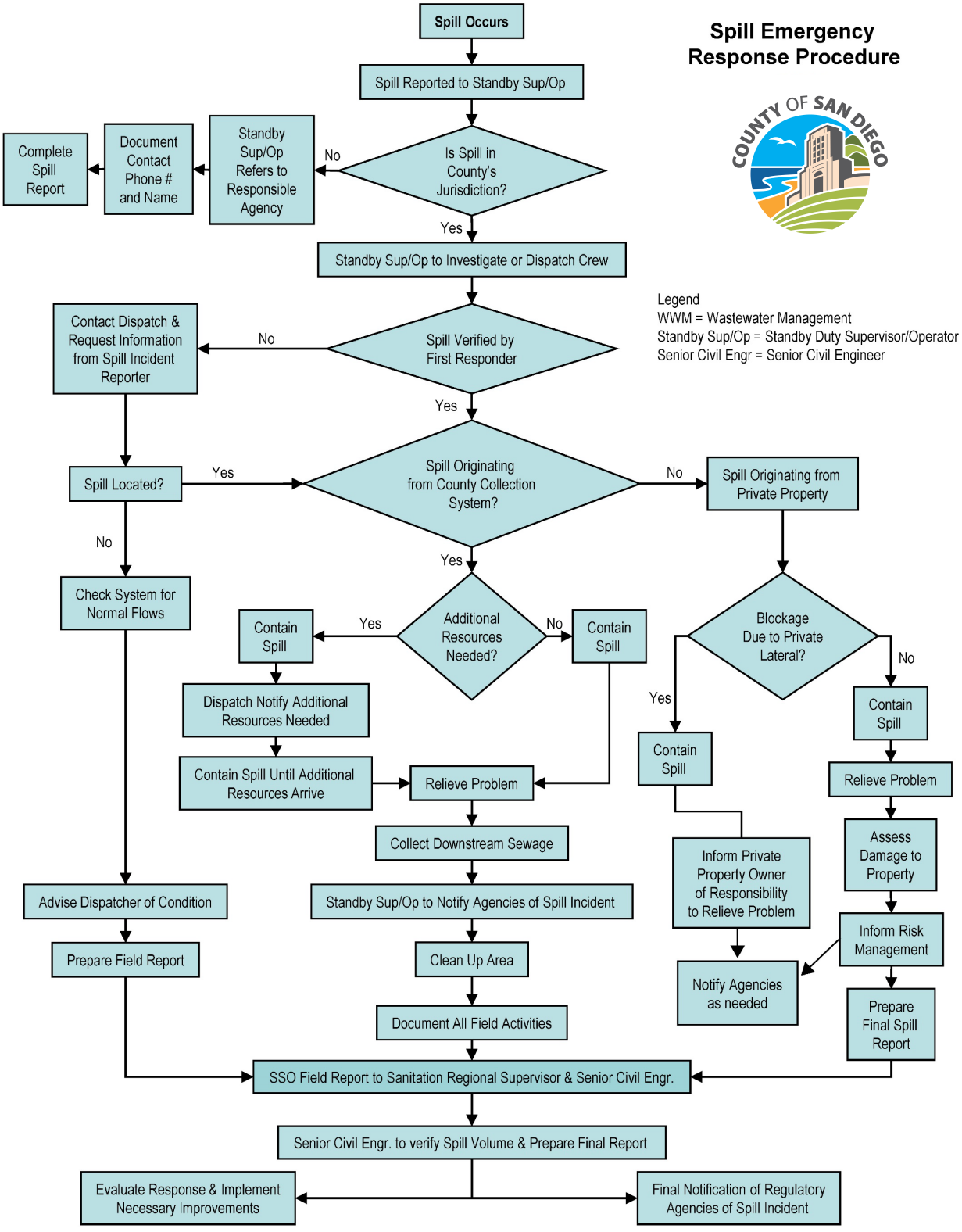


Figure 4 Spill Response Procedure

6.4 Regulatory Agencies Notification

Section 2.10 of the County's SERP provides a discussion of the procedures that should be followed by the County in the notification of the appropriate regulatory agencies of a spill as required by the General Order. The time frames and reporting requirements for the State and Regional Water Boards are dependent upon the size and type of spill. The SERP also stipulates that the County shall notify all other appropriate regulatory agencies, based on the size and extent of the spill that has occurred. The time frame of this notification is dependent upon the agency that is to be notified. Table 2.4 in the SERP identifies and summarizes the officials and agencies to be notified and under what conditions they are to be notified of a spill. The Standby Duty Supervisor in charge will contact the regulatory agencies.

6.5 Spill Reporting

The County staff shall monitor and prepare spill reports regardless of size and recovery that originate from the County's wastewater collection system. Chapter 4 of the County's SERP includes reporting procedures necessary to comply with the General Order. The County is required to submit various spill reports to the CIWQS, an internet-based reporting system. The CIWQS Reporting Time Requirements are summarized in Table 4.2 of the SERP. Table 4.3 in the SERP summarizes all the required information for various spill reports. The General Order requires the County to report sanitary sewer system spills to CIWQS, an internet-based reporting system. The County's LRO is responsible for certifying all spill reports, while Data Submitters can only enter report information into CIWQS. Section 4.3.3 of the SERP discusses the County's procedures as they relate to the preparation of a Spill Technical Report.

6.6 SERP Training

Appropriate staff will participate in regularly scheduled training sessions to assist response crews in awareness of their responsibilities and executing their duties. The training sessions will be organized based on the latest SERP as well as other reference materials. Training will also incorporate hands-on field demonstrations to ensure the preparedness of all response personnel to all anticipated situations.

Training and event participation will be documented and maintained. Currently, Facility Engineering & Operations and District Engineering staff is encouraged to receive training through various vendors, to participate in Collection System Maintenance classes, and obtain Wastewater Treatment Certification through the CWEA. Additional certification requirements may be imposed in the future if deemed necessary by the State Water Board.

SECTION 7 SEWER PIPE BLOCKAGE CONTROL PROGRAM

The General Order specifies the following requirements with respect to the Sewer Pipe Blockage Control Program (Control Program) element of the SSMP:

> The SSMP must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances.
- A plan and schedule for the disposal of pipe-blocking substances 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 substances generated within a sanitary sewer system service area.
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages.
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements.
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oil, and grease ordinance.
- An identification of sanitary sewer system sections subject to fats, oil, and grease blockages and establishment of a cleaning schedule for each section.
- Implementation of source control measures for all sources of fats, oil, and grease reaching the sanitary sewer system for each section identified above.

The purpose of a Control Program is to limit the amount of pipe-blocking substances that enters the collection system to an extent feasible. The County's previous SSMP justified with evidence that a FOG Control Program was unnecessary. The General Order has since expanded FOG Control Program to include sewer-blocking debris, such as rags. This section discusses the County's ongoing efforts that fall under a Control Program.

7.1 Legal Authority

The County has the legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages as defined in Section 68.162, Limitations on Use of Sewer, of the County Code. These discharges include but are not limited to greases, oils, and materials that may clog or obstruct sewer systems.

7.2 Grease Control Devices

Ordinance Number 10423 (Ordinance) establishes provisions for the use of the County's sewage facilities. Article 6, Part II of the Ordinance requires grease control for commercial food facilities. Section 6.1, Part II of the Ordinance established that pretreatment. dischargers of greases and/or oils from commercial food preparation/service operations shall be required to install an approved type of grease pretreatment device in accordance with the Uniform Plumbing Code. The Director or their designee shall approve installation of the grease pretreatment equipment. All required grease pretreatment shall be maintained in efficient operating condition by periodic removal of the accumulated grease. The discharging party shall be responsible for the proper removal and disposal by appropriate means of the material captured from grease pretreatment devices. No such collected grease shall be introduced into any drainage piping or

public sewer. Section 6.2, Part II of the Ordinance, the Director or designee may require the discharging party to keep records of grease pretreatment device maintenance and grease disposal by a licensed waste hauling company and to report on these maintenance activities to the District. The Director or designee may require the discharging party to provide results of periodic measurements of its discharge that includes chemical analysis of oil and grease content. Discharging party shall allow the District or its representative ready access at all reasonable times to all parts of the premises for purposes of sampling and inspections.

Section 67.808 of the County Code, Additional Minimum Best Management and Pollution Prevention Practices for Industrial, Commercial, and Municipal Facilities and Activities, requires the installation of grease traps for industrial, commercial, and municipal facilities and activities. The County continues to include Best Management Practices (BMPs) as a permit condition as a method of enforcement. Section 67.808 requires grease bins and grease traps shall be maintained in a clean and leak-proof condition. Section 61.104 of the County Code requires a permit to be secured from the DEHQ by food facilities.

Food facilities that are built from the ground up, from existing building spaces, tenant improvements and existing food facilities that remodel, change equipment or their menu, are required by the California Retail Food Code[17] to have plans submitted to the DEHQ. The DEHQ prepared a Food Facility Plan Review Guide[18] to assist those that are opening a new food facility or remodeling an existing food facility.

The DEHQ is tasked with inspecting and enforcing the California Retail Food Code, the California Plumbing Code, and the California Mechanical Code. The DEHQ conducts inspections using a statewide standard Food Inspection Report that lists all possible violations. Details on the DEHQ's food service establishment (FSE) inspection is documents in the Retail Food Facility Operator's Guide on located on the County's website.[19]

7.3 Identification and Mitigation

The County completed the *2015 Fats, Oil, and Grease Characterization Study* (2015 FOG Study), included in Appendix D, which identified the source and nature of FOG within the County's wastewater collection system. By identifying and locating the sources of FOG in the wastewater collection system, FOG build-up in the system can be controlled and subsequently reduced, thereby increasing the system's operating efficiency and reducing the number of sewer line blockages and spills. To locate the likely sources of FOG, a comprehensive list of the existing businesses permitted by the DEHQ was obtained. Approximately 232 FSEs that may contribute FOG to the wastewater collection system were identified and mapped as potential sources of FOG within the 2015 FOG Study. Overall, the data indicates that FOG-related issues are not associated with FSEs. Rather, most FOG-related issues appear to be due to residential discharge of FOG into the system. Section 5.2 of the 2015 FOG Study includes a summary of the findings in each of the affected service areas.

An initial list of Special Maintenance Sites was developed as part of the 2015 FOG Study. Since then, the County actively tracks and updates a list of Special Maintenance Sites using Cityworks. Special

[17] California Retail Food Code
[18] County of San Diego Food Facility Plan Review Guide
[19] Retail Food Facility Operator's Guide

Maintenance Sites are pipe segments identified as having high concentrations of FOG and roots and sludge accumulations.

There are currently 202 pipe segments identified by County wastewater maintenance staff as Special Maintenance Sites. This is a significant reduction compared to the 2020 SSMP which had over 400 Special Maintenance Sites. The reduction in segment totals is due to condition review and updating of all segments previously designated as Special Maintenance Sites. That County currently cleans Special Maintenance Sites quarterly. The County has experienced zero spills as the result of grease from 2015 through 2024. Since one spill was experienced as the result of grease in the last 10 years, the County will continue its currents procedures.

7.4 Public Education and Outreach

Working with the County's DEHQ and the County's MPRO, the DPW can emphasize the importance of minimizing the discharge of grease into the wastewater collection system. BMPs, which include simple and effective practices that residents and FSEs can implement to prevent and reduce the quantity of grease discharged into the sanitary sewer system, can be developed and made readily available. Appendix E includes some examples of educational material that the County has prepared and may distribute to the public.

The General Order specifies that a Control Plan should include a list of acceptable disposal sites for grease. Below are some FOG removal companies:

- Al Max Sanitation.
- Atlas Pumping.
- Affordable Grease Pumping.
- Darling International.
- Dar Pro Solutions.
- Diamond Environmental Services.
- SMC Grease Specialist, Inc.

SECTION 8 SYSTEM EVALUATION, CAPACITY ASSURANCE, AND CAPITAL IMPROVEMENTS

The General Order specifies the following requirements with respect to the System Evaluation, Capacity Assurance, and Capital Improvements element of the SSMP:

The SSMP must include procedures and activities for:

- Routine evaluation and assessment of system conditions.
- Capacity assessment and design criteria.
- Prioritization of corrective actions.
- A capital improvement plan.

System Evaluation and Condition Assessment. The SSMP must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available.
- Identify and justify the amount (percentage) of its system for its condition to be assessed each year.
- Prioritize the condition assessment of system areas that:
  - » Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies.
  - » Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas.
  - » Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List.
- Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods.
- Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into water of the State.
- Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities.
- Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

Capacity Assessment and Design Criteria. The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events.
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events.
- The capacity of key system components.
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information.
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions.
- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events because of climate change.
- Increases of erosive forces in canyons and streams near underground and aboveground system components due to larger and/or higher-intensity storm events.

- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events.
- Necessary redundancy in pumping and storage capacities.

Prioritization of Corrective Action. The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

Capital Improvement Plan. The capital improvement plan must include the following items:

- Project schedules include completion dates for all portions of the capital improvement program.
- Internal and external project funding sources for each project.
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies.

This Section summarizes the results of the most recent capacity evaluation and includes recommended improvements and the latest CIP.

8.1 System Evaluation and Condition Assessment

Regular and systematic inspection and assessment of sanitary sewer system facilities provides a means to monitor the condition of the facilities and provides a basis for identifying and scheduling capital improvements. The overall assessment is used to determine the funding required to repair, rehabilitate, and replace an aging collection system and to prioritize the allocation of funds and optimize the expenditure and efforts to operate a sewer collection system. This section summarizes the procedures for the County to evaluate the condition of their assets. The County's Inspection and Condition Assessment Program is further detailed in Chapter 6 of the O&M Program (Appendix A).

Condition assessments of the sewer pipelines is performed via CCTV inspection and CMMS maintenance records. The data provides essential information for evaluating the condition of the existing system and assessing the criticality of potential defects. The results of the assessment can be utilized to determine the most effective method of repair or rehabilitation to restore the facility to its most efficient state. A comprehensive evaluation of the defects noted and preliminary repairs and rehabilitation methods recommended should be performed to ascertain the condition of the portion of the wastewater collection system televised. Based on the comprehensive evaluation, projects can be identified and prioritized based on the impact to the overall wastewater collection system. Once the projects identified via this inspection and assessment process are prioritized, the potential project costs can be determined based on the recommended repair, rehabilitation, or replacement method. Using the priority and criticality ranking.

8.2 Repair and Rehabilitation Projects

The County's District Engineering Division is responsible for performing various types of wastewater facility repairs and rehabilitation improvements. Repair and rehabilitation work performed by crews may include point repairs at cracks, joints, and service interfaces, repairing collapsing or broken sewer pipe, removing obstructions in the sewers that hinder cleaning operations, maintenance hole rehabilitation, video inspection, and other related work. District Engineering staff can implement mitigation efforts and

perform repairs for pipelines of various sizes to restore or replace failing wastewater collection sewer lines. The types of repairs performed by County staff vary according to the location, depth, and utilities located in the vicinity of the necessary repair. As required, the County retains outside services for repair work that must be completed quickly, is excessively deep, and/or that are in areas with extensive utilities. Repairs that require resources beyond those available within the District Engineering Division or require further prioritization and planning are coordinated and scheduled with the County's Major Maintenance Project or CIP Division.

8.3 Capacity Assessment and Design Criteria

The County's most recent efforts in performing an evaluation of the sanitary sewer system capacity are documented in the following studies that address the wastewater collection systems for several of the service areas. The County is planning to perform an update to the master plans in 2025.

- Alpine & Lakeside Sewer Service Areas Sewer Master Plan (ATKINS,2013).
- Campo Sewer Service Area Sewer Master Plan (ATKINS,2013).
- Julian Sewer Service Area Sewer Master Plan (ATKINS,2013).
- Pine Valley Sewer Service Area Sewer Master Plan (ATKINS,2013).
- Spring Valley Sewer Service Area Sewer Master Plan (ATKINS,2013).
- Winter Gardens Sewer Service Area Sewer Master Plan (ATKINS,2013).
- East Otay Mesa Sewer Maintenance District Master Plan Update (PBS&J,2006).

8.3.1 Hydraulic Analysis Methods

The results of the County's capacity assessment were completed using models developed for the collection system in each service area. A model for each study area was developed based on the County's prior studies and/or master planning efforts and available data. The models focused on the County's main sewer trunk lines. This is typical within the industry standards for hydraulic modeling as these facilities convey the highest flows and are generally more likely to experience future increases in flow from new development. The following lists the models created for each study area.

- Alpine & Lakeside Sewer Service Areas - InfoWorks CS (Innovyze, Version 8.5).
- Campo Sewer Service Area - Spreadsheet.
- Julian Sewer Service Area - Spreadsheet.
- Pine Valley Sewer Service Area - Spreadsheet.
- Spring Valley Sewer Service Area - InfoWorks CS (Innovyze, Version 8.5).
- Winter Gardens Sewer Service Area - InfoWorks CS (Innovyze, Version 8.5).
- East Otay Mesa Sewer Service Area - SewerCAD (Bentley).

A spreadsheet model included a steady-state hydraulic analysis spreadsheet using Manning's formula to evaluate flow conditions, such as wastewater flow depth, flow rate, and velocity within pipes and maintenance holes. This tool was used for smaller service areas, such as, Campo, Julian, and Pine Valley and included physical collection system data, existing and forecasted populations, and per capital unit generation rates.

The hydraulic model application used for Alpine and Lakeside, Spring Valley, and Winter Gardens service areas was InfoWorks CS (Innovyze, Version 8.5). The models were developed using the physical collection system data, existing and forecasted populations, per capita unit generation rates, diurnal patterns, and rainfall events. The model was then calibrated to flowmetering records for dry and wet weather conditions. Once the model was calibrated, it was utilized to evaluate the existing collection system under existing and projected dry and wet weather flow conditions in order to identify potential recommended improvements to the existing collection system.

The hydraulic model for the East Otay Mesa Sewer Maintenance District Master Plan Update was developed using SewerCAD. SewerCAD is a hydraulic analysis computer model developed by Bentley that simulates flow conditions, such as wastewater flow depth, flow rate, and velocity, within pipes and maintenance holes in a wastewater collection system. The model can provide a representation of hydraulic flow conditions either, over an extended period of time, "Extended Period Simulation", or an instant in time "Steady-State" in the sewer's capacity. The Steady-State simulation was utilized in the East Otay Mesa Sewer Maintenance District Master Plan Update, which is an appropriate method for sizing the proposed backbone infrastructure. Model attributes, including maintenance holes, pipelines, and pump stations, were input into the model with the goal of maximizing gravity flow and connecting into the City of San Diego's existing sewer system; the study area was divided into basins that flow either northerly to the Otay Valley Trunk Sewer system or southerly to the Otay Mesa Trunk Sewer system. Logical connections to the City's system were determined from basin delineations using information from current development plans, general and specific plans, and existing topographic maps.

8.3.2 Hydraulic Analysis Design Criteria

The County established design criteria used to analyze the hydraulic capacity for each service area.

8.3.2.1 2013 Master Plans

The 2013 Master Plans analyzed system capacity in the model based on the estimated peak wet weather flows for the existing and build-out dry and wet weather conditions, to identify capacity deficiencies. The existing and buildout model scenarios were run under the peak dry and wet weather conditions in the model and results were compared to threshold criteria to determine capacity deficiencies. In addition, spreadsheet tools were used when hydraulic models were not available.

The threshold criterion was the depth-to-diameter (d/D) ratio at the design flow (Design Q). This d/D ratio was calculated in the models for the existing and buildout dry and wet weather flow conditions and was used to identify pipes needing improvement. For the dry weather conditions, the County's criteria for existing sewers included a maximum allowable d/D ratio of 0.75 for pipes with diameters greater than 15 inches and d/D ratio of 0.50 for pipes with diameters 15 inches and less. For the wet weather conditions, the County's criteria for existing sewers included a maximum allowable d/D = 0.92 for a two-year storm for all pipe diameters. The County's criteria for new sewers under wet weather conditions included a d/D ratio of 0.75 for pipes with diameters greater than 15 inches or a d/D ratio of 0.50 for pipelines less than or equal to 15 inches. Thus, pipes with d/D ratios greater than these values were identified as needing improvement. The County is currently updating the capacity assessment of sewer pipes to identify any capacity deficiencies. Identified deficiencies will be programmed into CIP.

8.3.2.2 East Otay Mesa Sewer Maintenance District Master Plan Update

The East Otay Mesa Sewer Maintenance District Master Plan sized proposed backbone infrastructure in the model based on the estimated peak dry weather flow under the build-out condition. This was used to develop a capital financing plan. The design criterion was the d/D ratio at the Design Q. This d/D ratio was calculated in the SewerCAD program for buildout dry weather flow conditions and was used to size sufficient pipeline diameters. The County's criteria included a maximum allowable d/D of 0.75 for pipe with diameters greater than 15 inches and d/D ratio of 0.67 for pipe with diameters 15 inches and less.

8.4 Prioritization and Corrective Actions

Projects included in the Major Maintenance Program primarily originate based on the assessment of the CCTV inspections conducted by County staff and outside contractors while CIP projects are identified based on capacity modeling results, condition assessment and other necessary projects identified during the update of the County master plans. Therefore, by integrating the results of the inspection and assessment efforts with those of the capacity modeling, the County can proactively and comprehensively implement a long-range planning effort.

Prioritizing projects relies on several factors, including:

- Severity and extent of the conditional defects.
- Hydraulic capacity needs and projections.
- Estimated remaining useful life of the facilities.
- Maintenance records (condition findings) and spill occurrences.
- Identified major new developments.

8.5 Capital Improvement Program

The capital improvement planning process is an ongoing, year-round effort. The Engineering Services Division continuously assess infrastructure conditions, engage stakeholders, and develop plans to identify and address capital improvement needs. The DPW meets annually to review and revise their forecast of planned and potential capital projects and publish a 5-Year Capital Improvement Plan and can be found on the County's website[20,21]. The 5-year Capital Improvement Plan is a planning tool that identifies anticipated projects expenditures that will improve the Country's infrastructure. It is not a comprehensive list of projects and maintenance activities, and projects may change or be removed as design requirements, budgets, and priorities change. The 5-year Capital Improvement Plan consists of project sheets for each project that are in active development. Project sheets show the community where the project is located, the project title, and the project description that includes fund sources, followed by a table with an anticipated expenditure plan, and a map showing the project location. The Board annually approves a two-year Operational Plan that includes funding for capital improvement projects as part of Department of Public Work's budget.

[20] 5-Year Capital Improvement Plan Fiscal Years 2024/25 to 2028/29
[21] Draft 5-Year Capital Improvement Plan, Fiscal Years 2025/26 to 2029/30

The District maintains a list of capital improvements, major maintenance, and major acquisitions for upcoming and recently completed for the past three years wastewater collection system on the District Projects Page[22]. These projects include system upgrades, rehabilitations, and repairs to ensure uninterrupted sewer service, minimize the chance of sewer spills, and maintain compliance with regulatory permits. The Wastewater Management Division meet annually to evaluate and prioritize the projects.

SECTION 9 MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

The General Order specifies the following requirements with respect to the Monitoring, Measuring, and Program Modifications section of the SSMP:

> The SSMP must include an Adaptive Management section that addresses SSMP implementation effectiveness and the steps for necessary SSMP improvement, including:
>
> - Maintaining relevant information, including audit findings, to establish and prioritize appropriate SSMP activities.
> - Monitoring the implementation and measuring the effectiveness of each SSMP Element.
> - Assessing the success of the preventive operation and maintenance activities.
> - Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations.
> - Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

This chapter presents a summary of the steps to be taken by the County to evaluate the effectiveness of this SSMP and update it should improvements be necessary or desirable.

9.1 Monitoring and Maintaining Information

To date, the County has effectively managed and maintained information pertaining to the wastewater infrastructure. Relevant data for all work performed to meet the goals of this SSMP are stored using Cityworks. The County has tracked performance measures through the Cityworks, and SmartCovers that include, but are not limited to, the length of pipe cleaned and inspected, the quantity, cause and location of stoppages, spills, and the scheduled maintenance of Special Maintenance Sites. The County will continue to monitor the performance measures it currently tracks. As improvements or modifications are identified, the County will implement the necessary adjustments to the program at the earliest convenience. Appendix F includes preventive maintenance activities and inspections that the County completed from 2015 through 2024.

[22] San Diego County Sanitation District Projects

9.2 Program Measurements

As the SSMP elements are implemented and evolve, the County will modify the elements due to new technology, equipment, code changes, specific program enhancements, and the collection system's rehabilitation through the implementation of the CIP. The County staff member responsible for monitoring the SSMP provisions should identify and recommend updates to this SSMP as part of the County's regular performance measurement assessments. Appendix F includes program measurements.

The following performance parameters may be utilized along with other typical industry and EPA performance indicators for the County's system:

- Pipe age.
- O&M cost/mile/year.
- O&M staff/100 miles.
- Percent of system each year.
- Total annual percent cleaned.
- System cleaning cycle frequency.
- FOG-related activities.
- Percent CCTV per year.
- Inflow and infiltration monitoring.
- Planning goals status.

9.3 Modifications Program

The County must update the SSMP periodically to maintain current information and to modify the programs as necessary to confirm program effectiveness and continual compliance with the General Order. Information that will be routinely updated includes but is not limited to, contact names and phone numbers for County staff responsible for the implementation of specific SSMP programs, staff on stand-by rotational schedule for spill response, and approved contractors and vendors.

As modifications to elements of this SSMP are deemed necessary, the County will implement them at the earliest practical time. A comprehensive SSMP update, and recertification will occur every six years or as necessary and will include any significant program changes.

9.4 Updating the Sewer System Management Plan

In accordance with Attachment D of the General Order, the updated SSMP will be recertified by the LRO and uploaded to the online CIWQS Sanitary Sewer System Database. Six months prior to the due date of their SSMP update, the LRO will distribute SSMP, annual reports, audits, and annual SERP updates to staff in charge of implementing an element of the SSMP. The initial review will be used to identify any changes that need to be made to the SSMP and identify any deficiencies. Following the initial review, the LRO and Data Submitters will set up meetings with those in charge of implementing elements of the SSMP. Prior to the meeting, those in charge of an SSMP element will interview staff to get feedback and input. These meetings will help identify additional changes that need to be made to their respective SSMP element. In addition, the LRO may consider distributing the SSMP to other agencies to perform a peer review. The

LRO and Data Submitters shall incorporate these changes into the SSMP Update. Once recommendations are incorporated into the document, the SSMP will be ready for public dissemination and ultimately for approval by the Board. Note that changes in the SSMP should be tracked in the Change Log, which is included in Appendix G.

9.5 Spill Trends

The General Order requires the County to include a running 10-year system performance analysis in its Annual Report. The performance must include two CIWQS-generated graphs that present the total spill volume per year and the number of spills per year. These graphs are generated using existing data on the CIWQS Sanitary Sewer System Database. With the CIWQS Sanitary Sewer System Database, the County can readily identify and illustrate the trends, including frequency, location, and volume. These identifications can be used to identify hot spots within the County's collection system. This information can be accessed by the LRO or the designated Data Submitters. Appendix F includes spill trends for the County from 2015 through 2024.

SECTION 10 INTERNAL AUDITS

This section presents a summary of the procedures to be used by the County to perform internal audits on its SSMP. The General Order specifies the following requirements with respect to the Internal Audit element of the SSMP:

> The SSMP shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of the General Order.

Per Section 5.4 of the General Order, at a minimum, an internal audit must:

- Evaluate the implementation and effectiveness of the County's SSMP in preventing spills.
- Evaluate the County's compliance with the General Order.
- Identify SSMP deficiencies in addressing ongoing spills and discharges to waters of the State.
- Identify necessary modifications to the SSMP to correct deficiencies.

Audit programs are intended to provide controls for ensuring that all programs associated with the SSMP are being implemented as planned and managed appropriately. Audit outcomes should provide information about challenges and successes in implementing the SSMP by evaluating work practices and operations, documentation, procedures records, and staff for implementation effectiveness and consistency. The audit will identify any program or policy changes that may be needed to continually improve effective implementation. Information collected as part of an audit should be used in to plan program or procedure revisions necessary to improve program performance.

10.1 Schedule

The County will conduct an internal audit of its SSMP, at a minimum frequency of once every three years. The audit's due date is within six months after the end of the three-year audit period. Table 1 includes the

County's next audit due date and audit periods. The County will submit a complete audit report that includes using CIWQS:

- Audit findings and recommended corrective actions.
- A statement that sewer system operators' input on the audit findings has been considered.
- A proposed schedule for the Enrollee to address the identified deficiencies.

10.2 Responsible Parties for Program Audit

The LRO is responsible for coordinating and compiling the major aspects of the program audit, including relevant interviews and data collection. The LRO may also designate key County staff that are knowledgeable in the County's sanitary sewer collection facilities to assist in the audits. The County's sewer system operators must be involved in completing the audit. The audit must be completed internally under the supervision of the LRO.

10.3 Program Audit Report

The County's LRO will be responsible for coordinating the major aspects of the program audit, including relevant interviews and data collection as it relates to the SSMP audit. The information gathered for the purpose of an SSMP audit may include the following, but not be limited to:

- Reviewing the progress made on the development of SSMP elements.
- Reviewing the status of the SSMP programs implemented.
- Identifying the success of various SSMP programs implemented.
- Identifying the improvements necessary to various SSMP programs.
- Describing system improvements within the audit period.
- Describing planned system improvements.
- Reviewing data related to spill occurrences.

Upon completion of the information gathering, the County must document the results in an audit report. The LRO will certify and submit an audit report to the online CIWQS Sanitary Sewer System Database per the requirements in Section 3.10 of Attachment E1 of the General Order. The County must retain the audit report on file in compliance with the General Order. A copy of the report must be submitted to the State and Regional Water Boards.

SECTION 11 COMMUNICATION PROGRAM

The General Order specifies the following requirements with respect to the Communication Program of the SSMP:

> The Plan must include procedures for the Enrollee to communicate with:
>
> The public for:
>
> - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
> - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
>
> Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:
>
> - System operation, maintenance, and capital improvement-related activities.

This section presents a summary of the steps to be taken by the County to communicate with the public on the development, implementation, and performance of the SSMP. In addition, steps taken for the final certification of the SSMP are summarized in this chapter.

11.1 Discussion of Public Education and Outreach

The County's Public Education and Outreach Program to communicate its efforts to comply with the General Order and address the development and implementation of this SSMP will serve to educate, inform, and engage key stakeholders, such as agencies that may be affected by a spill, businesses, developers, contractors, vendors, and plumbers whose business could be impacted by specific requirements or elements of this SSMP.

Through the County's MPRO, the County should coordinate external communications between the County and the public regarding the implementation and ongoing development of this SSMP and its various elements. The MPRO is responsible for preparing and providing pertinent information for news releases, articles, and the website. Additionally, the MPRO can work closely with the Board, County departments, news media, the public and affected agencies to assist in promoting an open and frequent exchange of information necessary for the systematic and effective implementation of the various SSMP elements.

The following includes a summary of the County's efforts to educate, inform, and engage the public's support and participation in the proper utilization of the County's sanitary sewer system and comply with the General Order requirements.

11.1.1 County of San Diego Official Website

The County's current outreach efforts include maintaining a website (https://www.sandiegocounty.gov/) to inform the public about County activities. The County's website is an effective communication channel for providing alerts and news to the public. The main page of the website provides access to various County departments, including the MPRO, and links to diverse information, important announcements, agendas for County Council meetings, and other key information for County residents. The County can utilize the website to publish its SSMP to provide the public the opportunity to view and offer input to the

County as the SSMP elements are implemented. In addition, the County can utilize the website to notify the public of important upcoming activities related to sewer system management.

11.1.2 County of San Diego Sanitary Sewer Overflow Emergency Response Plan

The SERP includes a Public Advisory of Sewage Contamination Procedures, which includes a description of the action that County staff must take to limit public access to surface waters and other areas that may have been impacted by a spill as well as notify the public of potentially hazardous conditions. Examples of signs that may be posted to provide a warning of potential public health risks are included in Attachment H of the SERP. Additionally, pre-scripted notices are included in Attachment I of the SERP which may be modified to accurately reflect the conditions at the time of publication and/or airing.

Should additional notification of sewage contamination be deemed necessary, County staff is required to, in cooperation with the County's MPRO, provide further notices using pre-scripted notices made available to the printed or electronic news media for immediate publication or airing or by other measures, such as door hangers.

11.1.3 Public Meetings

Public meetings to discuss County-related issues are held regularly in the North Chambers or Conference Rooms located at San Diego County Administration Center, 1600 Pacific Highway, San Diego, California 92101. The County encourages residents to attend Board meetings to become better informed about how the County works and various issues. The board meetings provide the residents and concerned citizens a forum to provide the board with input on particular programs through the Public Hearing process and through the Citizen Participation portion of each Board meeting. During Citizen Participation, each person who wishes to address the Board on an item not on the agenda may do so. Copies of the Council Agenda are made readily available to the public from the County's website or the Clerk of the Board of Supervisor's Office. Approval of the completed SSMP is required by the Board during a public Board meeting.

Project specific meetings may also be convened with community leaders and other citizens to discuss the impacts, schedule and criteria of sewer related projects and efforts. These meetings give citizens a forum to learn about the County's activities, voice their concerns, and receive clarification on a variety of issues. Often, the project managers arrange these meetings.

11.2 Public Education and Outreach Media

A variety of means exist to educate and inform the public regarding impacts to the County's sanitary sewer system facilities. The following list identifies several forms of media available for the County to use to educate and inform the public:

- Press releases.
- Door hangers.
- Brochures distributed at County locations and kiosks.

- Announcements and notices placed on the County's website.
- Specific events to educate the public on the effects of spills to the public and environment, such as at an Earth Day fair, open house events, and other appropriate venues.

Included in Appendix E are examples of educational campaigns, which include a flyer advertising that the drain is not a dump for FOG, a door hanger presented in both English and Spanish that can be left with residents, and best kitchen practices for businesses. Additionally, an example of text that may be included on a postcard and mailed to residents soon after a FOG-related spill has occurred to alert people to the effort required to clear a blockage and to reinforce not to put FOG down the drain. Translation services may be required and anticipated during any educational campaign.

Educating the public to reduce FOG is an important task that should have a specific amount of time dedicated to its success. Investment up front in educating the public, will reduce the financial expenditure in responding to and mitigating FOG related spills as they will be effectively reduced. Staff from the DPW and other affected departments should work closely with the County's DEHQ to develop appropriate messages and with which media the messages should be disseminated.

Additionally, the County intends to communicate on a regular basis with interested parties on the implementation and performance of this SSMP. The Public Education and Outreach Program will allow interested parties to provide input as the SSMP and its elements are developed and implemented.

APPENDIX A

O&M PROGRAM

San Diego County Sanitation District
Sewer System Management Plan

Appendix A
OPERATIONS AND MAINTENANCE PROGRAM

FINAL | February 2025

Contents

Attachments

Tables

Figures

Abbreviations

CCTV	closed-circuit television
CIP	capital improvement program
CMMS	Computerized Maintenance Management System
County	County of San Diego
District	San Diego County Sanitation District
FOG	fats, oils, and grease
FSE	food service establishment
General Order	General Order for Sanitary Sewer Systems Order No. WQ 2022-0103-DWQ
GIS	geographic information system
I/I	inflow and infiltration
MACP	Maintenance Hole and Assessment Certification Program
NASSCO	National Association of Sewer Service Companies
O&M	operations and maintenance
PACP	Pipeline Assessment and Certification Program
SERP	Spill Emergency Response Plan
SOP	standard operating procedure
SSMP	Sewer System Management Plan
SSOERP	Sanitary Sewer Overflow Emergency Response Plan
WDR	Waste Discharge Requirement
WWM	Wastewater Management

Chapter 1
INTRODUCTION

The County of San Diego (County) is responsible for the operations and maintenance (O&M) of an extensive wastewater collection system and is tasked with ensuring proper and efficient operation of the system. The County spans approximately 4,526 square miles and has approximately 3 million residents. Approximately three-quarters of the unincorporated population is served by private disposal systems rather than County Sanitation or Maintenance Districts, reflecting the rural nature of large portions of the county. The vast majority of those currently receiving public service are concentrated in two of the more urbanized districts including Spring Valley and Lakeside Sanitation Districts.

The County administers eight service areas that serve approximately 36,000 customers in the several unincorporated diverse and geographically separated communities. All eight County service areas were consolidated into a single agency referred to as the San Diego County Sanitation District (District) and the County Department of Public Works provides management, administrative, operational and various support personnel to confirm that the proper O&M of the wastewater collection system. Table 1.1 includes a summary of the County's Service Areas.

Table 1.1 San Diego County Sanitation District Service Areas

County of San Diego Service Areas	
Alpine	Campo
Lakeside	East Otay Mesa
Spring Valley	Winter Gardens
Julian	Pine Valley

Figure 1.1 depicts the location of the eight service areas within the County. In addition to the facilities contained within each service area, County staff also maintains several additional pipelines throughout the County that are not part of any specific area.

Collectively, the conveyance system includes approximately 432 miles of pipeline, 8,200 maintenance holes, and eight lift stations. Table 1.2 provides a summary of the approximate length of pipeline per service area while Table 1.3 provides a summary of the eight lift stations operated and maintained by County Wastewater Management (WWM) staff.

Harmony Grove has been transferred and is no longer a part of the County's service area.

Table 1.2 Approximate Length of Pipeline per County Service Area

County Service Area	Pipeline Length (feet)[1]	Pipeline Length (miles)
Alpine	111,848	21.2
Lakeside	542,043	102.7
Spring Valley	1,432,607	271.3
Pine Valley	2,726	0.5
Julian	14,996	2.8
Campo	34,883	6.6
East Otay Mesa	22,421	4.2
Winter Gardens	119,764	22.7
Total	**2,281,288**	**432**

Note:
(1) Based on County Geographical Information System (GIS) of San Diego GIS as of December 2017.

Table 1.3 County Maintained Lift Stations

Service Area	Lift Station	Address	City/State/Zip
Spring Valley	Jamacha	9903 Jamacha Boulevard	Spring Valley, CA 91978
	Ramona Avenue	411 Ramona Avenue	Spring Valley, CA 91978
	Vista Del Lago	9041 Camino Lago Vista	Spring Valley, CA 91978
	Rancho San Diego	11971 Singer Lane	Spring Valley, CA 91978
Alpine	Galloway	444 Arnold Way	Alpine, CA 92001
	Harbison Canyon	215 Bridle Court	Alpine, CA 92001
Lakeside	Moreno Avenue	10955 Moreno Avenue	Lakeside, CA 92040
	Woodcreek	15935 Spring Oak Road	El Cajon, CA 92021

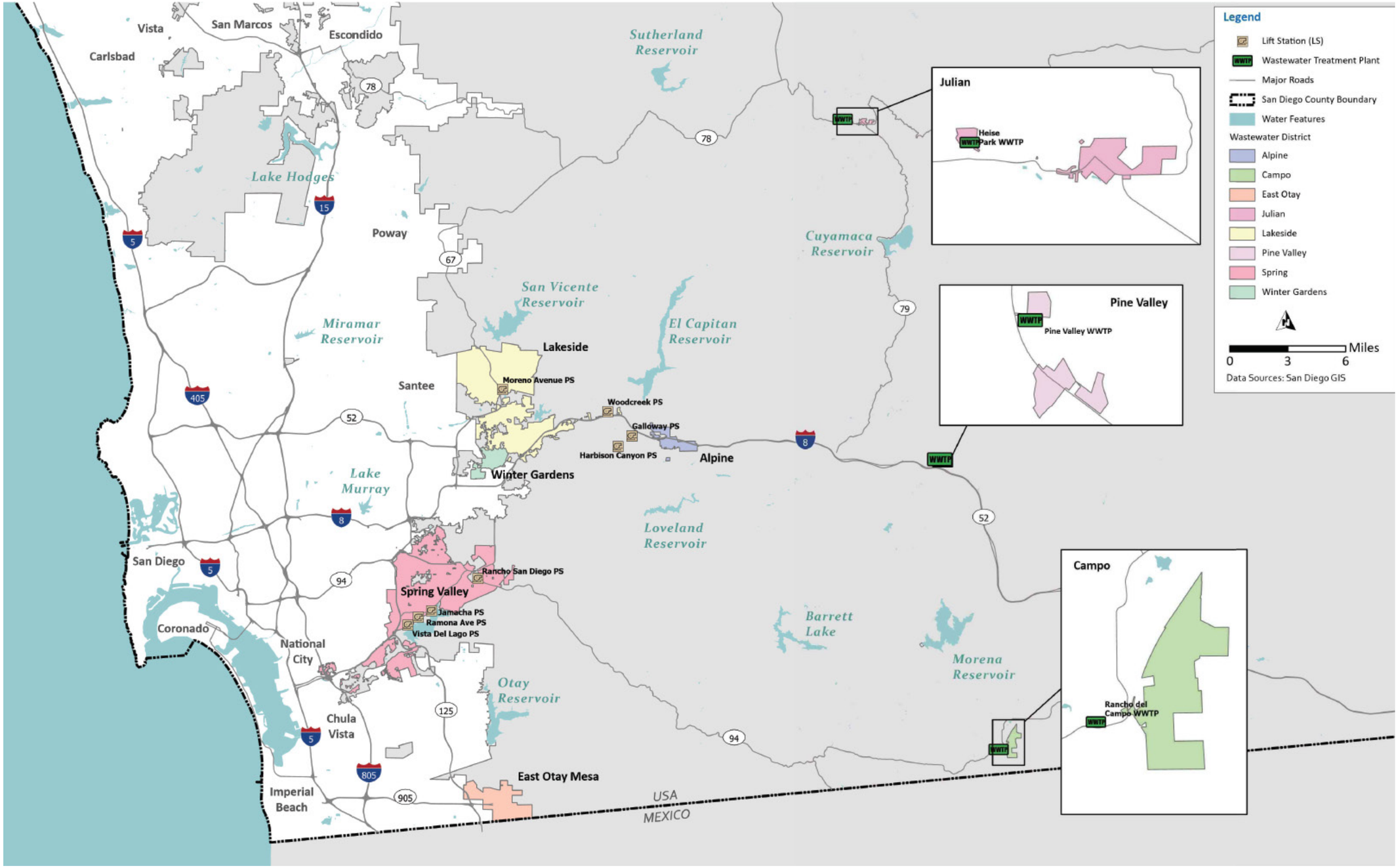


Figure 1.1 San Diego County Sanitation District Service Areas

Wastewater treatment is provided by either the City of San Diego's Metropolitan Wastewater system or one of several locally based plants operated by the respective County service areas depending on the community. The State Water Resources Control Board Statewide Water Discharge Requirements (WDRs) General Order for Sanitary Sewer Systems Order No. WQ-2022-0103-DWQ (General Order) pertaining to the Sewer System Management Plan (SSMP) includes the O&M requirements for wastewater collection systems.

1.1 Purpose of an O&M Program

With the establishment and documentation of a comprehensive O&M program, the specific details of the activities and procedures that personnel follow to implement the program are made available. A well planned, documented, and executed O&M program can provide the optimum level of maintenance activities for the least total maintenance cost. The following components are included in this O&M program:

- Inventory and Mapping of the Wastewater Collection System Assets.
- SmartCover System Monitoring System.
- Seasonal and Rain Event Triggered Vulnerability Asset Review.
- Preventative Maintenance Program.
- Sanitary Sewer Overflow Emergency Response Plan (SSOERP).
- Fats, Oils, and Grease (FOG) Reduction and Management Program.
- Wastewater System Inspection and Assessment Program.
- Capital Improvement Program (CIP) Project Identification.
- Cityworks Computerized Maintenance Management System (CMMS).
- Equipment and Replacement Part Inventories.
- Training Program.

The following sections include a summary of the activities currently performed by the County's Department of Public Works' WWM staff and provide recommendations to supplement the County's current efforts.

Chapter 2

WASTEWATER COLLECTION SYSTEM INVENTORY AND MAPPING

A comprehensive inventory of the County's wastewater collection system assets documents the horizontal and vertical locations of sewer collection system facilities, as well as the attributes of various sewer system components. This information is used to develop a GIS database of the wastewater collection system assets which facilitates management of O&M activities and expedites data management and retrieval for reporting purposes.

The locations of most sewer mains and associated appurtenances within the County were originally documented using assessor parcel map books. The map books, which were originally prepared based on information obtained from as-built drawings, have been converted to GIS using ESRI's ArcGIS software. The conversion of records to GIS has primarily included digitizing location information from the County's map books and recording facility attributes including:

- Year of installation.
- Diameter.
- Slope.
- Material.
- Invert elevations.
- Maintenance hole rim elevations.
- Effective length of pipeline segments between maintenance holes.
- Flow direction.

The conversion of the graphic information to the computerized mapping system, population of the GIS database, and assignment of identifying labels to all pipeline segments and maintenance holes allows the County to facilitate the effective management of the system and implement an asset management program for the wastewater collection system. To confirm the accuracy of information contained in the GIS and minimize the potential errors associated with the update of any graphic data converted into GIS, County staff continues to review and confirm the accuracy of the information. Involved in the review is staff with extensive knowledge and experience with the County's wastewater collection system.

Discrepancies between information contained on the County GIS system and field conditions have been manually documented on the GIS PDF. The PDFs containing comments are subsequently submitted to the County's GIS staff for updating of electronic files. With the conversion of the County's as built information to GIS, the County has developed a formal standard operating procedures (SOPs) for updating GIS information.

Additionally, the County has an asset mapping tool to facilitate viewing wastewater facility related data. The County's intranet-based viewer is specific to the County's wastewater collection system and allows County staff to view newly revised data and associated as-built drawings, and perform data queries.

2.1 System Inventory and Mapping Recommendations

The following are recommendations to facilitate the comprehensive documentation of facility attributes and efficient and effective management of the County's sewer facilities.

2.1.1 Gather Additional Attribute Data

In addition to the data captured for the wastewater collection system, including the unique identifiers for each asset, the County captures the following data:

- Coordinates of maintenance holes, clean outs, and dead ends.
- Service connections (approximate location is acceptable).
- Rehabilitation and repair data:
  - Acceptance date of work.
  - Rehabilitation material.
  - Effective nominal diameter of pipe.

Obtaining and incorporating additional system data will allow County staff to better manage and maintain the collection system and maintenance related information.

2.1.2 Implement Mapping and CMMS Software

The Preventive Maintenance Program utilizes Cityworks, a CMMS, to document scheduled and performed activities, such as, work orders.

In addition, the County's intranet-based viewer is specific to the County's wastewater collection system and allows County staff to view newly revised data, associated as-built drawings, and perform data queries. Implementing the asset mapping tool to interface with the County's GIS data and versatile CMMS system will assist staff in managing maintenance activities associated with its wastewater collection system assets, documenting operational and maintenance activities and field conditions, and managing capital assets and infrastructure to better plan and fund potential future capital improvement projects.

2.1.3 Develop and Implement a Routine Data Maintenance Procedure

Maintaining and updating data is a continuous process. Improvements by property owners and developers continuously change or add new sewer pipelines and connections that County staff and crews need to be aware of. Also, while working on the system, crews will identify discrepancies in the printed data that requires updating and/or revising. Staff has created an SOP for collecting this data, regularly entering new asset information, and correcting and/or revising discrepancies found in the data.

The SOP is as follows: Through closed-circuit television (CCTV) information and completed CIP and Private development projects all changes are identified on a pdf; the changes are sent to LUEG GIS with a tracking form. The updates to the GIS system are verified through the acceptance of the tracking form. The tracking form is routed through various engineering groups and GIS personnel to confirm the accuracy of changes.

As the GIS data is updated, an identified staff member, competent to use the GIS system, has the responsibility of updating the GIS and for verifying the data for accuracy. A new hardcopy master map is produced to allow the next month's changes to be documented and tracked. Each hardcopy master map with documented discrepancies and/or required revisions should be marked as complete once the GIS data is updated and archived for a minimum of one year. Maps should be reproduced depending on the number of changes and updates. This will confirm that crews and other staff have current data and serve to alleviate potential problems in the field with maintenance and repair efforts.

Chapter 3

WASTEWATER COLLECTION SYSTEM PREVENTATIVE MAINTENANCE

Like many aging utilities serving more mature communities, the County's wastewater collection system has required frequent maintenance due to age, extended use, debris accumulation, and tree root intrusion. To minimize and prevent system blockages and preserve and extend the useful life of the wastewater collection system, the County's Preventive Maintenance Program has primarily included the routine cleaning of its wastewater collection system pipelines. This section discusses the cleaning program and methods available to the County, and recommendations for cleaning efforts.

3.1 Cleaning Program

A component of a comprehensive O&M program includes performing routine cleaning services of the wastewater collection system. The primary purpose of cleaning the wastewater collection system is to remove the accumulation of foreign material from the sewer system. Cleaning should be performed in response to or in anticipation of one or more of the following conditions:

- Blockages (solid and/or semisolid obstructions resulting in cessation of flow).
- A reduction of hydraulic capacity due to sediment, roots, intrusions (connections or other foreign bodies), grease, encrustation, and other foreign material restricting the capacity of a sewer, which may result in a surcharge or flooding.
- Pollution caused by either the premature operation of combined wastewater overflows due to downstream restrictions in hydraulic capacity or discharge of debris from overflows during storms.
- Odors caused by the retention of solids in the system for an extended period of time, which may result in septic conditions producing corrosive hydrogen sulfide gas.
- Sewer inspections that may include visual, CCTV, or manned entry inspections to improve visibility of the pipeline surface.
- Sewer rehabilitation efforts - the wastewater collection pipelines should be cleaned prior to implementing any sewer rehabilitation work.

Generally, an effective routine cleaning program requires determining the cleaning needs, establishing priorities and scheduled cleaning activities, acquiring the support of an appropriate number of crews and personnel, acquiring necessary equipment, establishing written standard cleaning procedures, preparation of standard forms, establishing performance measures, and a mechanism for including cleaning information in the CMMS.

The County's wastewater collection system generally requires cleaning to remove accumulated debris and sediment that has fallen out of suspension from the waste stream. All pipes should be cleaned in a methodical and systematic manner to confirm consistency in the cleaning efforts. Typically, cleaning is performed by inserting the cleaning equipment into the pipeline at the

downstream maintenance hole and pushing the equipment up to the upstream maintenance hole. The cleaning equipment is then pulled down from the upstream maintenance hole to the downstream maintenance hole, since the flow in the pipe can assist in moving debris downstream.

3.1.1 Descriptions of Cleaning Methods Available

Common cleaning methods include jetting, mechanical rodding, bucketing (also referred to as winching or dragging), and manual or mechanical digging. The method employed is usually determined in advance and is typically contingent upon the pipe type and size and on the conditions expected in the pipe. Table 3.1 provides a summary of the most commonly used methods to clean a sewer system.

Table 3.1 Common Sewer Cleaning Methods

Technology	Uses and Applications
Mechanical	
Rodding	• Uses an engine and a drive unit with continuous rods or sectional rods. • Blades rotate and break up grease deposits, cut roots, and loosen debris. • Rodders also help thread the cables used for CCTV inspections and bucket machines. • Most effective in lines up to 12 inches in diameter.
Bucketing (Winching, Dragging)	• Cylindrical device, closed on one end with two opposing hinged jaws at other. • Jaws open, scrape off the material, and deposit it in the buckets. • Partially removes large deposits of silt, sand, gravel, and some types of solid waste.
Digging (includes manual digging)	• Involves excavating material by machine or hand and placing into buckets to remove material. • Optimal in large diameter sewers. • Requires confined space entries. • Techniques now used infrequently.
Hydraulic	
Balling	• A threaded rubber cleaning ball that spins and scrubs the pipe interior as flow increases in the sewer line. • Removes deposits of settled inorganic material and grease build-up. • Most effective in sewers ranging in size from 5 to 24 inches in diameter.
Jetting	• Directs high velocities (at approximately 2,000 pounds per square inch) of water against pipe walls. • Removes debris and grease build-up, clears blockages, and cuts roots within small-diameter pipes. • Efficient for routine cleaning of small diameter, low flow sewers. • Using jetter/vactor vehicles is considered a best practice.
Flushing	• Introduces a heavy flow of water into the line at a maintenance hole. • Removes floatables and some sand and silt. • Most effective when used in combination with other mechanical operations such as rodding or bucket machine cleaning.

Technology	Uses and Applications
Kites, Bags, and Poly Pigs	• Similar in function to the ball. • Rigid rims on bag and kite induce a scouring action. • Effective in removing accumulations of decayed debris and grease downstream.
Traps	• Collect sediments and large items at convenient locations. • Must be emptied on a regular basis as part of the maintenance program.

Notes:
(1) United States Environmental Protection Agency (Sept. 1999). Collection Systems O&M Fact Sheet - Sewer Cleaning and Inspection. (EPA 832-F-99-031).

Although the commonly used cleaning methods have proven effective in maintaining sewer systems, there are limitations to several of the cleaning methods used. Table 3.2 provides a summary of the limitations of several cleaning methods.

Table 3.2 Limitations of Cleaning Methods

Cleaning Method	Limitations
Mechanical	
Rodding	• Continuous rods are harder to retrieve and repair if broken and they are not useful in lines with a diameter greater than 12 inches because the rods have a tendency to coil and bend. This device also does not effectively remove sand or grit, but may loosen the material to be flushed out at a later time.
Bucketing (Winching, Dragging)	• This device has been known to damage sewers. The bucket machine cannot be used when the line is completely plugged because this prevents the cable from being threaded from one maintenance hole to the next. Setup of this equipment is time-consuming.
Hydraulic	
Balling and Jetting	• In general, these methods are only successful when necessary water pressure or head is maintained without flooding basements or houses at low elevations. Jetting - The main limitation of this technique is that caution needs to be used in areas with basement fixtures and in steep-grade hill areas. Balling - Balling cannot be used effectively in pipes with bad offset joints or protruding service connections because the ball can become distorted.
Flushing	• This method is not very effective in removing heavy solids. Flushing achieves temporary movement of debris from one section to another in the system.
High Velocity Cleaner	• The efficiency and effectiveness of removing debris by this method decreases as the cross- sectional areas of the pipe increase. Backups into residences have been known to occur when this method has been used by inexperienced operators. Even experienced operators require extra time to clear pipes of roots and grease.
Kites, Bags, and Poly Pigs	• When using this method, use caution in locations with basement fixtures and steep-grade hill areas.

Note:
(1) United States Environmental Protection Agency (Sept. 1999). Collection Systems O&M Fact Sheet - Sewer Cleaning and Inspection. (EPA 832-F-99-031).

3.1.2 Mechanical Cleaning

The cleaning and inspection of the wastewater collection system is performed on a 36-month schedule. Pipes 16 inches and smaller are cleaned mechanically or hydro-jetted. Sewer lines greater than 16 inches in diameter are inspected by other established industry methods to confirm flows are not being obstructed.

Cleaning efforts are assigned and documented daily through the Cityworks CMMS. Documented information pertaining to sewer main cleaning activities include lineal footage cleaned, pipe size, pipe length, type of debris removed, names of staff performing the cleaning, and any additional pertinent information.

3.1.3 Root Treatment

The County has a chemical root treatment program for when mechanical and hydraulic methods are not effective. The frequency of the root treatment is determined by cleaning frequency and information captured during ongoing monitoring and televising of the system. The root treatment program is tracked and captured in Cityworks.

3.1.4 Accelerated Cleaning Program Plan

A cleaning interval should be established for high-frequency mains that include pipe segments with the potential to accumulate debris more quickly than other sections and those areas susceptible to blockages that can lead to a spill.

To determine if the cleaning interval should be adjusted, staff should review the following items:

- The past four condition findings.
- CCTV inspection data collected within the last 12 months.
- Utilizing SmartCover to monitor flow trends where applicable.
- As-built data.

It is recommended that high-frequency cleaning intervals include:

- One month.
- Two months.
- Three months.
- Six months.
- Twelve months (annual maintenance interval).

Cleaning may occur prior or subsequent to the scheduled cleaning date, the cleaning frequency will be considered in conformance if the cleaning occurred within an acceptable range of time. Table 3.3 provides a summary of a possible range of time, which may be acceptable for the cleaning of specific facilities and is based on the initially established cleaning frequency.

Table 3.3 Cleaning Frequencies

Established Cleaning Frequency	Acceptable Range for Cleaning Frequencies
Monthly	1 week (before or after)
Every 2 Months	1 week (before or after)
Every 3 Months	2 weeks (before or after)
Every 6 Months	3 weeks (before or after)
Every 12 Months	4 weeks (before or after)

Chapter 4

SPILL EMERGENCY RESPONSE PLAN (SERP)

Spills may occur due to blocked sewers, a restriction in the wastewater collection system, pipe failures, flows exceeding the capacity of the system, mechanical malfunctions, and other natural or man-made causes such as roots and debris pushed into sewer mains from private laterals. The County recognizes the importance of protecting the health and safety of the public as well as the environment by preventing sewer flows from reaching surface waters and waters of the United States. This requires implementation of procedures to minimize the impact of a spill occurrence and comply with the requirements of state regulations.

In response to the potential occurrence of a spill, the County prepared an SERP, which establishes the formal procedures for County staff to respond to, contain, correct, and clean up spills, and minimize the effects of spills on the environment while protecting the public's health and safety. The County's SERP serves to supplement and be consistent with existing emergency plans and SOPs currently implemented by the County. The overall plan facilitates coordination and mobilization of necessary equipment and personnel in an organized and efficient manner when responding to a spill. The SERP also incorporates the Monitoring and Reporting Procedures mandated by the General Order. The primary goal in establishing an official SERP is to confirm that County staff responds appropriately and efficiently to all known spills immediately.

Chapter 5

FATS, OILS, AND GREASE REDUCTION AND MANAGEMENT PROGRAM

Residual FOG is primarily a by-product from food preparation in residential buildings and, more commonly, Food Service Establishments (FSEs). Therefore, proper handling and disposal of waste containing excessive FOG quantities is important since it can accumulate in the wastewater collection system and eventually block collection pipes and sewer lines, resulting in backups and overflows on streets, properties, and potentially in private residences.

Sources of grease generated in FSEs are generally from bulk deep-frying operations and water/oil separator units usually associated with specific food preparation areas. In addition, FOG generated in the food service industry includes the grease generated in food service kitchens from the cleaning of equipment and utensils used in the preparation and serving of food.

Wastewater collection systems are neither designed nor equipped to handle the accumulation of FOG on the interior of the sewer collection system pipes as a result of improper discharges and, therefore, may result in spills. Spills of wastewater into the stormwater collection system that ultimately reach our natural bodies of water could be greatly reduced by controlling the discharge of FOG into the wastewater collection system. Spills are readily preventable by good management practices and proper maintenance at FSEs.

To determine the extent of the FOG entering the County's wastewater collection system, the County performed a characterization study titled "County of San Diego Fats, Oils, and Grease Characterization Study" in 2015. The study identified the sources and nature of the FOG generated within the County's system and served to compile and categorize information related to the collection system as it pertains to FOG. The results of the characterization study are documented in the County's FOG Characterization Study included in Appendix D of the SSMP.

Chapter 6

WASTEWATER COLLECTION SYSTEM INSPECTION AND ASSESSMENT

Routine inspection of wastewater collection system facilities provides a means to monitor the condition of the facilities and the effectiveness of the maintenance operations. Information obtained from routine inspections serves to:

- Identify existing or potential problems.
- Provide accurate information regarding any existing or potential problems.
- Isolate the location of any existing or potential problems.
- Provide information regarding the criticality of any existing or potential problems.
- Facilitate identification of the optimal method to rectify problems.

Regular and systematic inspection and assessment of wastewater collection system infrastructure provides a basis for identifying and scheduling capital improvements as well as identifying needed maintenance activities. The results of the overall assessment are used to identify and prioritize projects, determine the funding required to repair, rehabilitate, and replace an aging collection system, and to prioritize the allocation of funds. Recommendations for capital improvements will optimize the expenditure and efforts to operate a sewer collection system.

The County employs CCTV technology for the inspection of its wastewater pipelines. With the use of the County's two CCTV trucks, inspections of the wastewater collection system are conducted on a regular basis. The CCTV inspections are generally performed subsequent to pipe cleaning and debris removal and of all new and rehabilitated pipelines in response to lateral backups to verify the condition of the public sewer main, to confirm contractor compliance with County design and construction standards. The County's CCTV truck is equipped with GraniteNet software developed by Cues. The inspection codes incorporated into the Granite Software are National Association of Sewer Service Companies (NASSCO) certified and comply with the Pipeline Assessment and Certification Program (PACP). The information obtained and recorded from the CCTV inspections is reviewed, recorded, and a preliminary assessment is made by the County CCTV crew. Defects are assigned a defect code and a severity rating according to the rating scale included with the GraniteNet software. The County's latest inspection was completed in 2021.

6.1 Pipeline Inspection

Uniform and consistent application of the observation codes, comments, and ratings is paramount in providing informative evaluation results. Utilization of standardized inspection observation codes by appropriately trained CCTV crew members serves to provide a consistent evaluation of the condition of the pipeline. Several of the County's sewer maintenance staff are PACP, Maintenance Hole and Assessment Certification Program (MACP) certified.

Included in Attachment A is NASSCO PACP Condition Grading System Code Matrix from the PACP Condition Grading System Guidelines with which the CCTV truck is equipped and to which severity grades are assigned. The severity grades range from 1 to 5 (with 5 being the most severe) and are assigned to the corresponding defect observation code to assist County staff in determining whether further assessment of the condition is necessary.

The preliminary condition assessment is performed by the CCTV operator and relies on the operator's preliminary assessment of the entire reach of pipe between two maintenance holes. The current process used by the County requires County staff to re-evaluate the CCTV data and images of a pipe segment. Therefore, the videos are reviewed several times: once during field inspections and then again to develop the best renewal recommendation and solution.

Defect observation codes should be utilized in conjunction with digital information to document the condition of the entire pipe segment. Due to the wide range of potential conditions that may be encountered during inspection of each individual facility, the observations developed and utilized should encompass a wide range of typical observations encountered with additional detailed descriptions to further refine the data in a format easy for querying.

6.2 Maintenance Hole Inspections

Maintenance hole inspections are conducted with the cleaning of the sewer main. All inspections are conducted through a work order created in Cityworks. County crews conduct visual inspections of the maintenance holes during regular cleaning efforts. The maintenance holes with detected defects are noted and the information is provided to the Regional Sanitation Supervisor for tracking and reporting purposes.

6.3 County Condition Assessment Procedures

As part of the assessment process, pipelines and/or maintenance holes identified as requiring repair, rehabilitation, or replacement must be prioritized. Videos and pictures captured during the CCTV inspections and containing noted defects are reviewed. Pipeline segments and maintenance holes are scored to indicate the criticality of the asset condition using NASSCO PACP and MACP grading systems.

Chapter 7

REPAIR, REHABILITATION, AND REPLACEMENT OPTIONS

Wastewater collection system repair, rehabilitation, and replacement is necessary to maintain adequate service and restore and maintain the structural integrity of the collection system and to provide adequate hydraulic capacity, including the reduction of inflow and infiltration (I/I). The purpose of developing and implementing a repair and rehabilitation program is to cost-effectively maintain system performance, extend the service life, and provide adequate capacity in the County's wastewater collection system infrastructure. Specifically, a well-developed program should serve to:

- Improve the performance and reliability of the system.
- Reduce ongoing maintenance costs.
- Reduce groundwater infiltration and stormwater inflow.
- Provide adequate capacity to reduce incidents of overflow.
- Maintain the value and extend the service life of this publicly owned asset.
- Comply with current and anticipated future public health and environmental regulations.

This section describes the County's current repair efforts, describes the various repair, rehabilitation, and replacement methods available, and outlines criteria to help identify which method would be the most appropriate and cost effective for specific conditions.

7.1 Current County Repair Procedures

The County's District Engineering Section is responsible for performing various types of wastewater facility repairs and rehabilitation improvements. Repair and rehabilitation work performed by crews may include point repairs at cracks, joints, and service interfaces, repairing collapsing or broken sewer pipe, removing obstructions in the sewers that hinder cleaning operations, maintenance hole rehabilitation, video inspection and other related work. The County retains outside services for repair work.

7.2 CIP Improvement Options

Several factors determine the priority of projects identified during the assessment process, although the condition of the pipe is usually the primary factor. Additional factors used to determine priority may include goals to reduce spills, reducing I/I in pipes located below the water table, or reducing maintenance efforts by improving pipe conditions. Other considerations include coordinating surface and utility improvements with the other agencies that may be impacted by the necessary improvements.

Chapter 8

CIP DEVELOPMENT

A properly planned short and long range CIP for the wastewater collection system allows the County to plan, design, and construct sewer infrastructure projects in a planned and organized manner that best serves its customers.

Projects included are primarily based on the assessment of the CCTV inspections conducted by County staff while CIP projects are identified based on capacity modeling results and other necessary projects identified during the update of the County master plans. Therefore, integrating the results of the inspection and assessment efforts with those of the capacity modeling, the County is able to proactively and comprehensively implement a long-range planning effort.

Prioritizing projects relies on several factors, including:

- Severity and extent of the conditional defects.
- Hydraulic capacity needs and projections.
- Estimated remaining useful life of the facilities.
- Maintenance records (condition findings) and spill occurrences.
- Identified, major new developments.

Using this data, the County updated several of its master plans and developed a rolling 10-year CIP list of projects, which identifies projected costs and dates for start and end of construction. The CIP, WWM Engineering, and Operational staff should review the list regularly to coordinate and include newly identified projects, revise the priorities, and update estimated costs based on new information.

Chapter 9

COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

The County uses Cityworks, a CMMS that provides a method for agencies to track equipment, maintain an inventory of its assets, detail timing and method in which work orders will be performed to maintain the assets, and accumulate all associated costs for labor, materials, and equipment. The ability to track activities such as scheduled and performed work, and workforce productivity allows County staff to determine the resources necessary for routine preventive maintenance activities as well as additional activities necessary to confirm proper O&M of the County's wastewater collection system.

Cityworks, a versatile CMMS, in conjunction with GraniteNet, a GIS-based tool, for maintaining specific wastewater collection system data may be utilized and customized to manage specific activities and resources associated with the County's collection system including, but not limited to the following:

- Tracking and monitoring ongoing O&M activities.
- Ensuring proper coordination between wastewater collection system maintenance work and other activities.
- Establishing a more efficient and systematic approach planned maintenance activities that enables a more efficient use of staff resources.
- Affecting inventory control enabling better spare parts forecasting to eliminate shortages and minimize existing inventory.
- Tracking and monitoring work orders for specific system activities.
- Eliminating paperwork and manual tracking activities, thus enabling staff to become more productive.

Chapter 10

EQUIPMENT AND REPLACEMENT PART INVENTORIES

The District Engineering Section maintains an inventory of vehicles and replacement parts. The inventory of vehicles and equipment available for performing the daily routine O&M of the County's wastewater collection system includes the type and quantity of the equipment. Attachment B includes a summary of the vehicles and general equipment available to Wastewater Division maintenance staff. Table 10.1 is an equipment list.

Table 10.1 Equipment List

Unit Type	Quantity
Traffic Control Equipment	
Trailer Mounted Arrow Board	1
Traffic Cones	100
Traffic Control Signs	-
Generators	
Large Trailer Mounted Generators	2
Portable Honda Generators	3
Pipe	
Replacement Pipe	Ordered as Needed
Replacement Fittings	Ordered as Needed
Maintenance Hole	
Precast Concrete Components	Ordered as Needed
Frames, Rings, and Covers	Ordered as Needed

Chapter 11

TRAINING PROGRAM

Training programs are developed to confirm that personnel are well-trained to implement all applicable and necessary components of the County's established programs and successfully achieve established strategic goals. The County District Engineering staff are trained on the provisions of the wastewater O&M policies, procedures, safety policies, and the equipment used. Additionally, District Engineering staff are encouraged to obtain Wastewater Treatment Certification through California Water Environment Association.

Training includes "on-the-job" training in conjunction with bi-weekly "tailgate" meetings to discuss safety issues.

Attachment A

NASSCO PACP CONDITION GRADING SYSTEM CODE MATRIX

PACP/LACP Condition Grades

Structural Codes

Description	Code	Structural Grade				O&M Grade
		Sanitary/Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe	
CRACK						
Crack Circumferential	CC	1	1	1	4	
Crack Hinge 2	CH2	2	5	2	5	
Crack Hinge 3	CH3	3	5	3	5	
Crack Hinge 4	CH4	4	5	4	5	
Crack Longitudinal	CL	2	3	2	4	
Crack Multiple	CM	3	3	3	4	
Crack Spiral	CS	2	3	2	4	
FRACTURE						
Fracture Circumferential	FC	2	4	2	5	
Fracture Hinge 2	FH2	3	5	3	5	
Fracture Hinge 3	FH3	4	5	4	5	
Fracture Hinge 4	FH4	4	5	4	5	
Fracture Longitudinal	FL	3	4	3	5	
Fracture Multiple	FM	4	4	4	5	
Fracture Spiral	FS	3	4	3	5	
BROKEN						
Broken	B	4	5	4	5	
Broken Soil Visible	BSV	5	5	5	5	
Broken Void Visible	BVV	5	5	5	5	
HOLE						
Hole	H	1 clock pos → 4 ≥ 2 clock pos → 5	5	1 clock pos → 4 ≥ 2 clock pos → 5	5	
Hole Soil Visible	HSV	5	5	5	5	
Hole Void Visible	HVV	5	5	5	5	

Description	Code	Structural Grade				O&M Grade
		Sanitary/Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe	
DEFORMED						
Deformed Flexible Bulging Inverse Curvature	DFBI	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5	
Deformed Flexible Bulging Round	DFBR	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	4	
Deformed Flexible Creasing	DFC	5	5	5	5	
Deformed Flexible Elliptical	DFE	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	≤ 5% → 2 > 5% to ≤ 10% → 3 > 10% to ≤ 20% → 4 > 20% to ≤ 40% → 5	
Deformed Rigid	DR	≤ 5% → 4 > 5% → 5	≤ 5% → 4 > 5% → 5	≤ 5% → 4 > 5% → 5	≤ 5% → 4 > 5% → 5	
Deformed Brick Bulging Inverse Curvature	DTBI	5	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5		
Deformed Brick Bulging Round	DTBR	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5	≤ 10% → 4 > 10% → 5		
COLLAPSE						
Collapse	X	5	5	5	5	
JOINT						
Joint Angular Large	JAL	5	5	5	5	
Joint Angular Medium	JAM	3	5	3	5	
Joint Angular Small (Change of Direction)	JAS	2	4	1	5	
Joint Offset Large	JOL	5	5	4	5	
Joint Offset Large Defective	JOLD	5	5	5	5	5
Joint Offset Medium	JOM	4	5	3	5	
Joint Offset Medium Defective	JOMD	4	5	4	5	4
Joint Offset Small (Displaced)	JOS	2	4	1	5	
Joint Offset Small Defective	JOSD	2	4	1	5	
Joint Separated Large	JSL	5	5	4	5	
Joint Separated Medium	JSM	4	5	3	5	
Joint Separated Small (Open)	JSS	2	4	1	5	

The Condition Grade Tables only include codes with defect ratings. For a full list of codes, see Appendix A.

Description	Code	Structural Grade				O&M Grade
		Sanitary/Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe	
SURFACE DAMAGE						
Surface Damage Aggregate Missing	SAM	4	3	4	3	
Surface Damage Aggregate Projecting	SAP	3	3	3	3	
Surface Damage Aggregate Visible	SAV	2	3	2	3	
Surface Damage Corrosion	SCP	3	3	3	3	
Surface Damage Missing Wall	SMW	5	5	5	5	
Surface Damage Pitting	SPP	4	4	4	4	
Surface Damage Reinforcement Corroded	SRC	5	5	5	5	
Surface Damage Roughness Increased	SRI	1	1	1	1	
Surface Damage Reinforcement Projecting	SRP	5	4	5	4	
Surface Damage Reinforcement Visible	SRV	4	4	4	4	
Surface Damage Spalling of Coating	SSC	1	1	1	1	
Surface Damage Surface Spalling	SSS	2	3	2	3	
Surface Damage Other Defective	SZD	3	3	3	3	
LINING FEATURE						
Lining Feature Annular Space	LFAS	3	3	3	3	
Lining Feature Blistered	LFB	3	3	3	3	
Lining Feature Service Cut Shifted	LFCS	3	3	3	3	
Lining Feature Detached	LFD	3	3	3	3	
Lining Feature Discoloration	LFDC	3	3	3	3	
Lining Feature Defective End	LFDE	3	3	3	3	
Lining Feature Delamination	LFDL	3	3	3	3	
Lining Feature Overcut Service	LFOC	3	3	3	3	
Lining Feature Resin Slug	LFRS	3	3	3	3	
Lining Feature Undercut Service	LFUC	3	3	3	3	
Lining Feature Wrinkled	LFW	3	3	3	3	

The Condition Grade Tables only include codes with defect ratings. For a full list of codes, see Appendix A.

Description	Code	Structural Grade				O&M Grade
		Sanitary/Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe	
WELD FAILURE						
Weld Failure Circumferential	WFC	2	4	2	4	
Weld Failure Longitudinal	WFL	2	4	2	4	
Weld Failure Multiple	WFM	3	5	3	5	
Weld Failure Spiral	WFS	2	4	2	4	
POINT REPAIR						
Point Repair Liner Defective	RPLD	4	4	4	4	
Point Repair Mechanical Sleeve	RPM		3			
Point Repair Mechanical Sleeve Defective	RPMD	4	4	4	4	
Point Repair Patch	RPP		3		3	
Point Repair Patch Defective	RPPD	4	4	4	4	
Point Repair Replacement	RPR		3		3	
Point Repair Replacement Defective	RPRD	4	4	4	4	
Point Repair Other	RPZ		3		3	
Point Repair Other Defective	RPZD	4	4	4	4	
BOLTS – METAL PIPE						
Bolts Loose	BTL	2	3	2	3	
Bolts Missing	BTM	3 4 – two or more clock positions	4 5 – two or more clock positions	3 4 – two or more clock positions	4 5 – two or more clock positions	
BRICKWORK						
Displaced Brick	DB	3	3	3		
Dropped Invert	DI	5	5	5		
Missing Brick	MB	4	4	4		
Missing Mortar Large	MML	3	5	3		
Missing Mortar Medium	MMM	3	4	3		
Missing Mortar Small	MMS	2	3	2		

Operation and Maintenance Codes

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
DEPOSITS						
Deposits Attached Encrustation	DAE		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Attached Grease	DAGS		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Attached Ragging	DAR		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Attached Other	DAZ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Ingress Fine	DNF		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	5
Deposits Ingress Gravel	DNGV		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	5
Deposits Ingress Other	DNZ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	5
Deposits Settled Hard/Compacted	DSC		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
Deposits Settled Fine	DSF		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Settled Gravel	DSGV		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Deposits Settled Sanitary	DSS		5	5	5	5
Deposits Settled Other	DSZ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
ROOTS						
Roots Fine Barrel	RFB		2	2	2	5
Roots Fine Connection	RFC		1	2	1	5
Roots Fine Joint	RFJ		1	2	1	5
Roots Fine Lateral	RFL		1	2	1	5
Roots Tap Barrel	RTB		3	3	3	5
Roots Tap Connection	RTC		2	3	2	5
Roots Tap Joint	RTJ		2	3	2	5
Roots Tap Lateral	RTL		2	3	2	5
Roots Medium Barrel	RMB		4	4	4	5
Roots Medium Connection	RMC		3	4	3	5
Roots Medium Joint	RMJ		3	4	3	5
Roots Medium Lateral	RML		3	4	3	5
Roots Ball Barrel	RBB		5	5	5	5
Roots Ball Connection	RBC		5	5	5	5
Roots Ball Joint	RBJ		5	5	5	5
Roots Ball Lateral	RBL		5	5	5	5
INFILTRATION						
Infiltration Weeper Barrel	IWB		2	2	1	5
Infiltration Weeper Connection	IWC		2	2	1	5

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
Infiltration Weeper Joint	IWJ		2	2	1	5
Infiltration Weeper Lateral	IWL		2	2	1	5
Infiltration Dripper Barrel	IDB		3	3	1	5
Infiltration Dripper Connection	IDC		3	3	1	5
Infiltration Dripper Joint	IDJ		3	3	1	5
Infiltration Dripper Lateral	IDL		3	3	1	5
Infiltration Runner Barrel	IRB		4	4	1	5
Infiltration Runner Connection	IRC		4	4	1	5
Infiltration Runner Joint	IRJ		4	4	1	5
Infiltration Runner Lateral	IRL		4	4	1	5
Infiltration Gusher Barrel	IGB		5	5	5	5
Infiltration Gusher Connection	IGC		5	5	5	5
Infiltration Gusher Joint	IGJ		5	5	5	5
Infiltration Gusher Lateral	IGL		5	5	5	5
Infiltration Stain Barrel	ISB		1	1	1	5
Infiltration Stain Connection	ISC		1	1	1	5
Infiltration Stain Joint	ISJ		1	1	1	5
Infiltration Stain Lateral	ISL		1	1	1	5
OBSTACLE/OBSTRUCTION						
Obstruction Brick or Masonry	OBB		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstruction Through Connection	OBC		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstruction Intruding Through Wall	OBI		5	5	5	5
Obstruction Wedged in Joint	OBJ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5

The Condition Grade Tables only include codes with defect ratings. For a full list of codes, see Appendix A.

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
Obstruction Pipe Material in Invert	OBM		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstruction Construction Debris	OBN		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstruction External Pipe or Cable	OBP		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstacle/Obstruction Rocks	OBR		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstruction Built into Structure	OBS		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Obstacle/Obstruction Other Objects	OBZ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
VERMIN						
Vermin Cockroach	VC		1	1	1	
Vermin Rat	VR		2	2	2	
Vermin Other	VZ		1	1	1	1
LEAK						
Leak	LK					5
Leak Barrel	LKB					5
Leak Joint	LKJ					5

Construction Codes

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
TAP						
Tap Break-In Defective	TBD		3	4	3	
Tap Break-In Intruding*	TBI		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	
Tap Drop Defective	TDD		3	4		
Tap Drop Intruding	TDI		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5		
Tap Factory Defective	TFD		3	4	3	4
Tap Factory Intruding*	TFI		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Tap Rehabilitated Defective	TRD		3	4	3	4
Tap Rehabilitated Intruding*	TRI		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Tap Saddle Defective	TSD		3	4	3	4
Tap Saddle Intruding*	TSI		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
INTRUDING SEALING MATERIAL						
Intruding Sealing Material Grout	ISGT		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5

The Condition Grade Tables only include codes with defect ratings. For a full list of codes, see Appendix A.

Description	Code	Structural Grade	O&M Grade			
			Sanitary/Combined/ Stormwater (non-perforated)	Dam/Levee	Perforated Pipe	Pressure Pipe
Intruding Sealing Material Sealing Ring	ISSR		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Intruding Seal Material Sealing Ring Broken	ISSRB		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Intruding Seal Material Sealing Ring Hanging	ISSRH		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
Intruding Seal Material Sealing Loose, Poorly Fitting	ISSRL		2	2	2	2
Intruding Sealing Material Other	ISZ		≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5	≤ 10% → 2 > 10% to ≤ 20% → 3 > 20% to ≤ 30% → 4 > 30% → 5
LINE						
Line Down**	LD		1	1	1	1
Line Left**	LL		1	1	1	1
Line Left Down**	LLD		1	1	1	1
Line Left Up**	LLU		1	1	1	1
Line Right**	LR		1	1	1	1
Line Right Down**	LRD		1	1	1	1
Line Right Up**	LRU		1	1	1	1
Line Up**	LU		1	1	1	1

Hidden Formulas in Software:

*Percent = (Length of intrusion/Pipe height) x 100
**Degrees = (Percent/100) x 90

Miscellaneous Codes

Description	Code	Structural Grade				O&M Grade			
		Sanitary/Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe	Sanitary/ Combined/ Stormwater (non-perforated)	Levee/ Dam	Perforated Pipe	Pressure Pipe
Miscellaneous Air Pocket	MAP								4
Miscellaneous Camera Underwater	MCU					4	4	4	
Miscellaneous Discoloration	MDC								1
Miscellaneous Survey Abandoned	MSA						4	4	
Miscellaneous Turbidity	MT								3
Miscellaneous Turbidity Transient Air	MTA								2
Miscellaneous Water Level Sag	MWLS	≤ 30% → 2 > 30% to ≤ 50% → 3 > 50% to ≤ 75% → 4 > 75% → 5	≤ 30% → 2 > 30% to ≤ 50% → 3 > 50% to ≤ 75% → 4 > 75% → 5	≤ 30% → 2 > 30% to ≤ 50% → 3 > 50% to ≤ 75% → 4 > 75% → 5	≤ 30% → 2 > 30% to ≤ 50% → 3 > 50% to ≤ 75% → 4 > 75% → 5				

Note

MSA is graded as a 4 in Dam/Levee and Perforated Pipe due to the inability to conduct a reverse inspection. This is to note that the inspection of the entire pipe could not be completed and should be flagged for a follow-up inspection.

Attachment B

WASTEWATER EQUIPMENT LIST

South/North Facilities Operations - Vehicle Inventory

Vehicle ID Number	Description
D82745	Operators Pickup
D82973	Supervisors Pickup
D80578	Operator Pickup
D82746	Operator Pickup
D82928	Operator Pickup
D82876	Operator Pickup
D83049	Operator Pickup
D82880	Operator Pickup
D82929	Operator Pickup
D82992	Operator Pickup
D82979	Operator Pickup
D82869	Operator Pickup
D82869	Electricians Van
D82910	Portable Generator
D82912	Portable Generator
D82911	Portable Generator
D82913	Portable Generator
D82877	8-inch Portable Pump
D82865	4-inch Portable Pump
D82864	4-inch Portable Pump
D83075	2019 CAT 289D Loader

Spring Valley Operation - Vehicle Inventory

Vehicle ID Number	Description
D83038	Supervisor Pickup
D83045	Utility Pickup
D82849	Utility Pickup
D82726	Flatbed
D82754	CCTV Van
D82927	CCTV Van
D82622	Lane Truck
D83069	Jet Rodder
D83058	Jet Rodder
D82924	Vactor
D82779	Vactor
D82852	Vactor
D82740	Hook Truck
D82702	Dump Bed
D82725	Hook Truck
D80069	Dump Bed
D82787	Hook Truck
D82786	Continuous Rodder
D82733	Water Tank
D82991	Backhoe
D82760	Skid Steer
D82839	Mini-X
D82302	Zieman Trailer
D82303	Zieman Trailer
D82775	Trail King Trailer, Long
D82794	Trail King Trailer, Long
D82806	Response Trailer
D82763	Easement Machine
D83074	Light Tower

SPRING VALLEY SANITATION DISTRICT/WW COLLECTIONS DIVISION
11937 Campo Road
Spring Valley, CA 91978
Main # 619-660-2007/FAX 619-670-1576
MS S156

CCTV TRUCK 1	**619-241-1017**
CCTV TRUCK 2	**619-541-1449**
STANDBY OPERATOR (AFTER HOURS)	**619-823-8212**

WW COLLECTION STAFF	OFFICE NUMBER	CELL NUMBER
Alex Lopez, Senior EO	**619-660-2007**	**619-643-8742**
Alfonso Vargas, Senior EO	619-660-2007	
Bertram Cordova, EO	619-660-2007	
Gaston Vidal Jr., EO	619-660-2007	
George Irons, EO	619-660-2007	
Lamont Barnes, EO	619-660-2007	
Manuel Lafarga, Senior EO	619-660-2007	
Michael Arakawa, EO	619-660-2007	
Michael Leos, EO	619-660-2007	
Michael Sherman, EO	619-660-2007	
Misael Sanchez Diaz, Senior EO	619-660-2007	
Rick Mendoza Jr., Senior EO	**619-660-2007**	
Scott Tally, Program Coordinator	***619-660-2007***	***619-538-2150***
Roberto Rodriguez, Sanitation Supervisor	***619-660-2007***	***619-417-6194***
Anthony Perry, Senior EO	619-660-2007	

SPRING VALLEY SANITATION DISTRICT/WW FACILITIES DIVISION
11937 Campo Road
Spring Valley, CA 91978
MAIN # 619-660-2008/FAX 619-670-1576
MS 156

Spring Valley Operation Treatment **619-660-2008**
Julian Wastewater Treatment Plant **760-756-0273**

WW PLANT OPERATORS	OFFICE NUMBER	CELL NUMBER
Brandon Asoro, Wastewater Plant Operator III	619-660-2008	619-226-9419
Christine Lavoie, Wastewater Plant Operator II		619-823-8478
Gary Henry, Wastewater Plant Operator II	619-660-2008	619-538-1347
Keith Kelly, Wastewater Plant Operator III	619-660-2008	619-851-4202/ 619-994-6831
Randy Rush, Wastewater Plant Operator II Ricky Najarila, Program Coordinator		858-472-0167 619-753-9267

APPENDIX B

CONTACT INFORMATION

Table B.1 Contact Information

Name	Position	Email	Telephone
Anthony Hooper	LUEG Program Manager	anthony.hooper@sdcounty.ca.gov	619-346-5740
Sumedh Bahl	Group Program Manager	sumedh.bahl@sdcounty.ca.gov	619-876-9277
Marisa Barrie	Director of Public Works	marisa.barrie@sdcounty.ca.gov	858-694-3087
Samir Nuhaily	Deputy Director of Engineering Services Division	samirm.nuhaily@sdcounty.ca.gov	619-507-7754
Chris Hanger	CIP Manager	chris.hanger@sdcounty.ca.gov	858-869-5815
Mike Bedard	Unit Manager	mike.bedard@sdcounty.ca.gov	619-346-9551
Scott Tally	Program Coordinator	scott.tally@sdcounty.ca.gov	619-538-2150
Roberto Rodriguez	Sanitation Supervisor	roberto.rodriguez1@sdcounty.ca.gov	619-417-6194
Stacy Preve	Facilities Supervisor	stacy.preve@sdcounty.ca.gov	858-248-9458
Wasim Hanna	Senior Civil Engineer	wasim.hanna@sdcounty.ca.gov	858-334-5511

APPENDIX C

SPILL EMERGENCY RESPONSE PLAN

San Diego County Sanitation District
Sewer System Management Plan

Appendix C
SPILL EMERGENCY RESPONSE PLAN

FINAL | February 2025

Contents

Attachments

Tables

Figures

Abbreviations

Cal OES	California Office of Emergency Services
CIWQS	California Integrated Water Quality System
County	County of San Diego
CWA	Clean Water Act
DEH	Department of Environmental Health
DPW	Department of Public Works
General Order	General Order for Sanitary Sewer Systems Order WQ 2022-0103-DWQ
gpm	gallons per minute
GPS	Global Positioning System
LRO	Legally Responsible Official
OES	Office of Emergency Services
PLSD	Private Lateral Sewage Discharge
SCADA	supervisory control and data acquisition
SDRWQCB	San Diego Regional Water Quality Control Board, District 9
SERP	Spill Emergency Response Plan
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
WDID	Waste Discharge Identification Number
WDRs	Waste Discharge Requirements
WWM	Wastewater Management
WWTP	wastewater treatment plant

Chapter 1

INTRODUCTION

Since spills of various volumes occur from time to time in spite of concerted prevention efforts, the County of San Diego (County) has prepared this Spill Emergency Response Plan (SERP). spills may occur from blocked sewers, pipe failures, mechanical malfunctions, and other natural or man-made causes. County crews are constantly on alert and ready to respond upon notification and confirmation of a spill.

This SERP establishes the formal procedures for County staff to respond to, contain, correct, and remediate spills that occur within any of the County's Service Areas, and it is intended to minimize the effects of spills on the environment while protecting the public's health and safety. Chapter 1 provides an overview of the County's wastewater collection system, the purpose and goals of the SERP, the regulatory authority requiring this plan, an overview of this document's organization, and definitions of terms contained in this document.

1.1 Wastewater Collection System Overview

The County's Department of Public Works (DPW) staff is responsible for the operation and maintenance of an extensive wastewater collection system and is tasked with ensuring proper and efficient operation of the system. The County spans approximately 4,526 square miles and has approximately three (3) million residents. Approximately three-quarters of the unincorporated population are served by private disposal systems. The remaining unincorporated areas are served by the County Sanitation District, reflecting the rural nature of large portions of the County. The vast majority of those currently receiving public sewer service are concentrated in two (2) of the more urbanized service areas including the Spring Valley and Lakeside Service Areas.

The County administers eight (8) sewer service areas that serve approximately 36,000 customers in several diverse and geographically separated unincorporated communities. Figure 1.1 shows the eight (8) County service areas for which the Wastewater Management (WWM) Division of the County's DPW provides management, administrative, operational and various support personnel for proper operation and maintenance of the wastewater collection system. Table 1.1 includes a summary of the existing service areas within the County's jurisdiction. Collectively, the conveyance system includes approximately 432 miles of pipeline, approximately 8,200 maintenance holes, and eight (8) lift stations.

Table 1.1 San Diego County Sanitation District Service Areas

County of San Diego Service Areas	
Alpine	Julian
Lakeside	Campo
Spring Valley	East Otay Mesa
Pine Valley	Winter Gardens

Wastewater treatment is provided by either the City of San Diego Metropolitan Wastewater System or one of several locally based plants operated by the respective County service area, depending on the community. Table 1.2 provides a summary of the locally based plants operated by the County.

Table 1.2 County Operated Treatment Plants

Treatment Facility	Address	City/State/Zip
Rancho Del Campo WWTP	31035 Forrest Gate Road	Campo, CA 92006
Julian WWTP	2840 Highway 78	Julian, CA 92036
Pine Valley WWTP	Pine Valley County Park, Old Highway 80	Pine Valley, CA 91962

Notes:
Abbreviation: WWTP - Wastewater Treatment Plant

1.2 Purpose and Goals

The County recognizes the importance of protecting the health and safety of the public as well as the environment by preventing sewer flows from reaching surface and ground waters and waters of the United States. The County also understands the necessity to implement procedures to comply with the requirements of state regulations. The primary goal in establishing this SERP is to provide guidance for County staff to respond appropriately and efficiently to all known spills immediately.

The objectives of the SERP can be summarized as:

- Protect public health and safety, and the environment.
- Protect adverse impacts to surface and ground waters.
- Minimize the effects of spills.
- Satisfy regulatory and discharge permit conditions.
- Protect private and public property.
- Protect County personnel.
- Minimize service interruptions to County services.
- Protect all County-owned assets.

This SERP is intended to supplement and be consistent with existing emergency plans and standard operating procedures currently implemented by County WWM staff for the wastewater facilities in each service area operated and maintained by County staff. The overall plan will facilitate coordination and mobilization of necessary facilities and personnel in an organized and efficient manner when responding to a spill.

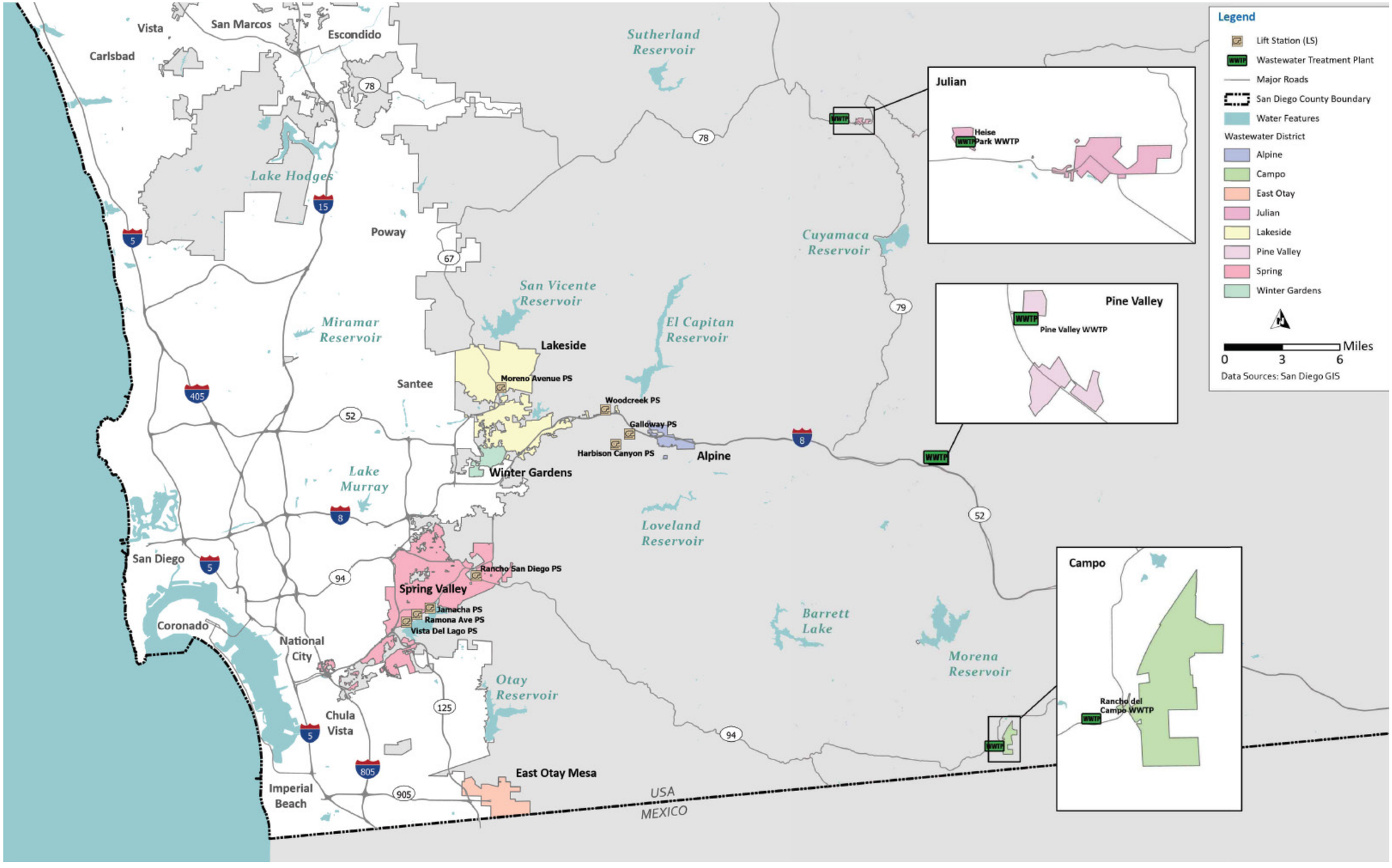


Figure 1.1 County of San Diego Sanitation District Service Areas

1.3 Organization of this SERP

This document provides the necessary guidelines for County WWM staff to respond to a spill event. This SERP contains the following elements:

- Introduction.
- Spill Response Procedures.
- Public Advisory of Sewage Contamination Procedures.
- Spill Monitoring and Reporting Requirements.
- Training Requirements.
- SERP Updating Requirements.
- Various Appendices.

1.4 Regulatory Requirements

The following regulatory requirements establish the impetus for the County to develop and follow procedures to minimize spills.

- Clean Water Act, Section 1251 of Chapter 33 of the United States Code: In 1972, the federal Congress enacted the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA). The CWA prohibits the discharge of pollutants, including sewage, into public waters of the United States. The federal government has the authority to enforce compliance with the CWA via specific permits, such as National Pollutant Discharge Elimination System permits, as well as court action such as administrative orders and consent decrees.
- California Water Code Section 13271, California Code of Regulations: Section 13271 of the California Water Code, Title 23 of the California Code of Regulations, prohibits the discharge of sewage and hazardous material into the waters of the State and requires the proper notification of authorized agencies in the event of a spill. Entities which do not properly follow the requirements of this section may be found guilty of a misdemeanor and punished by fine, imprisonment, or both.
- The Water Quality Control Plan for the San Diego Basin 9 (Basin Plan): The Regional Board adopted a Water Quality Control Plan for the San Diego Basin on September 8, 1994. The Basin Plan which was subsequently approved by the State Board on December 13, 1994. The basin plan designates beneficial uses, narrative, and numerical water quality objectives, and prohibitions which are applicable to the discharges prohibited under this Order. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State board.
- 2006 California Waste Discharge Requirements for Sanitary Sewer Systems: On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted the Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Order No. 2006-0003. The WDRs are applicable to all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to publicly owned treatment facilities in the state of California. Specifically, the WDRs, as part of the Monitoring and Reporting Program, require that the County establish monitoring, record keeping, reporting, and public notification requirements for spills, including on-line reporting requirements through the State's California Integrated Water Quality System (CIWQS) web-site. The WDRs required that the County began on-line reporting on January 2, 2007, and that the

County prepare an Emergency Response Plan by May 2, 2009. This SERP fulfills the later requirement and documents the County's efforts to comply with the on-line reporting.

- 2008 General Waste Discharge Requirements Monitoring and Reporting Amendment: On February 20, 2008, the SWRCB adopted Order No. WQ 2008-0002-EXEC, which amends the Monitoring and Reporting Program of Order No. 2006-0003-DWQ of the Statewide General WDRs for Sanitary Sewer Systems. The amendment serves to confirm that the agencies that have first responder duties are notified in a timely manner in order to effectively protect public health and the beneficial uses of potentially affected water. The Order requires the following:
  - For any discharges of sewage that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.
  - As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services (OES) and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.
- 2013 General Waste Discharge Requirements Monitoring and Reporting Amendment: On August 6, 2013, the SWRCB adopted Order No. WQ 2013-0058-EXEC, which amends the Monitoring and Reporting Program No. 2006-0003-DWQ of the Statewide General WDRs for Sanitary Sewer Systems. The amendment serves to implement changes to spill categories by adding a Category 3 spill type. This change is intended to improve data management to further assist Water Board staff with evaluation of high threat and low threat spills by placing them in unique categories (i.e., Category 1 and Category 3, respectively). It also simplified the notification requirement for spills reaching surface waters, modified other notification requirements slightly, and added a requirement for submittal of a technical report and a water quality monitoring plan for spills to surface water above 50,000 gallons.
- 2022 Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems: To reduce spills in the State of California, the SWRCB adopted the Statewide Water Discharge Requirements General Order for Sanitary Sewer Systems Order WQ 2022-0103-DWQ (General Order) on December 6, 2022. The General Order serves as statewide WDRs and supersedes the previous State Water Board Order 2006-0003-DWQ and amendments thereafter. The General Order established that all municipalities and districts with over one mile of sanitary sewer pipelines develop a Sewer System Management Plan (SSMP). As part of the requirements for the completion of an SSMP, the County is required to develop a SERP. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.
  This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer

systems. The new general order implements changes to the spill categories by adding a Category 4 Spill type. It also modifies the notification, monitoring, and reporting requirements.

- Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region: The General WDRs for Sanitary Sewer Systems, adopted by the State Board on May 2, 2006, establishes minimum requirements for publicly owned/operated sanitary sewer system and allows each regional board to issue more stringent or more prescriptive WDRs for sanitary systems within their respective jurisdiction. On February 14, 2007, the San Diego Regional Water Quality Control Board (SDRWQCB) adopted Order R9-2007-0005. The Order includes additional reporting requirements for wastewater collection agencies within Region 9, including notification of all private lateral sewage discharges for which the agencies become aware of, to the SDRWQCB. The County is located within Region 9.

1.5 Definition of Terms

Category 1 Spill: A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under the General Order that results in a discharge to:

- A surface water, including a surface water body that contains no flow or volume of water; or
- A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

  Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

  A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order.

Category 2 Spill: A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

Category 3 Spill: A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4 Spill: A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

First Responder: The County's Wastewater Maintenance staff person who is initially notified of a possible spill and arrives first at the reported location of the possible spill.

Private Lateral Sewage Discharge: Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

Public Waters: Any body of water such as the ocean, bay, lake, pond, river, stream, or creek where there is the potential for human contact as defined by the County Department of Environmental Health (DEH).

Receiving Water: A receiving water is a water of the State that receives a discharge of waste.

Sewage: Any liquid waste and water borne solid waste resulting from residential, commercial, industrial, or institutional activities or uses.

Spill: A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Surface Waters: All permanent and intermittent drainage ways, lakes, and reservoirs, either public or private, which are not man-made for the treatment of municipal, agricultural, or industrial waste, and wholly or partially within the boundaries of the County. Spills to storm drains tributary to surface waters shall be reported as discharges to surface waters.

Wastewater: Any volume of untreated or partially treated sewage discharged from the wastewater collection system upstream of a wastewater treatment plant.

Wastewater Collection System: Any system of pipes, pump stations, sewer lines, etc., used to collect and convey sewage to a treatment plant. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, high-lines, etc.) are considered to be part of the sanitary sewer system, and discharges of sewage to these facilities are not sanitary sewer overflows.

Waters of the State: Any surface water or groundwater (including saline waters) within the boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States: All waters of the United States as defined in the Code of Federal Regulations, Volume 40, Section 122.2 (40 CFR 122.2) such as navigable waters, rivers, streams, lakes, natural ponds, wetlands, etc., including tributaries to traditional navigable waters.

Chapter 2

SPILL RESPONSE PROCEDURES

Spills are caused by a blockage or a restriction in the wastewater collection system, pipe failures, flows exceeding the capacity of the system, and other natural or man-made causes. In the event of a spill, the County's District Engineering Section of the WWM Division staff must respond and be prepared to:

- Contain the spill.
- Control the overflow.
- Mitigate and clean up the contaminated area.
- Notify the appropriate authorities.

This chapter presents a strategy for staff within the County's District Engineering Section of the WWM Division to mobilize labor, materials, tools, and equipment to contain, mitigate, and clean-up residuals from a sewer overflow or spill and correct or repair any condition which may cause or contribute to an un-permitted sewage discharge. This plan is applicable to a wide range of potential system failures within any of the County's service areas that could result in a spill. Figure 2.1 summarizes the process presented in this chapter and offers a concise overview of the following steps required to quickly respond to an actual or possible spill event.

2.1 Receiving Information about a Possible Spill

A spill may be detected by County employees or the public. Suspicious circumstances, such as foul odors, backed up plumbing, unusual flooding, and so on, may also indicate the possibility of an actual or impending spill. In the event of a spill that may affect County system operations and/or may become a public health issue, personnel from various service areas of the WWM's District Engineering Section may be utilized. This section describes how County wastewater maintenance staff within this Section is notified of possible spills.

2.1.1 Telephone Notifications of Possible Spills

All telephone calls or complaints of possible or actual spills are received via the County's Operations Center Hotline at the Spring Valley Operations Center during business hours and routed to the Standby Duty Supervisor or are routed directly to the Standby Duty Operator if the notification is received during non-business hours. Figure 2.2 shows how a possible spill will be reported to the District Collections Engineering and Operations staff.

As illustrated on Figure 2.2, notification of a potential spill will be received by the County's Operations Center Hotline at the Spring Valley Operations Center and routed directly to the Standby Duty Supervisor during normal business hours. During non-business hours, weekends, and designated County holidays, calls will be routed directly to the Standby Duty Supervisor.

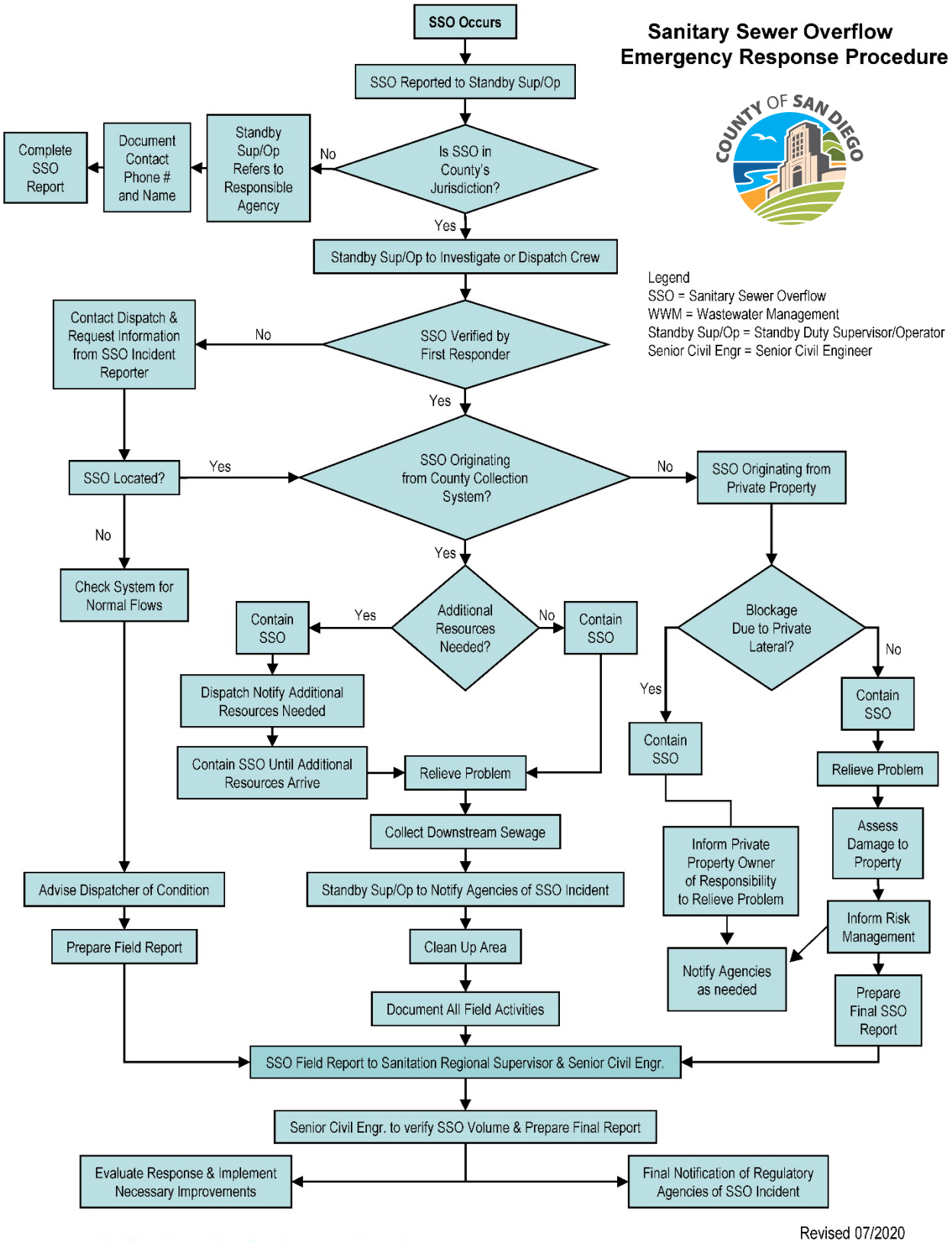


Figure 2.1 Spill Response Procedure

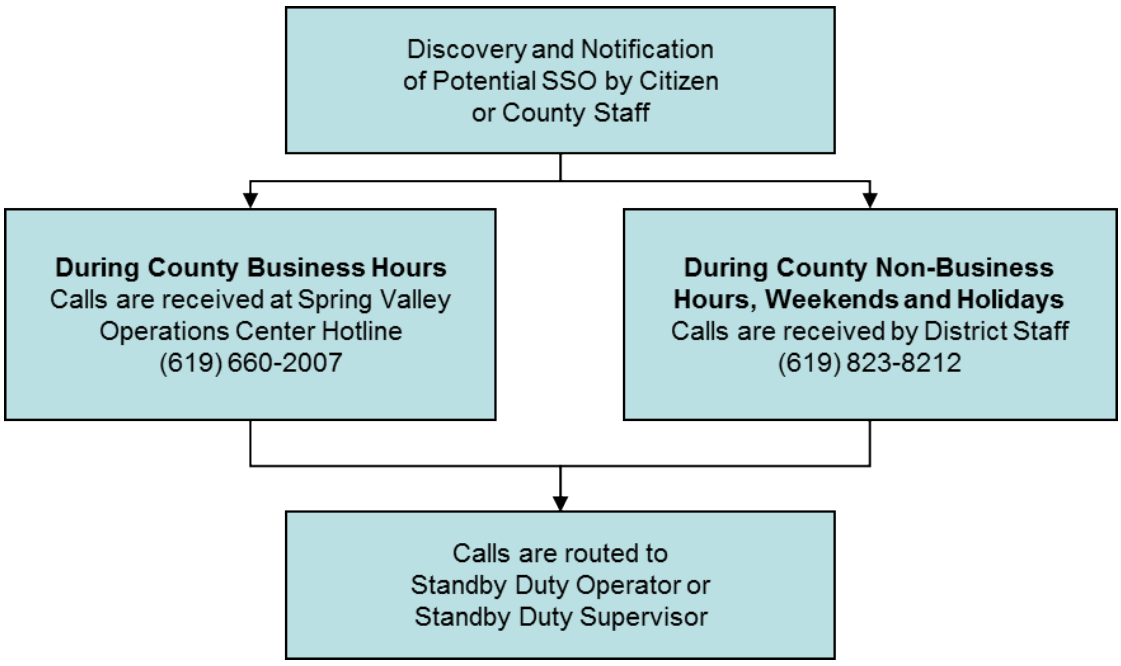


Figure 2.2 Process for Alerting Staff of a Possible Spill

Upon receipt of a notification of a potential spill, the Standby Duty Operator or Standby Duty Supervisor or will obtain as much information as possible from the reporting entity. The relevant information that should be collected includes:

- Time and date the call/spill report was received.
- Specific location (address, cross streets, etc.).
- Description of problem.
- Time the possible spill was noticed by the caller.
- Caller's name and telephone number.
- Observations of the caller (e.g., odor, duration, back or front of property, etc.).
- Other relevant information that will enable the responding County staff, personnel, and crews, if required, to quickly locate, assess, contain, and relieve the spill.

The *Sanitary Sewer Overflow Field Report* form in Attachment A can be used by the Standby Duty Operator or the Standby Duty Supervisor to capture the relevant information needed to respond to a report of a possible spill as well as be useful for initiating the work order assignment. Either the Standby Duty Operator or Standby Duty Supervisor will create a work order for the spill in Cityworks.

2.1.2 Sewer Maintenance Division Personnel Notifications of Possible Spills

Possible and actual spills detected by maintenance personnel in the course of their normal duties are reported immediately to the Supervisor. For incidents that occur during County business hours, staff closest to the location of the incident will be dispatched to the reported spill location. Personnel on-site observing the spill should begin efforts to contain and minimize the effects of the spill as further described in Section 2.5.

2.1.3 Lift Station Alarm Notifications of Possible Spills

The County's lift stations are located throughout the County and are also operated and maintained by District Engineering staff. The County's Collections Engineering and Operations staff is also responsible for responding to any possible or actual spill reported at any of the eight (8) lift stations.

Table 2.1 shows the alarms for each lift station that transmit signals directly to District Facilities Operations staff during business and non-business hours. The alarms listed in Table 2.1 generally exist and are typically incorporated in lift stations. When the alarms are transmitted to the County Operations Center, the Standby Duty Operator or the Standby Duty Supervisor is alerted according to the process illustrated on Figure 2.2 for potential spills that are reported during non-business hours, weekends, and County holidays.

After receiving notification of an alarm activation at a lift station, the Standby Duty Operator or the Standby Duty Supervisor will proceed to the lift station to assess and resolve the situation. If the First Responder requires assistance, he will contact the appropriate personnel for assistance.

Table 2.1 Lift Station Alarms

Lift Stations	Alarms				
	Pump Control Failure	Power Failure	High Water Level in Wet Well	Low Water Level in Wet Well	Communications
Spring Valley					
Jamacha	*	Y	Y	Y	Radio
Ramona Avenue	*	Y	Y	Y	Radio
Vista Del Lago	*	Y	Y	Y	Radio
Rancho San Diego	*	Y	Y	Y	Radio
Alpine					
Galloway	*	Y	Y	Y	Radio
Harbison Canyon	*	Y	Y	Y	Radio
Lakeside					
Moreno Avenue	*	Y	Y	Y	Radio
Woodcreek	*	Y	Y	Y	Radio
Julian					
Julian High School	N	Y	Y	Y	Radio
Additional Locations					
San Pasqual Academy	N	Y	Y	Y	Autodialer
Ramona Airport	N	Y	Y	Y	Radio

Notes:
(1) *These stations are equipped with a "float over-ride" system that takes over if the water level in the wet well rises due to pump control failure. The alarm is transmitted indicating the system was activated.

2.2 First Responder Responsibilities

Based on the information provided during the initial notification of a possible spill, the Standby Duty Operator or Standby Duty Supervisor shall proceed to the spill location to assess the cause and extent of the spill. The County staff member to arrive first at the location is considered the First Responder. The First Responder will determine whether to direct sewer maintenance crews, other County personnel, and/or approved contractors to the spill location if the spill cannot be fully contained or recovered or if it has reached public waters. If the First Responder is the Standby Duty Operator, the Standby Duty Operator will promptly notify the Standby Duty Supervisor of the type, level, and extent of the incident. The information obtained by the First Responder during the initial notification of a possible spill may warrant the First Responder, in his best professional judgment, to immediately dispatch crews or other County personnel to the spill location prior to proceeding to the reported spill location.

It is the responsibility of the First Responder to protect the health and safety of the public by mitigating the impacts of the spill to the extent possible. Areas where public contact with sewage is possible shall be isolated using barricades, signs, or other effective means. Upon determining the spill originated in County's jurisdiction, the First Responder will perform the following:

- Document timestamp photographs:
  - System location where spill originated.
  - Drainage conveyance system entry locations.
  - The location(s) of discharge into surface water, as applicable.
  - Extent of spill spread.
  - The location(s) of cleanup.
- Document GPS coordinates for the system location where the spill originated or, for multiple appearance points of a single spill event, the points closest to the spill origin.
- Determine the cause of the spill, e.g., sewer line blockage, or pipeline break, etc.
- Identify and request, if necessary, additional personnel, materials, and equipment necessary to minimize, contain, or isolate the impact of the spill.
- Control public access to affected area.
- Implement efforts to stop the spill.
- Notify the Senior Civil Engineer.

If the First Responder determines the spill is not within County's jurisdiction, the First Responder should notify the responsible agency to respond to the spill. If the spill poses an imminent danger to the public, public health, property, or to public waterways of the United States, then the First Responder should take prudent emergency actions to mitigate the spill until staff of the responsible agency arrives.

If the First Responder cannot locate the spill or the reported problem, he shall attempt to obtain additional information from the initial caller to clarify reported data and to locate the problem. If the spill or reported problem still cannot be located, the First Responder shall check the system for normal flows and prepare the final field report.

2.3 Dispatch of Crew(s) to Spill Location

Failure of any element within the wastewater collection system that threatens to cause or causes a spill triggers an immediate response to isolate and correct the problem. County sewer

maintenance crews and equipment are stationed at the County's Spring Valley Operations Yard, from where they are dispatched. The equipment is available 24-hours a day and staff is placed on "standby" on a rotational schedule to respond to any site of a reported spill. Also, additional County maintenance personnel are also on "standby" if additional crews are necessary. Attachment B contains the names and contact information for County staff that may be placed on standby.

All County staff dispatched to a spill location shall proceed immediately to the site. All necessary precautionary measures to ensure staff safety shall be in place. Spills within the County's jurisdiction that enter into areas outside the County's authority will continue to be contained and the affected agency will be notified of the spill to ensure proper cleaning and notifications are completed.

2.4 Requesting Additional Resources

If the First Responder determines that notification of additional staff beyond the "standby" spill response crew is required and/or County approved contractors are necessary to fully contain and recover the overflow, the Standby Duty Operator or Standby Duty Supervisor will mobilize the additional resources necessary.

County staff has access to additional resources from its own staff as well as outside on-call contractors that can be mobilized in case of an emergency or major spills. The list of County approved contractors and equipment rental vendors are provided in Attachment C.

2.5 Coordination with Storm Drain Utility Agencies/Departments

Spills of wastewater into the stormwater collection system ultimately reach natural bodies of water and have adverse impacts on water quality. Therefore, collaboration with stormwater agencies prior to, during, and after a spill is an important part of spill response planning and execution.

The County manages and operates the majority of stormwater facilities within the sewer service area so the communication and coordination is primarily inter-departmental. The departments shall collaborate on spill containment and best practices for preventing spills from entering the stormwater collection systems and water bodies. Table 2.2 lists the contact information for the individuals within stormwater departments and agencies.

Table 2.2 Stormwater Department/Agency Contact Information

Agency	Job Title	Name	Phone	Email
County of San Diego, DPW	Watershed Program Manager	Christine Tolchin	(888) 846-0800	watersheds@sdcounty.ca.gov
City of Chula Vista	Department of Public Works	Storm Drain	(619) 397-6000	
City of National City	Department of Public Works	Street Division	(619) 336-4580	publicworks@nationalcityca.gov

Agency	Job Title	Name	Phone	Email
City of El Cajon	Department of Public Works	Strom Water Protection Program	(888) 846-0800	
City of Santee	Public Services Division	Storm Water Pollution Prevention Program	(888) 844-6525	stormwater@cityofsanteeca.gov

2.6 Spill Containment, Correction, and Clean-up

This section describes specific actions to be performed by the District Engineering staff and additional necessary crews responding to a spill. The objectives of actions described in this section include:

- Protect public health, the environment, and property from spills and restore the surrounding area back to its original condition.
- Contain the sewage discharged to the maximum extent possible and prevent the discharge of sewage into surface waters.
- Control traffic and crowds to limit public access by establishing perimeters and control zones with cones, barricades, sign postings, caution tape, vehicles, and/or terrain.
- When appropriate, promptly notify regulatory agencies of preliminary spill information and potential impacts.
- Minimize the County's exposure to any regulatory agency penalties and fines.
- Detailed documentation, including photos, of all above actions.

The County shall respond with its staff, equipment, and/or contractors and, under most circumstances, the County will oversee, manage, and perform the tasks necessary to properly and effectively correct, contain, and clean up spills. County wastewater maintenance staff has the skill and experience to respond rapidly and in the most appropriate manner. Of critical importance with respect to an emergency response is to ensure that the temporary actions necessary to divert flows and fix the problem do not produce a problem elsewhere in the system. If the matter is not handled properly, subsequent sewer system back-ups may occur and create other spills.

The Spill Response Flowchart shown on Figure 2.1 illustrates emergency response procedures including notification and request of additional resources as required in the event of a large spill.

2.6.1 Initial Containment Measures

The following are initial measures to contain the spill and recover, where possible, sewage that has already spilled to minimize impact to the public or environment. County crews responding to the incident shall:

1. Determine the immediate destination of the spill (e.g., street curb gutter, storm drain, drainage channel, creek bed, body of water, etc.).
2. Take immediate steps to contain and recover the spill (e.g., block storm drain, recover sewage with a vactor truck, dig or construct a containment pond, divert flow into a downstream maintenance hole, etc.).

3. Identify and request, if necessary, assistance or additional County and/or Contractor resources (materials and equipment) to contain or isolate the spill.
4. Large spills greater than 10,000 gallons include all of the above, a requirement to build additional emergency containment areas downstream of the spill, if possible, and the initiation of an access plan into storm or flood control channels to contain spills that enter the storm drain system.

2.6.2 Additional Measures for Prolonged Spill Conditions

In the event of a prolonged sewer line blockage or sewer line collapse, responding County crews shall establish a portable by-pass pumping operation around the obstruction, continuously or periodically monitor the by-pass pumping operation, and perform emergency repairs to stop the spill. Detailed documentation including time stamped photos of all of the above steps should be included. Table 2.3 can be used as a guide to select the appropriate pump.

Table 2.3 Pump Capacity Estimating Table

Pump Size (inches)	Estimated Capacity (gpm)	Equivalent Gravity Sewer Flow (half full sewer)
2 x 2	200	6-inch diameter
3 x 3	450	8-inch diameter
4 x 4	600	10-inch diameter
6 x 6	1,000	12-inch diameter
8 x 8	1,600	15-inch diameter
10 x 10	2,800	18-inch diameter

Notes:
Abbreviation: gpm - gallons per minute

2.6.3 Correction of Spill Cause

Once the spill has been contained and the cause determined, efforts to correct the cause of the spill should commence. These efforts may involve, but not be limited to, removing the pipe blockage by flushing or rodding and repairing a damaged pipeline or maintenance hole. Care must be taken to prevent additional spills from occurring as a result of the corrective action taken to resolve the identified problem.

2.6.4 Clean-up

All spill sites must be thoroughly cleaned as soon as possible after an overflow. No readily identifiable residue (e.g., sewage solids, papers, plastics, etc.) is to remain. Clean-up of all spills will be handled according to the following procedures:

- The spill site must be secured to prevent contact by members of the public until the site has been thoroughly cleaned.
- Where practical, the area shall be thoroughly flushed and cleaned of any sewage or wash-down water using a high-pressure water hose or vactor truck; wash-down water shall be contained and recovered; solids and debris shall be flushed, swept, raked, or manually removed, and hauled away for proper disposal.
- Where appropriate (typically in areas with hard surfaces), areas that were in contact with the sewage shall be cleaned using an approved sanitizing agent and deodorizer.

- If sewage discharged into a body of water that may contain fish or other aquatic life, only environmentally approve sanitizing agents will be applied and the appropriate agency will be contacted.
- Where sanitizing agents are utilized, all contaminants shall be contained and collected for proper disposal.
- Where sewage resulted in ponding, the pond must be pumped dry and the residue removed and disposed of properly.

2.7 Traffic and Crowd Control

The purpose of traffic and crowd control is to limit public access to areas potentially impacted by un-permitted discharges of sewage. The following traffic and crowd control recommendations may be used as a guide for the various types of spills.

- Small spill (Up to 1,000 gallons):
  - Set up cones to direct traffic away from spill area.
  - Use County personnel to control traffic and pedestrians.
- Medium spill (1,000 to 10,000 gallons):
  - Perform lane closures as necessary.
  - Place proper signage for any lane closures and contaminated area signs.
  - Close affected entrances or exits from public and private facilities.
  - Place caution tape and barricades to protect pedestrians from contaminated area.
- Large spill (greater than 10,000 gallons):
  - Assess spill situation.
  - Inform County of San Diego Sheriff's Department of any law enforcement assistance necessary for roadway closures and traffic control.
  - Delegate responsibility to County DEH of informing public of hazards.
  - Place signage to inform public of potential hazards to public health and safety.
  - Block public access to hazard using barricades, cones, and caution tape.

2.8 Preliminary Assessment of Damage to Private and Public Property

Initial assessment of the spill site is performed by the Standby Duty Operator or designated back-up. If it is determined that the spill has reached a private residence or business, the spill is reported to the County's Risk Management Division personnel prior to responding County personnel leaving the site. A *Right of Entry* form (see Attachment D) is completed to document County staff's permitted access to the affected site for assessment. The Standby Duty Operator will determine whether the spill originated from the County's collection system or a private business or residence. Once the source of the spill is determined, containment and cleanup procedures are executed, and a *Sanitary Sewer Overflow Field Report* (Attachment A) will be completed. The first responder will attempt to document the private property damage through interviews with residents, photo journaling and documenting all damage.

2.8.1 Public Source Spill

If it is determined that the source of the spill is from the County's wastewater collection system, containment and cleanup procedures are executed to prevent the spill from reaching adjacent

private properties, local water bodies, and the storm drain system. Once the spill is contained and cleaned, proper documentation utilizing the appropriate forms will be completed.

If it is determined that the spill has reached a private residence or business, the spill is reported to the County's Risk Management Division personnel prior to responding County personnel leaving the site. An *Initial Damage Assessment to Private Property* form (see Attachment E) is completed and forwarded with the *Sanitary Sewer Overflow Field Report* to the County's Risk Management Division. Photographs and/or video footage should be taken of the spill and the area impacted by the spill, and should be filed with the *Sanitary Sewer Overflow Field Report*.

2.8.2 Private Source Spill

If it is determined that the source of the spill is from a private property, the First Responder and crews will use discretion in assisting the property owner/occupant as reasonably as they can. County staff is cautioned that County and responding maintenance crews may be liable for further damages inflicted to private property during such assistance. If County wastewater maintenance crews enter private property it should be with the express permission of the owner/occupant of the property. County sewer maintenance crews should not enter private property for the purpose of assessing damage. While on public property, crews are directed to take appropriate still photographs and video footage, if possible, of the surrounding and impacted area in order to thoroughly document the nature and extent of the impacts. Photographs and/or video footage should be filed with the *Sanitary Sewer Overflow Field Report*.

2.9 Notification Requirements

The volume, impact, and location of a spill determine the level of notifications required to comply with County and regulatory requirements. Table 2.4 provides a summary of the agencies that should be notified of a spill as soon as practicable without impeding containment or other emergency response measures. Attachment F lists the various agencies to be contacted. The County is not required to send reports to the SDRWQCB; this reporting is now achieved using the web-based on-line sanitary sewer system spill reporting system, CIWQS, which is further described in Chapter 4.0.

2.10 Regulatory Agency Notification Plan

The Regulatory Agency Notification Plan establishes procedures that the County will follow to provide formal notice to the SDRWQCB, California Office of Emergency Services (Cal OES), Environmental Protection Agency, County DEH, and other agencies as necessary in the event of a spill. Written notification, when required, shall be made within three (3) business days.

2.10.1 Initial Notification

In the event of a spill, the County must notify Federal and State Agency representatives as soon as possible, but no later than two (2) hours, after the spill. Table 2.4 identifies the agencies to be notified and when they are to be notified based on the type and volume of spill.

The initial, and any updated spill reports will then be faxed or mailed to the various agencies as necessary and as identified in the Regulatory Agency Notification List, provided as Attachment F. The Standby Duty Supervisor in charge will contact the regulatory agencies.

Additionally, the SWRCB adopted Order No. WQ 2022-0103-DWQ, requires that for discharges of sewage greater than or equal to 1,000 gallons that results in a discharge to a drainage channel

or a surface water, the responsible agency shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the Cal OES, and the local health officer or directors of environmental health with jurisdiction over the affected water bodies, and the appropriate Regional Water Quality Control Board as soon as practicable.

The County will provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services.
- Estimated spill volume (gallons).
- Estimated spill rate from the system (gpm).
- Estimated discharge rate (gpm) directly into waters of the State or indirectly into a drainage conveyance system.
- Spill incident description:
  - Brief narrative of the spill event.
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks.
- Name and phone number of contact person on-scene.
- Date and time the Enrollee was informed of the spill event.
- Name of sanitary sewer system causing the spill.
- Spill cause or suspected cause (if known).
- Amount of spill contained.
- Name of receiving water body receiving or potentially receiving discharge.
- Description of water body impact and/ or potential impact to beneficial uses.

2.10.2 Secondary Notification

After the appropriate parties on the spill notification list (Table 2.4) have been contacted, the County will contact all other regulatory agencies (Attachment F) as required, as well as other impacted parties if there has been a spill.

Following the initial notification to the California Office of Emergency Services and until such time that the County certifies the spill report in the online CIWQS Sanitary Sewer System Database, the County will provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated).
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated).
- Additional impact(s) to the receiving water(s) and beneficial uses.

Table 2.4 Spill Notification Requirements for Regulatory Agencies

Agency/Official	Reasons to Notify	When to Notify
California Office of Emergency Services (Cal OES)	Category 1 Spills ≥ 1,000 gallons	Within 2 hours of becoming aware of discharge
	A sewage discharge reaches or is likely to reach surface water and/or drainage channel tributary to a surface water OR enters a storm drain system and is not fully recovered	
	PLSD ≥ 1,000 gallons	As soon as practicable
	A sewage discharge reaches or is likely to reach surface water and/or drainage channel tributary to a surface water OR enters a storm drain system and is not fully recovered	
San Diego Regional Water Quality Control Board (SDRWQCB)	Category 1 Spill ≥ 1,000 gallons	As soon as practicable
	A sewage discharge to a drainage channel and/or surface water, or a discharge to a storm drain pipe that is not fully recovered	
	PLSD ≥ 1,000 gallons	Within 24 hours of becoming aware of discharge
	A sewage discharge reaches or is likely to reach surface water and/or drainage channel tributary to a surface water OR enters a storm drain system and is not fully recovered	
County of San Diego Department of Environmental Health (DEH)	A sewage discharge to a drainage channel and/or surface water, or a discharge to a storm drain pipe that is not fully recovered	As soon as practicable
San Diego County Flood Control District	A sewage discharge to a drainage channel and/or surface water, or a discharge to a storm drain pipe that is not fully recovered	As soon as practicable
City of San Diego Police Department, Emergency Services	Public Safety concerns, such as assistance with traffic control	As soon as practicable
California Department of Fish and Game-South Coast Region	A sewage discharge to a drainage channel and/or surface water, or a discharge to a storm drain pipe that is not fully recovered	As soon as practicable
Downstream Receiving Agency	A discharge has entered storm water system maintained by another agency	As soon as practicable

Notes:
Abbreviation: PLSD - Private Lateral Sewage Discharge

2.11 Monitoring and Mitigation

The First Responder who confirmed the spill must ensure that the provisions of this SERP and other directives are met. County staff shall conduct an assessment of the impacts following a spill. County staff shall appropriately mitigate and monitor the site for potential future spills and to prevent spills from re-occurring.

2.11.1 Receiving Water - Visual Observation

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water.
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water.
- Estimated spill volume entering the receiving water.
- Photography of:
  - Waterbody bank erosion.
  - Floating matter.
  - Water surface sheen (potentially from oil and grease).
  - Discoloration of receiving water.
  - Impact to the receiving water.

2.11.2 Receiving Water - Water Quality Sampling and Analysis

In the event of a spill in which 50,000 gallons or more sewage reaches surface water, the County is required to complete water quality sampling no later than 18-hours hours after the initial spill notification. The following water quality samples will be taken:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in Table 2.5.4, if sewage discharges to surface water via a drainage conveyance system.
  - The RSW-001, RSW-001U, and RSW-001 as described in Table 2.5, if the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due to No Flow" for its receiving water sampling locations.

Table 2.5 Water Quality Sampling Location

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

The County will analyze the collected receiving water samples for the following constituents in accordance with the Water Quality Analysis Specifications as outlined in Section 2.3.3 of Attachment E1 of the General Order:

- Ammonia.
- Appropriate bacterial indicators, including one or more of the following:
  - Total Coliform Bacteria.
  - Fecal Coliform Bacteria.
  - *E. coli*.
  - Enterococcus.

When samples are taken, the Legally Responsible Official (LRO) will coordinate with a certified laboratory to analyze the collected samples and will facilitate sample delivery. Water Quality Analysis will be performed according the specifications in Attachment E1 of the General Order. One of the major components of the Spill Technical Report is water quality monitoring. The sampling results will need to be included in the Spill Technical Report.

2.12 Spill Documentation

Documenting spills and the causes provides information for:

- Management for performance measurement and decision-making.
- Regulators to meet established reporting requirements.
- Planning future maintenance and repair activities.
- Engineering determinations regarding capacity, rehabilitation, or replacement.
- Reference for historical performance or claims.

It is the responsibility of the Standby Duty Supervisor to confirm that the spill is properly investigated and documented. The Standby Supervisor shall create a work order in Cityworks documenting the equipment, labor, material, location, and specifics for each spill. Information compiled during the investigation of the spill shall be recorded on the *Sanitary Sewer Overflow Report* as shown in Attachment G. Copies of supporting information shall be compiled. The minimum information required from the investigation is:

- Cause of spill.
- Volume of spill including volume released and volume recovered.
- Location of point of discharge, including GPS coordinates.
- Ultimate destination of the spill.
- Impact and extent of impact.
- Estimated start time of spill.
- Time County received notification of spill.
- Arrival time of crew(s) and time to correct the spill.
- End time of spill.
- Water body impacted and results of bacteriological monitoring, if applicable.
- Actions taken to mitigate the spill.
- Notifications to regulators and others.
- Timestamped photo documentation of the spill discharge through mitigation effort as well as containment, traffic control, mitigation, and cleanup.

A variety of approaches exist for estimating spill volumes. Attachment H provides guidance on estimating the volume of sewage that escaped from the wastewater collection system and the amount of sewage recovered.

The First Responder shall follow up, in person or by telephone, with the person(s) initially reporting the spill. The cause of the spill and its resolution should be disclosed.

Chapter 3

PUBLIC ADVISORY OF SEWAGE CONTAMINATION PROCEDURES

This chapter describes the action that the County must take to limit public access to surface waters and other areas potentially impacted by spills from the wastewater collection system.

The County DEH has primary responsibility for determining when to post notices of polluted surface waters or ground surfaces that resulted from uncontrolled wastewater discharges from its facilities. The County DEH may also make a determination and direct the County to post notices. The postings do not necessarily prohibit the use of recreational areas, unless posted otherwise, but provide a warning of potential public health risks due to sewage contamination.

The posting of notices shall be done as soon as practicable following the initial response to the spill. Signs should be posted on either side of the point of entry where sewage entered the body of water or public facility and the nearest public access point to that body of water or public facility. Examples of signs are included in Attachment I.

Staff shall regularly inspect the posted notices and replace any missing or damaged warning signs. Posted notices shall not be removed until it is determined that the threat to public health and safety is eliminated or at the direction of the County DEH.

Should additional notification of sewage contamination be deemed necessary, County staff shall, in cooperation with the County's Communications Officer, provide further notices through the use of pre-scripted notices made available to the printed or electronic news media for immediate publication or airing, or by other measures, such as door hangers. Examples of pre-scripted notices, which are included in Attachment J, should be modified to accurately reflect the conditions at the time of publication and/or airing. Information specific to the spill occurrence may be included where text is underlined or in parenthesis.

Chapter 4

SPILL REPORTING REQUIREMENTS

County staff shall monitor and report spills regardless of size and recovery that originate from the County's wastewater collection system. The County is also required to report any known spills that occur on private property from private laterals. This chapter details the reporting procedures necessary to comply with SWRCB and County requirements.

4.1 Spill Identification, Tracking, and Logging

A Cityworks' work order must be created to track and monitor each spill event. Using a completed *Sanitary Sewer Overflow Field Report* form (Attachment A) and a completed *Sanitary Sewer Overflow Report* form (Attachment G), the Sanitation Regional Supervisor can create or update the work order and enter the necessary data from the forms. All forms, documentation, and monitoring results should be kept with the work order.

4.2 Spill Category Classification

Spills are divided into five categories:

- Category 1 Spill: A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under the General Order that results in a discharge to:
  - A surface water, including a surface water body that contains no flow or volume of water; or
  - A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

    Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

    A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order.
- Category 2 Spill: A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

  A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- Category 3 Spill: A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

  A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- Category 4 Spill: A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.

  A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

- Private Lateral Sewage Discharge: Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

Figure 4.1 shows a flow chart that will guide County staff in determining the category classification of a spill, and the reporting requirements that are necessary.

4.3 On-Line Reporting Requirements

As of June 5, 2023, the WDRs require that County report sanitary sewer system spills using the CIWQS, an internet-based reporting system. This section describes the reporting procedures.

4.3.1 Reporting Authority and Access

At a minimum, the County is required to have one (1) Legally Responsible Official (LRO) who is registered with the State of California to officially sign and certify spill reports submitted via the CIWQS web-site. Currently, the Director of Public Works is identified as the County's LRO. The County has identified the Wastewater Facilities LUEG Program Manager within the Engineering Services Division's WWM Section as an additional LRO to act as a backup.

The County must also identify Data Submitters. These are individuals registered with the State to enter spill data, create and edit spill reports, and review data. Data Submitters cannot certify reports. Data Submitters are typically the First Responders to a spill location, or the person who collects the spill data for reporting. The County can identify and register as many Data Submitters as deemed necessary.

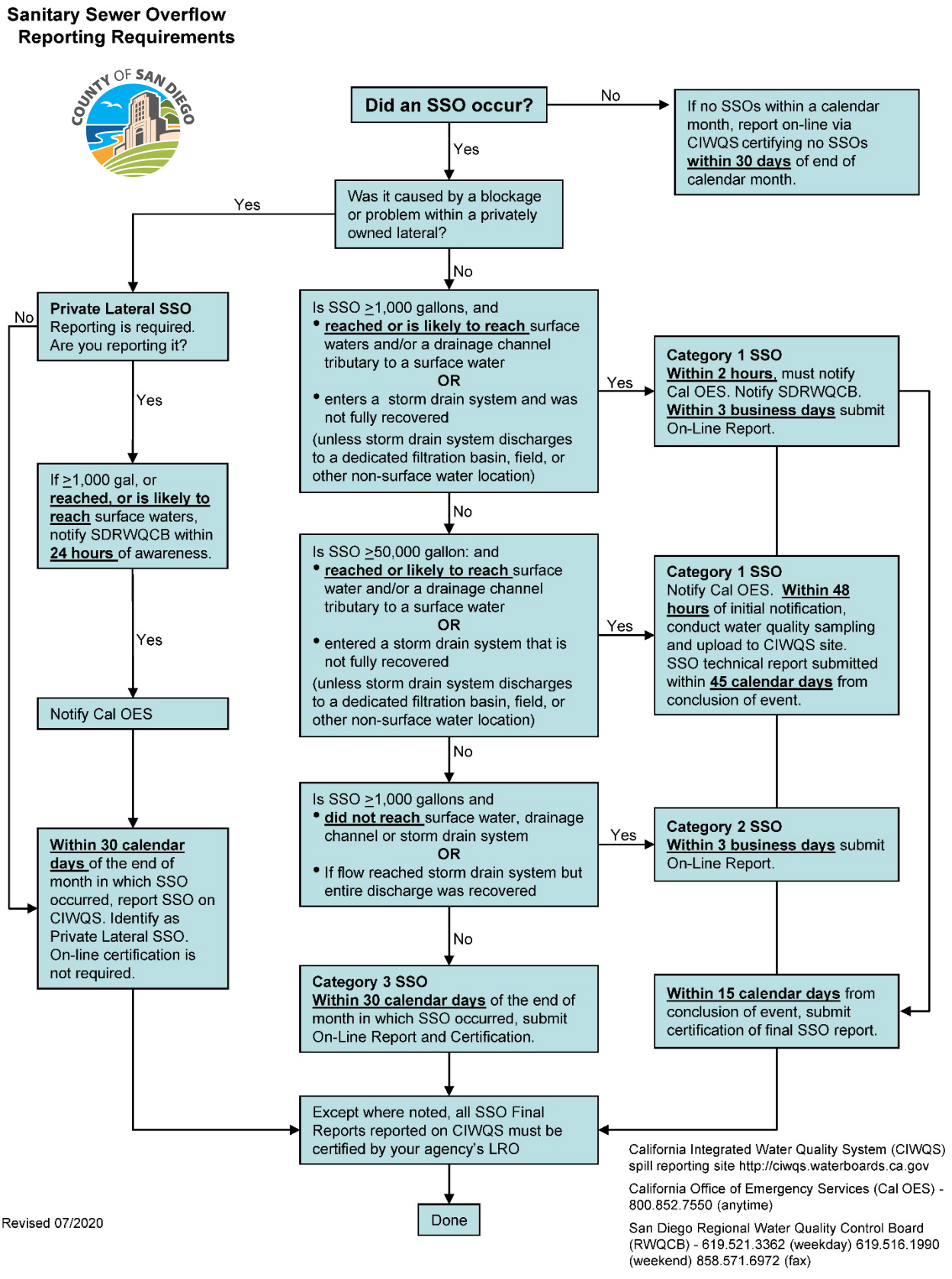


Figure 4.1 Spill Reporting Requirements

The County obtained a unique Waste Discharge Identification Number (WDID) for several of its Service Areas, collection systems and facilities. Table 4.1 includes the various WDID numbers issued to the County.

Table 4.1 County of San Diego Service Areas and WDID Numbers

County Service Areas	WDID No.
County of San Diego Collection System Alpine Service Area Lakeside Service Area Spring Valley Service Area Winter Gardens Maintenance District East Otay Mesa Service Area	9SSO10662
Campo Water & Sewer Service Area (Rancho Del Campo CS)	9SSO10689
Julian Service Area (Julian Water Pollution Facility)	9SSO10673

All LROs and Data Submitters receive a unique logon and password. This information should be guarded and protected. If an authorized user suspects his or her logon and password has been lost, stolen, or otherwise compromised, that person shall contact the SWRCB via the CIWQS help desk at 866-792-4977.

4.3.2 Mandatory Information to Report via CIWQS

Specific mandatory information must be included for each spill report submitted via CIWQS, prior to finalizing and certifying a spill report. All of the information required for the various reports is summarized in Table 4.3 at the end of Section 4.3.2.

SDRWQCB requires that all private lateral spills brought to the attention of the County must be reported. The following information is required for Private Lateral Sewage Discharges:

1. Name of person notifying Cal EMA and direct return phone number.
2. Location of spill using Global Positioning System (GPS) coordinates.
3. Regional Water Quality Control Board (County of San Diego is in Region 9).
4. County in which spill occurred (San Diego County).
5. Whether the spill entered a drainage channel and/or surface water.
6. Whether the spill was discharged into a storm drain pipe that was not fully captured and returned to the wastewater collection system.
7. Estimated spill volume and determination for calculating estimated volume in gallons.
8. Spill source (e.g., maintenance hole, cleanout, pipeline, etc.).
9. Spill cause (e.g., mainline blockage, roots, grease, etc.).
10. Time of spill notification or discovery.
11. Estimated operator arrival time.
12. Spill destination.
13. Estimated spill end time.
14. Identification of sewage discharge as a private lateral sewage discharge.
15. Responsible party contact information, if known.

The CIWQS reporting requirements are not in lieu of other reporting requirements. The County must also perform Regional Board reporting requirements, the Governor's OES reporting, and notifications to the County DEH.

Once the data is properly entered into the CIWQS Sanitary Sewer System Database, and the spill investigation is complete, the spill report must be certified by the LRO based on the reporting requirements summarized in Table 4.2.

Table 4.2 CIWQS Reporting Time Requirements

Spill Type	Initial CIWQS Report	Report Certification Requirements	Amendments
Category I Spill	Within 3 business days	Within 15 calendar days of the conclusion of the spill response and remediation	Within 90 calendar days of the spill end date. After 90 calendar days, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov
Category II Spill	Within 3 business days	Within 15 calendar days of the conclusion of the spill response and remediation	Within 90 calendar days of the spill end date. After 90 calendar days, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov
Category III Spill	Within 30 calendar days of the end of the month in which spill occurred	Within 30 calendar days of the end of the month in which spill occurred	Within 90 calendar days of the spill end date. After 90 calendar days, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov
Category IV Spill			Not applicable
Private Lateral Spill			Not applicable
No Monthly Spills			Not applicable

Table 4.3 Spill Report - Summary

Information to Report	Category 1 - Draft	Category 1 - Certified	Category 1 - Technical	Category 2 - Draft	Category 2 - Certified	Category 3 - Certified	Category 4 - Certified
Contact Information: Name and telephone number of Enrollee contact person to respond to spill-specific questions	✓	✓		✓	✓	✓	✓
Location name of SSO	✓	✓		✓	✓	✓	✓
Date and time the Enrollee was notified of, or self-discovered, the spill	✓	✓		✓	✓	✓	
Operator arrival time	✓	✓		✓	✓	✓	
Estimated spill start date and time	✓	✓		✓	✓	✓	✓
Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number	✓	✓		✓	✓		
Description, photographs, and GPS coordinates of the system location where the spill originated. • If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field	✓	✓	✓	✓	✓	✓	✓
Estimated total spill volume exiting the system	✓	✓		✓	✓	✓	✓
Description and photographs of the extent of the spill and spill boundaries	✓	✓	✓	✓	✓	✓	
Did the spill reach a drainage conveyance system? If Yes: • Description of the drainage conveyance system transporting the spill • Photographs of the drainage conveyance system entry location(s) • Estimated spill volume fully recovered from the drainage conveyance system • Estimated spill volume remaining within the drainage conveyance system • Estimated spill volume discharge to a groundwater infiltration basin or facility, if applicable	✓	✓	✓	✓	✓	✓	✓
Description and photographs of all discharge point(s) into the surface water	✓	✓	✓				
Estimated spill volume that discharged to surface water	✓	✓					
Estimated total spill volume recovered	✓	✓		✓	✓	✓	
Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill		✓			✓	✓	
Spill end date and time		✓			✓	✓	
Description of how the spill volume estimations were calculated, including at a minimum: • The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered) The methodology(ies), assumptions and type of the data relied upon for estimations of the spill start time and the spill end time		✓	✓		✓	✓	✓
Spill cause(s) (for example, root intrusion, grease deposition, etc.)		✓	✓		✓	✓	✓
System failure location (for example: main, lateral, pump station, etc.)		✓			✓	✓	✓
Description of the pipe material, and estimated age of the pipe material, at the failure location		✓	✓		✓	✓	
Description of the impact of the spill		✓	✓		✓	✓	
Whether or not the spill was associated with a storm event		✓			✓	✓	

Information to Report	Category 1 - Draft	Category 1 - Certified	Category 1 - Technical	Category 2 - Draft	Category 2 - Certified	Category 3 - Certified	Category 4 - Certified
Description of spill response activities including description of immediate spill containment and cleanup efforts		✓			✓	✓	✓
Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps; including: • Local regulatory enforcement action taken against an illicit discharge in response to this pill, as applicable • Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including: – Adjusted schedule/method of preventive maintenance – Planned rehabilitation or replacement of sanitary sewer asset – Inspected, repaired asset(s), or replaced defective asset(s) – Capital improvements – Documentation verifying immediately implemented system modifications and operating/maintenance modifications – Description of spill response activities – Spill response completion date Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of the spill.		✓			✓	✓	
Spill response completion date		✓			✓		
Detailed narrative of investigation and investigation findings of cause of spill		✓			✓	✓	
Reasons for an ongoing investigation (as applicable) and the expected date of completion		✓			✓		
Name and type of receiving water body(s)		✓					
Description of the water body(s), including but not limited to: • Observed impacts on aquatic life • Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill • Responsible entity for closing/restricting use of water body Number of days closed/restricted as a result of the spill		✓					
Whether or not the spill was located within 1,000 feet of a municipal surface water intake		✓			✓		
If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.		✓	✓				
Spill causes and circumstances, including at minimum: • Complete and detailed explanation of how and when the spill was discovered • Photographs illustrating the post-cleanup site conditions • Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations • Copy of original field crew records used to document spill Historical maintenance records for the failure location.			✓				

Information to Report	Category 1 - Draft	Category 1 - Certified	Category 1 - Technical	Category 2 - Draft	Category 2 - Certified	Category 3 - Certified	Category 4 - Certified
Enrollee's response to the spill: • Chronological narrative description of all actions taken by the Enrollee to terminate the spill. • Explanation of how the Sewer Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill. • Final corrective action(s) completed and a schedule for planned corrective actions, including: – Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable. – Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences. Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill			✓				
Water Quality Monitoring, including at minimum: • Description of all water quality sampling activities conducted • List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 of the Certified Sanitary Sewer Systems General Order • Laboratory results, including laboratory reports • Detailed location map illustrating all water quality sampling points Other regulatory agencies receiving sample results (if applicable).			✓				
Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.		✓					
Description of implemented system modifications and operating/maintenance modifications.							✓

4.3.3 Spill Technical Report

For any spill in which 50,000 gallons or greater are discharged into surface water, the County will submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The LRO is responsible for coordinating and preparing the Spill Technical Report. The Spill Technical Report will include the following information:

- Spill causes and circumstances, including at minimum:
  - Complete and detailed explanation of how and when the spill was discovered.
  - Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions.
  - Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations.
  - Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume.
  - Detailed description of the spill cause(s).
  - Description of the pipe material, and estimated age of the pipe material, at the failure location.
  - Description of the impact of the spill.
  - Copy of original field crew records used to document the spill.
  - Historical maintenance records for the failure location.
- Enrollee's response to the spill:
  - Chronological narrative description of all actions taken by the County to terminate the spill.
  - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill.
  - Final corrective action(s) completed and a schedule for planned corrective actions, including:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable.
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences.
    - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
- Water Quality Monitoring, including at minimum:
  - Description of all water quality sampling activities conducted.
  - List of pollutant and parameters monitored, sampled, and analyzed.
  - Laboratory results, including laboratory reports.
  - Detailed location map illustrating all water quality sampling points.
  - Other regulatory agencies receive sample results (if applicable).
- Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

4.3.4 Annual Certified Spill Reporting

The Annual Certified Spill Reporting applies to all Category 4 spills and spills from County-owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not

discharge to a surface water. The LRO will upload and certify records of Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

4.3.5 Monthly Reporting Requirement if No Spills

For each month that no Category 1, Category 2, or Category 3 spills are identified and reported via CIWQS, the County's LRO must prepare and submit a "No-Spill" or a "Category 4 Spills" and/or "non-Category 1 Lateral Spills" certification statement to CIWQS Sanitary Sewer System Database for the designated month. This report must be submitted within 30 days after the end of each calendar month with no Category 1 through 3 spills, as noted in Table 4.2.

4.3.6 Alternative Reporting Procedures when On-Line Reporting is Unavailable

In the event that the On-line CIWQS Sanitary Sewer System Database is not available to submit required reports or certify reports, County staff must fax all required information to the SDRWQCB office in accordance with the time schedules identified in Table 4.2. The County is also obligated to enter all required information into the On-line Database as soon as practicable.

4.4 Record Keeping and Document Retention

The County must retain individual spill records for a minimum of five (5) years from the date of the spill occurrence. This period may be extended when requested by an SDRWQCB Executive Officer. All records shall be made available for review upon State or Regional Board staff's request.

Per Order No. WQ 2022-0103-DWQ, specific records that must be retained include, but are not limited to:

1. General Records to document compliance with all provisions of the Sanitary Sewer System WDRs and the Monitoring and Reporting Program for each sanitary sewer system owned including any required records generated by the County's sanitary sewer system contractors;
2. Spill Records for each spill event including, but not limited to:
    a. Complaint records documenting how the enrollee responded to all notifications of possible or actual spills, both during and after business hours, including complaints that do not result in spills.
        i. Date, time, and method of notification.
        ii. Date and time of complainant or information first noticed the spill.
        iii. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential spill knows if the spill has reached surface waters, drainage channels or storm drains.
        iv. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.
        v. Final resolution of the complaint.
    b. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with Section D.7 pf the WDRs.
    c. Record documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized change or update.
4. Electronic monitoring records relied upon for documenting spill events and/or estimating the spill volume discharged, including, but not limited to records from:
    a. SCADA system.
    b. Alarm System.
    c. Flow monitoring devices.

To facilitate the County's ability to report regularly on spills, the Sanitation Regional Supervisor should track information pertaining to each spill. The Sanitation Regional Supervisor should document data as soon practicable after a spill event. This data can be queried for trends and used as a cross-reference for the on-line spill reporting requirements.

Chapter 5

TRAINING

Appropriate staff will participate in regularly scheduled training sessions to assist response crews in awareness of their responsibilities and executing their duties. These training sessions will be organized based on the latest SERP, as well as other reference materials. Training sessions shall also incorporate hands-on field demonstrations to ensure the preparedness of all response personnel to all anticipated situations.

An overview of the SSMP and the SERP should be provided to County staff. This will serve as a mode of instructing staff on the SSMP, spills, and required documentation. Field demonstrations will be performed to test equipment, response time, training effectiveness, resources, and manpower capabilities.

Training and event participation will be documented and maintained. Currently, District Engineering staff are encouraged to receive training through various vendors and to participate in Collection System Maintenance classes, and obtain Wastewater Treatment Certification through the California Water Environment Association. Additional certification requirements may be imposed in the future if deemed necessary by the SDRWQCB.

Chapter 6

UPDATING THIS SERP

This SERP reflects the County's established procedures for responding to reports of possible and confirmed spills originating from its wastewater collection system. As policies change and response procedures are refined, the SERP will be reviewed and modified to reflect all necessary changes.

6.1 SERP Availability

The SERP will be reviewed annually to ensure that all information is updated. The amended SERP will be distributed to the appropriate staff, County Departments, and SDRWQCB, and be made available to the public for review. Staff shall ensure that this SERP is readily available to wastewater maintenance personnel, and that said personnel are familiar with the plan and comply with it at all times.

6.2 Review and Update of the SERP

County staff shall maintain this SERP, and amend or update it as necessary by the addition of new facilities, or changes in the operation or maintenance of the wastewater collection system that may materially affect the potential for spills. At a minimum, the plan will be reviewed annually and will include updating telephone numbers and forms in the appendices and a review of procedures. The annual review of the plan will also ensure all provisions of the plan are being met and implemented. County staff shall also review and amend this SERP as appropriate after any spill occurrence. SERP deficiencies and updates will be addressed and modified accordingly. The plan performance will be routinely evaluated, reviewed and updated.

Attachment A

SANITARY SEWER OVERFLOW FIELD REPORT FORM

COUNTY OF SAN DIEGO
SANITARY SEWER OVERFLOW FIELD REPORT

PART A: INITIAL NOTIFICATION

Tracking # _____

Date Reported: _____ Time Reported: _____ (00:00)

Reported by – Name: _____ Phone Number: _____

Address or Agency: _____

Location of Overflow: _____

Cross Street: _____ Thomas Brothers Grid: _____

Reason for call-out: ☐ Stoppage/Overflow ☐ Pump Station Alarm ☐ Other: _____

Stoppage in: ☐ Mainline ☐ Private Lateral Sewer Overflow Structure ID: _____

Cause of Stoppage: _____

Responsible Party: ☐ County ☐ Private ☐ Other: _____

PART B: INITIAL RESPONSE

Time Arrived at Site: _____ Responding Supervisor: _____

Crew Members: _____

Date Overflow Started: _____ Date Overflow Stopped: _____

Time Overflow Started: _____ Time Overflow Stopped: _____

Est. Overflow Rate (gpm): _____ Est. Overflow Volume (gal): _____

Duration of Flow: _____ Overflow Volume Recovered (gal): _____

Reach Storm Drain: ☐ Yes ☐ No Final Destination of Overflow: _____

Reach Surface Water: ☐ Yes ☐ No If YES, Name of Surface Water: _____

Pictures/Video Taken: ☐ Yes ☐ No Samples Taken: ☐ Yes ☐ No

Location of Blockage: MH MH Overflow Maintenance Hole MH _____

Signs Posted: ☐ Yes ☐ No Sewer Main or Private Lateral: _____

Barricade: ☐ Yes ☐ No County Health Dept. Notified: ☐ Yes ☐ No

Cause of Overflow: (Check All that Apply)

☐ Blockage	☐ Roots	☐ Grease
☐ Flood/Rain	☐ Infiltration	☐ Line Break
☐ Construction	☐ Private Property	☐ Vandalism
☐ Rocks	☐ Debris	☐ Power Failure
☐ Pump Station	☐ Manhole	☐ Unknown

☐ Other: _____

Containment Materials: _____ Responsible Agency: _____

Cleanup Method: _____

*Sketch Area on Back of Sheet

SKETCH OF AREA: (Include time-stamped photo documentation, manholes, intersections, location of blockage, etc.)

Completed by:_____ **Agency:**_____ **Date:**_____

Attachment B

STANDBY COUNTY STAFF

STANDBY STAFF CONTACT INFORMATION

San Diego County Sanitation District

Wastewater Management Staff	Contact Name	Telephone Number	Cell Number
Sanitation Regional Supervisor	Scott Tally	619-660-2007	619-538-2150
Wastewater Facilities Supervisor	Stacy Preve	619-660-2008	858-248-9458
Standby Operator	Rotating Operator		619-823-8212
Operations Unit Manager	Mike Bedard	619-660-2007	619-346-9551

Attachment C

COUNTY APPROVED CONTRACTORS AND EQUIPMENT RENTAL VENDORS

COUNTY APPROVED CONTRACTORS AND EQUIPMENT RENTAL VENDORS

San Diego County Sanitation District

Contractors:

Contractor Name	Address	Telephone No.	Contact Name	Services Provided
Liquid Environmental Solutions	12740 Vigilante Road Lakeside, CA 92040	800-491-7867 619-443-7867 214-524-6056	Main Line - Peter Crane	Pumping, transportation and disposal of sludge, grease, scum and related liquid wastes
Sludge Busters	321 B Street Ramona, CA 92065	760-789-7054	Main Line - Ed Kapelczak	Pumping, transportation and disposal of sludge, grease, scum, and related liquid wastes
Bonita Pipeline, Inc.	2209 Highland Avenue National City, CA 91950	619-434-9801 619-520-3350	Main Line - Frank Marquez	General Engineering Contractor, Plumbing and pipe repairs, excavation, concrete, structural. (Class A)
Underground Utilities Incorporated	9102 Harness Street, Suite B, Spring Valley, CA 91977	619-461-9500 619-654-1301	Main Line - Michael Harness	General Engineering Contractor, Plumbing and pipe repairs, excavation, concrete, structural. (Class A)
C.E. Wilson	662 Grand Avenue, Spring Valley, CA 91977	619-464-6721 619-520-6564	Main Line - Brian Wilson	General Engineering Contractor, Plumbing and pipe repairs, excavation, concrete, structural. (Class A)

Equipment Vendors:

Vendor Name	Address	Telephone No.	Contact Name	Available Equipment
Xylem	11161 Harrel Street Mira Loma, CA 91752	951-963-3856	Main Line	Various portable pumps for as- needed emergency and/or back-up services for sewage lift stations

Attachment D

OWNER/RESIDENT INFORMATION AND RIGHT-OF-ENTRY FORM

County of San Diego

JEFF C. MONEDA
DIRECTOR

DEPARTMENT OF PUBLIC WORKS
5510 OVERLAND AVENUE, SUITE 410
SAN DIEGO, CA 92123-1237
(858) 694-2212
www.sdcounty.ca.gov/dpw/

c/o SAN DIEGO COUNTY SANITATION DISTRICT
SEWAGE SYSTEM FAILURE INCIDENT
OWNER/RESIDENT INFORMATION AND RIGHT-OF-ENTRY

Property:_____
(Street address)

Resident:_____Tel.No._____
(Full name(s))

Owner (if different from Resident):_____Tel. No._____
(Full name(s))

Address of Owner (if different from Resident):_____

As an Owner/Resident of a building served by the San Diego County Sanitation District, 5500 Overland Avenue, Suite 315, San Diego, CA 92123, (858) 514-4990 ("District"), it is the District's goal to at all times provide quality and functional sewer service.

In order for the District to assess and potentially take action to remediate a sewer system back-up or other sewer service failure ("Sewer System Failure"), it is necessary for the Owner/Resident to grant the District the right to enter the impacted private property. Owner/Resident hereby

❑ Authorizes ❑ Does not authorize

the District the right to enter the above identified Property under the following terms and conditions:

Right-of-Entry: Owner/Resident hereby grants the District, and the District's officers, employees, agents, and contractors (collectively "District Staff"), the right to enter onto the Property and into any structures on the Property to ascertain the cause and extent of the Sewer System Failure. District Staff may take photographs and perform non-destructive tests or inspection activities to attempt to ascertain the cause and extent of the Sewer System Failure. Following the inspection, District Staff shall promptly inform

the Owner/Resident if the District is able to perform any work to address the Sewer System Failure. Owner/Resident grants District Staff the right to enter onto the Property to stop the overflow of sewage by any reasonable means; remove wastewater liquids, particulates and other material; conduct disinfection activities; and perform remediation and repair work.

Denial/Termination: Owner/Resident may request that District Staff cease all or some inspection or other activities and leave the Property or any portion of the Property or structure on the Property at any time. District Staff shall promptly cease activities and leave the Property or portion of the Property or structure as requested by the Owner/Resident.

Self-Repair/Contractor of Choice: Owner/Resident may at any time refuse to allow District Staff to perform damage assessment, clean-up, disinfection, remediation work repairs or other work on the Property. Upon the passage of a reasonable time following Owner/Resident notifying District of the refusal, the Owner/Resident shall allow District to remove any equipment, supplies or tools on the Property. Upon removal of the equipment, supplies or tools, District Staff's right of entry to perform clean-up and remediation work shall terminate.

Claims: Owner/Resident may file a claim pursuant to the Government Claims Act, Government Code Section 810 et seq., against the District for personal injury, property damage, temporary lodging, and other expenses Owner/Resident feels should be paid by District as a result of the Sewer System Failure. All claims should be submitted with receipts, invoices, cancelled checks and other documents evidencing the expense and payment(s) made by Owner/Resident. Claim forms are available on the County of San Diego website at https://www.sandiegocounty.gov/content/sdc/dpw/wasteh2o/blockages-spills/sanitary-sewer-overflows-sso-.html.

Not an Admission of Fault: Any offer by District Staff to enter onto the Property and any structure located within the property, to perform any testing or inspections, or to perform any clean-up, remediation or other work, shall not be construed as an admission of fault or liability by the District nor be understood or interpreted as a reason for Owner/Resident to fail to take reasonable steps to limit loss or harm from the Sewer System Failure. Owner/Resident should take reasonable action to protect persons and property from injury as a result of any Sewer System Failure regardless of any action taken by District Staff.

Resident:_____
Signature

Owner:_____
Signature (if available and different from Resident)

Attachment E

INITIAL DAMAGE ASSESSMENT FORM FOR PRIVATE PROPERTY

Private Property
Initial Damage Assessment Form

The information requested on this form is for the purpose of documenting the possible impacts and extent of damage caused by a sanitary sewer overflow at, or as close to, the time of the event. By using this form, the County, its employees, elected officials, contract staff, and volunteers do not admit liability or culpability for the damage being documented.

INSTRUCTIONS: County staff at the SSO location are instructed to write notes, take photographs, and, if possible, video record the visible area without entering the private property. Please complete as much of this form a possible. Keep a copy and submit this form to Risk Management.

SSO INFORMATION

Date of SSO event: _____ Tracking #: _____

Location of SSO Event: _____
(ADDRESS)

Cross Street: _____ Thomas Brothers Grid: _____

AFFECTED PROPERTY

Address of Private Property: _____

_____ Zip Code:_____

Owner/Occupant Name(s): _____

Owner/Occupant Telephone Number(s): _____

INITIAL DAMAGE ASSESSMENT

Brief Description of Damage: _____

_____

_____

_____

_____

Reported by (name and title): _____

Dated: _____

(attach sketches, photographs, and other items documenting the extent and impact of damage)

Attachment F

SPILL NOTIFICATION LIST

SPILL NOTIFICATION LIST

San Diego County Sanitation District

Contact List	Contact Name	Telephone No.	Non-Business Hours
San Diego Regional Water Quality Control Board (RWQCB)	Fisayo Osibodu	619-521-8036	619-516-1990 and 619-521-5899
California Emergency Management Agency (Cal OES)	-	916-845-8911	800-852-7550
San Diego County Department of Environmental Health & Quality	Joseph Palmer	619-823-2579	858-505-6657 or 858-505-6640
San Diego County Flood Control District		858-565-5262	858-565-5262
San Diego County Storm Water Management Program	-	858-495-5318	888-846-0800
County of San Diego Sheriff's Department - Emergency Services	-	858-565-5200	-
County San Diego Fire Department			
Alpine	-	619-445-2635	-
East Otay Mesa	-	-	-
Julian - Cuyamaca	-	760-765-1510	-
Lakeside	-	619-390-2350 ext. 306	-
Pine Valley	-	619-473-8445	-
Spring Valley	-	-	-
Winter Gardens	-	619-590-3100	
Campo	-	-	-
California Highway Patrol (CHP)	-	800-835-5247	-
Caltrans District 11	-	619-688-6699	-
Hazardous Incident Response Team (HIRT)	Nick Vent	619-338-2217	Station M: 858-565-5255

Spill That May Enter the Sweetwater Reservoir

Contact Name	Title	E-mail Address	Office Phone	Cell Phone
Justin Brazil	Director of Water Quality	jbrazil@sweetwater.org	619-409-6812	619-729-7346
Plant Operator	Water Treatment Plant Operators		619-409-6800	
Giovanni Outlaw	Water Treatment Plant Operator Supervisor	goutlaw@sweetwater.org	619-409-6803	619-980-6829
Davis Doane	Plant Maintenance Supervisor	ddoane@sweetwater.org	619-409-6807	619-322-4758
Mark Hatcher	Laboratory Supervisor/Regulatory Analyst	mhatcher@sweetwater.org	619-409-6813	619-797-0630

24-Hour Emergency Contact

Contact	Phone Number
Sweetwater Reservoir	619-420-1413
Padre Dam	619-448-3111
El Cajon	619-579-3311
Helix Water	619-466-0585

Attachment G

SANITARY SEWER OVERFLOW REPORT FORM

COUNTY OF SAN DIEGO
SANITARY SEWER OVERFLOW REPORT

CIWQS Identifier: _____ **Tracking #**_____

This report is: ☐ Preliminary ☐ Final ☐ Revised

Reporting Details

Name & Title of Person Completing this Report:_____

Phone #_____ Date:_____ Time:_____(00:00)
(24-hour clock)

Name of Person/Agency First Reporting SSO:_____

Phone #_____ Date:_____ Time:_____(00:00)
(24-hour clock)

Location of Overflow

Street Address: _____Nearest Cross Street:_____

Thomas Brothers Grid:_____ Latitude of SSO:_____Longitude of SSO:_____

City: _____ County: _____ Zip:_____

Location of Potential Blockage or Problem Point: From MH#: _____ To MH#:_____

SSO Appearance Point: ☐Building ☐Force Main ☐MH ☐Sewer ☐Pump Station

☐Other:_____

Terrain at SSO Location: ☐Flat ☐Mixed ☐Steep

Diameter of Sewer:_____in Material of Sewer:_____ Estimated Age:_____yrs

SSO Details

Estimated Overflow **START**: Date:_____ Time:_____(00:00)
(24-hour clock)

Estimated **ARRIVAL** of Operator: Date:_____ Time:_____(00:00)
(24-hour clock)

Estimated Overflow **STOP**: Date:_____ Time:_____(00:00)
(24-hour clock)

Duration of Spill (in minutes) = _____ Minutes

Estimated Overflow Rate: _____gpm Total Volume of SSO: _____gal

SSO Volume Recovered: _____gal SSO Volume Lost: _____gal

SSO Cause: ☐Debris ☐Flow Exceeded Capacity ☐FOG ☐Blockage ☐Roots ☐Infiltration

☐Operator Error ☐Structural Problem ☐Pump Station Failure ☐Vandalism ☐Power Failure

☐Construction ☐Rainfall ☐Other:_____

If wet weather caused the SSO, chose storm size:

☐1yr ☐2yr ☐5yr ☐10yr ☐50yr ☐100yr ☐>100yr ☐Unknown

SSO Destination Details

SSO Final Destination: ☐Beach ☐Building ☐Paved Surface ☐Unpaved Surface ☐Storm Drain

☐Curb & Gutter ☐Surface Water ☐Other:_____

If SSO reached a storm drain, give street location (Specify N/S/E/W side):_____

Describe distance (feet) and path taken from SSO to storm drain inlet:_____

_____

If SSO reached surface waters, describe Receiving Waters:_____

If applicable, name and/or describe Secondary Receiving Water:_____

Response

Response Activities (Check ALL that Apply): ☐Contained All or Part of SSO ☐Restored Flow

☐Returned All or Part of SSO to Sewer ☐Cleaned Up ☐CCTV

☐Other:_____

Responding County Personnel:	Time Arrived:	Time Departed:
_____	_____	_____
_____	_____	_____
_____	_____	_____

Equipment Used:_____

Other Responding Agency/Contractor:_____

_____

SSO Clean-up Details

Materials Used for Containment:_____

Washwater Disposal Method:_____

Volume of Washwater Used: _____gal

Combined Volume of Recovered Washwater and Sewage-Contaminated Water: _____gal

Combined Volume of Lost Washwater and Sewage-Contaminated Water: _____gal

Miscellaneous (*Attach photos, correspondence, or follow-up reports that provide detailed information.*)

Remarks:_____

_____

_____

_____

Prevention Plan

Steps, taken or planned, to reduce or eliminate re-occurrence of SSO:_____

_____

_____

Schedule of any MAJOR milestones or improvements:_____

_____

Steps, taken or planned, to mitigate the impacts of the SSO:_____

_____

_____

Schedule of any MAJOR milestones or improvements:_____

_____

Notification Contact List (C*heck all who were notified.*)

Name/Agency	Phone #	Time	Date
☐ Regional Board (SDRWQCB)	(858) 467-2952		
☐ Office of Emergency Services (OES)	(800) 852-7550		
☐ Department of Environmental Health	(858) 495-5579		
☐ Risk Management Office	(619) 578-5756		
☐ Sheriff Dept-Emergency Services	(858) 565-5200		
☐ Local Fire Department			
☐ San Diego Flood Control District	(858) 565-5262		
☐ Contracting Agencies			
☐ California Department of Fish &Game	(916) 445-0411		
☐ Other_____			

MUST notify OES, County of San Diego Department of Environmental Health, and SDRWQCB within **2 HOURS** of becoming aware of an SSO reaching storm pipes, drainage channels, and/or surface waters

OES Control #_____

Report faxed to RWQCB? ☐Yes ☐No If yes, date and time of fax:_____

Public Use Closures

Were signs posted warning of contaminants? ☐Yes ☐No Dates Posted:_____

Location of Postings:_____

Were samples obtained of contaminated water? ☐Yes ☐No (Attach any and all results.)

Attachment H

POSSIBLE METHODS FOR ESTIMATING SPILL VOLUME

Possible Methods for Estimating Spill Volume

A variety of approaches exist for estimating the volume of a sanitary sewer overflow. This attachment documents four methods that are most often employed. Other methods are also possible. The person preparing the estimate shall use the method most appropriate to the SSO in question using his/her judgment. Every effort shall be made to make the best possible estimate of the volume.

Method 1 Eyeball Estimate

The volume of very small SSOs can be estimated using an "eyeball estimate." To use this method, imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the SSO is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to 100 gallons.

Method 2 Measured Volume

The volume of some small SSOs can be estimated using this method if it is not raining. In addition, the shape, dimensions, and depth of the spilled sewage are needed. The shape and dimensions are used to calculate the area of the spill and the depth is used to calculate the volume.

Step 1: Sketch the shape of the contained sewage

Step 2: Measure or pace off the dimensions

Step 3: Measure the depth in several locations

Step 4: Convert the dimensions, including depth to feet

Step 5: Calculate the area using the following formulas:

Rectangle	Area = length x width
Circle	Area = diameter x diameter x 0.785
Triangle	Area = base x height x 0.5

Step 6: Multiply the area times the depth

Step 7: Multiply the volume by 7.5 to convert it to gallons

Method 3 Duration and Flow Rate

Calculating the volume of SSOs where it is difficult or impossible to measure the area and depth requires a different approach. In this method separate estimates are made of the duration of the SSO and the flow rate. The methods of estimating duration and flow rate are:

Duration: The duration is the elapsed time from the start time to the end time, when the SSO stopped.

Start time is sometimes difficult to establish. Here are two approaches:

- For very large overflows, changes in flow on a downstream flow meter can be used to establish the start time. Typically the daily flow peaks are “cut off” or flattened by the loss of flow. This can be identified by comparing hourly flow data.
- Conditions at the SSO site change with time. Initially there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In both cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.
- Sometimes it is simply not possible to estimate the start time.

End time is usually much easier to establish. Field crews on-site observe the “blow down” that occurs when the blockage has been removed. The “blow down” can also be observed in downstream flow meters.

Flow Rate: The flow rate is the average flow left in the sewer system during the time the SSO stopped. There are three ways to estimate the flow rate:

- San Diego Manhole Flow Rate Reference Sheet: This sheet, presented on the following page, shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rate from the chart.
- Flow meter: Changes in flows in the downstream flow meters can be used to estimate the flow rate during the spill (better for large SSOs)
- Estimate based on up-stream connections: Once the location of the SSO is known, the number of upstream connections can be determined from system maps. Multiply the number of connections by 200 to 250 gallons per day per connection, or 8 to 10 gallons per hour per connection, or other flow rates that are consistent with the City’s data for its connections.

Once duration and flow rate have been estimated, the volume of the SSO is the product of the duration in hours or days times the flow rate in gallons per hour or gallons per day.

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

City of San Diego
Metropolitan Wastewater Department

Wastewater Collection Division
(619) 654-4160

5 gpm

25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4-99

Attachment I

WARNING SIGN SAMPLES

DANGER!

CONTAMINATED WATER

KEEP OUT

AGUA CONTAMINADA

ALEJESE

PELIGRO!

County of San Diego Department of Public Works

(619) 660-2007

WARNING!

RAW

SEWAGE

COUNTY OF SAN DIEGO

(619) 660-2007

Attachment J

EXAMPLES OF PRE-SCRIPTED NOTICES

SAMPLE PRE -SCRIPTED NEWS RELEASE – INITIAL NOTIFICATION

(County of San Diego, Department of Public Works Letterhead)

For Immediate Release

Date and Time

Cause of failure, such as mechanical breakdown or natural cause (lightning or local flooding) damage at sewage facility located near the intersection of street name and street name has caused sewage overflow into the surface water name in area name. A map showing the location of the sewage facility and areas impacted by the overflow is attached.

Although County Wastewater Management Department crews have begun to make temporary repairs and divert some of the flows to which plant and/or interim bypass pumping has begun, backups may occur in portions of the system. Consequently, residents (reference area or location on map) are urged to reduce water usage inside their homes as much as possible and to avoid coming into physical contact with standing waters in the street or using receiving surface water for any purpose until further notice.

Please note that the drinking water supply is not affected; however, the cooperation of residents to minimize water usage in order to reduce sewage flows is of the utmost importance.

CONTACT: DPW Communications Officer
Donna Durckel
619.531.5186

Senior Civil Engineer
Ted Kautzma
858.694.2919

SAMPLE PRE -SCRIPTED NEWS RELEASE – REPAIR UPDATE

(County of San Diego, Department of Public Works Letterhead)

For Immediate Release

Date and Time

Cause of failure, such as mechanical breakdown or natural cause (lightning or local flooding) damage at sewage facility located near the intersection of street name and street name has caused sewage overflow into the surface water name in area name. Repair crews were dispatched to assess the extent of the damage and to initiate repairs. To date, the following actions have been taken:

[Description of work accomplished.]

It is anticipated that the repair work will be complete by day, date, and time. Additional advisories will be issued if the status of the repairs should change.

Residents are cautioned to refrain from visiting the area where the repair efforts are being conducted.

CONTACT: DPW Communications Officer
Donna Durckel
619.531.5186

Senior Civil Engineer
Ted Kautzma
858.694.2919

SAMPLE PRE-SCRIPTED NEWS RELEASE – CLOSING STATEMENTS

(County of San Diego, Department of Public Works Letterhead)

For Immediate Release

Date and Time

Cause of failure, such as mechanical breakdown or natural cause (lightning or local flooding) damage at sewage facility located near the intersection of street name and street name has caused sewage overflow into the surface water name in area name. The leak caused the discharge of approximately number of thousand or million gallons of sewage into name of surface water, resulting in restricted public access to the area.

A specially trained team of repair experts was mobilized to take immediate and effective action. The repairs were complete in time in hours and/or days and involved around-the-clock operations.

The County's Wastewater Management Division worked in cooperation with the San Diego County Department of Environmental Health in monitoring the environmental effects of the sewage discharge on name of surface water. The media assisted in issuing advisories to keep the public informed of the status of remedial actions. As a result, the impacts of accidental sewage discharged were minimized. The water quality in name of surface water is continuing to be monitored to ensure there are no threats to public health and the environment.

CONTACT: DPW Communications Officer
Donna Durckel
619.531.5186

Senior Civil Engineer
Ted Kautzman
858.694.2919

SAMPLE PRE -SCRIPTED NEWS RELEASE – WATER CONSERVATION

(County of San Diego, Department of Public Works Letterhead)

For Immediate Release

Date and Time

Cause of failure, such as mechanical breakdown or natural cause (lightning or local flooding) damage at sewage facility located near the intersection of street name and street name has caused sewage overflow into the surface water name in area name. The leak has caused portions of surface water name to become polluted and necessitates reducing the discharge of sewage to the sewer system.

In order to prevent backups in the sewer system and sewage spills, residents are urged to reduce household water use. Residents should take the following actions:

1. Limit clothes washing

2. Limit showers and baths

3. Limit toilet flushing

It is necessary to restrict water use only for the period required to fix the leak. The County of San Diego's Wastewater Management Division crews have already begun to make repairs. Advisories will be issued when the repairs are completed so normal water use may resume.

The break does not affect the water supply. The water is safe to drink, but please limit water use to reduce sewage flow as much as possible.

CONTACT: DPW Communications Officer
Donna Durckel
619.531.5186

Senior Civil Engineer
Ted Kautzman
858.694.2919

APPENDIX D

COUNTY DPW FOG CHARACTERIZATION STUDY (MARCH 2015)

County of San Diego
Department of Public Works
Fats, Oils, and Grease Characterization Study

March 2015

Prepared for:

5555 Overland Drive
San Diego, CA 92123

Prepared by:

3570 Carmel Mountain Road, Suite 300
San Diego, CA 92130
858.874.1810

Atkins Project No.: 1000040727

Table of Contents

Tables

Attachments

Executive Summary

The County of San Diego (County) is committed to complying with the mandates set forth under the General Waste Discharge Requirements for Sanitary Sewer Systems Order No. 2006-0003 (WDRs). To comply with one of the eleven (11) mandatory elements of the SSMP, the County prepared a Fats, Oils, and Grease (FOG) characterization study to demonstrate its existing preventative maintenance program effectively reduces the quantity of FOG and other debris discharged to the wastewater collection system that may cause sewerage collection system blockages or sewer system overflows (SSOs).

The likely sources of FOG were identified and mapped. Approximately 232 food service establishments (FSEs) likely to use, produce, and/or contribute FOG to the wastewater collection system were identified and mapped. Additionally, the County's Special Maintenance Sites per service area were mapped. The Special Maintenance Sites being cleaned due to FOG conditions were located in the Alpine, Lakeside, Spring Valley, and the Winter Gardens Service Areas.

As well, historical SSO records reported to the RWQCB between January 2007 and January 2010 were obtained and reviewed to identify additional locations of potential problem sites due to excessive FOG concentrations.

Mapping the information serves to visually illustrate the existing sites with excessive FOG concentrations and historical SSOs as well as identify sites potentially susceptible to SSOs. Additionally, it allows the County to determine the potential impact of each FSE based on its proximity and relative location to Special Maintenance Sites or other potential FOG contributors.

Exhibits 1, 2, and 3, included in Attachment D, illustrate the approximate location of the FSEs which are located within the Alpine, Lakeside, Spring Valley, and Winter Gardens Service Areas, respectively. The location of each FSE is based on permit information obtained from the County of San Diego's Department of Environmental Health. Also shown on the exhibits are the locations of the current Special Maintenance Sites. The locations of the reported SSOs for which specific information was available were also superimposed.

Conclusions

The County's concentrated effort for addressing FOG related issues has been its proactive preventive maintenance program and the routine cleaning of its Special Maintenance Sites. Only one (1) SSO, which occurred in June 2008, was reported as having been caused due to excessive FOG in the wastewater collection system and this SSO is related to FOG generated by residential customers. The majority of the SSO occurrences have been primarily due to debris accumulation in the pipelines. Overall, the data indicates that the SSOs are not associated with FSEs. Rather, most FOG related issues appear to be due to residential discharge of FOG into the system. Implementing a FOG program at this time would place additional burdens on County staff and the rate payers. Instead, the County should continue to maintain the collection system and monitor grease related spills.

Chapter 1
Introduction

Several factors contribute to the periodic failure of a wastewater collection system that may potentially result in the occurrence of a Sanitary Sewer Overflow (SSO). SSOs can be attributed to many causes, including high concentrations of fats, oils, and grease (FOG), roots, poor conditions of the wastewater collection system lines, wet weather flows, or a combination of these conditions. It has been estimated that more SSOs are caused by FOG statewide than by any other factor, prompting state and local regulating agencies to focus on FOG Control Program development as a key element of Wastewater Discharge Requirements (WDRs).

Proper handling and disposal of waste containing excessive FOG quantities is important as it can accumulate in the wastewater collection system and eventually block collection pipes and sewer lines, resulting in backups and overflows on streets, properties, and even in private residences. Sewer overflows are unsanitary and negatively impact the environment. They are costly to agencies and the rate payers since the expense of cleaning up and repairs associated with improper disposal of FOG can lead to increased sewer rates.

This document describes the purpose of a FOG program, evaluates the issues the County of San Diego (County) is currently experiencing with the accumulation and control of FOG, and recommends whether the County should implement a FOG Control Program.

1.1 Purpose of a FOG Control Program

The County is committed to complying with the mandates set forth under the General Waste Discharge Requirements for Sanitary Sewer Systems Order No. 2006-0003 (WDRs). The WDRs require that the County develop a specific Sewer System Management Plan (SSMP) to include the provisions necessary to provide proper and efficient management, operation, and maintenance of the wastewater collection system. To comply with one of the eleven (11) mandatory elements of the SSMP, the County is to prepare a FOG Control Program, or demonstrate its existing preventative maintenance program effectively reduces the quantity of FOG and other debris discharged to the wastewater collection system that may cause sewerage collection system blockages or SSOs.

1.2 Sources of FOG

Residual FOG is primarily a by-product from food preparation in residential buildings and, more commonly, Food Service Establishments (FSEs). Typically, FOG enters a facility's plumbing system from ware washing, floor cleaning, and equipment sanitation. Wastewater collection systems are neither designed nor equipped to handle the FOG that can accumulate on the interior of the sewer collection system pipes from improper discharges. These accumulations restrict flow in pipes and can eventually result in SSOs. The unintentional overflow of untreated sewage creates a health risk to the public, damages property, and pollutes our environment.

FOG comes in two basic forms with each being handled and processed in a difference manner. One form of FOG is known in the industry as 'Yellow Grease.' Generally, yellow grease can be defined as the inedible and unadulterated FOG that is removed from FSE operations. Yellow Grease is placed in an enclosed container marked 'inedible' and typically located outside of the FSE. Sources of yellow grease generated in FSEs are from bulk deep-frying operations and

water/oil separator units usually associated with specific food preparation areas. The second form of FOG generated in the food service industry is the material recovered from grease traps, and is often designated in the FOG treatment industry as 'Brown Grease.' Brown grease is the general term used to describe the floatable FOG, settled solids and associated wastewater retained by grease traps. Unlike yellow grease, the majority of brown grease removed from grease traps has been contaminated by coming in contact with such agents as detergents and cleaning solutions used in FSEs. The major source of brown grease generated in FSEs is from the cleaning of equipment and utensils used in the preparation and servicing of food.

Development and implementation of a FOG Control Program facilitates the maximum beneficial public use of an agencies wastewater collection system by preventing blockages of sewer lines and reducing the adverse affects on sewage treatment operations resulting from discharges of FOG. In addition, an effective FOG Control Program can minimize revenue losses associated with enforcement actions and the impacts of restricting public activities, such as roadway closures to respond to a FOG related SSOs or closures of public access facilities.

1.3 FOG Characterization Study

To determine whether a comprehensive FOG Control Program and implementation of control mechanisms are required, it is necessary to identify the sources and nature of FOG. As well, the location of high frequency maintenance locations (Special Maintenance Sites) and the relationship to FOG discharge locations must also be determined.

Generally, large quantities of FOG are generated at FSEs during food preparation from both FOG used to assist in the cooking of the food (e.g. frying oil) and from the food itself (e.g. hamburger meat). The quantity of FOG generated varies by site based on the type of food being prepared, the cleaning and maintenance practices employed, and seating capacity. The County has also identified several high frequency maintenance locations within the collection system, several of which records indicate are due to excessive FOG accumulation.

The primary goal of a Characterization Study is to identify the source and nature of FOG within the County's wastewater collection system. The study serves to compile and categorize information provided by the County that pertains to the County's wastewater collection system as it relates to FOG. By identifying and locating the sources of FOG in the wastewater collection system, FOG build-up in the system can be controlled and subsequently reduced, thereby increasing the system operating efficiency and reducing the number of sewer line blockages and overflows. The objectives of the characterization study may be summarized as:

- Compile and categorize FOG related information;
- Identify and locate potential FOG sources;
- Identify high frequency maintenance locations due to FOG;
- Identify areas potentially susceptible to excessive FOG accumulation; and
- Identify and locate areas within the wastewater collection system in which SSOs have occurred due to excessive FOG.

To locate the likely sources of FOG, Atkins obtained a comprehensive list of the existing businesses permitted by the County of San Diego's Department of Environmental Health (DEH). As of January 2001 there have been over 6,700 permits issued by the DEH. From this list of businesses, 232 FSEs likely to use, produce, and/or contribute FOG to the wastewater collection system were identified and mapped as potential sources of FOG. Included in Attachment A is the list of FSEs mapped.

The lists of Special Maintenance Sites per service area were provided by the County's sewer maintenance staff. Attachment B includes the Special Maintenance Sites currently being cleaned by wastewater maintenance staff on a quarterly basis. The County's current Special Maintenance Sites are located within the Alpine, Lakeside, Spring Valley, and Winter Gardens Service Areas. The Special Maintenance Sites include pipe segments identified as having high concentrations of FOG and roots and sludge accumulations.

Atkins also investigated the historical SSO records reported to the RWQCB since January 2007 to identify additional locations of potential problem sites due to excessive FOG concentrations.

This page intentionally left blank.

Chapter 2
Characterization Study Results

The following is a summary of the characterization study performed by the County to determine whether the County's current preventive maintenance procedures are addressing the maintenance needs for the areas identified as potentially having FOG related conditions.

2.1 Characterization Study Results

Currently, the Special Maintenance Sites are located within the Alpine, Lakeside, Spring Valley, and the Winter Gardens Service Areas. The list of Special Maintenance Sites for Alpine, Lakeside, Spring Valley, and the Winter Gardens Service Areas are included in Attachment B, and provide a description of the condition for which the high frequency maintenance is required for each pipe segment identified. Table 2-1 provides a summary of the quantity of Special Maintenance Sites pipe segments within a specific service area and the condition for which the pipe segments are being maintained on a quarterly basis.

Table 2-1 Summary of Condition at Special Maintenance Sites

Service Areas	Special Maintenance Sites Conditions					Total Special Maintenance Sites
	Grease Sites	Roots Sites	Sludge Sites	Sludge / Roots Sites	Sludge / Grease Sites	
Alpine	4	3	17	-	-	24
Lakeside	16	10	44	-	-	70
Spring Valley	38	67	140	3	2	250
Winter Gardens	0	1	29	1	-	31
Total Sites	58	81	230	4	2	375

As shown in Table 2-1, there are 375 Special Maintenance Sites. Approximately 6% of the Special Maintenance Sites are located within the Alpine Service Area, 19% of the sites are in the Lakeside Service Area, 67% are in the Spring Valley Service Area, and approximately 8% are in the Winter Gardens Service Area. Currently there are no Special Maintenance Sites identified within the Julian, Pine Valley, Campo, East Otay Mesa or Harmony Grove. The Harmony Grove Service Area was recently formed in anticipation of planned development. Since development within the service area was suspended, it does not currently have wastewater collection facilities within the district boundary.

Table 2-2 includes a summary of the total length of Special Maintenance Sites pipe within each service area.

As shown on Table 2-2, County wastewater maintenance crews are currently responsible for the quarterly cleaning of approximately 89,687 lineal feet (17 miles) of Special Maintenance Sites pipe.

Table 2-2 Special Maintenance Sites Pipe Lengths

Service Area	Length of Special Maintenance Sites Pipe	
	Feet	Miles
Alpine	6,667	1.3
Lakeside	17,377	3.3
Spring Valley	57,499	10.9
Winter Gardens	8,144	1.5
Total	89,687	17.0

2.2 Severity of FOG Special Maintenance Sites

The County's current preventive maintenance program includes a cleaning cycle for the areas that have been identified by County staff as Special Maintenance Sites. The Special Maintenance Sites include pipe segments with high FOG, root, and sludge concentrations. The pipe segments within the wastewater collection system that have been identified as having an excessive amount of grease accumulation are routinely cleaned on a quarterly basis. Cleaning of all Special Maintenance Sites is tracked and scheduled manually by the Sanitation Regional Supervisor.

Of the total length of Special Maintenance Sites pipe maintained, Table 2-3 summarizes the total length of pipe cleaned due to excessive FOG.

Table 2-3 Special Maintenance Sites – FOG Related

Service Area	Special Maintenance Sites		Percent FOG Related
	Length of Pipe Segments Maintained for FOG (ft)	Total Length of Special Maintenance Site Pipe (ft)	
Alpine	1,181	6,667	18%
Lakeside	4,344	17,377	25%
Spring Valley	9,931	57,499	17%
Winter Gardens	0	8,114	0%
Total	15,456	89,657	17%

The Special Maintenance Sites within the Winter Gardens Service Area include only sludge and root accumulation. Currently, there are no Special Maintenance Sites due to FOG conditions within the Winter Gardens Service Area.

County sewer maintenance crews assign the FOG related pipe segments a rating of one (1) through three (3). A severity rating of three (3) indicates the worst condition and the pipe segment as near blockage. Table 2-4 provides a summary of the Special Maintenance Sites related to FOG concentrations and the rating assigned during the most recent cleaning of pipe segments. A "G" is used to indicate the Special Maintenance Site is due to excessive grease quantities in the pipe segment.

Overall, there are more sites rated at a severity level of two (2) and only two pipe segments within the Spring Valley Service Area rated at a severity level of three (3).

Table 2-4 Summary of Ratings for FOG Related Special Maintenance Sites

Service Area	FOG Condition Ratings			Total Sites
	G1	G2	G3	
Alpine	0	4	0	4
Lakeside	15	1	0	16
Spring Valley	8	28	2	35
Total	23	33	2	58
Rating Key: 1 through 3 (3 being worst, near blockage)				

2.3 Reported SSOs

Historical records obtained from the San Diego RWQCB website were reviewed to determine the approximate location of the SSO reported by the County between January 2007 and January 2010. A summary of the information obtained is included in Attachment C. As agencies within Region 9 are required to report SSOs occurrences at private laterals, Attachment C also includes information pertaining to SSOs occurrences at private laterals. Several of the SSOs reported did not include addresses to indicate the approximate location of the SSO occurrence.

In an effort to identify the location of SSO occurrences, the County's Maintenance Action Report (MAR) summary spreadsheet was obtained from the County. The MAR which includes a summary of the emergency calls received by the County's sewer system maintenance staff was reviewed to determine the types of calls received and responded to by the wastewater maintenance crews. This list includes information documented between July 2007 and December 2008.

Based on the review of the data obtained from the San Diego RWQCB website in conjunction with the MAR summary, several approximate locations of SSO occurrences were identified.

2.4 Mapping

Mapping the information allows the County to visually identify existing areas with excessive FOG concentrations and historical SSOs as well as identify areas susceptible to potential SSOs. Additionally, it allows the County to determine the potential impact of each FSE based on its proximity and relative location to Special Maintenance Sites or other potential FOG contributors. This information serves to assist the County in determining where its resources should be focused to systematically and effectively reduce the potential for overflows and operation problems in a cost effective manner.

Exhibits 1, 2, and 3, included in Attachment D, illustrate the approximate location of the FSEs identified within the Alpine, Lakeside, Spring Valley, and Winter Gardens Service Areas, respectively. Also shown on the exhibits are the locations of the current Special Maintenance Sites. The Special Maintenance Sites illustrated have been identified as requiring maintenance due to grease conditions. The locations of the SSOs were also superimposed. The exhibits illustrate the locations of the reported SSOs for which specific information was available, and that were reported by the County. The SSO locations are shown relative to the FSEs and the Special Maintenance Sites.

2.5 Results

The data indicates that FOG related SSOs are not associated with FSEs. Rather, most FOG related issues are tied to residential discharge of FOG into the system.

Alpine Service Area

Exhibit 1 illustrates the approximate location of the FSEs identified in the vicinity of the Alpine Service Area. As shown, the majority of the FSEs are located along Alpine Boulevard as well as several along Tavern Road. Also illustrated are the locations of the current Special Maintenance Sites maintained due to FOG conditions to illustrate the spatial relationship between the FSEs and the Special Maintenance Sites. Generally, the Special Maintenance Sites shown on the exhibit do not appear to be in close proximity to the FSEs. With the exception of the few Special Maintenance Sites at the intersection of Marshall Road and Alpine Boulevard and at Alpine Boulevard and Tavern Road, the majority of Special Maintenance Sites are along Arnold Way.

According to data records, there have been five (5) SSO occurrences. Of the SSOs reported, one (1) SSO was located outside of the service area. The other four (4) SSOs occurred within the Alpine Service Area boundary. The location of the SSOs reported was also superimposed onto the exhibit. Of the four (4) SSOs located within the service area boundary, one (1) SSO was reported as a private SSO, and three (3) as public SSOs. Two of the spills were caused due to vandalism and two (2) due to construction debris left by contractors. The SSOs do not appear to have occurred along pipelines designated as Special Maintenance Sites.

Lakeside Service Area

Exhibit 2 illustrates the approximate location of the FSEs identified in the Lakeside Service Area. As shown, FSEs are located throughout the service area with a large concentration located along Woodside Avenue and Maine Avenue. Also illustrated are the locations of the current Special Maintenance Sites maintained due to FOG conditions to illustrate the spatial relationship between the FSEs and the Special Maintenance Sites.

The majority of the Special Maintenance Sites are located along Woodside Avenue as are a large quantity of FSEs. Several Special Maintenance Sites are located in residential areas where the FOG condition may be primarily due to the discharge of FOG into the wastewater collection system by residents or due to other specific facility conditions (e.g. pipe sags or minimal slopes). Further research should be conducted to determine whether these sites are located downstream of FSEs or if deficiencies in pipelines exist.

According to data records, there have been two (2) SSO occurrences in the Lakeside Service Area. One occurrence was reported as a private lateral spill while the other was reported as a public SSO. Information for the private lateral spill was not available therefore is not illustrated on Exhibit 2. The location of the public SSO reported was also superimposed onto the exhibit. The SSO occurred along Winter Gardens Blvd. within the Lakeside Service Area and was reported to have occurred due to debris accumulation. The SSOs did not occur along pipelines designated as Special Maintenance Sites.

Winter Gardens Service Area

Exhibit 2 also illustrates the approximate location of the FSEs identified in the Winter Gardens Service Area. As shown, several FSEs are located along Winter Gardens Boulevard and there are no Special Maintenance Sites located within the Winter Gardens Service Area.

According to data records, there has been one (1) public SSO on Royal Road due to excessive debris. The location of the public SSO reported was also superimposed onto the exhibit and was reported to have occurred due to debris accumulation.

Spring Valley Service Area

Exhibit 3 illustrates the approximate location of the FSEs identified in the Spring Valley Service Area. As shown, FSEs are located throughout the service area with clusters concentrated along Campo Road, Jamacha Road, Buena Vista Road and the intersection of Buena Vista Drive and Willow Glen Road. Also illustrated are the locations of the current Special Maintenance Sites maintained due to FOG conditions to illustrate the spatial relationship between the FSEs and the Special Maintenance Sites.

The Special Maintenance Sites mapped are throughout the Spring Valley Service Area with several located in the vicinity of the FSEs as well as in areas that appear to be residential. The Special Maintenance Sites located in residential areas may be primarily due to the discharge of FOG into the wastewater collection system by residents or due to other specific facility conditions (e.g. pipe sags or minimal slopes). Further research should be conducted to determine whether these sites are located downstream of FSEs or if deficiencies in pipelines exist.

According to data records, there have been nine (9) private lateral and eight (8) public SSO occurrences reported within the Spring Valley Service Area. The location of each SSO was also superimposed onto the exhibit. Table 2-5 includes a summary of the conditions reported as causing the SSOs.

Table 2-5 Summary of SSO Causes

Condition	Public SSOs	Private SSOs
Debris	3	6
Grease	1	–
Roots	2	1
Structural	1	1
Vandalism	1	–
Other	–	1
Total	8	9

Of the total seventeen (17) SSOs reported, only one (1) was reported as having been caused due to FOG. Since approximately half of the SSOs reported were due to debris accumulation, further research should be conducted to determine whether deficiencies in pipelines exist.

2.6 Conclusions

The County's concentrated effort for addressing FOG related issues has been its proactive preventive maintenance program and the routine cleaning of its Special Maintenance Sites. Only one (1) SSO that occurred in June 2008 was reported as having been caused due to excessive FOG in the wastewater collection system. Since then, the majority of the SSO occurrences have been primarily due to debris accumulation in the pipelines. Overall, the data indicates that the SSOs are not associated with FSEs. Rather, most FOG related issues appear to be due to residential discharge of FOG into the system.

This page intentionally left blank.

Chapter 3
FOG Maintenance Recommendations

The County's proactive maintenance procedures have been successful in minimizing the number of SSOs due to excessive FOG. This section includes recommended actions for the County to consider for supplementing its current preventative maintenance program. The recommendations are intended to be consistent with existing operations and maintenance procedures.

3.1 Adjust Special Maintenance Site Frequencies

The County has established a cleaning interval for Special Maintenance Sites with the potential to accumulate debris and susceptible to blockages that can result in SSOs. Currently, County maintenance crews clean Special Maintenance Site pipe segments on a quarterly basis. However, establishing a cleaning schedule based on objective standards could reduce the frequency of scheduled routine cleaning occurring at particular locations and optimize the use of the County's crews. Table 3-1 (included as Table 3-4 in the County of San Diego Operations and Maintenance Program) provides objective guidelines for establishing the condition findings of the Special Maintenance Sites and includes a description for each potential condition finding.

Table 3-1 Guidelines for Condition Findings

Clear	Light	Medium	Heavy
No observable grease, roots, sludge, or debris	1.0 – 1.5 gallons of sludge, small chunks of grease; 20 – 30 minutes to clean a line; 1 – 2 passes to clear the water	2 – 3 gallons of sludge, moderate chunks of grease; 30 minutes to clean a line; 2 – 3 passes to clear the water	4 or more gallons of sludge, grease, clumps of roots; more than 30 minutes to clean a line; 4 or more passes to clear the water

Note: a "line" is a pipe segment that averages 300 feet between two maintenance holes

The information obtained should be recorded and identified according to one of the four (4) standard Condition Findings: "clear", "light", "medium", and "heavy". The condition finding for pipe that is being cleaned on an appropriate cleaning frequency will return a "light" condition finding. A pipe consistently indicating a "clean" condition finding indicates that the pipe cleaning may be occurring too frequently. A pipe returning a "medium" or "heavy" condition finding is an indication that the cleaning frequency for the pipe may need to be increased. Situations that may result in false condition findings include pipelines with structural failure, vandalism, construction related blockages, etc.

Prior to implementing changes to the current cleaning schedule, sewer maintenance crews should conduct a thorough evaluation of each Special Maintenance Site including pipe segment location, length, diameter, and current cleaning schedule and frequency interval to establish the purpose for designating the site as a Special Maintenance Site. Additionally, County maintenance crews should continue to thoroughly document the type and quantity of debris removed from each pipe segment. The results of the initial evaluation will establish a basis from which the County's wastewater maintenance staff can begin tracking and monitoring the condition findings and other critical elements of each site to determine if the pipe segment has been appropriately designated as a Special Maintenance Site and whether the current cleaning frequency should be modified.

Throughout the year, the sewer maintenance staff, in consultation with the engineering staff, should evaluate the data and determine whether the interval between cleanings should be adjusted. To determine if the cleaning interval should be adjusted for a Special Maintenance Site, staff should review the following items:

- History of SSOs for the specific segment
- The past four (4) condition findings
- CCTV inspection data collected within the last 12 months
- As-built data

Based on the thorough and routine monitoring of the sites and the information obtained, the cleaning frequency can be adjusted and re-evaluated as necessary.

3.2 Public Outreach

The County of San Diego's Operations and Maintenance Program documents the County's activities which serve to facilitate the maximum beneficial public use for the County's sanitary sewer system while preventing blockages of the sewer lines and reducing the adverse affects on sewage treatment operations resulting from discharges of FOG into the system.

The County's efforts to minimize the effects of FOG entering into the wastewater collection system though its preventive maintenance program can be further supplemented with efforts that include public education and through the common interest in preventing health hazards and damage to homes and businesses. Education of the residents and owners of FSEs about the effects of FOG is essential to reduce the quantity of FOG that is introduced into the wastewater collection system.

The County's concentrated effort for addressing FOG related issues has been its proactive preventive maintenance program. Working with the Department of Environmental Health (DEH) and the Media and Public Relations Office, the Department of Public Works can emphasize the importance of minimizing the discharging of FOG into the wastewater collection system. Best management practices (BMPs), which include simple and effective practices that residents and FSEs can implement to prevent and reduce the quantity of FOG discharged into the sanitary sewer system can be developed and made readily available. Several acceptable BMPs can be included on the County's website to facilitate dissemination of and access to the information.

As well, the routine inspections performed of FSEs by the DEH for permit renewal provides the County an opportunity to reiterate the importance of limiting FOG discharge into the County's wastewater collection system and reduce the potential of SSOs due to excessive FOG. Practical BMPs should continue to be included in the permit conditions as a method to enforce the County's efforts.

Attachment A
County of San Diego
Food Service Establishments

COUNTY OF SAN DIEGO
FOOD SERVICE ESTABILISHMENTS

Business Name	Business Address	City	State	Zip	District
ALPINE VALERO RESTAURANT	1140 TAVERN ROAD	ALPINE	CA	91901	ALPINE
MEDITERRANEO	1347 TAVERN ROAD	ALPINE	CA	91901	ALPINE
LA CARRETA	1347 TAVERN ROAD	ALPINE	CA	91901	ALPINE
SUBWAY	1620 ALPINE BLVD	ALPINE	CA	91901	ALPINE
ALPINE FITNESS	1620 ALPINE BLVD	ALPINE	CA	91901	ALPINE
MANANAS MEXICAN FOOD	1730 ALPINE BLVD	ALPINE	CA	91901	ALPINE
STEPHS DONUT HOLE	1730 ALPINE BLVD	ALPINE	CA	91901	ALPINE
RAMONS SMOKE HOUSE BBQ	1730 ALPINE BLVD	ALPINE	CA	91901	ALPINE
LITTLE CAESARS PIZZA	1730 ALPINE BLVD	ALPINE	CA	91901	ALPINE
PANDA MACHI CHINESE & JAPANESE CUISINE	1730 ALPINE BLVD	ALPINE	CA	91901	ALPINE
ALPINE TACO SHOP INC	1903 ALPINE BLVD	ALPINE	CA	91901	ALPINE
COBBLESTONE COTTAGE TEA SHOPPE	1945 ALPINE BLVD	ALPINE	CA	91901	ALPINE
ALPANCHOS MEXICAN RESTAURANT	2139 ALPINE BLVD	ALPINE	CA	91901	ALPINE
ALPINE PIZZA & PASTA	2165 ARNOLD WAY	ALPINE	CA	91901	ALPINE
ALPINE INN	2225 ALPINE BLVD	ALPINE	CA	91901	ALPINE
TAPATIOS MEXICAN FOOD	2335 ALPINE BLVD	ALPINE	CA	91901	ALPINE
THE VINE WINE BART BISTRO	2502 ALPINE BLVD	ALPINE	CA	91901	ALPINE
JANETS MONTANA CAFE	2506 ALPINE BLVD	ALPINE	CA	91901	ALPINE
DONATOS ITALIAN REST	2654 ALPINE BLVD	ALPINE	CA	91901	ALPINE
PIZZA HUT & WING STREET	2710 ALPINE BLVD	ALPINE	CA	91901	ALPINE
SUBMARINA ALPINE	2710 ALPINE BLVD	ALPINE	CA	91901	ALPINE
SALSA MEXICAN FOOD	2710 ALPINE BLVD	ALPINE	CA	91901	ALPINE
FREDS OLD FASHIONED BURGERS	2754 ALPINE BLVD	ALPINE	CA	91901	ALPINE
WANNA PIZZA	2754 ALPINE BLVD	ALPINE	CA	91901	ALPINE
ANTONIO L LOPEZ	2806 ALPINE BLVD	ALPINE	CA	91901	ALPINE
SUBWAY	2963 ALPINE BLVD	ALPINE	CA	91901	ALPINE
JULIAN JAM COFFEE HOUSE	1921 MAIN STREET	JULIAN	CA	92036	ALPINE
JULIAN TEA & COTTAGE ARTS	2124 3RD STREET	JULIAN	CA	92036	ALPINE
THE BAILEY BARBECUE	2305 MAIN STREET	JULIAN	CA	92036	ALPINE
WENDYS/DAIRY QUEEN	1497 PIPER RANCH RD	SAN DIEGO	CA	92154	EAST OTAY
ALTA CAFE	511 ALTA RD	SAN DIEGO	CA	92154	EAST OTAY
HEROS DELI	2000 MAIN ST	JULIAN	CA	92036	JULIAN
SOUPS & SUCH CAFE	2000 MAIN ST	JULIAN	CA	92036	JULIAN
THE FAJITA GRILL	2018 MAIN ST	JULIAN	CA	92036	JULIAN
JULIAN GOLD RUSH HOTEL	2032 MAIN ST	JULIAN	CA	92036	JULIAN
JULIAN CAFE	2112 MAIN ST	JULIAN	CA	92036	JULIAN
COWBELLA RANCH CAFE	2116 MAIN ST	JULIAN	CA	92036	JULIAN
MOMS PIE HOUSE	2119 MAIN ST	JULIAN	CA	92036	JULIAN
MOM'S PIE HOUSE	2119 MAIN ST	JULIAN	CA	92036	JULIAN
APPLE ALLEY BAKERY	2122 MAIN ST	JULIAN	CA	92036	JULIAN
CANDIED APPLE PASTRY COMPANY	2128 4TH ST	JULIAN	CA	92036	JULIAN
MINERS DINER	2134 MAIN ST	JULIAN	CA	92036	JULIAN
JULIAN GRILLE	2224 MAIN ST	JULIAN	CA	92036	JULIAN
JULIAN PIE CO	2225 MAIN ST	JULIAN	CA	92036	JULIAN
ORCHARD HILL COUNTRY INN	2502 WASHINGTON ST	JULIAN	CA	92036	JULIAN
BUFFALO BILLS	2603 B ST	JULIAN	CA	92036	JULIAN
ROMANOS DODGE HOUSE	2718 W B STREET	JULIAN	CA	92036	JULIAN
RONGBRANCH RESTAURANT	2722 WASHINGTON ST	JULIAN	CA	92036	JULIAN
PONCHO VILLA	2907 WASHINGTON ST	JULIAN	CA	92036	JULIAN
TACO BELL	13418 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
PANDA EXPRESS	13439 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
SUBWAY	13465 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
GIANT NEW YORK PIZZA	13465 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
GIANT NEW YORK PIZZA	13465 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
MCDONALDS	13574 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
DENNYS	13584 CAMINO CANADA	EL CAJON	CA	92021	LAKESIDE
JACK IN THE BOX	14039 HWY 8 BUSINESS	EL CAJON	CA	92021	LAKESIDE
KARLAS MEXICAN FOOD	14110 OLDE HWY 80	EL CAJON	CA	92021	LAKESIDE
MARECHIAROS ITALIAN RESTAURNT	14120 OLDE HWY 80	EL CAJON	CA	92021	LAKESIDE
MARY ETTAS CAFE	14809 OLDE HWY 80	EL CAJON	CA	92021	LAKESIDE
LA POSTA DE ACAPULCO	8575 LOS COCHES RD	EL CAJON	CA	92021	LAKESIDE
DANNYS RESTAURANT & PIZZA	8575 LOS COCHES RD	EL CAJON	CA	92021	LAKESIDE
DONUTS AVE	8575 LOS COCHES RD	EL CAJON	CA	92021	LAKESIDE
EAST BOUND BAR & GRILL	10053 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE

COUNTY OF SAN DIEGO
FOOD SERVICE ESTABILISHMENTS

Business Name	Business Address	City	State	Zip	District
SIXTY 7 BAR & GRILL	10109 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE
BURGER KING	10130 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE
DOMINOS PIZZA	10135 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE
SARITAS TACO SHOP	10143 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE
GOLD DONUTS	10205 LAKE JENNINGS PARK RD	LAKESIDE	CA	92040	LAKESIDE
LOS RANCHERITOS MEXICAN FOOD	10205 LAKE JENNINGS PARK RD	LAKESIDE	CA	92040	LAKESIDE
WILLOWBROOK COUNTRY CL	11905 RIVERSIDE DR	LAKESIDE	CA	92040	LAKESIDE
KFC	12061 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
SONORAS TACO SHOP	12115 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
LA CHULA MEXICAN AND SEAFOOD	12128 WOODISDE AVE	LAKESIDE	CA	92040	LAKESIDE
ARBYS 5172	12136 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
JACK IN THE BOX	12155 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
LA PALAPA	12169 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
THE NEIGHBORS PUB & GRUB	12169 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
COUNTRY DONUT	12169 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
LAKESIDE CAFE	12212 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
LAKESIDE RODEO GIANT PIZZERIA & DELI	12243 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
SOMBRERO MEXICAN FOOD	12250 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
DAIRY QUEEN	12260 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
TACO BELL	12265 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
PIZZA HUT	12336 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
SOMBRERO MEXICAN FOOD	12346 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
GRAMMAR'S DELI	12346 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
CAFE 67	12381 MAPLEVIEW ST	LAKESIDE	CA	92040	LAKESIDE
ROBERTOS TACO SHOP	12401 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
LITTLE CAESARS	12405 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
MARIOS ITALIAN RESTAURANT	12440 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
CUPS & CONES	12481 WOODSIDE AVE	LAKESIDE	CA	92040	LAKESIDE
MI CABANA MEXICAN FOOD	12510 LAKESHORE DRIVE	LAKESIDE	CA	92040	LAKESIDE
VFW POST	12650 LINDO LN	LAKESIDE	CA	92040	LAKESIDE
MIKES GIANT NEW YORK PIZZA	13326 HWY 8 BUSINESS	LAKESIDE	CA	92040	LAKESIDE
ALBERTS MEXICAN FOOD	13334 I 8 BUSINESS	LAKESIDE	CA	92040	LAKESIDE
GAETANOS	13524 HWY 8 BUSINESS	LAKESIDE	CA	92040	LAKESIDE
TASTY PIZZA	9534 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
WIENERSCHNITZEL	9536 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
ROSARITOS MEXICAN FOOD	9562 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
SUBWAY	9562 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
LENGS CHINESE FOOD	9610 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
NEW YORK GIANT PIZZA	9610 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
MCDONALDS	9614 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
CHINA DYNASTY RESTAURANT	9740 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
GIANT PIZZA KING	9742 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
LAKESIDE STEAKHOUSE	9927 MAINE AVE	LAKESIDE	CA	92040	LAKESIDE
LA PARADA	8215 WINTER GARDENS BL	LAKESIDE	CA	92040	LAKESIDE
FROSTY BURGER	28823 OLD HIGHWAY 80	PINE VALLEY	CA	91962	PINE VALLEY
CALVINS	28841 OLD HIGHWAY 80	PINE VALLEY	CA	91962	PINE VALLEY
MAJORS DINER	28870 OLD HIGHWAY 80	PINE VALLEY	CA	91962	PINE VALLEY
MY KIDS CLUBHOUSE	5034 BONITA RD	BONITA	CA	91902	SPRING VALLEY
GIANT PIZZA KING	5035 CENTRAL AV	BONITA	CA	91902	SPRING VALLEY
KFC	5080 BONITA RD	BONITA	CA	91902	SPRING VALLEY
HANS & HARRYS BAKERY	5080 BONITA RD	BONITA	CA	91902	SPRING VALLEY
CARIBE RESTAURANT & NIGHTCLUB	5080 BONITA RD	BONITA	CA	91902	SPRING VALLEY
MURRIETAS MEXICAN RESTAURANT	5170 BONITA RD	BONITA	CA	91902	SPRING VALLEY
LA FINCA D ADOBE	5202 BONITA RD	BONITA	CA	91902	SPRING VALLEY
BONITA GOLF CLUB	5540 SWEETWATER RD	BONITA	CA	91902	SPRING VALLEY
LA VIDA REAL LLC	11588 VIA RANCHO SAN DIEGO	EL CAJON	CA	92019	SPRING VALLEY
JAMBA JUICE	12098 FURY LN	EL CAJON	CA	92019	SPRING VALLEY
DENNYS	2642 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
MCDONALDS	2646 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
HILBERTOS MEXICAN FOOD	2648 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
JANETS CAFE	2650 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
SUBWAY	2650 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
ROUND TABLE PIZZA	2650 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
BAGEL TOWNE CAFE INTERPRISES INC	2650 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY

COUNTY OF SAN DIEGO
FOOD SERVICE ESTABILISHMENTS

Business Name	Business Address	City	State	Zip	District
MANDARIN CHEF	2654 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
SPINNERS	2654 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
LITTLE CAESARS	2920 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
CARLS JR	2935 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
KFC	2949 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
SUBMARINA SUBS	2951 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
HOOLEYS IRISH PUB & GRILL	2955 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
RUBIOS FRESH MEXICAN GRILL	2959 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
PIZZA HUT	2959 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
JUICE BLEND	2959 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
YUKI SUSHI	2963 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
RISTORANTE ARRIVEDERCI	2963 JAMACHA RD	EL CAJON	CA	92020	SPRING VALLEY
CHAMBOI	2963 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
PETER PIPER PIZZA	2983 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
TABOO SUSHI BAR & GRILL	2986 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
HONG KONG CITY	2990 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
PRESS BOX SPORTS LOUNGE	2990 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
SAHARA CAFE	2990 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
DA BOYZ PIZZA AND PASTA	2990 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
TGI FRIDAYS	2991 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
BURGER KING	2992 JAMACHA RD	EL CAJON	CA	92019	SPRING VALLEY
NANCYS TACO SHOP	8731 BROADWAY	LA MESA	CA	91941	SPRING VALLEY
PALERMO PIZZA ITALIAN RESTAURANT	8733 BROADWAY	LA MESA	CA	91941	SPRING VALLEY
BOOMER BEES CAFE BAKERY	8739 BROADWAY	LA MESA	CA	91941	SPRING VALLEY
BEIJING EXPRESS	8741 BROADWAY	LA MESA	CA	91941	SPRING VALLEY
INTERNATIONAL HOUSE OF PANCAKES	8747 BROADWAY	LA MESA	CA	91941	SPRING VALLEY
WENDYS	8749 CAMPO RD	LA MESA	CA	91941	SPRING VALLEY
PIZZA HUT	1838 SWEETWATER RD	NATIONAL CITY	CA	91950	SPRING VALLEY
SUBWAY	1860 SWEETWATER RD	NATIONAL CITY	CA	91950	SPRING VALLEY
L & L HAWAIIAN BARBECUE	1860 SWEETWATER RD	NATIONAL CITY	CA	91950	SPRING VALLEY
DENNYS	1904 SWEETWATER RD	NATIONAL CITY	CA	91950	SPRING VALLEY
COZY CORNER	2548 GRANGER AVE	NATIONAL CITY	CA	91950	SPRING VALLEY
GAETANOS ITALIAN CAFE	10025 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
HORTENCIAS TACO SHOP	1015 GRAND AVE	SPRING VALLEY	CA	91977	SPRING VALLEY
JACK IN THE BOX	10255 CAMPO RD	SPRING VALLEY	CA	91978	SPRING VALLEY
GIANT PIZZA KING	1029 ELKELTON BL	SPRING VALLEY	CA	91977	SPRING VALLEY
RAMBERTOS TACO SHOP	1039 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
LUCYS BAKERY	1043 ELKELTON BL	SPRING VALLEY	CA	91977	SPRING VALLEY
HECTORS TACO SHOP	1045 ELKELTON BL	SPRING VALLEY	CA	91977	SPRING VALLEY
JACK IN THE BOX	1047 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
FOSTERS FREEZE	1069 ELKELTON BLVD	SPRING VALLEY	CA	91977	SPRING VALLEY
CHINA HOUSE EXPRESS	2615 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91978	SPRING VALLEY
ROLBERTOS	2615 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91977	SPRING VALLEY
SUBWAY	2615 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91977	SPRING VALLEY
RANCHWOOD DELI	2731 VIA ORANGE WY	SPRING VALLEY	CA	91978	SPRING VALLEY
FERNANDOS PIZZA	2778 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91977	SPRING VALLEY
EL PUERTO TACO SHOP	2836 BANCROFT DR	SPRING VALLEY	CA	91977	SPRING VALLEY
PAPAS PIZZA	2844 BANCROFT DR	SPRING VALLEY	CA	91977	SPRING VALLEY
PEDROS COCINA MEXICANA	3515 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91978	SPRING VALLEY
WIENERSCHNITZEL	3523 SWEETWATER SPRINGS BL	SPRING VALLEY	CA	91978	SPRING VALLEY
LORETOS MEXICAN FOOD	3546 BANCROFT ST	SPRING VALLEY	CA	91977	SPRING VALLEY
CARLS JR	3722 KENORA DR	SPRING VALLEY	CA	91977	SPRING VALLEY
NEW LINLEES CHINESE CUISINE	501 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
PALOMA TACO SHOP	507 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
LITTLE CAESARS PIZZA	539 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
RAFAS MEXICAN FOOD	566 PARAISO AVE	SPRING VALLEY	CA	91977	SPRING VALLEY
ASHTLAN	566 PARAISO AVE	SPRING VALLEY	CA	91977	SPRING VALLEY
A & D SALES	6377 QUARRY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
GODFATHERS PIZZA	685 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SUBWAY	689 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SOMBRERO MEXICAN FOOD	691 SWEETWATER RD	SPRING VALLEY	CA	91977	SPRING VALLEY
TASTY CHINA EXPRESS	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
GRACIELAS TACO SHOP	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
PIZZA HUT	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY

COUNTY OF SAN DIEGO
FOOD SERVICE ESTABILISHMENTS

Business Name	Business Address	City	State	Zip	District
LOUISIANA FAMOUS FRIED CHICKEN	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
BAMBINOS PIZZARIA & DELI	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SARAHS BAKERY	8300 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
KFC	8330 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
LEOCYNNS LUMPIA	8360 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
EL KORA MEXICAN RESTAURANT	8415 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
K T DONUTS	8415 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
KABABAYAN BAKERY	8423 PARADISE VALLEY RD	SPRING VALLEY	CA	91977	SPRING VALLEY
FRUTI TACO	8614 TROY ST	SPRING VALLEY	CA	91977	SPRING VALLEY
RALLYS HAMBURGERS	8667 JAMACHA RD	SPRING VALLEY	CA	91977	SPRING VALLEY
MCDONALDS	8730 JAMACHA BL	SPRING VALLEY	CA	91977	SPRING VALLEY
CALIFORNIA COMFORT	8910 TROY ST	SPRING VALLEY	CA	91977	SPRING VALLEY
MARLENS TACO SHOP	8921 JAMACHA RD	SPRING VALLEY	CA	91977	SPRING VALLEY
MOOSE LODGE	9062 MEMORY LN	SPRING VALLEY	CA	91977	SPRING VALLEY
NEW CHINA RESTAURANT	9142 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
JIM HOMS WHEEL THRU	9330 JAMACHA BL	SPRING VALLEY	CA	91977	SPRING VALLEY
SPRINGVALLEY WATER STORE	9348 JAMACHA BL	SPRING VALLEY	CA	91977	SPRING VALLEY
MARISCOS GERMAN	9410 APPLE ST	SPRING VALLEY	CA	91977	SPRING VALLEY
DON JILBERTOS MEXICAN FOOD	9569 JAMACHA BL	SPRING VALLEY	CA	91977	SPRING VALLEY
SILVAS MEXICAN FOOD	9664 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
GRECIAN CAFE	9676 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
ROUND TABLE PIZZA	9676 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
RANASCOM	9683 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
MAMA CHRIS'S BAR BE QUE	9725 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
CHEF CHINA	9726 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
MS DONUT	9729 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
AVOS CATERING	9735 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
BAGATELLE FRENCH BAKERY	9738 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
TROPICAL HUT RESTAURANT & BAKERY	9766 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
LITTLE CAESARS PIZZA	9770 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SUBWAY	9805 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SANTANAS MEXICAN GRILL	9824 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SARITA TACO SHOP	9906 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
LA POSTA DE ACAPULCO	9914 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
SUNRISE DELI NEW YORK STYLE	9945 CAMPO RD	SPRING VALLEY	CA	91977	SPRING VALLEY
ROSES DONUTS	1760 N 2ND ST	EL CAJON	CA	92021	WINTER GARDENS
PIZZA HUT	1762 N 2ND ST	EL CAJON	CA	92021	WINTER GARDENS
MARISCOS EL TITANIC	1771 N 2ND ST	EL CAJON	CA	92021	WINTER GARDENS
HOLE IN THE WALL PIZZA SHOPPE	8049 WINTER GARDENS BL	EL CAJON	CA	92021	WINTER GARDENS
CALYPSO	975 GREENFIELD DR	EL CAJON	CA	92021	WINTER GARDENS

Attachment B
Existing Special Maintenance Sites

SPECIAL MAINTENANCE SITES FOR ALPINE SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
403	130	55	B	Alpine Blvd.	S1
403	130	432	C	Alpine Blvd.	S2
403	220	67	B	Alpine Blvd.	S2
403	220	326	C	Alpine Blvd.	S2
403	221	315	D	Arnold cs Alpine Grove	G2
403	221	535	E	Arnold cs Alpine Grove	G2
403	250	196	C	Alpine Blvd. To Arnold Way	S2
403	250	133	G	Esmt	T1
403	250	162	H	Alpine Blvd.	T1
403	261	442	F	Alpine Blvd.	T1
403	271	286	E	Alpine Blvd.	S2
403	271	181	G	Marshall @ Restaurant	G2
403	360	360	A	Marshall	S2
403	360	249	B	Marshall	S2
403	360	73	C	Marshall	S2
403	370	347	AC	Tavern cs Arnold	S2
403	370	347	B	Alpine Blvd. cs Tavern	S2
403	392	150	B	Tavern cs Alpine Blvd.	G2
403	400	350	AC	The Village off Arnold	S2
403	410	308	C	Trailer Park Alpine Blvd.	S2
403	410	280	D	Trailer Park Alpine Blvd.	S1
403	410	297	E	Trailer Park Alpine Blvd.	S1
403	462	395	A	Esmt. Harbinson Canyon	S2
403	462	381	B	Esmt. Harbinson Canyon	S2

CONDITION KEY: T=Roots, G=Grease, S=Sludge, including grit.
RATING KEY: 1 through 3, 3 being worst (near blockage)

SPECIAL MAINTENANCE SITES FOR LAKESIDE SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
382	71	300	F	Esmt Riverview	S1
382	80	98	E	9316 Westhill	S1
382	100	206	B	Marilla	S1
382	122	384	C	Westhill	S1
382	122	190	E	Westridge Pl.	T3
382	122	358	G	Westhill	S1
382	122	220	J	Westhill Vista	T1
382	122	188	L	Westhill Vista	S1
382	122	40	N	Westhill	S1
382	130	197	A	Esmt. off of Marilla	S1
382	130	107	E	Esmt. off of Marilla	T1
382	140	306	E	Emerald Hills	S1
382	191	364	B	Winter Gardens Blvd.	S2
382	191	366	C	Winter Gardens Blvd.	S2
382	191	353	D	Winter Gardens Blvd.	S2
382	200	217	C	Esmt. off of Westhill	T1
382	200	141	E	Esmt. Off Paradise Pk Dr	S1
382	200	52	H	Esmt. Off Paradise Pk Dr	S1
382	240	180	J	Esmt. off of Westhill	T2
382	270	101	B	Winter Gardens Blvd.	G2
382	290	350	G	Saguaro	S1
382	290	134	H	Saguaro	S1
382	290	180	J	Saguaro	S1
385	330	350	D	Winter Gardens Blvd.	S1
385	330	315	E	Winter Gardens Blvd.	T3
394	40	281	K	Vine St.	S1
394	101	215	D	Woodside	G2
394	101	350	E	Esmt off Woodside	G2
394	101	66	F	Esmt off Woodside	G2
394	102	350	F	Woodside	G2
394	102	320	G	Woodside	G2
394	300	206	H	Castle Court	T2
394	300	393	J	Castle Court	T1
394	320	250	A	Esmt Castle Court	T1
394	450	187	B	Petite Ln.	S1
394	490	225	A	Beechtree	S2
394	490	218	B	Beechtree	S1
394	490	100	C	Beechtree	S1
394	490	350	D	Beechtree	S1
394	490	161	E	Esmt.	S1
394	490	270	F	Esmt.	S1

SPECIAL MAINTENANCE SITES FOR LAKESIDE SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
394	551	151	L	Wintercrest	S1
394	561	330	B	Laurel St.	S2
394	561	325	C	Beechtree	S2
394	10-1	350	B	Winter Gardens Blvd.	G2
394	10-1	135	C	Winter Gardens Blvd.	G2
395	270	300	D	Beechtree	S1
395	270	350	E	Beechtree	S1
395	270	393	F	Beechtree	S1
395	270	50	H	Beechtree	S1
395	270	335	J	Beechtree Esmt.	S1
395	270	188	M	Beechtree Esmt.	S1
395	290	166	M	Appaloosa	S1
395	290	166	N	Appaloosa	S1
395	322	317	R	Telkaif	G2
395	331	261	H	Telkaif	G2
395	331	252	J	Telkaif	G2
395	331	197	K	Telkaif	G2
395	331	343	L	Telkaif	G2
396	160	124	G	Miguel Ln. Esmt	S1
396	160	345	P	Miguel Ln. Esmt	S1
397	260	300	S	Esmt off of Gay Rio	S1
397	340	243	A	Chestnut	S2
397	340	250	B	Esmt	S2
397	340	148	C	Esmt	S2
397	340	343	D	Calle Lucia	S1
397	410	415	D	Meseta Ln.	G2
397	410	302	M	Cochera Rd.	G2
398	261	370	B	Pinkard Lane	G1
398	460	289	D	Rosada Way	T3

CONDITION KEY: T=Roots, G=Grease, S=Sludge, including grit.

RATING KEY: 1 through 3, 3 being worst (near blockage)

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
495	440	120	G	Highland Glen	T2
495	440	109	H	Highland Glen	T2
496	72	165	P	Esmt. @ Vivera	T1
496	211	254	G	Heavenly Way	T3
496	212	260	D	Grandview	G2
496	221	350	N	Grandview	S2
496	221	350		Grandview	S2
496	330	160	C	Esmt. @ Vivera	T1
499	150	353	A	Thunderbird Ln.	G2
499	240	162	D	Birdie Dr.	S1
499	260	100	A	Esmt. @ Campo Rd.	S1
499	260	46	B	Esmt. @ Campo Rd.	S1
499	260	190	C	Esmt. @ Campo Rd.	S1
499	260	164	D	Esmt. @ Campo Rd.	S1
499	320	116	A	Esmt. @ Fairway	G2
499	362	206	S	Saddle	T1
500	11	167	A	Esmt. @ Kahlua	T2
500	11	192	B	Esmt. @ Kahlua	T2
500	180	334	C	Esmt.	S2
500	220	113	A	Esmt. @ Kahlua	T2
500	220	152	B	Esmt. @ Kahlua	T2
500	220	100	F	Esmt. @ Kahlua	S1
501	30	527	F	Crestview	S1
501	40	193	C	Esmt. @ Rancho Rd.	T1
501	90	276	S	N. Cordoba	T1
501	90	267	T	N. Cordoba	T1
501	94	357	N	Cortez Way	S1
501	95	157	X	Esmt @ N. Bonita	S1
501	100	105	AH	Challenge	S2
501	100	130	AN	Cliffwood	T1
501	100	175	E	Lovette Esmt.	T1
501	100	56	F	Lovette Esmt.	S1
501	100	114	G	Lovette Esmt.	T1
501	100	229	L	Estrella	T1
501	100	189	M	Estrella	T1
501	120	384	C	Rancho Rd.	S2
501	120	253	D	Esmt. @ Rancho Rd.	T1
501	120	110	E	Esmt. @ Rancho Rd.	S1
501	171	150	AC	Esmt. @ San Juan	S1
501	171	190	AD	Esmt. @ San Juan	S1
501	171	163	AE	Esmt. @ San Juan	T1

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
501	171	160	W	North Bonita	G2
501	171	127	X	North Bonita	G2
501	180	168	AA	Esmt @ Casa De Oro	T2
501	180	259	J	Esmt @ Casa De Oro	S1
501	180	109	K	Esmt @ Casa De Oro	S1
501	180	204	L	Esmt @ Casa De Oro	S1
501	180	63	M	Esmt @ Casa De Oro	S1
501	180	216	W	Esmt @ Casa De Oro	T2
501	180	198	X	Esmt @ Casa De Oro	T2
501	190	141	B	Esmt. @ Gaul	T2
501	210	285	S	Ramona Dr.	S1
501	241	170	A	Esmt. @ Bonita St.	G2
501	241	165	B	Bonita St.	G2
501	242	310	J	Buena Vista	S1
501	245	310	J	Buena Vista	S1
501	270	291	D	Esmt. Madrid	T2
501	300	410	C	Toledo Rd.	S1
501	382	300	E	Miriam	S1
503	20	178	A	Trophy	S1
503	20	236	B	Trophy	S1
503	20	145	C	Turf Ln.	S1
503	30	300	A	Trophy	S1
503	30	250	E	Oar	S1
503	30	290	F	Par	S1
503	30	83	H	Trophy	S1
503	40	225	F	Link	S1
503	52	135	D	Central	T1
503	170	350	A	Fairway	S2
503	170	106	B	Fairway	S3
503	271	590	A	Troy St. Park	G1
503	272	397	B	Public Park off Troy	T1
503	272	100	C	Public Park off Troy	S1
503	272	25	D	Public Park off Troy	S2
503	290	191	D	Bancroft	S1
503	290	265	E	Bancroft	S1
503	290	300	K	Valencia	S2
503	391	235	A	Esmt. @ Valencia	S1
503	391	268	E	Carmen Ranch	T1
503	391	127	H	Carmen Ranch	S2T2
503	391	350	J	Carmen Ranch	S2T2
503	391	189	K	Carmen Ranch	S1

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
503	391	461	L	Esmt. @ Carmen Ranch	S1
503	411	308	A	Tyler	S2
503	411	235	C	Esmt. @ Tyler	S1
503	411	24	S	Tyler	S1
503	412	163	E	Esmt. @ Tyler	S2
504	21	130	D	Helix St.	S1
504	21	200	E	Helix St.	S1
504	21	60	L	Helix St.	S1
504	80	267	B	S. Bonita St.	T1
504	100	158	A	S. Bonita St.	T1
504	100	269	B	S. Bonita St.	T1
504	111	30	F	Lamar St.	S1
504	112	150	E	Esmt @ Rosedale	S1
504	112	324	F	Esmt @ Rosedale	T1
504	120	310	V	Esmt. @ Lamar	S1
504	160	315	D	S. Bonita St.	T1
504	170	310	D	Rosedale Drive	S1
504	170	225	J	Esmt @ Rosedale	S1
504	170	240	L	Esmt @ Rosedale	S1
504	200	350	B	Avocado	S1
504	200	370	C	Avocado	S1
504	311	366	B	Esmt. @ Bancroft	G2
504	311	119	C	Esmt. @ Bancroft	S1
504	350	275	G	Kenora	S1
504	350	194	J	Kenora	S1
504	350	60	M	Kenora	T1
505	10	372	B	S. Bonita St.	T1
505	20	145	B	Glen Dr.	T1
505	20	203	C	Glen Dr.	T1
505	82	163	T	Esmt. @ Swtr. Springs	T3
505	82	248	U	Esmt. @ Swtr. Springs	T3
505	101	227	J	Esmt. @ Don Pico	T3
505	101	198	K	Esmt. @ Don Pico	T3
505	101	250	L	Esmt. @ Don Pico	S1
505	102	332	M	Esmt. Calavo Dr.	S1
505	110	163	AA	Esmt. @ Don Pico	S1
505	110	317	B	Esmt. @ Don Pico	T1
505	110	222	C	Esmt. @ Don Pico	T1
505	121	90	G	Ybarra Rd.	S1
505	150	191	B	Esmt. @ Loma Rancho	T1
505	150	170	D	Loma Rancho	T1

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
505	160	272	E	Esmt. @ Calavo	S1
505	160	420	K	Calavo Dr.	T1
505	260	173	A	Esmt.	S1
505	270	258	A	Daleridge	T1
505	270	346	B	Cliffside	T1
505	270	123	D	Cliffside	T1
505	270	149	E	Cliffside	T1
505	270	30	G	Cliffside	T1
505	280	258	A	Canyonridge	S1
505	280	251	B	Canyonridge	S1
505	280	353	C	Daleridge	T1
505	340	243	F	Ridgeside	T1
505	460	118	C	Esmt.	S1
505	460	101	D	Esmt.	T1
505	460	100	E	Esmt.	S1
505	460	75	F	Esmt.	T1
505	460	115	G	Esmt.	S1
505	460	117	H	Esmt.	S1
505	480	335	A	Canyonview	T1
505	480	320	B	Canyonview	T1
505	580	193	D	Calle Marinero	S1
505	580	132	H	Esmt. @ Swtr Springs	S2
505	601	163	T	Calavo	S1
505	621	296	G	Moorpark	S2
505	621	182	H	Esmt. @ Moorpark	S2
505	622	42	S	Austin	S1
505	626	348	L	Moorpark	G2
563	60	233	AM	Esmt. @ 24th St.	T1
563	60	207	AN	Esmt. @ 24th St.	T1
563	161	64	A	Esmt. @ Grove	S1
563	161	207	B	Esmt. @ Grove	S1
563	161	100	C	Esmt. @ Grove	S1
564	50	353	D	Wilma	S1
564	60	276	E	Esmt. @ Alta	S1T1
564	150	364	A	Esmt. @ Alta	S1
570	40	8	E	Plaza Bonita	S1
570	120	500	B	Esmt. Bonita Rd	G2
570	180	362	B	Bonita Rd.	S2
570	180	533	D	Esmt. Bonita Rd.	G2
577	510	290	A	Esmt.	G2
577	510	270	B	Tarlton	G1

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
577	510	305	C	Tarlton	S1G1
577	510	90	D	Tarlton	-
577	510	210	E	Folkstone	G1
577	520	120	C	Tarlton	G1
577	520	250	G	Folkstone	G2
577	520	267	H	Esmt. @ Folkstone	G1
578	80	187	K	Esmt. @ Helix	S1
578	100	209	A	Harness	G2
578	100	285	B	Gowin	S1
578	100	132	C	Gowin	G2
578	100	137	D	Gowin	G1
578	100	214	E	Harness	S1
578	160	327	H	Esmt. Off Grand Ave.	S1
578	160	129	J	Esmt. Off Grand Ave.	S1
578	170	81	D	Jamacha	G1
578	201	245	A	Harness	S1
578	201	330	B	Harness	S1
578	220	170	B	Harness	S1
578	220	145	C	Harness	S1
578	300	122	S	Esmt. @ Central Ave.	G1
579	150	345	C	St. George	S1
579	160	325	K	St. George	S1
579	170	442	D	Jamacha	S1
579	220	265	E	Huron	G2
579	230	430	C	Huron	G2
579	240	214	L	Banock	S1
579	260	264	D	Galopago	S1
579	330	138	D	Mitra Ct.	G2
579	330	64	E	Jamacha	G2
579	330	318	P	Jamacha	G2
579	330	81	R	Jamacha	G2
579	340	212	P	Esmt. @ La Mesa Ct.	S1
579	381	110	D	San Miguel	S1
579	381	80	M	San Miguel	S1
580	200	128	M	Esmt. @ Jacoby	T2
583	500	340	E	Delrose	G2
583	500	288	F	Elkelton	G2
584	40	278	C	Orville	S2
584	40	443	D	Orville	S2
584	40	317	E	Safford	S2
584	61	220	D	Esmt. @ Gillespie	S1

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
584	61	250	H	Gillespie	G2
584	61	21	J	Gillespie	S1
584	61	175	K	Gillespie	S1
584	62	230	D	Esmt. @ Gillespie	S2
584	62	118	E	Gillespie	S2
584	62	282	F	Gillespie	S1
584	62	300	G	Gillespie	T1
584	100	259	J	Ruxton	S1
584	260	360	B	Brucker	G2
584	260	359	C	Brucker	S1
584	320	225	C	Grand Ave.	T3
584	460	258	B	San Diego St.	S1
584	460	35		Kempton	G2
584	460	535		Kempton	G2
584	470	268	B	Kempton	G2
584	470	268	B	Kempton	S2
584	470	340	D	Felicita	S1
584	512	332	E	Esmt. @ Brucker	S1
586	60	293	C	Check Bridge	-
586	181	205	C	Elkelton	S1
586	251	218	F	Broadview	S1
586	282	58	S	Worthington	S1
589	100	314	D	Tennis Ct.	S2
589	100	291	E	Tennis Ct.	S2
589	231	198	Y	Esmt. @ Briarwood	T1
590	12	254	A	Esmt. @ Briarwood	S2
590	12	390	B	Esmt. @ Briarwood	S1
590	52	360	B	Sweetwater Rd.	S1
590	52	186	C	Esmt @ Sweetwater	S1
590	52	230	D	Esmt @ Sweetwater	S1
590	220	510	D	Esmt. @ San Miguel	S1
590	220	294	E	Esmt. @ San Miguel	S1
590	260	360	B	Pray St.	S1
590	270	132	B	Pray St.	T2
590	381	387	C	Country Trails	T1
590	381	334	D	Wildoats	S1
590	381	309	E	Country Trails	S1
590	390	328	F	Via De Cabello Blanco	T1
590	400	209	A	Esmt. @ Loma Del Sol	T1
590	400	383	B	Esmt. @ Country Trails	S1
590	400	299	C	Esmt. @ Country Trails	S2

SPECIAL MAINTENANCE SITES FOR SPRING VALLEY SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition & Rating
590	400	415	D	Esmt. @ Country Trails	S2
590	400	299	E	Sunny View	S2
593	60	310	E	Palm	G3
593	70	168	D	Esmt. @ Acacia	G3

CONDITION KEY: T=Roots, G=Grease, S=Sludge, including grit.
RATING KEY: 1 through 3, 3 being worst (near blockage)

SPECIAL MAINTENANCE SITES FOR WINTER GARDENS SERVICE AREA

Book	Page	Line#	Line Letter	Street/Esmt.	Condition Key
388	251	294	G	Pepper Dr.	S1
388	261	495	J	Pepper Dr.	S1
388	261	385	M	Pepper Valley	S1
388	370	400	B	Cresthill Rd.	S1
400	142	223	A	Pepper Dr.	S1
400	142	300	E	Esmt.	S1
400	151	310	E	Peerless Dr.	S1
400	160	120	A	Pepper Dr.	S1
400	160	200	B	Wight Way	S1
400	160	131	D	Pepper Dr.	S1
400	280	125	F	Esmt	T1
400	280	50	G	Sunview Dr.	S1,T1
400	322	253	B	Merril Dr.	S1
400	340	288	D	Sunburst Dr.	S1
400	340	200	L	Bird Song	S1
484	11	322	C	Greenfield Dr.	S2
484	11	199	F	Greenfield Dr.	S2
484	11	196	J	Greenfield Dr.	S2
484	12	172	D	Greenfield Dr.	S2
484	12	153	G	Greenfield Dr.	S2
484	12	377	K	Greenfield Dr.	S2
484	51	400	A	Greenfield Dr.	S2
484	51	380	B	Greenfield Dr.	S1
484	51	360	C	Greenfield Dr.	S1
484	51	225	D	Greenfield Dr.	S1
484	51	150	E	Olive St.	S2
484	52	293	A	Greenfield Dr.	S1
484	52	383	B	Greenfield Dr.	S2
484	52	380	C	Greenfield Dr.	S2
484	52	150	D	Greenfield Dr.	S2
484	110	200	F	Esmt.	S2

CONDITION KEY: T=Roots, G=Grease, S=Sludge, including grit.

RATING KEY: 1 through 3, 3 being worst (near blockage)

Attachment C
County of San Diego
Sanitary Sewer Overflow Locations

COUNTY OF SAN DIEGO
REPORTED SEWER SYSTEM OVERFLOWS

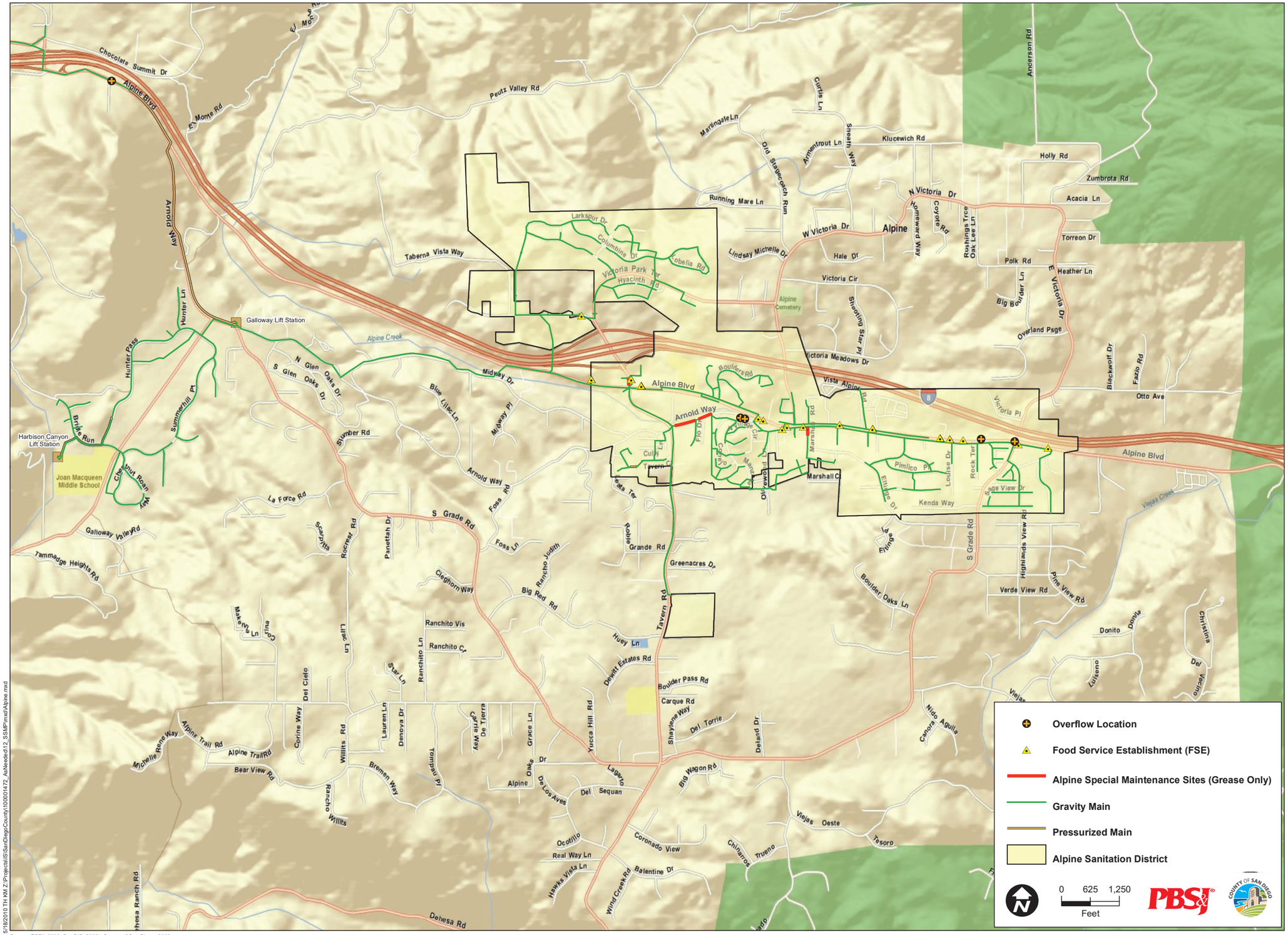
ITEM NO.	EVENT ID	Collection System	SSO Category	Start Date & Time	SSO Address	SSO City	Cause
SSO Occurences at Mains							
1	748067	County Of San Diego CS	Category 1	1/1/2010 9:55	10263 Vista de la Cruz	La Mesa	Debris
2	747145	County Of San Diego CS	Category 1	11/27/2009 20:45	16666 Alpine Blvd	Alpine	Debris
3	744310	County Of San Diego CS	Category 1	9/5/2009 9:10	4255 Conrad Drive	Spring Valley	Roots
4	741723	County Of San Diego CS	Category 1	7/22/2009 11:55	Wild Oats & Country Trails	N/A	Debris
5	737515	County Of San Diego CS	Category 1	5/15/2009 7:50	2415 Ridgeway	National City	Debris
6	737153	County Of San Diego CS	Category 2	5/3/2009 12:30	2055 Arnold	Alpine	Vandalism
7	737009	County Of San Diego CS	Category 1	4/30/2009 10:40	9260 Harness	Spring Valley	Vandalism
8	736744	County Of San Diego CS	Category 2	4/23/2009 9:25	2055 Arnold	Alpine	Vandalism
9	732954	County Of San Diego CS	Category 1	12/3/2008 10:57	10441 Madrid	Spring Valley	Roots
10	730114	County Of San Diego CS	Category 1	11/28/2008 10:00	11934 Royal	El Cajon	Debris
11	719563	County Of San Diego CS	Category 1	6/15/2008 21:00	1201 Elkelton	Spring Valley	Grease
12	713196	County Of San Diego CS	Category 1	2/16/2008 10:40	Alpine Blvd & South Grade Rd	Alpine	Debris
13	707819	County Of San Diego CS	Category 2	11/3/2007 9:30	Quarry Rd & Sweetwater Rd	Spring Valley	Debris
14	706754	County Of San Diego CS	Category 1	10/27/2007 8:00	Jamacha Blvd & Trace Rd	Spring Valley	Structural
15	654144	County Of San Diego CS	Category 2	7/14/2007 16:45	1832 Helix Street	Spring Valley	Debris
16	651083	County Of San Diego CS	Category 2	5/21/2007 20:30	9060 Winter Gardens Blvd	Winter Gardens	Debris
17	647416	County Of San Diego CS	Category 1	2/22/2007 20:00	8759 Bigford	Spring Valley	Roots
SSO Occurences at Private Laterals							
1	745112	County Of San Diego CS	Category 2	9/26/2009 8:45	N/A	Spring Valley	Debris
2	742969	County Of San Diego CS	Category 2	8/12/2009 10:10	N/A	El Cajon	Roots
3	733823	County Of San Diego CS	Category 1	2/10/2009 7:24	N/A	Spring Valley	Debris
4	730262	County Of San Diego CS	Category 2	12/5/2008 11:45	N/A	National City	Roots
5	731245	County Of San Diego CS	Category 2	11/21/2008 16:15	2390 Bancroft Dr	Spring Valley	Debris
6	728649	County Of San Diego CS	Category 2	10/25/2008 19:00	9902 Jamacha Blvd	Spring Valley	Debris
7	720309	County Of San Diego CS	Category 1	6/24/2008 10:15	N/A	Spring Valley	Debris
8	716705	County Of San Diego CS	Category 2	4/26/2008 11:00	8628 Valencia St	Spring Valley	Roots

COUNTY OF SAN DIEGO
REPORTED SEWER SYSTEM OVERFLOWS

9	716794	County Of San Diego CS	Category 2	4/22/2008 7:30	2011 Hawkins Way	Spring Valley	Structural
10	714822	County Of San Diego CS	Category 1	3/11/2008 9:45	N/A	Spring Valley	Other
11	713197	County Of San Diego CS	Category 1	2/17/2008 8:15	2812 Alpine Blvd	Alpine	Debris
12	657672	County Of San Diego CS	Category 2	9/17/2007 10:00	N/A	Spring Valley	Debris
13	651639	County Of San Diego CS	Category 2	6/7/2007 7:20	N/A	Lakeside	Debris

Addresses obtained from County MAR

Attachment D
Exhibits 1, 2, and 3
FSE, SSO and Special Maintenance Site Locations for Alpine, Lakeside, and Spring Valley

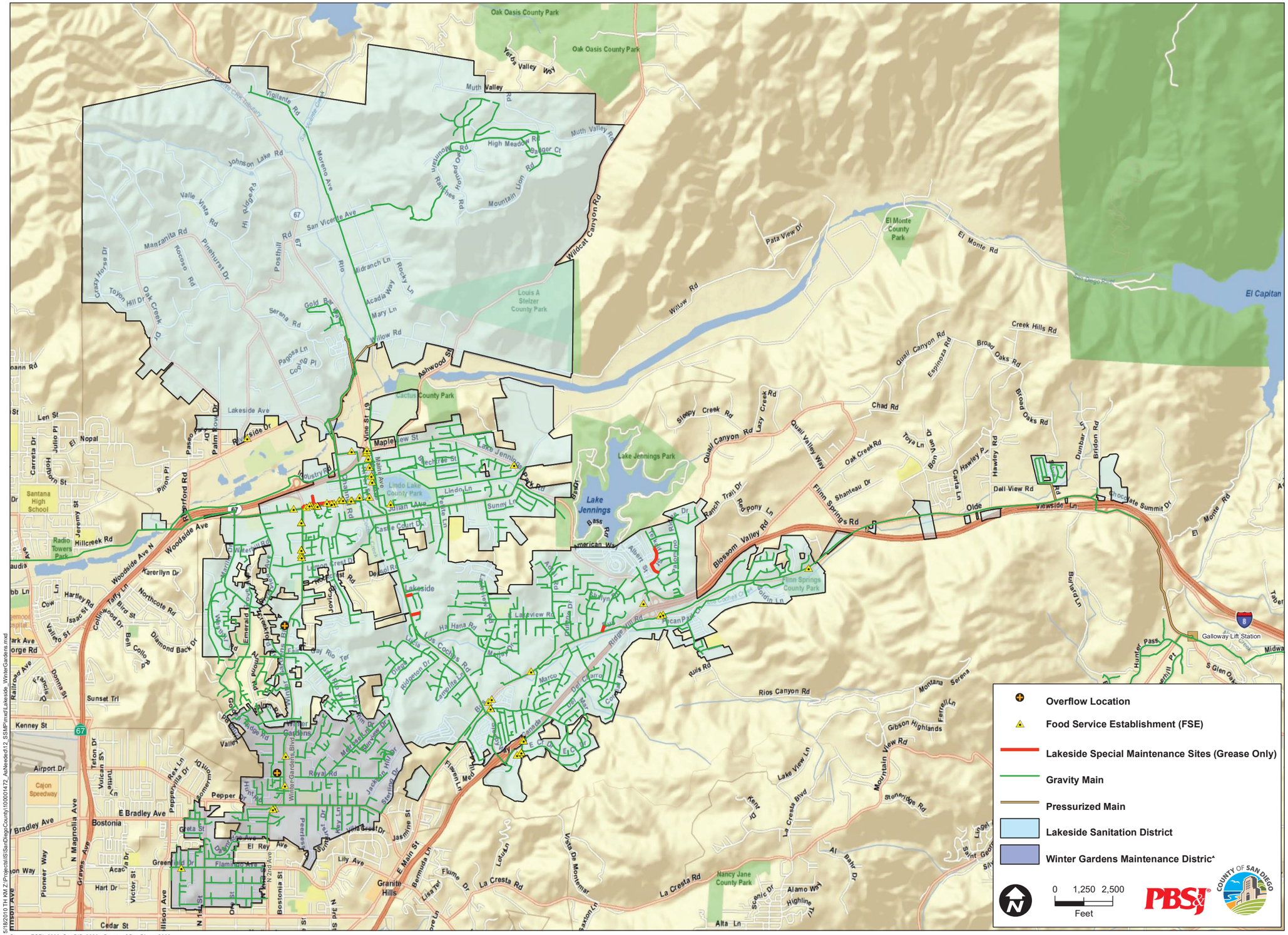


5/18/2010 TH KM Z:\Projects\IS\SanDiegoCounty\1010001472_AsNeeded\12_SSMP\mxd\Alpine.mxd

Source: ESRI, 2009; SanGIS, 2008; County of San Diego, 2008

Food Service Establishments, Overflow Locations, and Special Maintenance Sites within Alpine Sanitation District

Exhibit 1

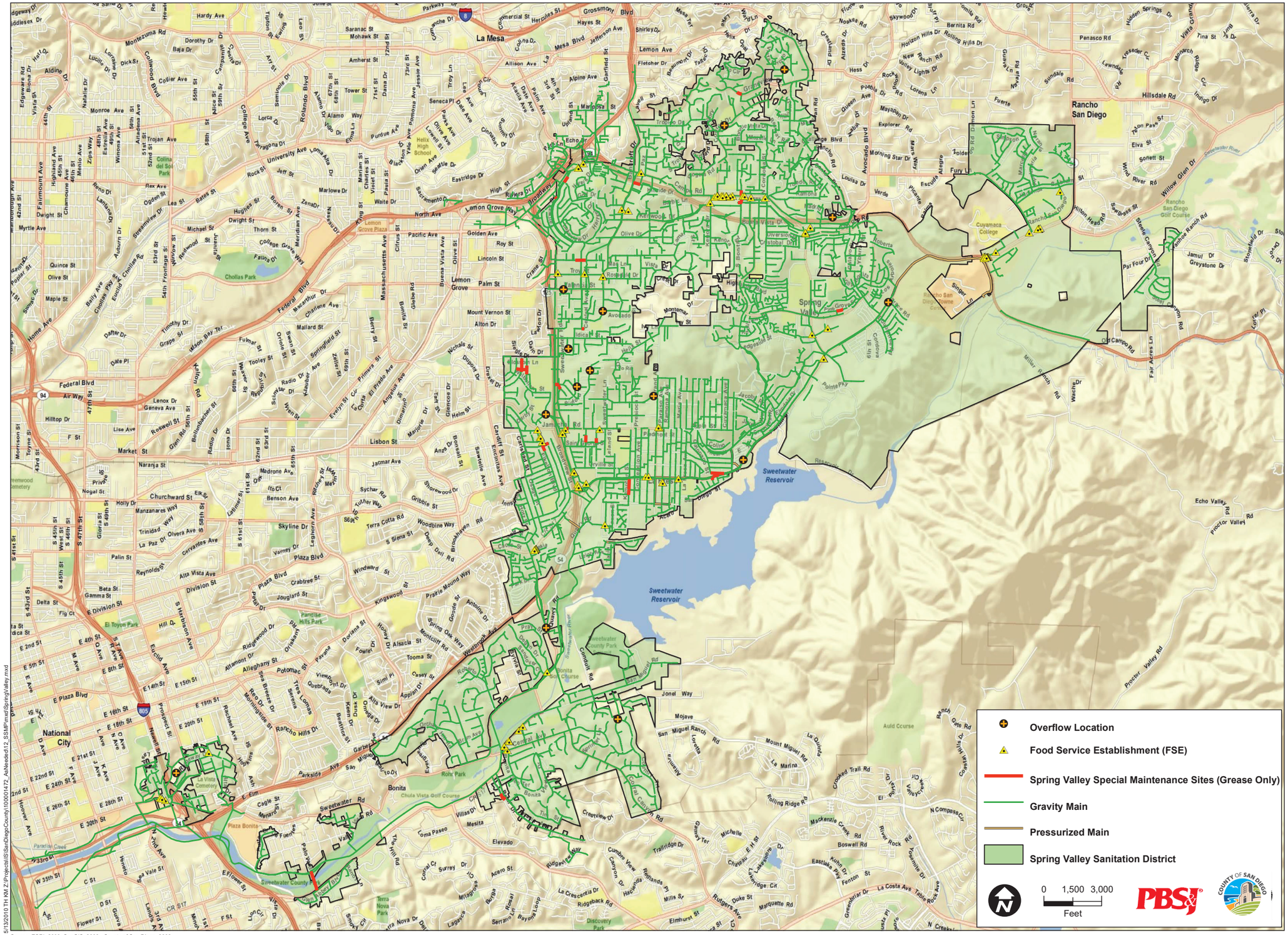


5/18/2010 TH KM Z:\Projects\IS\SanDiegoCounty\100001472_AsNeeded\12_SSMP\mxd\Lakeside_WinterGardens.mxd

Source: ESRI, 2009; SanGIS, 2008; County of San Diego, 2008

Food Service Establishments, Overflow Locations, and Special Maintenance Sites within Lakeside/Winter Gardens Sanitation Districts

Exhibit 2



5/13/2010 TH KM Z:\Projects\ISSanDiegoCounty\1000014?2_AsNeeded\d12_SSMP\mxd\SpringValley.mxd

Source: ESRI, 2009; SanGIS, 2008; County of San Diego, 2008

Food Service Establishments, Overflow Locations, and Special Maintenance Sites within Spring Valley Sanitation District

Exhibit 3

APPENDIX E

PUBLIC OUTREACH

A Public Service Announcement
for County of San Diego Residents
From Your Department of Public Works

Help us protect our environment!

Grease, oil, and fat should go from

the Pan... 

...to the Can.

Never pour grease, cooking oil,
or fat down the sink.
They can clog drains and cause
sewer pipes to back up.
Cool down your cooking oil, grease,
and fat - pour them into a container
with a secure lid.

Trash the can – not your pipes!

Wipe out pots and pans with a paper towel before doing dishes – you will use less soap and decrease clogs.

Dispose of food scraps in the trash – not down garbage disposals, drains, or toilets.

Un Anuncio Publico de Servicio para
los Residentes de el Condado de San Diego
Departe de su Departamento de Servicos Publicos

Ayudenos a protejer nuestro medio ambiente!

La grasa y aceites van de

el Sarten... 

...a la Basura.

Nunca vacie por el fregadero la
grasa y aceites para cocinar.
Pueden obstruir el drenaje y causar
el cano de desague que se estanque.
Enfrie su aceite y grasa para cocinar
y vacielos a una lata con tapa segura.

Tire la lata y no sus tuberias a la basura!

Limpie las cacerolas y los sartenes con una toalla de papel antes de lavar los platos – asi usando menos jabon y disminuir la posibilidad de que se tape la tuberia.

Tire pedasos de comida en la basura – no en el fregadero, drenaje, o tasa de bano.

The drain is not a dump.

Put fats, oils and grease where they belong.

Mix them in your trash with absorbent waste like paper, coffee grounds, or kitty litter.

Department of Public Works
Spring Valley Operations Center
11937 Campo Road: Spring Valley, CA 91978
(619) 660-2007

Dear Resident,

You are receiving this message because your neighborhood has recently experienced a sanitary sewer spill related to a build-up of fats, oils, and grease in the sewer pipes. Cooking grease coats pipelines much like fatty foods clog human arteries. The grease clings to the insides of the pipe, eventually causing blockage and potential sewer spills. By following a few simple steps, you can help prevent costly sewer spills in the future.

- Pour your cooking oil (this includes salad oil, frying oil and bacon fat) into an old milk carton, frozen juice container, or other non-recyclable package, and disposed of it in the garbage.
- Wipe dishes and pots that are coated with greasy leftovers (butter, peanut butter, etc.) with a disposable towel prior to washing or placing in the dishwasher.
- Place food scraps and fat trimmings from meat in a trashcan.

If you have questions, please contact us at 858.694.2919.

Sincerely,

Ted Kautzman
Senior Civil Engineer

APPENDIX F

2015-24 SPILL AND PREVENTATIVE MAINTENANCE DATA

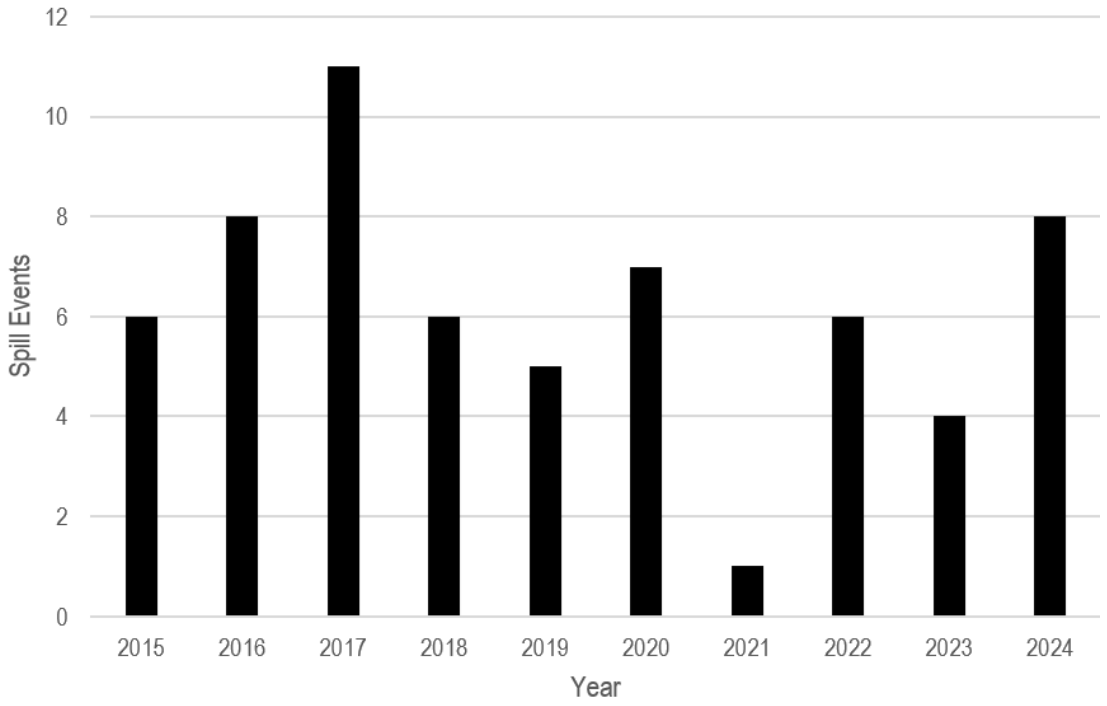


Figure F.1 Spill Events by Year

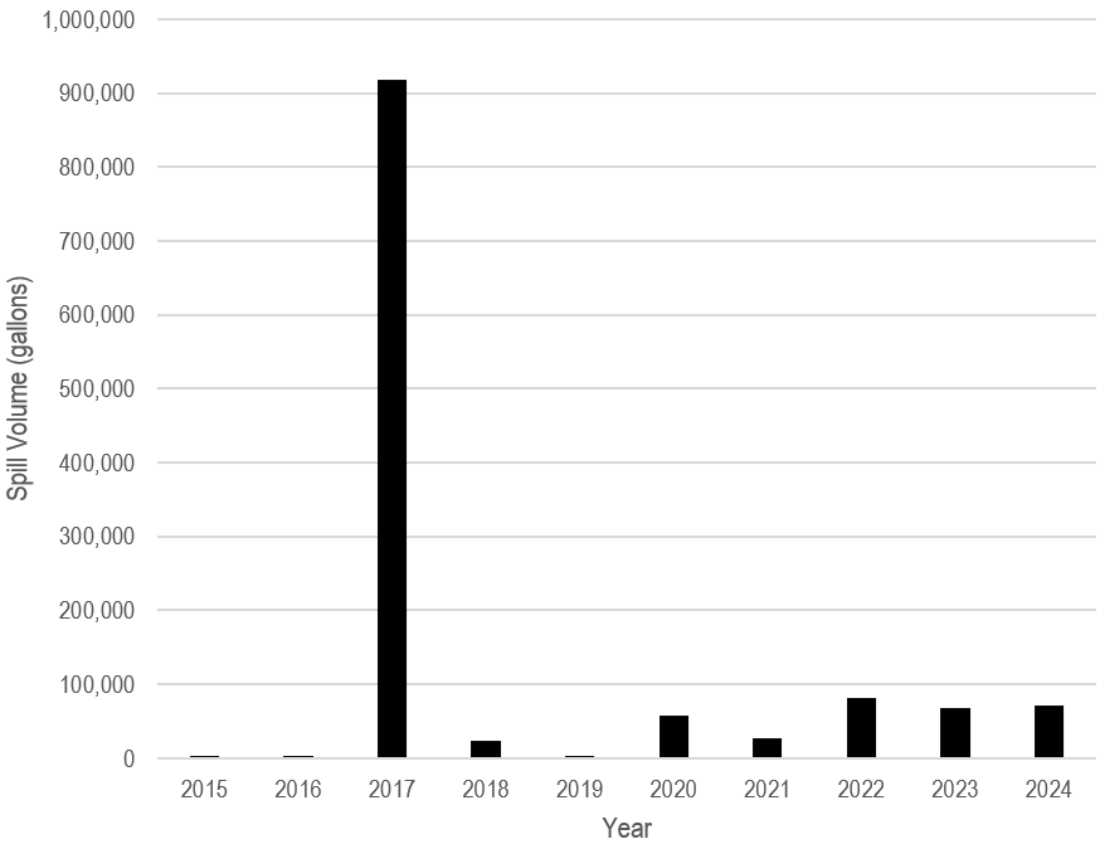


Figure F.2 Spill Volume by Year

Table F.1 Spill Events by Cause

Year	Debris	Roots	Grease	Defect	Vandalism	Other	Total
2015		6					6
2016	1	5				2	8
2017	1	5				5	11
2018		2		1	1	2	6
2019	1	2			1	1	5
2020	4	1	0	0	0	2	7
2021				1			1
2022	3	2		1			6
2023		1				3	4
2024	1	4				3	8
Total	11	28	0	3	2	18	62
Percent	18%	45%	0%	5%	3%	29%	

Table F.2 Spill Volume (gallons) by Cause

Year	Debris	Roots	Grease	Defect	Vandalism	Other	Total
2015	0	2,148	0	0	0	0	2,148
2016	0	1,410	0	981	500	0	2,891
2017	500	4,890	0	3,300	909,400	0	918,090
2018	0	690	0	6,737	20	16,500	23,947
2019	130	325	0	2,681	0	300	3,436
2020	1,112	25	0	0	56,044	0	57,181
2021	0	0	0	26,010	0	0	26,010
2022	2,620	133	0	77,825	0	0	80,578
2023	0	980	0	0	66,995	0	67,975
2024	5,700	3,475	0	0	62,125	0	71,300
Total	10,062	14,076	0	117,534	1,095,084	16,800	1,253,556
Percent	1%	1%	0%	9%	87%	1%	

Table F.3 Spill Events by Service Area

Year	Spring Valley	Alpine	Lakeside	Winter Gardens	Julian	Total
2015	6					6
2016	3		3	2		8
2017	9		2			11
2018	5			1		6
2019	3	2			0	5
2020	6	0	0	1	0	7
2021	1	0	0	0	0	1
2022	3	1	1		1	6
2023	3	1				4
2024	6	1	1			8
Total	45	5	7	4	1	62
Percent	73%	8%	11%	6%	2%	

Table F.4 Preventive Maintenance Tracking

Year	Miles of Sewers Inspected	Maintenance Holes Inspected	Miles of Sewers Cleaned	Miles of Sewer Root Control	Special Maintenance Sites	SmartCover Alarms
2015						
2016						
2017			383.2			
2018			42.3		375	
2019	68.3		426.6		400	
2020	31.9	7,150	236.5	5.70	226	
2021	32.3	2,098	334.2	3.70		
2022	5.9	7,312	299.8	0.00	202	14
2023	12.9	4,030	165.8	0.14	202	47
2024					202	

APPENDIX G

SSMP CHANGE LOG

Table G.1 SSMP Change Log

Date	SSMP Element and Section	Description of Change/Revision Made	Change Submitted By