City of La Mesa
Sewer System Management Plan

July 2025

City of La Mesa
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With support from
MOE
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1 Sewer System Management Plan Goal and Introduction

This Sewer System Management Plan (SSMP) has been prepared by the City of La Mesa in accordance with the State Water Resources Control Board (SWRCB) Order No. WQ 2022-0103-DWQ, which supersedes Order 2006-0003-DWQ. The SSMP demonstrates the City's approach to effectively manage, operate, and maintain its sanitary sewer collection system and to prevent and mitigate sewage spills.

The SSMP establishes the framework for implementing measures to:

- Ensure the proper management, operation, and maintenance of the City's sewer system;
- Reduce the frequency and impact of sewage spills;
- Ensure adequate capacity to convey peak flows; and
- Comply with applicable State and federal regulations.

This plan serves as the City's commitment to protecting public health and the environment through proactive planning, preventive maintenance, and continuous improvement of the wastewater collection system.

This section meets the requirements of State Water Resources Control Board Order WQ 2022-0103-DWQ, Attachment D, Section 1. It establishes the goals that guide the development and implementation of the SSMP, reflecting the City of La Mesa's commitment to effectively managing, operating, and maintaining the sanitary sewer collection system.

The goals of the SSMP are to:

- Properly manage, operate, and maintain the sanitary sewer system
- Minimize and mitigate sewage spills
- Ensure adequate capacity for base and peak flows, including wet weather
- Maintain a trained and qualified workforce with sufficient resources
- Evaluate system performance annually and apply adaptive management
- Educate the public and provide access to program information
- Protect public health, property, and the environment

These goals are the foundation for all SSMP elements and are implemented through a structured framework of policies, procedures, training, and performance monitoring. They reflect the City's commitment to maintaining a safe, reliable, and environmentally responsible sanitary sewer system.

1.1 Regulatory Context

The SSMP has been developed to comply with the current Waste Discharge Requirements (WDRs) established under State Water Board Order WQ 2022-0103-DWQ. This Order requires all publicly owned sanitary sewer systems greater than one mile in length to maintain an SSMP that includes specific program elements outlined in Attachment D.

Order WQ 2022-0103-DWQ includes, but is not limited to, new provisions on:

- Spill categorization and reporting,

- Required audit intervals,
- System performance metrics and public access,
- Enhanced documentation and certification by a Legally Responsible Official (LRO), and
- Annual update of the City's SERP.

The City is located within Region 9, which is under the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB). The SDRWQCB may enforce stricter requirements, including monitoring private lateral spills and reporting under Order R9-2007-0005.

1.2 Sewer System Management Plan Update Schedule

Per Order WQ 2022-0103-DWQ, the City of La Mesa will implement the following schedule for updates and internal audits of this SSMP:

- SSMP Recertification: The SSMP will be reviewed and updated as necessary at least once every six (6) years to ensure it reflects current regulatory requirements, City practices, staffing, and infrastructure. Following any update, the SSMP will be recertified by the City's LRO and submitted to the California Integrated Water Quality System (CIWQS) database.
- SSMP Internal Audit: An internal audit will be conducted at least once every three (3) years. The purpose of the audit is to evaluate the effectiveness of the SSMP elements, confirm implementation, and identify areas for improvement. Each audit will include findings, recommended corrective actions (if any), and an implementation schedule. Audit reports will be retained for a minimum of five years and uploaded to CIWQS within six months of the end of the audit period.
- Performance Milestones: Updates and audits will include an assessment of performance milestones, including metrics related to the prevention and reduction of sewage spills. These may include sewage spills frequency and volume trends, improvements to Operations and Maintenance (O&M) practices, capital project delivery, staff training participation, and updates to Standard Operating Procedures (SOPs).

A summary of key dates for this SSMP's ongoing implementation is shown below:

Milestone	Date
Last SSMP Update	July 2025
Next Planned Internal Audit	By June 2027
Next Full SSMP Recertification	By June 2031

1.3 Sewer System Asset Overview

The City of La Mesa is situated in eastern San Diego County, bordered by the cities of El Cajon, San Diego, and Lemon Grove, as well as the unincorporated area of San Diego County. The service area spans approximately nine (9) square miles and is over 95% developed, with future growth anticipated to occur mainly through infill development and redevelopment.

The City serves approximately 60,800 residents and maintains ownership and operational control of a sewer collection system, which includes:

- Approximately 13,000 connections,
- 165 miles of gravity sewer mains,

- 0.04 miles of force mains,
- 0 Publicly owned and maintained lift stations,
- 1 Privately owned and maintained lift station, and
- Several interagency connection locations (County of San Diego, Lemon Grove, El Cajon, City of San Diego)

Because the City is largely built out, this relatively stable information supports ongoing maintenance planning, capacity modeling, and targeted outreach—such as FOG prevention efforts aimed at food service establishments.

The City's collection system is divided into four major drainage basins: Alvarado, University, Spring Valley, and Lemon Grove. All flows are ultimately conveyed to the City of San Diego's Metropolitan Wastewater System (Metro System) for treatment and disposal.

Existing land uses within the service area are categorized as single-family residential, multi-family residential, commercial, industrial, institutional, parks, underdeveloped land, and right-of-way. Table 1-1 summarizes the existing land uses within the service area.

Table 1-1

City of La Mesa Existing Land Use

Land Use	Units	
Single-family Residential	11,124	Dwelling Units
Multi-family Residential	13,262	Dwelling Units
Commercial	449	Acres
Institutional	332	Acres
Industrial	44	Acres
Park	264	Acres
Underdeveloped Land	200	Acres
ROW	1,430	Acres

Source: SANDAG Land Use

1.4 SSMP Organization

This SSMP is organized to address the eleven (11) required elements listed in Attachment D of Order WQ 2022-0103-DWQ. Each element is presented as a standalone section in this document:

Section 1 – Sewer System Management Plan Goal and Introduction

Section 2 – Organization

Section 3 – Legal Authority

Section 4 – Operations and Maintenance Program

Section 5 – Design and Performance Provisions

Section 6 – Spill Emergency Response Plan

Section 7 – Sewer Pipe Blockage Control Program

Section 8 – System Evaluation, Capacity Assurance and Capital Improvements

Section 9 – Monitoring, Measurement and Program Modifications

Section 10 – Internal Audits

Section 11 – Communication Program

This version of the SSMP reflects updated section naming and restructuring to comply with the revised WDR format and guidance, including the integration of the SERP.

2 Organization

This section identifies the City of La Mesa personnel responsible for developing, implementing, and overseeing this SSMP. It includes the names, job titles, and responsibilities of key positions involved in implementing SSMP elements and reporting sewage spills, as well as a description of the chain of communication for reporting sewage spills to the State Water Resources Control Board through the CIWQS.

2.1 Legally Responsible Official

The City of La Mesa Public Works Director is designated as the LRO for all reporting, certification, and compliance obligations under the WDR. The LRO is responsible for final review and certification of sewage spill reports submitted through CIWQS and ensuring that all SSMP elements are implemented and updated. Any changes to the designated LRO or backup LRO are submitted to the State Water Board within 30 days.

The Director of Public Works (LRO) has designated the following positions to act as the Authorized Representative and be responsible for the timely review and certification of required reports on CIWQS.

- Assistant Director of Public Works
- Environmental Manager

2.2 Key Personnel Responsibilities

The implementation of the SSMP is supported by staff from the Public Works Department – Engineering Division and Operations Division. Responsibilities are distributed as follows:

Public Works Director (LRO): Oversees certified reports, oversees SSMP implementation, ensures compliance with the WDR, reports information to the City Manager.

Assistant Director of Public Works (Authorized to Certify Under LRO): Submits reports as Authorized Representative, manages day-to-day operation and maintenance of the wastewater collection system, oversees City field operations, coordinates spill response, and supports SSMP audits and updates.

Environmental Manager (Authorized to Certify Under LRO): Submits reports as Authorized Representative, organizes training, coordinates SSMP implementation and updates, and conducts as needed sampling.

Wastewater Maintenance Supervisor: Oversees wastewater field crews, schedules preventive maintenance, coordinates onsite spill response methods.

Utilities Workers I – III: Perform system cleaning, inspections, spill response, root treatment, and preventive maintenance activities. Report unusual conditions or spills to the Supervisor.

Administrative Coordinator: Enters information into the City's asset management and work order system.

Contact information for these positions is provided in Attachment B of the SERP, located in Appendix A of this SSMP.

2.3 Organizational Structure

The organizational chart (Figure 1) on the following page shows the lines of authority and identifies key roles responsible for SSMP elements. This chart will be updated as needed and reviewed at least every three years in conjunction with the required SSMP audit.

Staff roles and contact assignments are reviewed during SSMP updates (every six years or as needed) to ensure accuracy and continuity in program implementation.

The following table summarizes key SSMP-related roles and responsibilities for City staff:

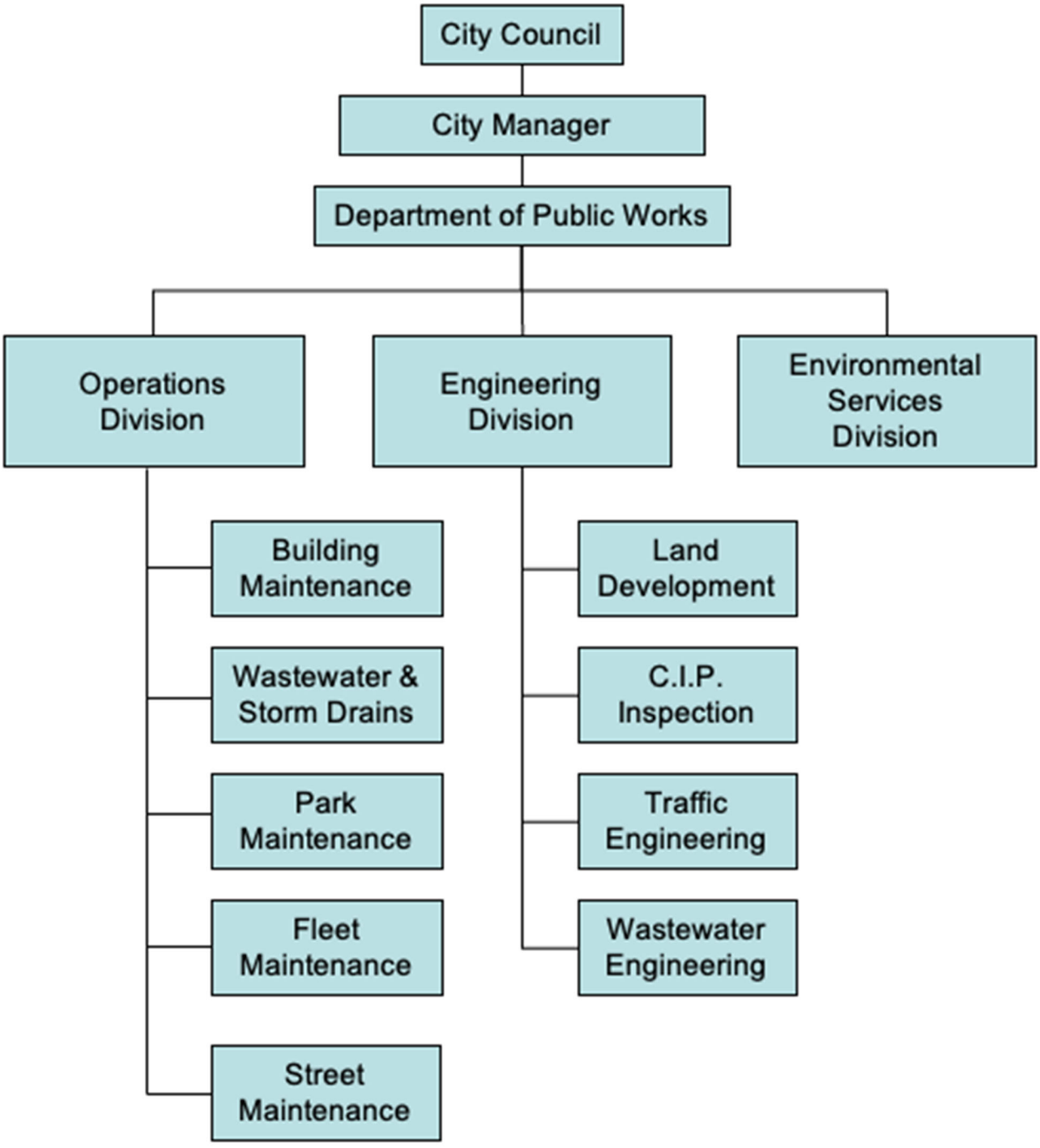
Position	SSMP Responsibilities
City Council	Approves SSMP updates, sets policies and budgets supporting compliance
Director of Public Works (LRO)	Certifies SSMP, oversees all PW staff, reports information to City Manager
Asst. Director of Public Works	Oversees all day to day field operations staff. Ensures spill response and compliance. Certifies reports.
Environmental Manager	Coordinates SSMP compliance, conducts trainings, certifies reports.
Wastewater Supervisor	Directs onsite sewage spill response, manages day-to-day maintenance activities
Engineering Division	Manages GIS, plans capacity improvements, coordinates with Operations
Field Staff	Performs inspections, cleanings, overflow response, equipment maintenance

2.4 Chain of Communication for Sewage Spill Reporting

The chain of communication for sewage spill response and reporting is as follows:

1. Utilities Workers identify and report any suspected sewage spills to the Wastewater Maintenance Supervisor.
2. Wastewater Maintenance Supervisor dispatches crews, oversees containment and cleanup, and evaluates whether the event qualifies as a sewage spill under the WDR.
3. Wastewater Maintenance Supervisor briefs the Assistant Director of Public Works on all response activities.
4. Environmental Manager: Coordinates sampling if needed. Conducts regulatory reporting and meets with staff to review data for submittal.
5. Public Works Director (LRO) is notified and reviews incident details.
6. LRO certifies and submits the required sewage spill reports via CIWQS within regulatory timeframes.

Figure 1 Organization Chart



3 Legal Authority

3.1 Overview

This section addresses the requirements of Attachment D, Section 3 of State Water Resources Control Board Order WQ 2022-0103-DWQ. The City of La Mesa maintains legal authority to implement and enforce all provisions of this SSMP through its municipal code (see Appendix A for relevant sections) local ordinances, and interagency agreements. This legal authority enables the City to:

- Prevent illicit discharges into the wastewater collection system
- Require proper design and construction of new and rehabilitated sewers
- Ensure access for maintenance, inspection, and repairs
- Limit and enforce against discharges that may cause blockages or system overflows
- Implement source control measures including FOG regulations and enforcement
- Control inflow and infiltration (I&I)
- Enforce all provisions through citations, permit revocation, or connection termination

3.2 Agreements

The City maintains several interagency agreements that define responsibilities for shared infrastructure, billing, and conveyance connections with other jurisdictions. These include agreements with:

- The City of San Diego (Metro System wastewater treatment and conveyance)
- The County of San Diego Sanitation District
- The City of El Cajon and Lemon Grove for interconnected sewer lines

These agreements ensure that sewer flows are conveyed and treated in accordance with regional policies, and provide mechanisms for cost-sharing, capacity tracking, and emergency coordination.

3.3 Municipal Code

3.3.1 Prevention of Illicit Discharges

The City of La Mesa prohibits illicit discharges into the storm drain system and the sanitary sewer system in accordance with La Mesa Municipal Code Section 7.18.040. This ordinance prohibits the discharge of non-stormwater substances, including sewage, wastewater, and wash waters from commercial or industrial operations, into the Municipal Separate Storm Sewer System (MS4). Through this provision, the City retains legal authority to enforce compliance with discharge prohibitions intended to protect stormwater and wastewater infrastructure.

The City coordinates its wastewater and stormwater programs to investigate and resolve reports of illegal discharges, cross-connections, and infrastructure failures that could lead to pollutants entering receiving waters. Inspections and enforcement activities are

conducted by designated staff authorized to issue notices of violation and require corrective action. This legal authority bolsters the City's efforts to maintain compliance with the Statewide Waste Discharge Requirements and the San Diego Region MS4 Permit.

3.3.2 Accessibility for Maintenance, Inspection, and Repair

The City retains legal authority to access all components of its publicly owned wastewater collection system, including gravity mains, manholes, and City-maintained portions of sewer laterals, for inspection, maintenance, and repair. This authority is granted under Municipal Code Section 17.08.020, which authorizes the City Engineer or their designee to enter private property when necessary to perform work on infrastructure owned or operated by the City.

This access is critical to preventing sewage spills, performing proactive condition assessments, and executing timely corrective actions. The City's O&M program relies on clear access to cleanouts and manholes, which must remain unobstructed for routine service and emergency response.

3.3.3 Proper Connections and Construction

The City of La Mesa enforces construction and connection standards to ensure that all new and modified sewer connections are appropriately designed, permitted, and constructed. Under Municipal Code Section 17.20.550, the City establishes clear requirements for connections to the sanitary sewer system, including prohibitions against the discharge of unpolluted water, such as stormwater, groundwater, or roof runoff, into the sanitary sewer.

The City's current sewer design criteria are documented in Section V of the City's Design Criteria Manual, which was adopted by City Council Resolution 15579 on July 28, 1987. The Sewer Design Technical Standards include guidelines for design flow rates, gravity sewer design, sewer pipe materials and appurtenances, sewer pipeline installation, technical provisions for house laterals, special sewer appurtenances, and sewer pipeline testing requirements. Additionally, the City references the latest edition of the Greenbook for standardized construction and inspection specifications for the wastewater collection systems, SDRSD for sewer details, and the Uniform Plumbing Code.

All new sewer connections must receive approval from the City Engineer and comply with the City's Standard Specifications and Details. This includes submitting construction drawings, conducting inspections during installation, and verifying proper slope, materials, and cleanout access. These requirements aim to ensure system integrity, prevent blockages and inflow/infiltration (I/I), and protect public health and the environment.

3.3.4 Limit Fats, Oils, and Grease Discharges

The City of La Mesa has adopted a comprehensive Fats, Oils, and Grease (FOG) Control Program to prevent the accumulation of grease within the wastewater collection system, which is a common cause of sewage spills. Chapter 17.24 of the Municipal Code establishes the City's regulatory authority to require best management practices (BMPs) for food service establishments and other grease-generating businesses.

All food service establishments (FSEs) within the City are required to obtain a FOG Discharge Permit and must comply with FOG BMPs, including installation and maintenance of grease interceptors or traps, proper disposal of grease waste, and recordkeeping of maintenance activities. City inspectors conduct routine site inspections and enforce permit conditions through written notices, re-inspections, and, if necessary, escalated enforcement actions.

The City's FOG program plays a critical role in protecting sewer capacity, minimizing maintenance costs, and reducing the risk of sewage spills caused by grease blockages.

3.4 Enforcement

The City enforces its sewer regulations under Title 17 of the La Mesa Municipal Code. Enforcement mechanisms include issuing notices of violation, administrative penalties, disconnection of illegal or non-compliant connections, and legal action when necessary.

The Public Works and Engineering Departments coordinate enforcement actions for violations of connection requirements, illegal discharges, or obstructions in the collection system. The City also enforces grease control ordinances and coordinates inspections of food service establishments in accordance with its FOG program.

The City's enforcement authority applies to all elements of this SSMP, including illicit discharges, unauthorized connections, inflow and infiltration, access restrictions, and failure to comply with required maintenance practices. This comprehensive authority ensures that the City can take timely and effective corrective action to protect public health, water quality, and infrastructure integrity.

4 Operation and Maintenance Program

This section addresses the Operations and Maintenance Program requirements of Element 4 in Attachment D of Order WQ 2022-0103-DWQ. The WDRs require that the SSMP contain descriptive measures of the City's O&M Program implemented by City staff to facilitate proper and efficient management and maintenance of the sanitary sewer system and the affected appurtenances. The WDRs require that the SSMP include a description of each of the following components as they apply to the City's sanitary sewer system:

a) Maintenance of up-to-date sanitary sewer system map showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

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

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

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

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

4.1 System Mapping

The City maintains a comprehensive, up-to-date GIS-based map (https://la-mesa-gis-hub-lamesaca.hub.arcgis.com/maps/fa3473a07a8f463db124a0a112a18718/about) of the wastewater collection system, including all gravity mains, manholes, and related features. The GIS database is regularly updated to reflect new construction, as-built drawings, condition assessment data, and field verifications. Because the system map is continuously revised, it is not included in this SSMP. Instead, the most current version is readily accessible to all City staff—including field crews—via desktop computers and mobile field tablets.

The GIS map is used to:

- Support maintenance scheduling and emergency response

- Identify infrastructure locations and attributes
- Track cleaning history and field activities

Field crews have real-time mobile access to the GIS map, and hard-copy wall maps are maintained at the Public Works office. Map updates are coordinated between the Engineering and Operations Divisions, with all revisions logged and quality-checked before publication.

4.2 Preventive Operation and Maintenance Activities

The City's Operations Division is responsible for operating and maintaining the City's wastewater collection system within the public right-of-way and easements. Operations Division personnel regularly perform preventative maintenance (PM) activities on the sewer system, including inspecting all manholes. The staff also continues to perform some system repair, such as raising manholes, but typically, the work is contracted out.

The City aims to clean most of the sewer system in a 12-month cycle. Approximately 95% of the system is cleaned annually. The remainder are large diameter mains and sensitive spots that either do not require, or are too delicate, to be pressure jetted. In addition to the routine cleaning schedule, the City identifies areas with a history of blockages, root intrusion, or other maintenance issues as priority locations. These problem areas are scheduled for higher-frequency cleaning and inspection, which may occur quarterly or more frequently depending on severity and historical performance.

The City has utilized Open Gov/Categraph OMS software for several years as a maintenance management system to track work orders and to provide inventory management capabilities. Currently, staff schedule and perform maintenance activities. Documentation and reporting of cleaning efforts are provided in a daily report. The daily report includes lineal footage cleaned, pipe size, pipe condition, pipe length, names of cleaning staff, and any additional comments provided by the maintenance crews. Daily progress is recorded by highlighting a large wall map maintained at the City's Public Works office. Additionally, the Wastewater Maintenance Supervisor enters the total length of pipe cleaned into an Excel spreadsheet from which monthly totals are compiled.

The City uses the software application to manage its work orders. Work orders and information obtained from customers are provided to the Wastewater Maintenance Supervisor, who performs site inspections. Based on the results of the site inspections, appropriate responses are implemented. The administrative assistant stores a copy of the work order within the management system software.

The City uses software to provide staff with a means to retrieve and organize information regarding the O&M of the City's wastewater collection system. The procedures for documenting scheduled and completed maintenance activities allow for the production of status reports.

The City maintains documented SOPs for core operations and maintenance activities, including system cleaning, root control, and equipment inspections. SOPs are reviewed annually and updated to reflect equipment, staffing, or regulatory requirements changes.

4.2.1 System Cleaning

The City's cleaning schedule includes two (2) crews, each consisting of two to three staff members, assigned to perform daily cleaning. Each crew performs power flushing/jetting of the sewer system.

The work order management system tracks and schedules maintenance of high-frequency maintenance locations. These locations are cleaned more frequently, typically monthly, quarterly, or semiannually. They include areas with high root concentrations, areas with sewer pipelines having minimal slope, and locations that have been identified to have chronic grease accumulation.

4.2.2 Root Treatment

The City implements a root treatment program to supplement its routine power flushing and jetting activities. Targeted areas include older neighborhoods with mature trees, especially in easements, and locations identified through Closed Circuit Television (CCTV) inspections.

Root foaming is performed on an as-needed basis and is not conducted annually. Locations with significant root intrusion identified via CCTV are added to the treatment schedule and grouped by geographic section for efficient planning.

4.2.3 Sanitary Sewer System 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 and the effectiveness of the maintenance operations, as well as a basis for identifying and scheduling capital improvements. The overall assessment can also be used to determine the funding required to repair, rehabilitate, and replace an aging collection system, prioritize the allocation of funds, and optimize the expenditure and efforts to operate a sewer collection system.

4.2.3.1 System Inspection and Assessment

The City uses closed-circuit television (CCTV) inspections to assess the condition of the wastewater collection system and inform the Capital Improvement Plan (CIP). A full-system inspection was completed in 2009, and ongoing CCTV inspections are conducted as needed by trained City staff using a dedicated CCTV truck. The City stores sewer video using web-based software called GraniteNET.

Inspections typically occur after pipelines have been cleaned and are prioritized in response to sewage spills, root intrusions, or recurring maintenance needs. Findings are documented in daily reports and either addressed by the Operations Division or referred to Engineering for further evaluation.

Inspection data, asset inventory, and maintenance history, are managed within the City's Cartegraph OMS system. These data inform rehabilitation priorities and support proactive maintenance planning.

The City is also evaluating the use of standardized condition assessment tools, such as the NASSCO, to enhance consistency in scoring and improve long-term rehabilitation and replacement planning.

4.2.3.2 Repair and Rehabilitation Projects

The City's Public Works Operations Division is responsible for ensuring that immediate "unscheduled" repairs and/or rehabilitation improvements of various types and pertaining to wastewater facilities are adequately performed. The repairs and/or rehabilitation work performed by City staff may be identified via the CCTV inspections and primarily includes point repairs but does not include work requiring the replacement of entire pipe segments between manholes. Repairs that require resources beyond those available within the Public Works Operations Division or require further prioritization and planning are coordinated and scheduled with the City's Engineering Division.

4.2.3.3 CIP Development

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 may include goals to reduce sewage spills, providing sufficient system capacity, reducing infiltration and inflow in pipes located below the water table, or reducing maintenance efforts by improving the pipe condition. Other considerations include coordinating surface and utility improvements with the other agencies that may be impacted by improvements. Integrating the results of the inspection and assessment efforts, with the capacity modeling efforts, the City will pursue a proactive and comprehensive long-range planning effort.

4.2.4 Pump Station and Force Main Maintenance

The City does not have any wastewater pump stations, but it does maintain one 6" CI force main which is about 260' long , which is fed by a privately owned and maintained pump. The pump station facility are inspected and maintained on a routine schedule based on equipment age, condition, and criticality.

The one Privately Owned/Maintained Sewer Pump serves one condo building and a self storage facility. The property owner of the Condo Building has a maintenance plan which was approved by the City. The pump was installed in approximately 2020.

4.2.5 Maintenance Strategy

The City of La Mesa's maintenance strategy focuses on proactive and preventive care to minimize the occurrence of sewage spills and extend the useful life of collection system assets. The Operations Division manages a regular cleaning and inspection schedule for all gravity sewer mains based on risk prioritization and historical data.

Key components of the City's maintenance strategy include:

- Routine cleaning using Gap Vax trucks
- Root control and grease management in high-frequency problem areas
- CCTV inspections on a rotational basis or as follow-up to cleaning
- Use of CCMS - OpenGov/Cartegraph OMS to document maintenance activities and inspection results

- Regular updates to cleaning frequencies based on system performance
- Maintenance of sewer easements and access roads
- Inspection and maintenance of pump stations and force mains on a routine schedule based on equipment criticality and condition
- Inventory of essential equipment and replacement parts to ensure a timely response to system failures

4.2.6 Scheduling

Scheduling of maintenance activities is managed through the City's CCMS OpenGov/Cartegraph OMS, which allows field crews to input completed work in real-time and supervisors to track outstanding tasks. Preventive maintenance is scheduled on the basis of line criticality, past performance, and known FOG or root intrusion issues. Reactive maintenance is conducted in response to citizen complaints, internal observations, or overflow events.

4.2.7 Asset Management

The City is in the process of enhancing its asset management approach to better integrate long-term condition assessment, risk prioritization, and renewal planning. Current asset data is maintained in GIS and is linked to inspection and maintenance records in OpenGov/Cartegraph OMS.

Future improvements will include:

- Integration of asset condition scoring from CCTV inspections
- Use of GIS layers to prioritize capital improvements
- Development of lifecycle cost evaluations for major infrastructure
- Coordination with the Sewer Master Plan to support CIP planning

These steps will support optimized investment in maintenance and rehabilitation to reduce long-term risks and ensure service reliability.

4.3 Training Program

The City of La Mesa provides quarterly training to ensure that all personnel involved in the operation, maintenance, and management of the sanitary sewer system are qualified, competent, and compliant with applicable regulations. The program supports the safe, efficient, and consistent implementation of the SSMP. Its objectives are to reinforce safe practices, ensure regulatory compliance, and enhance staff knowledge of system operations, inspections, and emergency response.

4.3.1 Training Program Scope and Objectives

The City's training program is designed to:

- Reinforce safe and effective field and office practices.
- Ensure compliance with federal, state, and local regulatory requirements.
- Enhance staff knowledge of sewer system operations, maintenance techniques, inspections, and emergency procedures.
- Promote familiarity with SSMP roles, requirements, and reporting responsibilities.

Training is provided to all new hires and refreshed regularly. Supervisors adjust training schedules based on individual job functions and equipment use.

4.3.2 Training Topics and Delivery

The City's training program includes:

- New Employee Orientation: Overview of the SSMP and WDRs, safety protocols, regulatory context, and field operations.
- Annual Refresher Courses: Topics include sewage spill response (i.e., SERP), PPE, spill containment, and SOP updates.
- Procedures for estimating spill volume in the field using visual indicators, flow calculations, and standardized tools.
- Role-Specific Technical Training:
    - Confined space entry
    - Lockout/Tagout (LOTO)
    - Hazard communication (HazCom)
    - Trench and traffic control safety
- System-Specific Training:
    - OpenGov/Cartegraph OMS, GIS, and asset management tools
    - Closed-Circuit Television (CCTV) inspections
- Emergency Preparedness: Tabletop exercises and field drills for sewage spill response and coordination.

These topics are incorporated into regular internal training and annual spill response exercises.

4.3.3 Documentation and Recordkeeping

Training records include attendance logs, agendas, and relevant certifications. Records are retained for a minimum of five years.

The Environmental Manager maintains these records and provides them upon request during audits or inspections.

4.3.4 Evaluation and Continuous Improvement

The effectiveness of the training program is evaluated through field observations, performance reviews, SSMP audit findings, staff feedback, and updates to equipment, SOPs, or regulations. Training modules are revised as necessary to ensure continuous improvement and ongoing compliance.

4.4 Equipment and Replacement Part Inventories

The Operations Division keeps repair equipment and materials on site in the storage yard, including pumps, fittings, pipes, and hoses. A detailed inventory list of the City's existing sewer maintenance and repair equipment, replacement parts, and materials is maintained, see Appendix E. It includes adequate sizes and types of the critical repair and replacement parts. Additionally, it includes a resource list of contractors and vendors who stock materials and are available for emergency and short notice deliveries.

4.5 Summary and Continuing Efforts

To further comply with the Operations and Maintenance element of the SSMP, the City is continuing to document and formalize comprehensive O&M procedures that include:

- Maintaining up-to date maps of the City's wastewater collection system;
- Scheduling and performing routine preventative O&M activities including regular maintenance and high frequency locations;
- Developing a rehabilitation and replacement plan to identify and prioritize system deficiencies for short term and long term planning;
- Training for staff in wastewater collection system operations and maintenance; and
- Maintaining equipment and replacement part inventories.

5 Design and Performance Provisions

This section addresses the design, construction, and inspection standards required by Section 5 of Attachment D in the State Water Resources Control Board's Order WQ 2022-0103-DWQ. The City must ensure that all new and rehabilitated sanitary sewer system assets are designed, constructed, and tested to protect public health, minimize the risk of sewage spills, and ensure long-term system performance.

5.1 Design Criteria and Construction Standards and Specifications

The City of La Mesa requires that all new sewer infrastructure and rehabilitation projects comply with its adopted Design Standards, Standard Specifications, and Standard Drawings, which the Engineering Division periodically updates. These standards are intended to ensure system capacity, structural durability, ease of maintenance, and hydraulic performance under peak flow conditions.

The City's current sewer design criteria are documented in Section V of the City's Design Criteria Manual, adopted by City Council Resolution 15579 on July 28, 1987. The Sewer Design Technical Standards include provisions for flow rate assumptions, gravity sewer slope requirements, approved pipe materials, manhole placement, lateral and cleanout standards, and pavement restoration criteria. The City also maintains specific handouts to guide design criteria and requirements (see Appendix C).

When deficiencies in existing design criteria are identified, such as inadequate capacity, outdated material specifications, or evolving regulatory requirements, the City initiates a review and update of its standards. This includes project-level engineering evaluation and coordination with regional standards and best practices, such as the Standard Specifications for Public Works Construction ("Greenbook"), the Uniform Plumbing Code, and San Diego Regional Standard Drawings (SDRSD).

Key design provisions include:

- Minimum slope and velocity requirements for gravity mains
- Approved pipe materials (e.g., PVC, VCP, DIP) and joint standards
- Manhole placement, spacing, and structural specifications
- Requirements for sewer laterals, cleanouts, and appurtenances
- Trench bedding, backfill compaction, and pavement restoration criteria
- Hydraulic capacity standards based on fixture unit loading and peaking factors

The City's Engineering Division must review and approve all design submittals from private developers, consultants, or contractors before construction. Approved plans are required to comply with all applicable City, County, and regional design requirements.

5.2 Procedures and Standards

To ensure the wastewater collection system's long-term performance and structural integrity, the City of La Mesa implements standardized construction procedures and inspection protocols for all new, rehabilitated, or modified sewer infrastructure. These

procedures align with the requirements of State Water Board Order WQ 2022-0103-DWQ (Attachment D, Section 5) and San Diego Water Board Order R9-2007-0005 (Provision D.6(a)).

5.2.1 Construction Inspection and Testing

All sewer system construction projects are subject to inspection by qualified personnel, including City inspectors or authorized representatives. The following inspections and tests are conducted before final acceptance:

- Visual inspections verify that alignment, slope, bedding, and backfill meet design specifications.
- Air or water pressure testing of all gravity and force mains to confirm watertightness.
- Mandrel (deflection) testing for flexible pipe materials ensures deformation remains within allowable limits.
- CCTV inspections post-construction to verify proper jointing, pipe condition, and absence of obstructions or sags.
- Leak and hydrostatic testing of force mains, as applicable, per manufacturer and Greenbook standards.

All inspections and testing results must be documented, reviewed by City staff, and retained as part of the project record. Deficiencies must be corrected and verified through re-inspection prior to final acceptance of any public infrastructure.

5.2.2 As-Built Verification

Following construction, the contractor must submit as-built drawings reflecting final field conditions. These drawings are verified by the Engineering Division through field review to confirm infrastructure location, depth, and configuration. Verified as-builts are used to update the City's GIS database and asset management records.

5.2.3 Acceptance Procedures

Infrastructure is not accepted into the public sewer system until all testing has been passed, punch list items are resolved, as-built drawings are verified, and all documentation has been reviewed and approved. The acceptance process includes coordination between inspection, operations, and engineering staff to ensure full compliance with applicable City standards and WDR provisions.

6 Spill Emergency Response Plan (SERP)

The City of La Mesa has developed and maintains a comprehensive SERP (see Appendix B) to guide staff response to sewage spills and ensure compliance with SWRCB Order WQ 2022-0103-DWQ. The purpose of the SERP is to ensure that all feasible steps are taken to:

- Contain and control the overflow
- Minimize impacts to public health and the environment
- Prevent recurrence
- Document the incident per regulatory reporting requirements

This plan includes clear protocols for notification, dispatch, on-site response, cleanup, and communication with regulatory agencies.

The City's Spill Emergency Response Plan is a revised living document based on actual field experience, regulatory updates, and audit findings. It is fully integrated with the SSMP, regularly exercised and evaluated, and shared with all relevant internal departments and contractors. Through proactive preparedness, rapid response, and thorough reporting, the City minimizes the impact of sewage spills and meets all applicable requirements of Orders WQ 2022-0103-DWQ and R9-2007-0005.

6.1 Regulatory Requirements for Spill Emergency Response Plan

The State Water Board and San Diego Water Board WDRs require that the City develop and implement a spill emergency response plan that identifies measures to protect public health and the environment from sewage 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 the waters of the State;
- Comply with the notification, monitoring, and reporting requirements of this 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 before, during, and after a spill event;
- The City requires all contractors performing work on the sanitary sewer system to follow the SERP and to coordinate with City staff during any spill event
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in this General Order; and
- Annually, the SERP is reviewed, revised if necessary, and certified by the LRO, with documentation uploaded to CIWQS.

6.2 Sewage Spill Notification and Response

Upon receiving notice of a potential sewage spill from the public, City staff, or automated alarms, the City of La Mesa immediately dispatches trained personnel to assess and respond to the situation. The City maintains a 24-hour call center and emergency response capacity to ensure rapid mobilization.

Field personnel follow the procedures outlined in the City's SERP, including:

- Conducting an initial assessment to verify and categorize the spill in accordance with Attachment E.1 of Order WQ 2022-0103-DWQ (Category 1, 2, 3, or 4)
- Identifying and containing the source of the spill using appropriate control measures
- Reviewing sewer and storm drain maps to evaluate potential pathways to surface water
- Using vacuum trucks, sandbags, plugs, and absorbents to recover and contain wastewater
- Cleaning and disinfecting affected areas following recovery
- Posting warning signs and barricades in areas impacted by overflows or where public access may pose a health risk

City sewage spill response crews are trained in traffic control, confined space entry, spill volume estimation, and hazard mitigation. Response teams escalate to bypass pumping and interdepartmental coordination if needed, as described in Chapter 2 of the SERP. Coordination with the Stormwater Division and water quality sampling may be initiated if the spill reaches or threatens receiving waters.

Upon receiving notice of a potential sewage spill from the public, City staff, or automated alarms, the City immediately dispatches trained personnel to assess and respond to the situation. The City maintains a 24-hour call center and emergency response capacity.

On-site response includes:

- Identifying and containing the source of the spill
- Using vacuum equipment and absorbents to recover spilled wastewater

- Cleaning and disinfecting affected areas
- Posting warning signs if a spill reaches public areas or waterbodies
- Sewage spill response crews are trained in traffic control, confined space entry, and environmental hazard mitigation.

6.3 Reporting and Recordkeeping

The City complies with all electronic sewage spill reporting requirements through CIWQS. Reporting protocols are detailed in Chapter 4 of the City's Spill Emergency Response Plan and follow these regulatory timelines:

- 2-hour notification to Cal OES for Category 1 sewage spills reaching surface waters or surface water tributaries
- Initial sewage spill report in CIWQS within three business days of becoming aware of the sewage spill
- Certified final sewage spill report in CIWQS within 15 calendar days of response conclusion
- Technical report within 45 calendar days for any spill ≥50,000 gallons
- Monthly no-spill certification filed within 30 calendar days of the month's end

In addition to these reports, the City maintains internal documentation that supports regulatory compliance and informs annual review of the Spill Emergency Response Plan. Documentation includes:

- Incident response logs and crew activity records
- Photographs, field sketches, and system maps
- CCTV inspection footage (if applicable)
- Volume estimation calculations and justification
- Sampling data, laboratory results, and chain of custody forms

All sewage spill records are retained for a minimum of five years in accordance with Order R9-2007-0005, Provision D.6(d), and are available to the San Diego Regional Water Board upon request.

6.4 Annual Review and Certification

As required by Order WQ 2022-0103-DWQ, the City conducts an annual review and update of its SERP. This review ensures that contact information, response procedures, available equipment, interagency coordination protocols, and reporting processes remain current and effective.

The City's LRO certifies the SERP annually in CIWQS. Any revisions made as part of the annual review are documented in a revision log, retained for audit purposes, and used to inform updates to the City's SSMP and spill response training. The most recent certified version is maintained on file and made available to the Regional Water Board upon request.

The review process includes analyzing spill trends, average response time, root causes, and containment effectiveness. This performance evaluation informs procedural changes,

equipment needs, and targeted staff training updates. Lessons learned from actual sewage spills, or spill simulations, are also incorporated into the updated SERP.

6.5 Staff Training and Preparedness

City personnel responsible for sewage spill response are trained in accordance with the procedures described in Chapter 5 of the City's SERP. Training is conducted quarterly and on an as-needed basis for field-based work.

Training topics include:

- Field response procedures and safety protocols (e.g., confined space entry, HAZMAT awareness)
- Spill containment, recovery, and decontamination methods
- Use of sewer and storm drain system maps to assess downstream risk
- Estimating spill volume using field indicators and standard formulas
- CIWQS reporting procedures, documentation expectations, and required timeframes
- Interdepartmental coordination and communication with emergency services and the Regional Water Board

Attendance is documented through sign-in logs and training materials (see Appendix D for a typical training agenda), which are retained for audit purposes. Training effectiveness is evaluated through field exercises, post-incident reviews, and staff feedback. Training plans are updated based on lessons learned, changes to the SERP, or regulatory updates.

Contractors performing work on or around the wastewater collection system are required to review relevant SERP protocols and coordinate with City staff in the event of a spill.

7 Sewer Pipe Blockage Control Program

7.1 Regulatory Framework and Objectives

The Statewide WDR (Order WQ 2022-0103-DWQ, Attachment D, Section 7) and the San Diego Regional Water Board's Order R9-2007-0005 (Provision D.7) require the City to implement a Sewer Pipe Blockage Control Program to prevent blockages and minimize the occurrence of sewage spills.

The Blockage Control Program must address all significant sources of blockages, including fats, oils, and grease (FOG), root intrusion, rags, and debris, and must include public education, inspections, enforcement, and ongoing program evaluation.

The City of La Mesa's program is designed to:

- Prevent sewage spills caused by FOG, roots, rags, and debris
- Identify and mitigate high-risk areas using system data and field observations
- Promote proper operation and maintenance of sewer appurtenances, including private laterals and FSEs
- Implement a targeted maintenance, inspection, and enforcement strategy
- Evaluate program performance annually and revise as necessary

7.2 Identification of Blockage-Prone Areas

The City uses multiple data sources to identify areas vulnerable to blockages, including:

- Sewage spill history and OpenGov/Cartegraph OMS records
- CCTV condition assessments
- Field observations by maintenance staff
- Root treatment and high-frequency cleaning logs

Blockage-prone locations, also referred to as "hot spots," are logged in OpenGov/Cartegraph OMS and scheduled for enhanced maintenance. Each hot spot is assigned an initial cleaning frequency, which is adjusted over time based on observed conditions and maintenance effectiveness. Areas with chronic blockages caused by FOG, roots, or debris may also be targeted for structural rehabilitation.

7.3 Root Intrusion and Debris Control

In addition to FOG control, the City actively manages blockages caused by root intrusion, rags, and debris. These measures include:

- Routine hydro-jetting in easements and older neighborhoods with mature tree cover
- As-needed root foaming based on CCTV observations
- Immediate response and removal of rags and non-dispersibles during sewage spills
- Evaluation of repeat problem areas for capital upgrades or enforcement

Root-intruded segments are flagged through the City's CCTV inspection program. Identified sections are grouped geographically and scheduled for root foaming or prioritized cleaning. The City evaluates new technologies and condition rating systems (e.g., NASSCO) to standardize assessments and improve prioritization.

7.4 Food Service Establishments Requirements and FOG Control

Food Service Establishments (FSEs) are required to install, operate, and maintain grease control devices per the City's Municipal Code and adopted engineering standards. These measures are intended to prevent the discharge of fats, oils, and grease (FOG) into the City's wastewater collection system.

The City's has a well developed FOG Program which started in 2009. All FSEs now have Grease Interception Devices installed, except a few with waivers due to major engineering constraints. The City permits and inspects all FSEs annually.

City inspectors conduct routine and risk-based inspections of FSEs to verify compliance with the following standards:

- Proper sizing and installation of approved grease interceptors or grease traps
- Routine maintenance and cleaning, with documentation logs retained on-site
- Physical accessibility of grease control devices for inspection and servicing
- Employee awareness and training in proper grease disposal practices

Inspection results are recorded in the City's FOG inspection tracking system. FSEs that are out of compliance are required to take corrective actions within a specified timeframe. Repeat non-compliance may result in enforcement per section 7.6 below.

7.5 Public Education and Outreach

The City engages in public education to reduce sewer pipe blockages. Messaging covers grease disposal, root-safe landscaping, and responsible flushing habits ("no wipes in pipes"). Outreach efforts target both residents and businesses, particularly Food Service Establishments (FSEs), and include:

- Distributing educational brochures during FOG inspections
- Providing grease disposal guidance during permit issuance, plan checks, and site inspections for FSEs
- Posting best management practices (BMPs), compliance requirements, and resources on the City's website
- Including educational inserts in utility bills and digital newsletters

The City tracks outreach activities annually, including the number and type of materials distributed, the number of FSEs reached, and the frequency of engagement. Where possible, the effectiveness of outreach is assessed through inspection outcomes, feedback from businesses, and analysis of grease-related sewage spills.

Educational strategies are updated based on inspection trends, observed public behaviors, or new regulatory requirements. Materials are periodically revised to ensure accuracy and continued engagement with the community.

7.6 Inspection, Maintenance, and Enforcement

The City maintains an enhanced inspection and cleaning schedule for “hot spots” identified through maintenance history, sewage spills, and CCTV inspection. These areas are cleaned using hydro-jetting and periodically reinspected using CCTV to confirm effectiveness. Cleaning crews document each event in OpenGov/Cartegraph OMS, including condition observations, grease root, and debris accumulation levels.

The City tracks repeat cleaning events at the same location to identify patterns of recurring sewer pipe blockages. When repeated maintenance is required, staff evaluate whether additional enforcement, targeted outreach, or infrastructure improvements are needed.

Enforcement of the Sewer Pipe Blockage Control Program includes escalating actions for non-compliant dischargers:

- Issuance of Notices of Violation for failure to maintain grease control devices
- Re-inspection fees and cost recovery for repeated cleaning due to upstream discharges
- Administrative citations for continued non-compliance
- Suspension or termination of sewer service for chronic or willful violations

All enforcement actions are documented and retained in the City’s records. Enforcement trends and problem locations are reviewed regularly to inform updates to cleaning schedules, inspection frequency, and public outreach strategies.

7.7 Program Review and Updates

The City reviews the Blockage Control Program annually to evaluate its effectiveness in reducing sewage spills. The review is conducted by supervisory staff in coordination with the LRO and includes:

- Trends in pipe blockage sewage spills, and system maintenance
- FSE inspection results and compliance history
- Hot spot cleaning frequencies and field observations
- Outreach efforts and public engagement metrics
- Applicable regulatory updates

Based on this evaluation, the City modifies inspection frequencies, maintenance schedules, outreach materials, and enforcement focus as necessary. All program changes are documented and incorporated into the SSMP during the annual audit.

8 System Evaluation, Capacity Assurance and Capital Improvements

The WDRs require the City's SSMP to include procedures and activities for regular evaluation and assessment of system conditions, capacity assessment and design criteria, prioritization of corrective actions, and a capital improvement plan (CIP).

8.1 System Evaluation and Condition Assessment

8.1.1 Overview

The City of La Mesa maintains a System Evaluation and Capacity Assurance Plan (SECAP) per State Water Resources Control Board Order WQ 2022-0103-DWQ, Attachment D, Section 8. The Plan was developed by PBS&J Engineering and is included in the City's Wastewater master plan.

The SECAP is designed to ensure sufficient hydraulic capacity in the City's wastewater collection system to convey existing and future peak dry and wet weather flows. It supports the prevention of capacity-related sewage spills and informs long-range capital planning. The following are evaluation methods used to inform the City's assessments and adaptive management planning.

8.1.2 Condition Assessment Procedures

The City evaluates the condition of its sanitary sewer system using closed-circuit television (CCTV) inspections, manhole inspections, and visual surface reviews. The City's goal is to conduct using NASSCO PACP standards, however turnover in staff has historically led to training gaps related to person specific NAASCO certification. In-field observations of pipe defects, surcharging, inflow and infiltration (I&I), and structural damage are recorded in the City's OpenGov/Cartegraph OMS and GIS databases.

8.1.3 Annual Assessment Goals

The City has set a goal to assess about 10 percent of its gravity sewer system each year, enabling a complete system review every ten years. This approach aligns with industry best practices and is seen as a reasonable trade-off between system coverage, staffing, financial resources, and the typical lifespan of wastewater infrastructure. A ten-year cycle also offers enough frequency to catch emerging defects before they lead to critical failures, especially when combined with risk-based prioritization to focus on high-risk areas. This 10% annual goal is supported by guidance from the U.S. EPA and Water Environment Federation, which recommend a full system assessment every 5–10 years based on risk, resources, and system size. It reflects proactive, risk-informed asset management strategies that scale with system size and available resources.

8.1.4 Prioritization Criteria

Priority is given to areas with high environmental or public health risk, including pipelines near surface waters, steep terrain, high groundwater, environmentally sensitive areas, and

waters listed on the Clean Water Act Section 303(d) List. Historical SSOs, chronic maintenance, and high I&I zones may also be prioritization criteria.

8.1.5 Inspection and Monitoring Methods

Field crews evaluate signs of potential failure, such as root intrusion, fractures, offset joints, and surcharge evidence. Inspections incorporate flow monitoring, rainfall correlation, and historical spill data to guide risk-based planning. All inspections are documented with logs, photographs, and reports, and stored in the OpenGov/Cartegraph OMS and GIS. Records are maintained for at least five years and made available to SWRCB or SDRWQCB upon request.

CCTV Sewer Videos are kept in GraniteNET software for web based viewing.

8.1.6 Climate Change Vulnerability Assessment

System components vulnerability:

- Sea level rise- Not a Concern
- Flooding – Inflow and Infiltration/Flooding is a major concern due to increased intensity of rain events due to Climate Change.
- Erosion- Low Concern, infrastructure depth is generally adequate.
- Wildfire aftermath- Not a Concern
- Power outages. Low Concern, system is all gravity expect for one privately maintained small lift station.

To fulfill the capacity assessment and design criteria requirements of the 2022 Statewide Waste Discharge Requirements (Order WQ 2022-0103-DWQ, Attachment D, Section 8.2), the City of La Mesa relies on methodologies established in its Wastewater Master Plan, completed in October 2008. That plan included flow monitoring, hydraulic modeling, and evaluation of peak dry and wet weather flows under existing and build-out conditions. These methods are consistent with current regulatory expectations and are adopted here as the City's ongoing framework for capacity planning. They continue to guide future system evaluations and updates to the City's Capital Improvement Program (CIP).

The Master Plan developed detailed hydraulic models of the wastewater collection system, primarily for pipes 12 inches and larger. These models were calibrated using dry weather meter data and used to simulate wet weather flow conditions. Build-out projections were based on SANDAG Series 7 population forecasts and land use assumptions, including full development of vacant parcels under existing zoning.

Capacity evaluations used standard hydraulic design criteria and applied a depth-to-diameter (d/D) threshold of 0.75 to identify potential improvement segments. Pipe reaches exceeding this threshold were considered capacity-constrained and prioritized for further evaluation. In most cases, these reaches were resolved through iterative modeling that tested upsizing alternatives to provide adequate capacity for projected flows. The assessment concluded that very few sewer segments were capacity-limited.

- City's robust CIP Program has upsized and replaced areas of concern, particularly main truck sections.

Design flow assumptions were based on the City's updated hydraulic criteria and unit generation rates, as summarized in Table 8-1. These rates were developed using City land use data and SANDAG growth projections, calibrated against measured flows at key Metro metering locations.

Table 8-1
Recommended Unit Wastewater Generation Rate

Land Use / Population	Recommended Unit Generation Rate
Land Use	
Single-Family Residential	270 gpd/DU
Multi-Family Residential	180 gpd/DU
Commercial	500 gpd/AC
Industrial	500 gpd/AC
Institutional	500 gpd/AC
Population	
Single-Family Residential	90 gpdc
Multi-Family Residential	15 pdc

AC = acre
DU = dwelling unit
gpd = gallons per day
gpdc = gallons per day per capita

City growth rates were projected based on SANDAG residential and employment population estimates and projections, and the recommended unit generation rates were applied to these population estimates.

As part of the master plan, an evaluation of the available capacity in the City's existing wastewater collection system was completed to identify sewer reaches that may be undersized to accommodate existing and/or future wastewater flows. Based on the evaluation's findings, phased facility improvements were identified to reduce the potential for sanitary sewer overflows and allow for projected growth within the City's service area.

CIP projects are prioritized based on a risk-based framework that accounts for hydraulic deficiency severity, sewer spill history, proximity to sensitive areas, and opportunities to coordinate with other infrastructure efforts. The Engineering Division maintains a rolling five-year CIP, updated annually with input from Operations staff. Scopes, schedules, and budgets are reviewed based on field observations, system performance, funding availability, and interagency coordination needs.

This integrated planning approach ensures the City can proactively address deficiencies, support planned growth, and maintain a resilient, compliant wastewater system in alignment with the 2022 WDR.

8.2 Capacity Assessment and Design Criteria

8.2.1 System Components Contributing to Spills

The City's Engineering Staff monitors the functionality of the system on an ongoing basis using:

- Approximately 40 SmartCovers installed City Wide
- ADS Metering
- Feedback from Maintenance Staff
- Analysis of causation of Dry Weather Spills (Roots, FOG, Capacity, etc)
- Wet weather and Wet Weather Spill analysis of basin dynamics using ADS Metering and Smart Covers

The City has both an internal and external study in progress related to Inflow and Infiltration during Wet Weather.

- The Internal Study is being conducted by the City's Engineering Department in the Alvarado Basin using approximately 25 new SmartCovers.
- The External Study is being conducted by Metro Wastewater JPA and will be using ADS Echo Meters. This study has yet to begin 2026.

Key System components can be monitored using ADS flow metering data for each sewer basin. The City's Engineering Staff monitors the functionality of the system on an ongoing basis

Major sources that contribute to peak flow associated with sewer spills include:

- Inflow and Infiltration during wet weather. The City has several strategies and program to address this. Including, Ongoing CIP Program, and I&I Studies.

8.2.2 Capacity Assessment Components

The City's Capacity Assessment is included in the City's Sewer Master Plan. The document is included as a reference to this plan. The City does not have issues due to erosive forces, or dry weather peak flow. The City does not operate any sewer pumps.

Inflow and Infiltration work is multi-faceted, has been updated and is an ongoing process. The City conducts I&I work via its CIP program, basin studies, and elsewhere. Capacity of flood prone systems are included in the Capacity Analysis, however data, inspections, audits and spill history is updated continuously.

8.3 Prioritization of Corrective Action

The City's assessments are used to prioritize actions. The following information is used to prioritize.

- Spills. ACLs.
- Inflow and Infiltration Studies
- Dry Weather Capacity issues
- Infrastructure Condition

8.4 Capital Improvement Plan

The City has an ongoing CIP Plan which is updated bi-annually. Below is a list of major CIP projects and completion timelines.

- Alvarado 2 Truck Sewer SRF Funded- Completed $6M
- Alvarado 3 Truck Sewer SRF Funded- Completed $6M
- Phase 6 Sewer Improvements- (2025/2026) $9M
- Phase 7 Sewer Improvements (2027) $8M
- AJ Basin Sewer Improvements (2030+) $12M+
- Annual Sewer Improvements (Yearly) <$500,000

The City has a very robust and comprehensive Sewer CIP program for a City its size. The City utilizes SRF funding primarily and uses Pay-Go primarily for smaller projects under $500,000.

9 Monitoring, Measurement, and Program Modifications

9.1 Regulatory Framework

This section fulfills the requirements of State Water Resources Control Board Order WQ 2022-0103-DWQ, Attachment D, Section 9, and Attachment E.1, Sections 3.7 and 3.8. These provisions require the City to monitor and evaluate SSMP implementation, assess program effectiveness, and adjust elements based on performance trends. Specifically, the SSMP must:

1. Maintain data to support SSMP prioritization and audit tracking
2. Track the implementation and effectiveness of SSMP elements
3. Evaluate the success of preventive O&M activities
4. Modify SSMP elements based on monitoring results
5. Analyze trends in sewage spill frequency, location, volume, and cause

9.2 Monitoring and Measurement Program

9.2.1 SSMP Activity Documentation

The City uses OpenGov/Cartegraph OMS, GIS, and internal spreadsheets to document key program activities, including preventive and corrective maintenance, CCTV inspections, sewage spills, and capital projects. These records support SSMP audits, performance reviews, and data-driven program improvements.

9.2.2 Performance Metrics and Effectiveness Review

The City tracks key performance indicators (KPIs) to evaluate the effectiveness of each SSMP element. Metrics are reviewed during routine internal meetings and triennial audits to identify trends and guide program modifications. Indicators include:

- Total number and volume of sewage spills
- Sewage spill causes and root cause trends (e.g., FOG, roots, structural defects)
- Percentage of system cleaned and CCTV inspected
- Time to respond to sewage spills and service calls
- Work order backlog and completion rates
- Preventive maintenance frequency vs. plan
- Frequency of FOG inspections and enforcement
- O&M cost per linear mile
- Percent of system rehabilitated or replaced annually
- Operations staffing per 100 miles of pipe

9.2.3 Preventive Maintenance Program Evaluation

The effectiveness of the City's preventive maintenance program is evaluated at least once every three years. The evaluation includes:

- Review of cleaning cycles and recurring "hot spots"

- Analysis of trends from CCTV condition assessments
- Evaluation of equipment adequacy and available staffing
- Correlation of maintenance data with historical sewage spill patterns

Results are used to adjust cleaning schedules, prioritize rehabilitation, inform staffing needs, and plan future capital projects.

9.2.4 Program Updates and Adaptive Management

The SSMP is revised based on monitoring results, audit findings, staffing changes, infrastructure improvements, and regulatory updates. While updates may occur at any time, the entire SSMP must be reviewed, revised as necessary, and certified by the LRO at least once every six years. All revisions are documented and retained for audit purposes.

To support adaptive management, the City evaluates system performance annually using data from CIWQS sewage spill reports, preventive maintenance logs, inspection records, and internal work orders. This data is analyzed to:

- Identify recurring problem areas or failure modes
- Assess the effectiveness of current PM schedules
- Adjust SOPs and training based on root cause patterns
- Prioritize assets in the CIP based on risk and condition

Results of this analysis are reviewed and incorporated into future SSMP updates, cleaning schedules, asset rehabilitation planning, and resource allocation. This ensures that program improvements are evidence-based and aligned with actual system performance.

9.2.5 Sewage Spill Trend Analysis and 10-Year Graphs

In accordance with Attachment E.1, Section 3.8, the City maintains and submits 10-year graphical summaries of sewage spills by number and volume with its CIWQS Annual Report. Supporting actions include:

- Maintaining records of sewage spill cause, location, volume, and response
- Generating graphs to show sewage spill trends by year
- Identifying recurring causes and locations
- Using trends to adjust inspection frequency, maintenance scheduling, public outreach, and capital improvement priorities

9.3 SSMP Modifications and Recertification

The SSMP is reviewed and revised when KPIs indicate performance gaps, new infrastructure is added, or regulatory requirements change. All modifications are certified by the LRO and submitted via CIWQS. Audit results are central to identifying needed updates. The City applies adaptive management principles to support continuous improvement across all SSMP elements.

10 Internal Audits

10.1 Audit Procedures and Frequency

Per State Water Resources Control Board Order WQ 2022-0103-DWQ, Attachment D, Section 10, the City of La Mesa conducts an audit of its SSMP at least once every three years. The audit aims to evaluate whether each SSMP element is being effectively implemented and whether modifications are needed to improve performance.

The audit process includes:

- Reviewing the implementation status of each SSMP element
- Assessing performance using key performance indicators (see Section 9.2.2)
- Verifying compliance with applicable WDR provisions
- Examining records of field activities, inspections, training, and maintenance
- Interviewing staff from operations, engineering, and management teams
- Reviewing changes in staffing, organizational structure, procedures, or infrastructure
- Documenting corrective actions taken since the last audit

A written audit report is prepared within six months of the end of the audit period. The report includes findings, recommended actions, responsible parties, and timelines for implementation. The LRO certifies the audit and uploads it to CIWQS. Audit documentation is retained for at least five years and made available to the State or Regional Water Boards upon request.

10.2 Continuous Improvement and Documentation

Audit findings are used to drive continuous improvement of the SSMP. Based on audit results, the City may:

- Identify outdated or underperforming program components
- Recommend updates to procedures, staffing, training, or documentation
- Adjust maintenance strategies, inspection frequencies, or capital project priorities
- Track implementation of corrective actions and verify closure of past audit recommendations

Each audit report includes:

- A summary of each SSMP element's implementation status
- Evaluation of program effectiveness and regulatory compliance
- Identified deficiencies and root causes
- Description of corrective actions completed since the previous audit
- Recommended updates and assigned responsibilities
- Timelines for implementing changes

Audit outcomes are incorporated into the next SSMP update or recertification effort as required by the WDR.

11 Communication Program

11.1 Purpose and Regulatory Requirements

This section addresses State Water Resources Control Board Order WQ 2022-0103-DWQ, Attachment D, Section 11, which requires a communication program that:

- Engages the public and stakeholders in SSMP development and implementation
- Ensures the SSMP is available and accessible to the public
- Communicates SSMP performance, updates, and goals to City leadership and staff

11.2 Public Education and Outreach

The City of La Mesa maintains an ongoing public education and outreach program to promote proper sewer use, reduce inflow and infiltration (I&I), and prevent sewage spills. This program targets residents, businesses, and Food Service Establishments (FSEs) and includes:

- Distribution of educational brochures and newsletters
- Participation in public events such as Earth Day and Public Works Week
- Posting content on the City's website and social media platforms
- Partnerships with schools and civic groups for environmental awareness
- Targeted FOG education and mailings to FSEs on grease control practices
- Soliciting public input during major SSMP updates or program changes

11.3 Internal Communication and Implementation Coordination

The City facilitates coordination across departments responsible for SSMP implementation, including Public Works Operations, Engineering, Environmental Compliance, and the City Manager's Office. Internal communication mechanisms include:

- Regular interdepartmental meetings for planning and compliance tracking
- Shared access to GIS, OpenGov/Cartegraph OMS, and sewage spill records for unified decision-making
- Emergency communication protocols for after-hours sewage spill response
- Distribution of updated SOPs and SSMP revisions

Staff are informed of roles and responsibilities through:

- Safety tailgate meetings
- Quarterly training sessions
- Post-audit briefings and results
- Internal memos from program leads

11.4 Communication with Governing Body and Stakeholders

The City provides updates on SSMP implementation and performance to its governing body, including the City Council, through:

Council staff reports submitted during SSMP certification or updates

Presentations at public meetings during adoption or recertification

Budget workshops and agenda items addressing SSMP-related infrastructure and staffing

11.5 SSMP Availability and Transparency

The City ensures that the SSMP is publicly available and transparent. Measures include:

- Posting the most current SSMP on the City's website
- Providing a hard copy at City Hall during normal business hours
- Uploading the SSMP to the CIWQS database upon recertification

The City responds to public inquiries about sewer operations, sewage spills, and infrastructure planning. Feedback is recorded and considered during SSMP updates to improve program effectiveness and public trust.

Appendix A
Municipal Code Sections

7.18.040 Illegal discharges.

A. Compliance with this Chapter. Any discharge that is not in compliance with this chapter is an illegal discharge. The city maintains legal authority to control the contributions of pollutants in discharges of runoff into the city's MS4 associated with industrial, commercial, construction, and residential activities.

B. Discharge of Non-Storm Water Prohibited. No person shall discharge non-storm water directly or indirectly into the storm water conveyance system or receiving waters. Prohibited are illegal discharges or illegal connections that include but are not limited to:

1. Sewage;
2. Discharge of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive service facilities;
3. Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
4. Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
5. Discharge of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
6. Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
7. Discharge of pool or fountain water containing chlorine, algaecides, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
8. Discharges of saline swimming pool water unless such discharge can be discharged via a pipe or concrete channel directly to a naturally saline water body (e.g., Pacific Ocean);
9. Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction related wastes;
10. Discharges of food related wastes (e.g. grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

C. Conditionally Allowed Non-Storm Water Discharges.

1. Storm water discharges regulated under a valid facility-specific NPDES permit or facility specific RWQCB waste discharge requirements permit are exempt from discharge prohibitions established by this chapter, provided compliance with all relevant permit conditions is maintained to the satisfaction of the RWQCB and the city engineer. Facilities and activities whose storm water discharges are regulated under a general permit, including the state industrial general storm water permit, state construction general storm water permit and the state general dewatering permit, are not exempted from this chapter.
2. Non-storm water discharges to the MS4 from the following categories of non-storm water discharges are allowed if the discharger obtains coverage under NPDES Permit No. CAG919001 (RWQCB Order No. R9-2007-0043, or subsequent order) for discharges to San Diego Bay, or NPDES Permit No. CAG919002 (RWQCB Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay, and the discharger is in compliance with all requirements of the applicable NPDES permits and all other applicable laws and regulations; or the RWQCB determines in writing that

coverage under NPDES Permit Nos. CAG919001 or CAG919002 is not required. Otherwise, non-storm water discharges from the following categories are illicit discharges:

a. Discharges from uncontaminated pumped groundwater;

b. Discharges from foundation drains when the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year;

c. Discharges from crawl space pumps;

d. Discharges from footing drains when the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year.

3. Non-storm water discharges to the MS4 from water line flushing and water main breaks are allowed if the discharges have coverage under NPDES Permit No. CAG679001 (Regional Water Quality Control Board Order No. R9-2010-0003, or subsequent order), and the discharger is in compliance with all requirements of that NPDES permit and other applicable laws and regulations. This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 are allowed if the discharges have coverage under an NPDES permit, and the discharger is in compliance with the applicable NPDES permit and other applicable laws and regulations. Otherwise, discharges from water lines are illicit discharges.

4. Non-storm water discharges to the MS4 from the following categories are allowed, unless the enforcement official or the regional water quality control board identifies the discharge as a source of pollutants to receiving waters, in which case the discharge is considered an illicit discharge:

   a. Discharges from diverted stream flows;

   b. Discharges from rising groundwater;

   c. Discharges from uncontaminated groundwater infiltration to the MS4;

   d. Discharges from springs;

   e. Discharges from riparian habitats and wetlands;

   f. Discharges from potable water sources, except as set forth in La Mesa Municipal Code Section 7.18.040.3;

   g. Discharges from foundation drains when the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to produce non-storm water discharges under unusual circumstances; and

   h. Discharges from footing drains when the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to produce non-storm water discharges under unusual circumstances.

5. Non-storm water discharges from the following categories are allowed if they are addressed with BMPs. Otherwise, non-storm water discharges from the following categories are illicit discharges:

   a. Air conditioning condensation;

   b. Individual residential vehicle washing

   c. Flows from non-emergency firefighting activities; and

   d. Flows from emergency firefighting activities.

6. Public Health and Safety Exemptions. Discharges determined by the city engineer to be necessary to protect public health and safety are allowed, provided any conditions on such discharges imposed by the city engineer are satisfied and the city engineer makes written findings supporting the exemption.

7. On-Site Wastewater Systems. Discharges to the subsurface from properly functioning permitted site waste water systems are not prohibited by this chapter.

8. Exemptions Not Absolute. Any conditionally allowed discharge described above which the city engineer determines is a significant source of pollutants to receiving waters or the city's storm water conveyance system, shall be prohibited unless the discharger complies with additional BMPs imposed by the city engineer to reduce pollutants in the discharge to the maximum extent practicable and the BMPs are effective. Such prohibitions shall take effect after written notice to the discharger by the city engineer containing a schedule for compliance based on the necessity to protect public health and safety or the environment.

(Ord. 2008-2787 § 1 (part); February 12, 2008: Ord. 2010-2806, § 1; February 23, 2010: Ord. 2015-2840, § 1; May 12, 2015)

17.08.020 Sewer lateral fees.

In addition to the fees for a sewer connection permit established in Chapter 27.04 of this code, the owner or applicant for such connection shall pay to said city for construction and laying of laterals fees as established by city council resolution.

The fees are for installation under normal conditions. Under abnormal conditions, such as difficult or unusual excavations, additional appropriate charges may be negotiated at the discretion of the city manager.

Any additional charges for unusual circumstances in a sewer lateral installation shall be remitted to the city immediately. Final acceptance of the building being served will not be made until these charges are received by the city.

In case a connection is made to a sewer where it crosses private property, the plumber shall install the pipe to the main sewer and shall uncover the main sewer so that a connection can be properly made and the department of public works shall make such connection.

In case a connection can be made to a normal, shallow sewer main or to a special deep sewer main, the property owner may connect to the special deep sewer main by paying the connection charges to be negotiated by the city manager.

In all cases in which a lateral has been installed to serve a particular lot or parcel of land and the street is subsequently paved, that lateral must be used unless an exception is made by the department of public works.

(Ord. 2316; July 1, 1983: Ord. 2459 § 28; August 11, 1987)

17.12.070 Payment of sewer service charges.

A. All sewer service charges imposed under these provisions of the code shall be computed upon a monthly basis and shall be payable upon the billing of such charges to the owner or his agent.

B. Sewer service charges may be collected either through the tax roll of the county of San Diego, or by any method authorized by state law, including by direct payment or billing by the city or combined with other utility bills and separately designated.

C. If the sewer service charge is not paid before the close of business or postmarked before midnight of the final date for payment, a penalty shall be added thereto; provided, however, that when the final day for

payment falls on Saturday, Sunday or a legal holiday, payment may be made without penalty on the next regular business day. The late payment penalty shall be established by city council resolution.

D. Sewer service charges to be imposed on property where the parcels have been created or the use thereof changed subsequent to July 1st through August 10th of each year shall be separately collected through direct billing by the city.

E. This chapter shall be enforced pursuant to applicable law, including specifically California Health and Safety Code Sections 5473.1 through 5473.10.

(Ord. 2021 § 1; May 27, 1975: Ord. 2616 § 1; January 26, 1993: Ord. 2012-2823, § 1; June 26, 2012)

17.20.439 Industrial wastewater.

(a) Waste Disposal — Permit Required. Any person, municipality, sanitation district, or governmental agency desiring to discharge industrial waste into a public sewer shall obtain a permit to discharge said wastes into said system from the city manager known as a permit for industrial wastewater discharge.

(b) Permit for Industrial Wastewater Discharge. The permit for industrial wastewater discharge may require pretreatment of industrial wastewaters before discharge, restriction of peak flow discharges, discharge of certain wastewaters only to specified sewers of the city, relocation of point of discharge, prohibition of discharge of certain wastewater components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased costs of the city created by the wastewater discharge and such other conditions as may be required to effectuate the purpose of this section.

No person shall discharge industrial wastewaters in excess of the quantity or quality limitations set by the permit for industrial wastewater discharge. Any person desiring to discharge wastewaters or use facilities which are not in conformance with the industrial wastewater permit should apply to the city manager for an amended permit.

(c) Discharge Reports. The city may require that any person discharging or proposing to discharge wastewater into a public sewer file a periodic discharge report. The discharge report may include, but not be limited to, nature of process, volume, rates of flow, mass emission rate, production quantities, hours of operation, or other information which relates to the generation of waste, including wastewater constituents and characteristics in the wastewater discharge. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site even though they may not normally be discharged. In addition to discharge reports, the city may require information in the form of industrial wastewater discharge permit applications and self-monitoring reports.

(d) Permit Application. Persons seeking an industrial wastewater discharge permit shall complete and file with the city manager, an application in the form prescribed by the city manager, and accompanied by the applicable fees. The applicant may be required to submit, in units and terms appropriate for evaluation, the following information:

(1) Name, address and Standard Industrial Classification number of applicant;

(2) Volume of wastewater to be discharged;

(3) Wastewater constituents and characteristics including but not necessarily limited to those mentioned in paragraph (m) as determined by a laboratory approved by the city;

(4) Time and duration of discharge;

(5) Average and thirty minute peak wastewater flow rates, including daily, monthly and seasonal variations if any;

(6) Description of activities, facilities and plant process on the premises including all materials, processes and types of material which are or could be discharged;

(7) Any other information as may be deemed by the city manager to be necessary to evaluate the permit application.

The city manager will evaluate the data furnished by the applicant and may require additional information. After evaluation and acceptance of the data furnished, an on-site inspection of the waste discharge system, treatment systems, or other systems relating to the waste discharge may be required. The city manager may then issue an industrial wastewater discharge permit subject to terms and conditions provided herein.

(e) Permit Conditions. Industrial wastewater discharge permits shall be subject to all provisions of this section and all other regulations, user charges and fees established from time to time by resolution of the city council. The conditions of industrial wastewater discharge permits shall be uniformly enforced by the city manager in accordance with this section, and applicable local, state and federal regulations.

(f) Duration of Industrial Wastewater Discharge Permits. Permits shall be issued for a specified time period, not to exceed five years. A permit may be issued for a period less than a year or may be stated to expire on a specific date. If the permittee is not notified by the city thirty days prior to the expiration of the permit, the permit shall be extended one additional year. The terms and conditions of the permit may be subject to modification and change by the city during the life of the permit as limitations or requirements as identified in paragraph (m) are modified and changed. The permittee shall be informed of any proposed changes in his permit at least thirty days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

(g) Transfer of Any Industrial Wastewater Discharge Permit or Changed Use. Industrial wastewater discharge permits shall be issued only for specific use for a specific operation. Any sale, lease, transfer or assignment of the premises or operation for which the permit was issued shall require a new permit to be issued. Any new or changed conditions of operation shall require a new permit to be issued.

(h) Revocation of Industrial Wastewater Discharge Permit. The city manager may revoke the permit of any permittee who is found to be in violation of this section or applicable local, state or federal regulations or who:

(1) Fails to factually report the wastewater constituents and characteristics of its discharge;

(2) Fails to report significant changes in operations, or wastewater constituents and characteristics;

(3) Refuses reasonable access to the permittee's premises for the purpose of inspection or monitoring; or

(4) Violates conditions of the permit.

(i) Industrial Wastewater Discharge Permit Fee. An industrial wastewater discharge permit fee will be collected annually from all permittees. The permit fee shall be established from time to time by a resolution of the city council; provided, however, that prior to considering implementation of the permit fee or any change in said permit fee by resolution as aforesaid, a notice of the proposed implementation and/or change shall be posted by the city clerk at least ten days prior to consideration of such a resolution by the city council.

(j) Sampling, Self-Monitoring and Flows. The city manager shall require the permittee to provide results of periodic measurements of its discharge which is to include chemical analysis and flow. The city manager may require a monitoring facility to be furnished and operated at permittee's expense. All permittees making periodic measurements shall furnish and install at an appropriate location, a calibrated flume, weir, flow meter or similar device suitable to measure flow rate and total volume approved by the city manager. In lieu of wastewater flow measurement, the city manager may accept records of water usage and adjust the flow volume by suitable factors to determine peak and average flow rates for the specific industrial wastewater discharge. The monitoring facility should be situated normally on the permittee's premises, but the city

manager may, when such a location would be impractical or cause undue hardship on the user, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles. Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the city manager's requirements and shall be completed within ninety days following written notification by the city manager, unless a time extension is granted by the city manager. Those permittees required by the city manager to make periodic measurements of industrial wastewater flows and constituents shall annually make the minimum number of such measurements as required in the permit. When required by the city manager, permittees shall install and maintain in proper order automatic flow-proportional sampling equipment and/or automatic analysis and recording equipment. Permittees shall allow the city or its representative ready access at all reasonable times to all parts of the premises for purposes of sampling or in the performance of any of their duties. The city manager shall have the right to set up on the permittee's property such devices as are necessary to conduct sampling or metering operations. Where a permittee has security measures in force, the permittee shall make the necessary arrangements with their security guards so that upon presentation of suitable identification, personnel of the city shall be permitted to enter without delay.

All sampling, analysis and flow measurement procedures, equipment, results and records shall be subject at any time to inspection by the city manager.

(k) Pretreatment. Permittees shall make wastewater acceptable under the limitation established herein before discharging to any public sewer. Any facilities required to pretreat wastewater to a level acceptable to the city manager shall be provided and maintained at the permittee's sole expense. Detailed plans, compliance schedule, and operating procedures shall be submitted to the city manager for review and shall be approved by the city manager before construction of the facility. The review of such plans and operating procedures will in no way relieve the permittee from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the city manager under the provisions of this section. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be approved by the city manager. No permittee shall increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with any local, state, or federal discharge standard.

(l) Protection from Accidental Discharge.

(1) Each permittee shall provide protection from other substances regulated by this section. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the permittee's own cost and expense.

(2) In the case of an accidental discharge, it is the responsibility of the permittee to immediately notify the city manager of the incident. The notification shall include location of discharge, type of waste, concentration and volume and corrective actions. Within five days following an accidental discharge, the permittee shall submit to the city manager a detailed written report describing the cause of the discharge and the measures to be taken by the permittee to prevent similar future occurrences. Such notification shall not relieve the permittee of any expense, loss, damages, or other liability which may be incurred as a result of damage to the wastewater systems, fish kills, or any other damage to persons or property; nor shall such notification relieve the permittee of any fines, civil penalties, or other liability which may be imposed by this section or other applicable law. A notice shall be permanently posted on the permittee's bulletin board or other prominent place advising employees who to call in the event of an accidental discharge. Permittees shall insure that all employees who may cause, allow or observe such an accidental discharge to occur are advised of the emergency notification procedures.

(m) Prohibited Discharges. In most cases, the concentration or amount of any particular constituent which will be judged to be excessive or unreasonable cannot be foreseen but will depend on the results of technical determinations and the actions of regulatory agencies. The list of constituents which may be regulated provides specific limits only where they are now reasonably well established. The other constituents on the

list are presented with the objective of enumerating the types of wastes which will be regulated from time to time. Unless approval has been obtained from the city manager, no person shall discharge or cause to be discharged to a public sewer, which directly or indirectly connects to the city's wastewater system, the following:

(1) Any gasoline, benzene, naphtha, solvent, fuel oil or any liquid, solid or gas that would cause or tend to cause flammable or explosive conditions to result in the wastewater system.

(2) Any matter containing toxic or poisonous solids, liquids or gases in such quantities that, alone or in combination with other substances, may create a health hazard for humans, animals or the local environment, interfere detrimentally with wastewater treatment processes, cause a public nuisance, or cause any hazardous condition to occur in the wastewater system.

(3) Any matter having a pH lower than five (5.0) or having any corrosive or detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel or may cause damage to structures, equipment or other physical facilities of the wastewater system.

(4) Any solids or viscous substances or other matter of such quality, size or quantity that they may cause obstruction to flow in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

(5) Any rainwater, storm water, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water.

(6) Any matter having a temperature higher than one hundred fifty degrees Fahrenheit (sixty-five degrees Celsius).

(7) Any matter containing more than five hundred mg/l of oil or grease.

(8) Any strongly odorous matter or matter tending to create odors.

(9) Any matter containing over one mg/l of dissolved sulfides.

(10) Any matter with a pH high enough to cause alkaline incrustations on sewer walls.

(11) Any matter promoting or causing the promotion of toxic gases.

(12) Any matter requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

(13) Any excessive amounts of deionized water, steam condensate, distilled water, or single pass cooling water.

(14) Any radioactive matter except:

a. When the person is authorized to use radioactive materials by the state department of health or other governmental agency empowered to regulate the use of radioactive materials, and

b. When the matter is discharged in strict conformity with current California Radiation Control Regulations (California Administrative Code, Title 17), and the nuclear regulatory commission regulations for safe disposal, and

c. When the person is in compliance with all rules and regulations of all other applicable regulatory agencies.

(15) Any matter producing excessive discoloration of the wastewater treatment plant effluent.

(16) Any toxic materials including, but not limited to, all heavy metals, cyanide, phenols, chlorinated hydrocarbons, and other organic compounds unless limited to that concentration which complies with all local, state and federal discharge limitation, and which does not interfere with the operation of the wastewater facilities.

(n) Limitations on the Use of Garbage Grinders. Matter from garbage grinders shall not be discharged into a public sewer except matter generated in preparation of food normally consumed on the premises, or where the permittee has obtained a permit for that specific use from the city manager, and agrees to undertake whatever self-monitoring is required by the city manager. Such grinders must shred the waste to a degree that all particles will be carried freely under normal flow conditions prevailing in the public sewer. Garbage grinders shall not be used for grinding plastic, paper products, inert materials, or garden refuse.

(o) Limitations on Point of Discharge. No person shall discharge any substances directly into a manhole or other opening in a public sewer other than through an approved sewer connection unless upon written application and payment of the applicable charges and fees, the city manager issues a permit for such direct discharges.

(p) Availability of the City's Wastewater Facilities. If wastewater facilities capacity is not available, the city manager may require the industrial waste discharger to restrict his discharge until sufficient capacity can be made available. When requested, the city manager will advise persons desiring to locate new facilities as to the areas where industrial wastewater of their proposed quantity can be received by available wastewater facilities. The city manager may refuse service to persons locating facilities in areas where their proposed quantity or quality of industrial wastewater is unacceptable in the available treatment facility.

(q) Discrepancies Between Actual and Reported Industrial Wastewater Discharge Permit Quantities. Should measurements or other investigations reveal that the permittee is discharging a flow rate, or a quantity of flow, chemical oxygen demand or suspended solids significantly in excess of that stated on the permit or in excess of the quantities reported to the city manager by the permittee, the permittee shall apply for an amended permit and shall be assessed for all delinquent charges together with penalty and interest. Before these charges shall be assessed at least two additional twenty-four hour samples and flow measurements shall be obtained by the city manager with all costs of sampling and analyses to be paid by the permittee.

A permittee who violates this section shall, in the absence of other evidence, be presumed to have been discharging at the determined parameter values over the preceding three years or since the city manager's previous verification of quantity parameters, whichever period is shorter.

(r) Records Retention. All permittees subject to this section shall retain and preserve for not less than three years, any records, books, documents, memoranda, reports, correspondence and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or on behalf of a permittee in connection with its discharge. All records which pertain to matters which are the subject of administrative action or any other enforcement or litigation activities brought by the city shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

(Ord. 2360, § 1; June 12, 1984)

17.20.530 Enforcing agency.

The San Diego County health department is hereby designated as the inspecting and enforcing agency of this chapter.

(San Diego County Ord. 1158 NS (part), as adopted by Ord. 784; March 12, 1957)

17.20.550 Additional charges allowed.

In addition to other penalties, fees and charges stated in this chapter any excessive sewer or sewerage maintenance expenses or reconstruction costs including administrative costs caused by any stoppage or breakage, any toxic, hazardous or odorous condition, or any damage or deterioration of the public sewer, and attributable thereto, shall be charged to the discharger causing or contributing to such conditions.

(Ord. No. 2009-2795, § 3; April 14, 2009)

Chapter 17.24 FATS, OILS AND GREASE CONTROL

Sections:

17.24.010 Title and effective date.

This chapter shall be known as "City of La Mesa Fats, Oils and Grease Control" and shall become effective as of July 1, 2009.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.020 Purpose and intent.

The purpose of this chapter is to:

(a) prevent blockages and sanitary sewer overflows of sewer lines caused by the discharge of fats, oils and grease;

(b) reduce the adverse affects on sewage treatment operations resulting from discharges of fats, oils and grease into the system;

(c) specify appropriate fats, oils and grease discharge requirements for grease producing facilities discharging into the city's wastewater collection system; and

(d) protect public health and the environment by minimizing public exposure to unsanitary conditions.

The intent of this chapter is to use the police power of the city to regulate the direct and indirect discharge of waste containing fats, oils and grease into the city's wastewater collection system in a manner that complies with all applicable laws, including the federal Clean Water Act, California Water Code and applicable waste discharge requirements.

(Ord. No. 2009-2794, § 1; April 14, 2009)

12.24.030 Definitions.

For the purposes of this chapter certain terms are defined as follows:

(a) CITY ENGINEER means and refers to the director of public works/city engineer or his/her designee.

(b) COMPLIANCE SCHEDULE AGREEMENT means and refers to an agreement executed between the city engineer and a FSE found to be in violation with the requirements of this chapter. The agreement shall specify requirements for the FSE to attain compliance.

(c) FATS OILS AND GREASE (FOG) means any vegetable or animal product that is used in or is a by product of the cooking or food preparation process, and that turns or may turn viscous or solidifies with a change in temperature or other conditions.

(d) FATS, OILS AND GREASE CONTROL PROGRAM refers to a document adopted by a resolution of the city council providing procedural guidelines to implement the purpose and intent of this chapter.

(e) FOOD SERVICE ESTABLISHMENT (FSE) means a place where food is prepared and served and/or sold for consumption by the public and includes commercial and non-commercial establishments.

(f) GREASE PRETREATMENT DEVICE means any device that reduces excessive amounts of fats, oils and grease prior to discharge into the wastewater collection system.

(g) NOTICE OF VIOLATION (NOV) means and refers to a notice to the FSE owner or operator, provided by the city engineer, that identifies a violation of the requirements of this chapter, a request to schedule an additional inspection or a request to provide information.

(h) SEWAGE means any liquid waste and water borne solid waste resulting from residential, commercial, industrial or institutional activities or uses.

(i) HARDSHIP WAIVER refers to waiving of certain conditions imposed pursuant to the issuance of a FOG permit which are deemed impractical by the city manager.

(j) WASTEWATER means any volume of untreated or partially treated sewage ultimately discharged into the public sewer.

(k) WASTEWATER COLLECTION SYSTEM means any system of pipes, pump stations, sewer lines or similar devices on appurtenances used to collect and convey sewage to a treatment plant.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.040 Adoption of the FOG control program.

The city council may periodically adopt or amend by resolution the City of La Mesa FOG Control Program for regulating the discharges of fats, oils, and grease into the wastewater collection system within the city. Said document shall be available in the office of the city clerk for examination and use by the public.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.050 FOG discharge—Permit required.

Any FSE desiring to discharge wastewater into a public sewer shall obtain a permit from the city engineer which shall be referred to as a FOG discharge permit. The FOG discharge permit may require pretreatment of wastewater prior to discharge, restriction of peak flow discharges, discharge of certain wastewater only to specified sewers of the city, relocation of point of discharge, prohibition of discharge to certain wastewater components, restrictions of discharge to certain hours of the day, payment of additional charges to defray increase costs of the city created by the wastewater discharge, and other conditions as may be required to effectuate the purpose and intent of this chapter. No person shall discharge wastewater in excess of the quantity or quality limitations set by any FOG discharge permit and any other applicable requirements pursuant to federal, state or local law.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.060 Permit application.

(a) Persons seeking a FOG discharge permit shall complete and file with the city engineer an application in the form prescribed by the city engineer and accompanied by the applicable fees. The applicant shall be required to submit the following information:

(1) name and address of applicant;

(2) volume of wastewater to be discharged;

(3) time of daily food preparation operations;

(4) description of food preparation, type, number of meals served, cleanup procedures, dining room capacity, number of employees and size of kitchen; and

(5) any other information as may be deemed necessary by the city engineer to evaluate the permit application.

(b) The city engineer shall review the application within ten calendar days and may require additional information and an on-site inspection of the waste discharge system, treatment systems or other system relating to the waste discharge. Within thirty days of the submission of an application deemed complete by the city engineer, the city shall either issue subject to certain terms and conditions or deny a FOG discharge permit. A denial of any FOG discharge permit shall be without prejudice.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.070 Duration of permit.

A FOG discharge permit shall be issued for a specified time period not to exceed five years. The terms and conditions of the permit may be subject to modification by the city during the term of the permit as deemed necessary by the city engineer. The FSE shall be informed of any proposed changes in the permit at least thirty days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.080 Permit non-transferable.

FOG discharge permits shall be issued only for specific use for a specific operation. Any sale, lease, transfer or assignment of the use or operation for which the permit issued shall require a new permit. Any new or changed conditions of use or operation may l also require a new permit.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.090 Revocation of permit.

The city engineer may revoke the FOG discharge permit issued to any FSE found to be in violation of the requirements of this chapter or if the same does any of the following:

(a) fails to comply with the conditions of the FOG discharge permit;

(b) fails to install required grease pretreatment devices as required by the FOG discharge permit;

(c) fails to comply with the reporting and/or pretreatment requirements or pretreatment device maintenance as required by the FOG discharge permit;

(d) fails to comply with a NOV or a compliance schedule agreement or any other provision of this Code;

(e) knowingly provides a false FOG discharge permit application or makes false representations or submits false documents, reports or logs to the city engineer;

(f) refuses to allow inspections during normal business hours or after hours if emergency conditions exist such as an overflow or suspected overflow;

(g) interferes with an FSE inspection or the sampling of an FSE discharge; or

(h) causes or contributes to sewer blockages or sewer overflows within the public sewer or fails to address the conditions leading to more than one overflow event from a private system within a twelve-month period.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.100 Fees.

(a) General. Fees identified in this chapter shall be established from time to time by resolution of the city council.

(b) FOG discharge permit fee. FOG discharge permit fees shall be collected in conjunction with the issuance of the permit.

(c) Inspection fee. A fee based on the specified frequency of inspection as outlined in the FOG control program shall be collected at the time of FOG discharge permit issuance.

(d) Re-Inspection fee. A re-inspection fee may be collected for additional inspections required to determine whether specified corrective actions for noted violations of this chapter have been implemented and if additional improvements are required.

(e) NOV fee. A NOV fee may be collected from parties receiving a NOV of the FOG discharge permit.

(f) Grease disposal mitigation fee. A grease disposal mitigation fee shall be collected from parties who obtain a hardship waiver according to the requirements of this chapter.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.110 Maintenance reports.

The city engineer shall require the FSE to maintain records of grease pretreatment device cleaning, maintenance and grease removal and to report on such maintenance to the city as requested. The city engineer may require the FSE to provide results of periodic measurements of its discharge which may include chemical analysis of oil and grease content. The FSE shall allow the city engineer ready access at all reasonable times to all areas of the use or operation for purposes of sampling and inspections.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.120 Hardship waiver.

The city manager may waive certain conditions imposed pursuant to the issuance of a FOG discharge permit upon making a determination that said conditions are impractical. If the city manager makes the determination

that a hardship exists then the applicant will be subject to a grease disposal mitigation fee as defined in Section 17.24.110(f). In considering the application of the said waiver, the following factors shall be considered:

(a) installation of a grease pretreatment device would conflict with other applicable laws or standards.

(b) installation of a grease pretreatment device is impractical due to existing conditions.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.130 Enforcement and penalty for violation.

(a) Wastewater discharge violation. Whenever a discharge of wastewater in any manner is in violation of this Code or of any order issued by the city engineer pursuant to this Code and declared a public nuisance, the discharge shall be corrected or abated as directed by the city engineer. Any person responsible for such a public nuisance shall be guilty of a misdemeanor.

(b) Falsifying of information. Any person who knowingly makes any false statement, representation, record, report, plan or other document filed with the city engineer or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required pursuant to this chapter shall be guilty of a misdemeanor.

(c) NOV. The city engineer may issue an NOV to a FSE for any violation of this chapter. The NOV may require that corrective action be taken by a specified date. Failure to comply with a NOV may result in the issuance of a compliance schedule agreement. Failure by the FSE to implement any element of a compliance schedule agreement shall be a violation of this chapter.

(d) Termination of service. The city engineer may revoke any FOG discharge permit issued or terminate any wastewater service to any use or operation if a violation of any provision of this chapter exists or if a discharge of wastewater causes or threatens to cause a condition of contamination, pollution or nuisance. If such conditions exist, the city engineer may act immediately to suspend the use or operation of the FSE.

(Ord. No. 2009-2794, § 1; April 14, 2009)

17.24.140 Notice, correction of NOV and appeal.

(a) Any notice issuance pursuant to this chapter shall be in writing and served in person or by mail. If served by mail, the notice shall be sent to the last address known to the city engineer. Where the address is unknown, service may be made upon the owner of the use or operation involved.

(b) Violations and enforcement actions may be appealed to the city manager. Appeals shall be made in writing setting forth the following information:

1. the name and mailing address of the person making the request or appeal;

2. the determination involved; and

3. the error claimed to have been made and all reasons in support of the request.

Appeals from the determination of the city engineer shall be filed with the city manager's office. Appeals from decisions of the city manager may be appealed to the city council and shall be filed with the city clerk. The required fee shall be paid with the filing. All requests shall be filed within ten days following the date of the final determination to be appealed."

(Ord. No. 2009-2794, § 1; April 14, 2009)

Appendix B
Spill Emergency Response Plan (SERP)

City of La Mesa
Spill Emergency Response Plan

Updated July 2025

City of La Mesa
8130 Allison Avenue
La Mesa, CA 91941

With support from
MOE
731 S Hwy 101, Suite 16

ATTACHMENTS

Abbreviations

BMP	Best Management Practices
CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
EPA	Environmental Protection Agency
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
GIS	Geographic Information System
I&I	Inflow and Infiltration
LRO	Legally Responsible Officer
MRP	Monitoring and Reporting Program
NASSCO	National Association of Sewer Service Companies
NPDES	National Pollutant Discharge Elimination System
OES	Office of Emergency Services
SDRWQCB	San Diego Regional Water Quality Control Board
SERP	Spill Emergency Response Plan
SOP	Standard Operating Procedures
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
WDRs	Waste Discharge Requirements

1 Introduction

Because sewage spills of various sizes happen occasionally despite targeted prevention efforts, the City of La Mesa (City) has created this Spill Emergency Response Plan (SERP). Sewage spills can occur due to blocked sewers, pipe failures, mechanical issues, and other natural or human causes. City crews remain alert and are prepared to respond quickly once notified and confirmed of a sewage spill.

This SERP establishes the formal procedures for City staff to respond to, contain, correct, and clean up sewage spills. It is intended to minimize the effects of sewage spills on the environment while protecting the public's health and safety. Chapter 1 provides an overview of the City'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 City owns, operates, and maintains approximately 150 miles of sewer main and several interagency connection facilities in the County of San Diego. The City also owns, operates, and maintains approximately 4,192 manholes. The sewer mains convey wastewater flows generated within four (4) major drainage basins to connections to sewerage facilities located along Interstate 8 to the north and Highway 94 to the south. Flows are ultimately conveyed to transmission and treatment facilities operated by the City of San Diego's Metropolitan Wastewater Department (MWWD).

1.2 Purpose and Goals

The City recognizes the importance of protecting the health and safety of the public and the environment by preventing sewer flows from reaching surface waters and waters of the United States. The City also understands the necessity to implement procedures to comply with the requirements of state regulations. The primary goal in establishing a SERP is to ensure that City staff respond appropriately and efficiently to all known sewage spills immediately.

The objectives of the SERP can be summarized as:

- Protect public health and safety, and the environment;
- Minimize the effects of sewage spills;
- Satisfy regulatory and discharge permit conditions;
- Protect private and public property;
- Protect City personnel; and
- Protect all City-owned assets.

This SERP supplements and is consistent with the city's existing emergency plans and standard operating procedures. The plan will facilitate the coordinated and efficient mobilization of necessary facilities and personnel when responding to a sewage spill.

1.3 Organization of SERP Document

This document provides the guidelines for City staff to respond to a sewage spill event. This SERP contains the following elements:

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

1.4 Regulatory Requirements

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

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 an sewage 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.

California Waste Discharge Requirements: On December 6, 2022 the State Water Resources Control Board (SWRCB) approved Order 2022-0103-DWQ. The WDR prescribes requirements for Sanitary Sewer Systems and became effective on June 5, 2023.

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 (NPDES) permits, and court action, such as administrative orders and consent decrees. The City of La Mesa is not currently subject to an NPDES permit or any legal action initiated by the federal government.

Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region: The General Waste Discharge Requirements 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 City of La Mesa is located within Region 9.

Amendment Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems: The Monitoring and Reporting Program (MRP) for Order 2022-0103-DWQ, which became effective June 5, 2023, establishes monitoring, recordkeeping, reporting, and public notification requirements for all enrollees under the current WDR.

1.5 Definition of Terms

Category 1 Sanitary Sewer Overflow: All discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond).

Category 2 Sanitary Sewer Overflow: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire sewage spill discharged to the storm drain system is fully recovered and disposed properly.

Category 3 Sanitary Sewer Overflow: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition over 50 gallons under 1000 gallons.

Category 4 Sanitary Sewer Overflow: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition under 50 gallons.

Private Lateral Sewage Discharge (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online Database.

First Responder: The City Operations Division staff person who is initially notified of a possible sewage spill and/or arrives first at the reported location of the possible sewage spill.

Public Waters: Any body of water, such as the ocean, bay, lake, pond, river, stream, or creek, with the potential for human contact as defined by the County Department of Environmental Health Quality.

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

Sewage Spill: A sewage spill is any overflow, spill, release, discharge, or sewage diversion from a wastewater collection system. Sewage spills include:

- Release of untreated or partially treated sewage that reaches waters of the United States;
- Release of untreated or partially treated sewage that does not reach waters of the United States; and
- Sewage backups into buildings and private property that are caused by blockages or flow conditions in a wastewater collection system, other than a building lateral. Sewage backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is a sewage spill when sewage is discharged off private property into streets, storm drains, or waters 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 City of La Mesa. Sewage 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 sewage spills.

Waters of the State: Any surface water or groundwater (including saline waters) within the boundaries of the state.

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.

2 Sewage Spill Response Procedures

Sewage spills are caused by a blockage or a restriction in the wastewater collection system, pipe failures, flows exceeding the system's capacity, and other natural or man-made causes. In the event of a sewage spill, the City's wastewater staff must respond and be prepared to:

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

This chapter presents a strategy for the City Operations Division to mobilize labor, materials, tools, and equipment to contain, mitigate, and clean up residuals from a sewage spill and correct or repair any condition that may cause or contribute to an unpermitted sewage discharge. This plan applies to a wide range of potential system failures that could create a sewage spill.

2.1 Receiving Information about a Possible Sewage Spill

City employees or the public may detect a sewage spill. Suspicious circumstances, such as foul odors, backed-up plumbing, unusual flooding, and so on, may also indicate the possibility of an actual or impending sewage spill. This section describes how the City's Operations Division staff is notified of possible sewage spills.

Telephone Notifications of Possible Sewage Spills

All telephone calls or complaints for actual or possible sewage spills are routed to the Wastewater Maintenance Supervisor from the City's Public Works office or the La Mesa Police Dispatch Center. The designated back-up person is notified if the Wastewater Maintenance Supervisor is unavailable or non-responsive.

Figure 1 illustrates that notification of a potential sewage spill will be routed directly to the Wastewater Maintenance Supervisor in the City's Operations Division during regular business hours. During non-business hours, weekends, and designated City holidays, calls will be received by the City of La Mesa Police Dispatch Center and forwarded to the Wastewater Maintenance Supervisor or the designated back-up in the City's Operations Division.

Upon receipt of a notification of a potential sewage spill, the Wastewater Maintenance Supervisor or the designated back-up will obtain as much information as possible from the reporting entity. The relevant information that should be collected includes:

- Time and date the call/sewage spill report was received;
- Specific location (address, cross streets, etc.);
- Description of problem;
- Time the possible sewage 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.); and
- Other relevant information that will enable the responding City staff personnel and crews, if required, to quickly locate, assess, contain, and relieve the sewage spill.

The *Sewage Spill Field Report* form in Attachment A can be used by the Wastewater Maintenance Supervisor or designated backup person to capture the relevant information needed to respond to a report of a possible sewage spill and help initiate the work order assignment.

Operations Division Personnel Notifications of Possible Sewage Spills
Possible and actual sewage spills detected by maintenance personnel during their regular duties are reported immediately to the Wastewater Maintenance Supervisor or designated backup. Personnel on-site observing the sewage spill should begin efforts to contain and minimize its effects, as further described in subsection 2.5 below.

2.2 First Responder Responsibilities

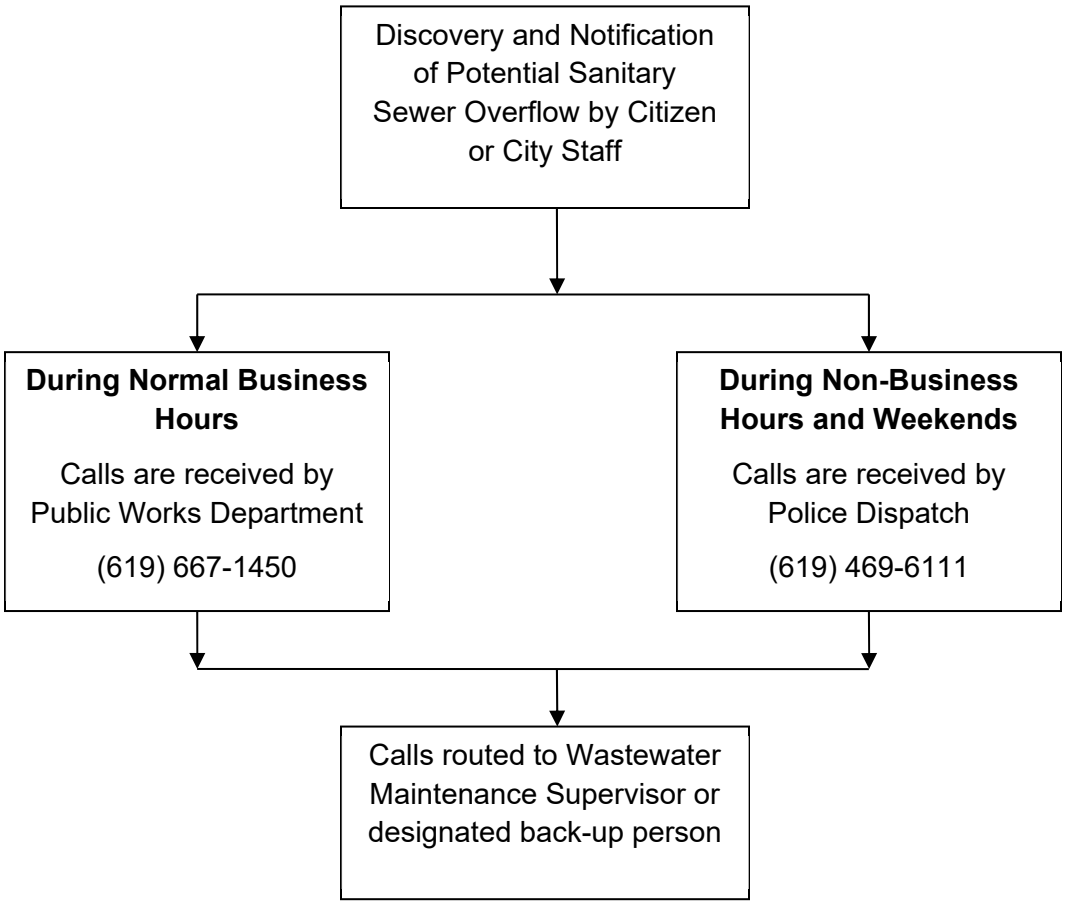
Based on the information provided during the notification of a possible sewage spill, the Wastewater Maintenance Supervisor or the designated back-up person shall proceed to the sewage spill location to assess the cause and extent of the sewage spill. The City staff person who arrives first at the location is considered the First Responder. The First Responder will determine whether to direct a wastewater crew, other City personnel, and/or approved contractors to the sewage spill location if the spill cannot be fully contained or recovered, or it has reached public waters. The information obtained by the First Responder during the initial notification of a possible sewage spill may warrant the First Responder, in their best professional judgment, to immediately dispatch crews or other City personnel to the sewage spill location before proceeding to the reported sewage spill location.

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

- Determine the cause of the sewage 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 sewage spill;
- Control public access to affected area; and
- Implement efforts to stop the spill.

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

Figure 1
Process for Alerting Staff of a Possible Sanitary Sewer Overflow



If the First Responder cannot locate the sewage spill or the reported problem, he/she shall attempt to obtain additional information from the initial caller or Police Dispatch Operator to clarify reported data and to locate the problem. If the sewage spill or reported problem still cannot be located, the First Responder shall check the system for normal flows, advise dispatch of the status, and prepare the final field report.

2.3 Dispatch of Crew(s) to Sewage Spill Location

Failure of any element within the wastewater collection system that threatens to cause or causes a sewage spill triggers an immediate response to isolate and correct the problem. City Operations Division crews and equipment are stationed at the City's Public Works Yard, from where they are dispatched. The equipment is available 24 hours a day, and staff are placed "on-call" on a rotational schedule to respond to any site of a reported sewage spill. Additional City maintenance personnel are "on call" if additional crews are necessary. Attachment B contains the names, contact information, and on-call schedule for City staff.

All employees dispatched to a sewage spill location shall proceed immediately to the site. All necessary precautionary measures to ensure staff safety shall be in place. Overflows within the

City's jurisdiction that enter areas outside the City's authority will continue to be contained, and the affected agency will be notified of the sewage spill to ensure proper cleaning and notifications are completed.

Photos

Responders must take several photos of the spill location and downstream spill path, capture, and/or result, and take photos from several angles to ensure the spill is documented.

2.4 Requesting Additional Resources

If the First Responder decides that notifying additional staff beyond the "on-call" sewage spill response crews is needed and/or City-approved contractors are required to fully contain and recover the spill, the Wastewater Maintenance Supervisor or designated backup will mobilize the necessary resources. The City can access extra support from its own staff as well as outside on-call contractors that can be mobilized in case of an emergency or major sewage spills. The list of City-approved contractors and equipment rental vendors is provided in Attachment C.

Coordination with Stormwater Agencies

The Public Works Department of the City of La Mesa has combined sewer and storm drain resource personnel; therefore, coordination is implied.

2.5 Overflow Containment, Correction, and Clean-up

This section describes specific actions to be performed by the Operations Division staff and additional crews responding during a sewage spill. The objectives of the specific actions described in this section include:

- Protect public health, the environment, and property from sewage spills and restore the surrounding area 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 sewage spill information and potential impacts; and
- Minimize the City's exposure to any regulatory agency penalties and fines.

Under most circumstances, the City will oversee, manage, and perform the tasks necessary to effectively and adequately correct, contain, and clean up sewage spills. The City shall respond with its staff, equipment, and/or contractors. These personnel have the skill and experience to respond rapidly and in the most appropriate manner. An emergency response's critical importance is ensuring 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 correctly, subsequent sewer system back-ups may occur, creating other sewage spills.

Initial Containment Measures

The following are initial measures to contain the sewage spill and recover, where possible, sewage that has already spilled to minimize impact to the public or environment. The City crew 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 vacuum truck, dig or construct a containment pond, divert flow into a downstream manhole, etc.).
3. Identify and request, if necessary, assistance or additional City and/or Contractor resources (materials and equipment) to contain or isolate the spill;
4. Large spills greater than 10,000 gallons include all the above, a requirement to build additional emergency containment areas downstream of the sewage spill, if possible, and initiating an access plan into storm or flood control channels to contain sewage spills that enter the storm drain system.

Additional Measures for Prolonged Overflow Conditions

In the event of a prolonged sewer line blockage or collapse, the responding City crew shall set up a portable bypass pumping system around the obstruction, continuously or periodically monitor the bypass operation, and carry out emergency repairs to stop the spill. Table 1 can be used as a guide to select the appropriate pump.

Table 1
Pump Capacity Estimating Table

Pump Size (inches)	Estimated Capacity (GPM)	Equivalent Gravity Sewer Flow (half full sewer)
2 X 2	200	6-inch diameter
3X3	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

Correction of Sewage Spill Cause

Once the sewage spill has been contained and the cause determined, efforts to correct the cause of the sewage 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 manhole. Care must be taken to prevent additional sewage spills from occurring as a result of the corrective action taken to resolve the identified problem.

Clean-up

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

- The sewage 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 disinfected and deodorized; proper contact time for proper disinfection must be ensured;
- Where sewage resulted in ponding, the pond must be pumped dry and the residue removed and disposed of properly;
- If sewage discharged into a body of water that may contain fish or other aquatic life, disinfection will not be performed, and the appropriate agency will be contacted; and
- Where appropriate, disinfect and deodorize the sewage spill site using liquid bleach, commercial sanitizers (such as HTH®), etc.

2.6 Traffic and Crowd Control

The purpose of traffic and crowd control is to restrict public access to areas that could be affected by unpermitted sewage discharges. The following traffic and crowd control recommendations can serve as a guide for different types of sewage spills.

Small sewage spill (Up to 1,000 gallons)

- Set up cones to direct traffic away from the spill area; and
- Use City personnel to control traffic and pedestrians.

Medium sewage 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; and
- Place caution tape and barricades to protect pedestrians from the contaminated area.

Large sewage spill (greater than 10,000 gallons)

- Assess the spill situation;
- Inform City Police Department of any law enforcement assistance necessary for roadway closures and traffic control;
- Delegate responsibility to County Department of Environmental Health Quality for informing the public of hazards;
- Place signage to inform the public of potential hazards to public health and safety; and
- Block public access to the area using barricades, cones, and caution tape.

2.7 Preliminary Assessment of Damage to Private and Public Property

Initial assessment of the sewage spill site is performed by the First Responder, who may be the Wastewater Maintenance Supervisor, the designated back-up person, or other City staff. The First Responder will determine whether the sewage spill originated from the City's collection system, a private business, or a residence. Once the source of the sewage spill is determined, containment and cleanup procedures are executed, and a *Sewer Spill Field Report* (see Attachment A) will be completed.

Public Source Sewage Spill

If it is determined that the source of the sewage spill is from the City's wastewater collection system, containment and cleanup procedures are executed to prevent the sewage spill from reaching adjacent private properties, local water bodies, and the storm drain system. Once the sewage spill is contained and cleaned, proper documentation utilizing the appropriate forms will be completed.

If it is determined that the sewage spill has reached a private residence or business, the sewage spill is reported to the City's Risk Management personnel prior to Wastewater Maintenance personnel leaving the site. A *Damage Report to Private Property* (see Attachment D) is completed and forwarded with the *Sewer Spill Field Report* to the City's Risk Management. Photographs and/or video footage should be taken of the spill and the area impacted by the sewage spill. Photographs and/or video footage should be filed with the *Sewer Spill Field Report*.

Private Source Sewage Spill

If it is determined that the source of the sewage spill is from a private property, the First Responder and crew will use discretion in assisting the property owner/occupant as reasonably as they can. City staff are cautioned that the City and the Operations Division may be liable for further damages inflicted on private property during such assistance. If City staff enter private property, it should be with the explicit permission of the owner/occupant of the property. The City crew should not enter private property to assess damage. Staff is directed to take appropriate photographs and video footage, if possible, of the surrounding and impacted area to document the nature and extent of the impacts thoroughly. Photographs and/or video footage should be filed with the *Sewer Spill Field Report*.

2.8 Notification Requirements

A sewage spill's volume, impact, and location determine the notifications required to comply with City and regulatory requirements. Table 2 summarizes the officials and agencies who should be informed of a sewage spill as soon as practicable, without impeding containment or other emergency response measures. Attachment B lists the specific names and numbers of the individuals holding these positions. The City is not required to send reports to the SDRWQCB; this reporting is now achieved using the web-based online sewage spill reporting system, CIWQS, which is further described in Chapter 4.0 below.

2.9 Regulatory Agency Notification Plan

The Regulatory Agency Notification Plan establishes procedures that the City will follow to provide formal notice to the SDRWQCB, Environmental Protection Agency (EPA), Department of Environmental Health Division of San Diego County, and other City agencies as necessary in the event of a sewage spill. Written notification, when required, shall be made within five (5) business days.

Table 2
Sewage Spill Notification Requirements

Agency/Official	Reasons to Notify	When to Notify
La Mesa Police Department, Emergency Services	Public Safety concerns, such as assistance with traffic control	Immediately
Governor's Office of Emergency Services	Category 1 sewage spill conditions	Within 2 hours of notification of sewage spill
San Diego County Public Works	An sewage spill impacts the County's facilities	As soon as practicable
La Mesa Risk Management	sewage spill from City system enters private property or causes an sewage spill on private property	Prior to leaving sewage spill site
La Mesa Public Works Engineering Division	To begin a capital improvement solution to replace temporary repair	After sewage spill is stopped
La Mesa Wastewater Maintenance Supervisor	All sewage spills reported to Wastewater Supervisor	Immediately
La Mesa Director of Public Works	All major sewage spills reported to Director of Public Works.	As soon as determined necessary
La Mesa City Manager's Office	sewage spill in anticipation of media coverage or heightened scrutiny, or environmental impact.	As soon as determined necessary

Initial Notification

In the event of a significant spill (any sewage spill greater than 10,000 gallons per day), the City must notify Federal and State Agency representatives no later than 2 hours of becoming aware of the spill. Table 2-2 identifies who should be notified and when based on the type and volume of sewage spill. The initial and any updated spill reports will then be faxed or mailed to the various agencies as identified in the *Sewage Spill Notification List*, provided in Attachment B. The supervisor in charge will contact the regulatory agencies.

Secondary Notification

After the s*ewage spill notifications* (Table 2) have been made, the City will contact the other regulatory agencies using the *Sewage Spill Notification List* (Attachment B) as required and other impacted parties if there has been a spill.

2.10 Monitoring and Mitigation

The First Responder who confirmed the sewage spill must ensure that the provisions of this SERP and other directives are met. City staff shall assess the impacts following a sewage spill. Appropriate mitigation and monitoring measures shall be implemented following the assessment to monitor the site for potential future sewage spills and to prevent sewage spills from re-occurring. For sewage spills that reach surface waters, the City must conduct the following activities:

- Obtain water quality samples.
- Gather samples upstream and downstream of any location where the sewage spill reached surface water.
- Log the sample location, time, and water temperature on the chain of custody form.
- Create a map of the sample locations so that follow-up testing can be performed.

- Collect samples at the location where the sewage spill entered the water. When taking the sample, submerge the bottle below the surface of the water with the cap on. Once the bottle is under the surface, remove the cap and fill the bottle. Gloves should be worn while sampling to avoid infecting any open wounds.
- Analyze the sample for at least the following constituents:
    - Ammonia Nitrogen;
    - Biochemical Oxygen Demand (BOD);
    - Dissolved Oxygen (DO);
    - Total Fecal Coliform;
    - Total Suspended Solids (TSS); and
    - Additional sampling requirements as imposed by the SDRWQCB.

2.11 Sewage Spill Documentation

Documenting sewage spills and their 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; and
- Reference for historical performance or claims.

The First Responder shall ensure the sewage spill is properly investigated and documented. Information compiled during the investigation of the sewage spill shall be recorded on the *Sewage Spill Report* (Attachment A). Copies of supporting information shall be compiled. The minimum information required from the investigation is:

- Cause of sewage spill;
- Volume of sewage spill, including volume released and volume recovered;
- Location of point of discharge, including Thomas Guide map page;
- Ultimate destination of the sewage spill;
- Impact and extent of impact;
- Estimated start time of sewage spill;
- Time City received notification of sewage spill;
- Arrival time of crew(s) and time to correct the sewage spill;
- End time of sewage spill;
- Water body impacted and results of bacteriological monitoring, if applicable;
- Actions taken to mitigate the sewage spill; and
- Notifications to regulators and others.

There are various approaches to estimating sewage spill volumes. Attachment E guides estimating the volume of sewage that escaped from the wastewater collection system and the amount of sewage recovered.

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

3 Public Advisory of Sewage Contamination Procedures

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

The City is primarily responsible for determining when to post notices of polluted surface waters or ground surfaces resulting from uncontrolled wastewater discharges from its facilities. The County Department of Environmental Health Quality may also make a determination and direct the City 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.

Notices shall be posted as soon as practicable following the initial response to the spill. Signs should be posted on either side of the entry point 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 F.

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 Department of Environmental Health Quality.

Should additional notification of sewage contamination be deemed necessary, City staff shall, in cooperation with the City's public information 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.

4 Sewage Spill Monitoring and Reporting Requirements

City staff shall monitor and report sewage spills regardless of size and recovery originating from the City's wastewater collection system. The City must also report any known sewage spills on private property from private laterals. This chapter details the reporting procedures necessary to comply with SWRCB and City requirements.

4.1 Sewage Spill Identification, Tracking, and Logging

A work order must be created to track and monitor each sewage spill event. Using a completed *Sewage Spill Field Report* form (Attachment A), the Wastewater Maintenance Supervisor can create or update the work order and enter the necessary data. All forms, documentation, and monitoring results should be kept with the work order.

4.2 Sewage Spill Category Classification

Sewage spills are categorized into three types:

Category 1 Sewage Spills: All discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond).

Category 2 Sewage Spills: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire sewage spill discharged to the storm drain system is fully recovered and disposed properly.

Category 3 Sewage Spills: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

Private Lateral Sewage Discharge (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online Database.

Figure 2 is a flow chart that will guide City staff in determining the category classification of a sewage spill and the necessary reporting requirements.

4.3 Online Reporting Requirements

The WDRs require that the City report sewage spills using the California Integrated Water Quality System (CIWQS) Online Database per the current Order 2022-0103-DWQ and associated 2022 MRP.

Reporting Authority and Access

At a minimum, the City must have one (1) Legally Responsible Official (LRO) registered with the State of California to officially sign and certify sewage spill reports submitted via the CIWQS website. The City has identified at least one additional LRO as a backup.

The City also identified Data Submitters. These are individuals registered with the State to enter sewage spill data, create and edit sewage spill reports, and review data. Data Submitters cannot certify reports. The City can identify and register as many Data Submitters as deemed necessary.

Each Agency is assigned a unique Waste Discharge Identification Number (WDID). The City of La Mesa's number is WDID #9SSO10652. All LROs and Data Submitters receive a unique login and password. This information should be guarded and protected. If an authorized user suspects his or her login and password have been lost, stolen, or otherwise compromised, that person shall contact the SWRCB via the CIWQS help desk at 866-792-4977.

Mandatory Information to Report via CIWQS

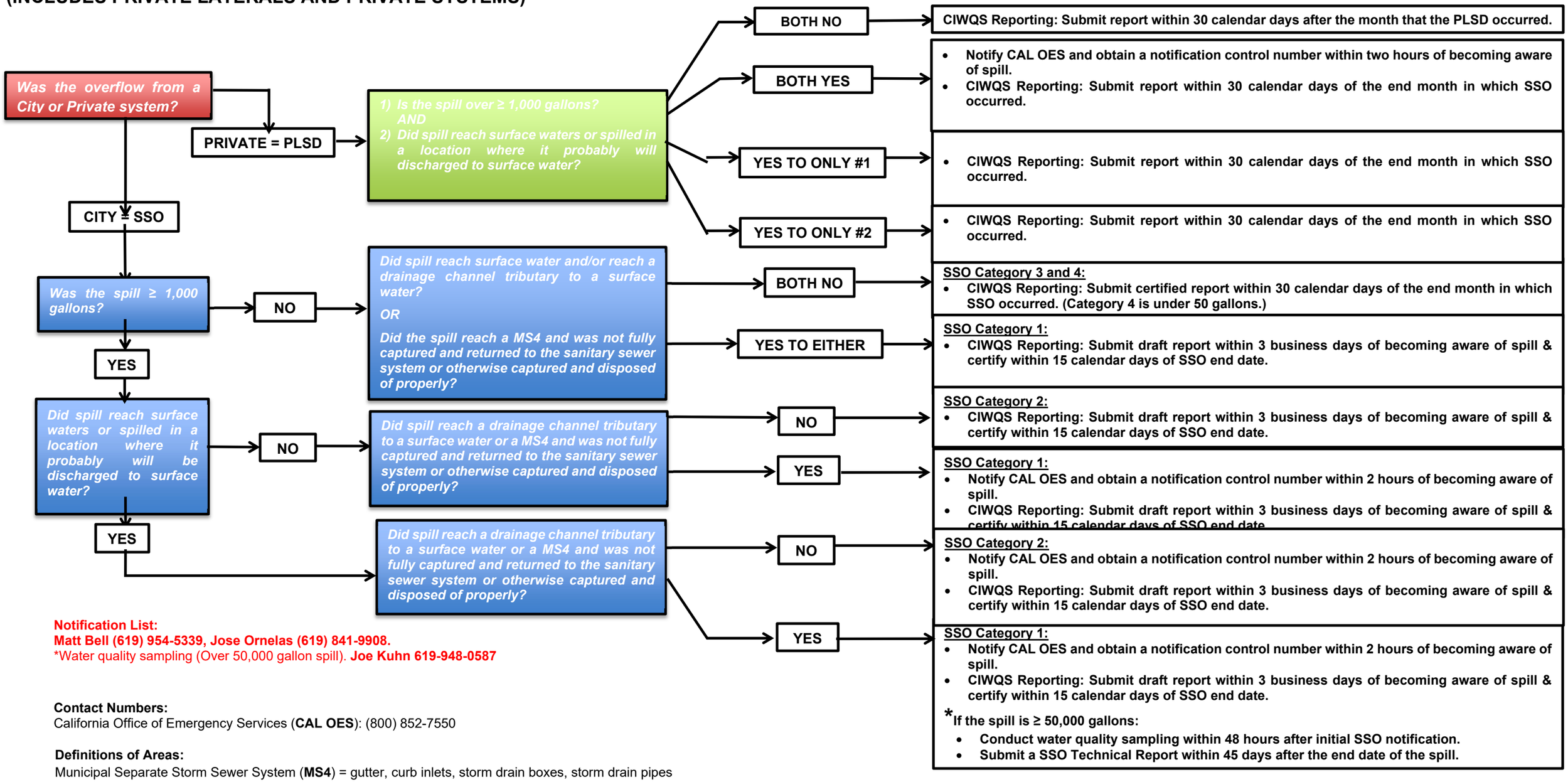
Before finalizing and certifying a sewage spill report, specific mandatory information must be included for each sewage spill report submitted via CIWQS.

The following information is required for all Category 2 sewage spills:

1. Location of sewage spill using Global Positioning System (GPS) coordinates;
2. Regional Water Board 9;
3. San Diego County;
4. Whether the sewage spill entered a drainage channel and/or surface water;
5. Whether the sewage spill was discharged into a storm drain pipe that was not fully captured and returned to the wastewater collection system;
6. Estimated sewage spill volume in gallons;
7. Sewage spill source (e.g., manhole, cleanout, pipeline, etc.);
8. Sewage spill cause (e.g., mainline blockage, roots, grease, etc.);
9. Time of sewage spill notification or discovery;
10. Estimated operator arrival time;
11. Sewage spill destination; and
12. Estimated sewage spill end time.

Figure 2: Sewer Spill Reporting Flow Chart

CITY OF LA MESA
(INCLUDES PRIVATE LATERALS AND PRIVATE SYSTEMS)



Notification List:
Matt Bell (619) 954-5339, Jose Ornelas (619) 841-9908.
*Water quality sampling (Over 50,000 gallon spill). **Joe Kuhn 619-948-0587**

Contact Numbers:
California Office of Emergency Services (**CAL OES**): (800) 852-7550

Definitions of Areas:
Municipal Separate Storm Sewer System (**MS4**) = gutter, curb inlets, storm drain boxes, storm drain pipes
Drainage Channel: Any open concrete or natural channel

The following information is required for all Category 1 sewage spills :

1. All information listed for Category 2 sewage spills ;
2. Estimated sewage spill volume that reached surface water, drainage channel, or not recovered from a storm drain;
3. Estimation methods used to calculate spill volume;
4. Estimated sewage spill volume recovered;
5. Response and corrective action taken;
6. If bacteriological samples were taken, identify which regulatory agencies received sample results; if no samples were taken, then N/A must be selected;
7. The parameters that samples were analyzed for (if applicable);
8. Whether health warning signs were posted;
9. Beach(es) impacted, if none then N/A must be selected;
10. Whether there is an ongoing investigation;
11. Steps taken or planned to reduce, eliminate, and prevent recurrence of the sewage spill and a schedule of major milestones for those steps;
12. OES control number (if applicable);
13. Date OES was initially called (if applicable);
14. Time OES was initially called (if applicable);

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

1. All information listed for Category 2 sewage spills;
2. Identification of sewage discharge as a private lateral sewage discharge; and
3. Responsible party contact information, if known.

The CIWQS reporting requirements are not in lieu of other reporting requirements. The City must also perform Regional Board reporting requirements, the Governor's Office of Emergency Services reporting, and notifications to the County Department of Environmental Health Quality.

Once the data is properly entered into the CIWQS database and the sewage spill investigation is complete, the LRO must certify the sewage spill report based on Table 3.

Monthly Reporting Requirement If No Sewage Spills

For each month in which no sewage spills are identified and reported via CIWQS, the City's LRO must prepare and submit a statement in CIWQS certifying that there were no sewage spills for the designated month. This report must be submitted within 30 days after the end of each calendar month with no sewage spills, as noted in Table 3.

Table 3
CIWQS Reporting Time Requirements

Sewage Spill Type	Initial CIWQS Report	Certification Requirements
Category 1 Sewage Spill	Within 3 business days	Within 15 days of the conclusion of the sewage spill response and remediation
Category 2 sewage spill	Within 3 business days	Within 3 days of becoming aware of the sewage spill and certify within 15 calendar days of the sewage spill.
Category 3 Sewage Spill	Within 30 calendar days	Within 30 calendar days of the end of the month.
Private Lateral Sewage Spill	Prior to Certification	Within 30 days after the end of the month in which the sewage spill occurred
Sewage Spill Technical Report	With 45 calendar days	Submit within 45 calendar days after the end date or any Category 1 sewage spill of 50,000 gallons or greater.
Collection System Questionnaire	N/A	Update and Certify every 12 months
No Monthly Sewage Spills	N/A	Within 30 days after the end of the month in which no sewage spills occurred

Alternative Reporting Procedures When Online Reporting Is Unavailable
If CIWQS is not available to submit required reports or certify reports, the City must fax all required information to the SDRWQCB office in accordance with the time schedules identified in Table 3. The City must also enter all required information into CIWQS as soon as practicable.

Water Quality Monitoring
Conduct water quality sampling within 48 hours after any initial sewage spill notification for Category 1 sewage spills in which 50,000 gallons or greater are spilled to surface waters.

4.4 Record Keeping and Document Retention

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

Specific records that must be retained include, but are not limited to:

- Sewage Spill Event Records
- Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.
- Records to document Water Quality Monitoring for sewage spills of 50,000 gallons or greater spilled to surface waters.
- Collection system telemetry records, if relied upon to document and/or estimate sewage spill volume.

4.5 Water Quality Monitoring Plan for Major Spills

In accordance with the Monitoring and Reporting Program (MRP) for Order 2022-0103-DWQ, the City shall implement water quality monitoring for all Category 1 Sanitary Sewer Overflows (SSOs) of 50,000 gallons or greater that reach surface waters. The purpose of the monitoring is to assess the extent and impact of the spill on receiving waters and to support any required public health notifications and environmental assessments.

The following requirements apply:

Timing of Sampling:
Water quality sampling must begin as soon as feasible, but no later than 48 hours after the City becomes aware of the SSO.

Minimum Required Analytes:
At a minimum, the City must analyze these parameters at each sampling location:

- Ammonia
- Total Coliform
- Fecal Coliform
- Enterococcus

Additional sampling parameters may be required by the SDRWQCB based on site-specific conditions.

Sampling Locations:
The City shall collect samples at the following locations, at a minimum:

1. Upstream of the point of entry to surface water (to establish background conditions)
2. Downstream of the point of entry (to assess impact)
3. At the point where the sewage spill entered the surface water

Documentation and Reporting:
Water quality sampling results must be documented and included in the Sewage Spill Technical Report required for all Category 1 SSOs of 50,000 gallons or more, as described in Section 4.3. The Sewage Spill Technical Report must be submitted to CIWQS within 45 calendar days of the end date of the sewage spill.

Quality Assurance/Quality Control (QA/QC):
All sampling and laboratory analysis shall follow applicable QA/QC procedures as outlined in Attachment C of the MRP for Order 2022-0103-DWQ, including use of State-certified laboratories and proper chain-of-custody documentation.

5 Training

Appropriate staff will participate in regularly scheduled training sessions to help response crews understand their responsibilities and carry out their duties. These sessions will be organized based on the latest SERP and other reference materials. They will also include hands-on field demonstrations to prepare all response personnel for anticipated situations.

City staff should be provided with an overview of the Sewer System Management Plan (SSMP) and the SERP. This will instruct staff on the SSMP, sewage spills, and necessary documentation. Field demonstrations will be conducted to test equipment, response times, training effectiveness, resources, and staffing capabilities.

Training and event participation will be documented and maintained. The City of La Mesa has historically conducted quarterly wastewater training. All records of training attendees are kept in the City's wastewater files.

6 Updating this SERP

This SERP reflects the City's established procedures for responding to reports of possible and confirmed sewage 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, City Departments, and SDRWQCB and 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 always comply with it.

6.2 Review and Update of the SERP

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

Attachment A

Sanitary Sewer Overflow Field Report Form and Flow Chart

CITY OF LA MESA
JEWEL of the HILLS

PUBLIC WORKS DEPARTMENT

Certified by: _____ (Print Name) _____ (Signature) _____ (Date)

CIWQS Identifier: _____ SR/WO# _____ Reviewed By: _____ _____ (Date)

Other WOs# _____ _____ _____ _____ _____

WDID# _____ Certification Confirmation# _____

Red text indicates fields that MUST by completed by field personnel.

Blue text indicates reference information

This report is: ☐ **Preliminary** ☐ **Final** ☐ **Revised**

Has the Cartegraph Request/Task been updated with details of the incident and closed? Yes☐ No☐

Has CIWQS report been completed and certified within allotted time? Yes ☐ No ☐

If the answer to either of the above questions are "no", this SSO event may not be closed.

SSO Details

Estimated Overflow START: **Date:**_____ **Time:**_____**(AM/PM)**

Estimated ARRIVAL of Operator: **Date:**_____ **Time:**_____**(AM/PM)**

Estimated Overflow STOP: **Date:**_____ **Time:**_____**(AM/PM)**

Duration of Spill (in minutes) = _____ **Minutes**

Did SSO Reach?: ☐ **Storm Drain** ☐ **Drainage Channel** ☐ **Surface Water Body**

☐ **None of the Above (Did NOT reach water system)**

Total Volume of SSO: (1)_____**gal**

SSO Volume Recovered: (2) _____**gal**

SSO Volume Lost: (3) _____**gal**

Estimated Overflow Rate: (4) _____**gpm**

1. Multiply flow rate with the duration of spill in minutes
2. "Recovered" shall mean that no portion of the SSO has reached open water and has flowed downstream to the ocean/bay. Examples of SSO recovery could be diversion of flow away from storm drain system or open channel by any means such vacuuming, damming the SSO in or outside the storm drain system and flushing the flow into sewer system, diverting the flow into a planter or retention area; sun-drying of the flow and removing solid debris and in short any means to keep the SSO getting to the open waters.
3. This is the flow that reaches the open water directly or indirectly through the storm drain system. The goal is to keep this to zero.
4. Use the manhole overflow pictures to estimate the rate of flow.

SSO Cause: ☐Debris ☐Flow Exceeded Capacity ☐FOG ☐Rainfall ☐Roots ☐Structural Problem ☐Pump Station Failure ☐Vandalism ☐Other:_____

Private Lateral Spill: ☐Yes ☐No

If spill reached a storm drain, was all wastewater fully captured and returned to the sewer system?

☐Yes ☐No ☐ N/A (did NOT reach storm water system)

Reporting Details

Name & Title of Person Filling Out this Report:_____

Phone #_____ Date:_____ Time:_____(AM/PM)

Name of Person First Reporting SSO:_____

Phone #_____ **Date:**_____ **Time:**_____**(AM/PM)**

Location of Overflow

Street Address: _____**Nearest Cross Street:**_____

Latitude of SSO:_____Longitude of SSO:_____

City: _____ County: San Diego

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

Pipe ID's Affected: _____

SSO Appearance Point: ☐Building ☐Force Main ☐Manhole ☐Sewer ☐Pump Station ☐Other:_____

Where Did Failure Occur? ☐Upper Lateral ☐Main ☐ Lower Lateral (Right of Way) ☐Other:_____

Terrain at SSO Location: ☐Flat ☐Mixed ☐Steep

Diameter of Sewer:_____**in** **Material of Sewer:**_____ **Estimated Age:**_____**yrs**

SSO Destination Details

SSO Final Destination: ☐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:

San Diego River ☐ Chollas Creek ☐ Sweetwater River ☐

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 City Personnel:	**Time Arrived:**	**Time Departed:**

Equipment Used:_____

Other Responding Agency/Contractor:_____

SSO Clean-up Details

Materials Used for Containment:_____

Wastewater Disposal Method:_____

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 (*Check all who were notified.*)

If Spill is over 10,000 gallons and not recovered, you MUST legally notify CAL OES (800-852-7550) within **2 HOURS** of becoming aware of an SSO reaching drainage channels, and/or surface waters.

If Spill is greater than 1000 gallons and under 10,000 gallons and not recovered, CAL OES must still be notified as soon as possible, however there is no 2 hour legal requirement.

Once Cal OES is notified, they will notify other state and local agencies.

Critical Phone Numbers

Name/Agency	Phone #	Time	Date
☐ WW Maintenance Supervisor	619-433-7028		
☐ Director of Public Works	619-667-1388		
☐ Asst. Director of Public Works	619-841-9908		
☐ CAL OES	800-852-7550		
☐ Police Dept.-Emergency Services (If there is a public hazard)	619-667-1416		

Secondary Phone Numbers

☐ Risk Management	619-667-1178		
☐ City's Claims Adjustor	619-895-0246		
☐ La Mesa Fire Department	619-667-1355		
☐ Public Works	619-667-1450		
☐ WW Lead Worker	619-954-5539		
☐ Public Works Inspector- ENG	619-954-4309		
☐ Storm Water Program Manager	619-948-0587		
☐ WW Engineering Project Manager	619-667-1153		
☐ City Manager	619-667-1195		
☐ Other_____	_____		

Cal OES Control #_____

Public Use Closures

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

Location of Postings:_____

Were samples obtained of contaminated water? ☐Yes ☐No (Sampling required for spills over 50,000 gallons. Contact Storm Water Program Manager for Sampling)

SKETCH OF AREA: (Include manholes, intersections, location of blockage, etc. A marked-up copy of the sewer and storm drain map may be used to attach to the report.)

Completed by:_____ Date:_____

CITY OF LA MESA
SANITARY SEWER OVERFLOW REPORTING FLOW CHART
(INCLUDES PRIVATE LATERALS AND PRIVATE SYSTEMS)

Was the overflow from a City or Private system?

PRIVATE = PLSD

CITY = SSO

Was the spill ≥ 1,000 gallons?

NO

YES

Did spill reach surface waters or spilled in a location where it probably will be discharged to surface water?

NO

YES

1) **Is the spill over ≥ 1,000 gallons?**
   AND
2) **Did spill reach surface waters or spilled in a location where it probably will discharged to surface water?**

- **BOTH NO** → **CIWQS Reporting: Submit report within 30 calendar days after the month that the PLSD occurred.**
- **BOTH YES** →
  - **Notify CAL OES and obtain a notification control number within two hours of becoming aware of spill.**
  - **CIWQS Reporting: Submit report within 30 calendar days of the end month in which SSO occurred.**
- **YES TO ONLY #1** →
  - **CIWQS Reporting: Submit report within 30 calendar days of the end month in which SSO occurred.**
- **YES TO ONLY #2** →
  - **CIWQS Reporting: Submit report within 30 calendar days of the end month in which SSO occurred.**

Did spill reach surface water and/or reach a drainage channel tributary to a surface water?

OR

Did the spill reach a MS4 and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly?

- **BOTH NO** →
  SSO Category 3 and 4:
  - **CIWQS Reporting: Submit certified report within 30 calendar days of the end month in which SSO occurred. (Category 4 is under 50 gallons.)**
- **YES TO EITHER** →
  SSO Category 1:
  - **CIWQS Reporting: Submit draft report within 3 business days of becoming aware of spill & certify within 15 calendar days of SSO end date.**

Did spill reach a drainage channel tributary to a surface water or a MS4 and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly?

- **NO** →
  SSO Category 2:
  - **CIWQS Reporting: Submit draft report within 3 business days of becoming aware of spill & certify within 15 calendar days of SSO end date.**
- **YES** →
  SSO Category 1:
  - **Notify CAL OES and obtain a notification control number within 2 hours of becoming aware of spill.**
  - **CIWQS Reporting: Submit draft report within 3 business days of becoming aware of spill & certify within 15 calendar days of SSO end date.**

Did spill reach a drainage channel tributary to a surface water or a MS4 and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly?

- **NO** →
  SSO Category 2:
  - **Notify CAL OES and obtain a notification control number within 2 hours of becoming aware of spill.**
  - **CIWQS Reporting: Submit draft report within 3 business days of becoming aware of spill & certify within 15 calendar days of SSO end date.**
- **YES** →
  SSO Category 1:
  - **Notify CAL OES and obtain a notification control number within 2 hours of becoming aware of spill.**
  - **CIWQS Reporting: Submit draft report within 3 business days of becoming aware of spill & certify within 15 calendar days of SSO end date.**

*__If the spill is ≥ 50,000 gallons:__
- **Conduct water quality sampling within 48 hours after initial SSO notification.**
- **Submit a SSO Technical Report within 45 days after the end date of the spill.**

Notification List:
Matt Bell (619) 954-5339, Jose Ornelas (619) 841-9908.
*Water quality sampling (Over 50,000 gallon spill). **Joe Kuhn 619-948-0587**

Contact Numbers:
California Office of Emergency Services (**CAL OES**): (800) 852-7550

Definitions of Areas:
Municipal Separate Storm Sewer System (**MS4**) = gutter, curb inlets, storm drain boxes, storm drain pipes
Drainage Channel: Any open concrete or natural channel

Attachment B

Sewage Spill On-Call Response Personnel and Notification List

City of La Mesa
Sanitary Sewer Overflow
On Call Personnel List

City Staff	Contact Name	Office Telephone Number	Mobile Number
Wastewater Maintenance Supervisor	Matt Bell		619-954-5339
Wastewater Lead Worker	Jason Mount		619-729-5466
City of La Mesa Risk Management Office	Beatriz Cruz-Rivera	619-667-1178	-
Asst. Dir. Public Works	Jose Ornelas		619-841-9908

City of La Mesa
Sanitary Sewer Overflow Notification List

Contact List	Contact Name	Telephone Number
Office of Emergency Services Warning Center (CAL OES)	-	800-852-7550
San Diego County Department of Public Works	-	858-514-4990
City of La Mesa Risk Management Office	Beatriz Cruz-Rivera	619-667-1178
La Mesa Police Department – Watch Commander	-	619-667-1416
La Mesa Police Department - Dispatch during Non-Business Hours	-	619-667-1400
La Mesa Fire Department	-	619-667-1355
City of La Mesa Engineering	Joe Kuhn	619-667-1340 619-948-0587
Director of Public Works	Michael Throne	619-667-1388
City Manager	Greg Humora	619-667-1146
Caltrans District 11- Main Number	-	619-688-6699
California Highway Patrol (CHP) – Non Emergency	-	800-835-5247

Attachment C

Approved Contractors and Equipment Rental

Approved Contractors and Equipment Rental Vendors

Contractors:

Contractor Name	Address	Telephone No.	Contact Name	Services Provided
Patriot Environmental Services	3464 Pickett St. San Diego, CA 92110	619.449.9014		Any major Haz Mat or other major clean up operation of which we are not equipped to handle.
MJC Construction	3015 Sylvia St Bonita CA	619.472.5619	Javier	Major Pipe Repair/Replacement
MacIntosh Co Inc		619-249-4129	Sam	Major Pipe Repair/Replacement

Equipment Vendors:

Vendor Name	Address	Telephone No.	Contact Name	Available Equipment
White Cap	430 Raleigh Ave El Cajon	619-590-2001		Pipes and Associated
Furguson	1149 N Marshall Ave El Cajon	619-596-5600		Pipes and Associated

Attachment D

Damage Report 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 City, its employees, elected officials, contract staff, and volunteers do not admit liability or culpability for the damage being documented.

INSTRUCTIONS: City 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: _____ Task Order #: _____

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 E

Possible Methods for Estimating Spill Volume

Possible Methods for Estimating Spill Volume

A variety of approaches exist for the estimation of the volume of a sanitary sewer overflow. This attachment documents three 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 in Figure G-1, 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, 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.

PRODUCED BY THE CITY OF SAN DIEGO WASTEWATER COLLECTION SYSTEM DIVISION

PROVIDED BY: CWEA SOUTHERN SECTIONS COLLECTION SYSTEM COMMITTEE

CWEA
SOUTHERN SECTIONS COLLECTION SYSTEMS COMMITTEE
NICK ARHONTES 714-962-2411 EX 3011
DENIS POLLAK 760-753-0155 EX 3010
HENRY DOVE 818-814-8455

Attachment F

Warning Sign Samples

WARNING

RAW

SEWAGE

CITY OF LA MESA

(619) 667-1450

Appendix C – Design Standards and Construction Specifications

SEWER LATERAL POLICY

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION
8130 Allison Avenue, La Mesa, CA 91942

REVISION DATE: June 21, 2016

SUBJECT: Policy for the Design, Construction, Permitting and Maintenance of Sewer Laterals

PURPOSE:

The purpose of the sewer lateral policy is to:

- Provide guidelines for the design, construction, permit requirements, and maintenance of sanitary sewer laterals.
- Protect public health, safety, and the environment by reducing number and severity of sewer backups and overflows.
- Minimize inconveniences to residents and businesses.
- Reduce cost of services to customers.
- Improve sewer system performance.
- Reduce inflow and infiltration of storm water into the wastewater collection system.
- Comply with the Federal Clean Water Act.
- Comply with Requirements of Region 9 Water Quality Control Board .

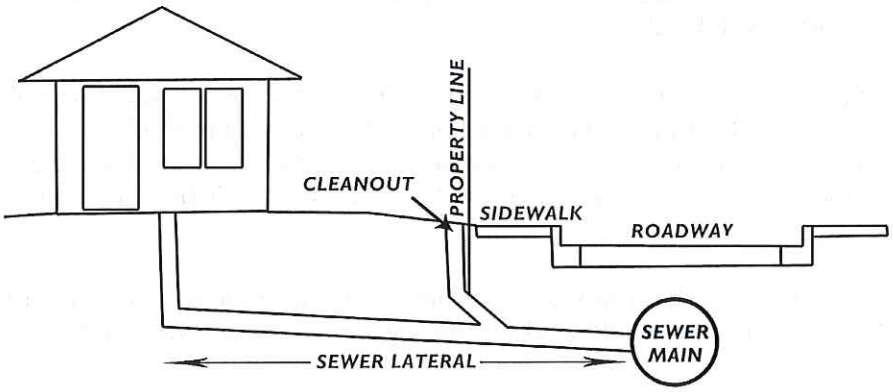
SCOPE:
This policy shall apply to all sewer laterals to the maximum extent practicable.

DEFINITIONS:

- Building Sewer: All plumbing and fixtures located within private property. Building sewers and portions of sewer laterals within private property are under the City's building division purview and shall comply with the building division's requirement including but not limited to the building and plumbing codes. Contact the buidling division for permitting and inspection requirements.
- Sewer Lateral: The segment of pipe, appurtenances and fixtures that connect the building sewer to the City sewer main. The portion of the pipe within the public right-of-way or an easement shall be subject to the engineering division's review, permitting and inspection and shall comply with the policies and requirements set forth herein.

Chronic Sewer Lateral Problem: Sewer laterals with chronic problem are those that have:

a) at least three blockages on record over two year period
b) major structural issues (pipe defects, collapse or break)
c) major root intrusion



A. Design and Construction Criteria

1. *Size and Number of Sewer Laterals*: Minimum size of a sewer lateral shall be 4 inches for single family and duplexes and 6 inches for multi-family, commercial, and industrial properties. Every building with plumbing fixtures shall be separately and independently connected to the public sewer, except where one building stands in the rear of another; and when two or more buildings on the same property are under one ownership and the property is not subdividable. The property may then be served by a single adequately sized connection to the public sewer. The address of each property must be indicated on the plans.

   Developers of subdivisions, multi-family dwellings, commercial and industrial properties shall submit a sewer impact report for the City's approval. The sewer impact report shall include the following:

   - Estimate of sewer generation from the new development
   - Sewer capacity analysis of the existing pipe within the study area
   - Sewer capacity impact of the additional flow from the new development on the pipe within the study area
   - Sizing of new pipe for the required new capacity within the study area

   The limits of the study area shall be determined by the City Engineer.

2. *Sewer Lateral Pipe Type*: The pipe shall be PVC, SDR 35 (Green).

3. *Sewer Service Availability:* If a property does not have an existing sewer service and there is no sewer main within the immediate vicinity of the property to serve the property, the sewer main must be extended past the prolongation of the property sideline by at least 10 feet. The sewer main must end with a clean out or a manhole at the direction of the City Engineer. Sewer laterals must run perpendicular to the proposed main. Four-inch laterals should not be connected to a clean out or manhole at the main line.

4. *Wet Tap Connection:* Connection to the main shall be with rigid PVC saddle, stainless steel clamps, and concrete cradle up to spring line. The vertical angle from the horizontal centerline of the pipe cross section to the center line axis of the saddle/lateral pipe shall not exceed 45 degrees. The main line must be inspected before and after coring. After coring the main and locking installation of the saddle, the connection point must be inspected by the City prior to connecting the lateral and backfilling the trench.

5. *Sewer Lateral Cleanout:* A PVC or ABS "Wye" type sewer cleanout (toward the sewer main) shall be installed at the final vertical bend, preferably 2 feet offset into the property line. The cleanout shall be installed per Regional Standard Drawings (RSD). It is recommended that double "Wye" (two "Wye") type cleanouts be installed in order to facilitate cleaning the building and sewer main sides of the lateral.

6. *Minimum Depth:* A sewer lateral in the street that is less than 3 feet deep (from flow line) must be capped with concrete per RSD SP-03.

7. *Marking the Curb:* where the sewer lateral crosses the curbline, the applicant shall stamp or etch the letter "S" for sewer on the face of the curb.

8. *Root Control (Optional):* Root barrier may be wrapped around pipe joints, and strapped to the pipe to prevent root intrusion into the lateral.

9. *Existing Improvements:* Prior to removal, existing improvements shall be saw cut. Sidewalk shall be replaced from joint to joint. Curb and gutter removal shall be a minimum of seven and one half (7½) feet and joined to existing curb and gutter through dowels; however; the remaining portion of the curb to the nearest joint shall not be less than five (5) feet. Cross-gutter shall be replaced from joint to joint and doweled to existing improvements.

10. *Metallic Identification Tape:* A 6-inch metallic identification tape labeled "Sewer" shall be installed above the sewer lateral between the subgrade and the structural section of the surface improvements from the property line to the main.

11. *Backwater Valve Assembly*: A backwater valve shall be installed when the lowest building plumbing fixture's trap outlet is less than two feet (2 ft) above the rim of the nearest upstream manhole from the point of connection of the sewer lateral to the public sewer. It is highly recommended that the backwater valve should be installed at the point of lowest elevation of the ground surface of the building site outside of the building or such other location as is permitted by the City, providing that at any such location, the elevation of the ground surface is not less than two (2 ft) below the lowest trap outlet served by the building sewer. Renovation projects that do not include re-plumbing work, are required to install backwater valve assembly on their building sewers. Backwater valves shall be installed per City's standard drawings.

12. *Fats, Oils and Grease:* Development or renovation projects containing food establishments shall comply with the City's Fats, Oil and Grease (FOG) Ordinances and program. These establishments shall install grease interceptors as per requirements of the plumbing code and building division.

13. *Interceptors*: Interceptors shall be used to filter out of wastewater non-cooking oils, flammable waste, sand, plaster, lint, hair, and ground glass. Non-cooking oil, flammable waste, sand, plaster, lint, hair, and ground glass interceptors shall be provided when, in the opinion of the City Engineer, they are necessary for proper handling of liquid wastes containing unacceptable solid or liquid waste in excessive amounts. Interceptors are required in commercial buildings, primarily, to accumulate and recover objectionable substances from wastewater.

    Each interceptor must be located to provide easy access for maintenance and for removing the accumulated matter. Interceptors must be maintained in efficient operating condition by periodically removing the accumulated waste. Detailed drawings must be submitted to the City for approval. When interceptors are required, waste not requiring separation must not be discharged through an interceptor.

    Gasoline, Oil, and Sand Interceptor: Interceptors must be provided to prevent the introduction of gasoline, grease, oil or sand into the sewer system as follows:

    - Any place where motor vehicles are repaired and floor drainage is provided.
    - Any place where motor vehicles are washed.
    - Public storage garages where floor drainage is provided.
    - Any place where oil, gasoline or other volatile liquids can be discharged into the sewer system.
    - Plants where parts are washed to remove oil or greasy substances.

    Meat Processing Interceptors: Where an establishment slaughters, prepares or processes meat, the waste from the floors must pass through a specially designed floor drain before entering the grease interceptor.

    Laundry Interceptors: Lint interceptors must be installed on the sewer pipes from commercial laundries or multi-family laundries. The lint interceptor should have a removable ½ inch mesh screen metal basket or a similar device to collect solids such as lint, string, and buttons.

    Other Trap Requirements: Bottling plants are required to discharge their process wastes through an interceptor that is designed to separate broken glass and other solids from liquid waste. Establishments that generate hair in large quantities are required to use interceptors similar to those used in commercial laundries or swimming pools. Animal hospitals and dog grooming establishments are required to install hair strainers (interceptors) on sewer lines from bathtubs or other receptacles where animals are bathed. Dental and Orthopedic sinks where plaster, wax or other objectionable substances will be discharged into the sewer system, require the installation of an interceptor trap in the sewer line.

    Dilution or Neutralizing Tanks: Corrosive liquids such as, chemicals, acids, or strong alkalis, must pass through an approved dilution or neutralizing tank before discharging into the regular sanitary system.

    Industrial Waste Permit: Industrial Waste Permit may be required from the City of La Mesa for certain sewer discharges that are regulated through the EPA. To obtain the permit, the applicant shall place an application with the City of San Diego Industrial Waste Division.

14. *Sump Pump:* For properties lower than the sewer main, sump pumps shall be installed in accordance with the Uniform Plumbing Code. A private manhole within the private property shall be installed at the end of the pressure line in accordance with the Regional Standard Drawing or approved equal. To minimize turbulence, it is necessary to align the crown of the force main outlet with the crown of the sewer lateral at the receiving manhole. The invert of the manhole should be sloped smoothly between force main and sewer lateral inverts.

B. Encroachment Permit

1. *Encroachment Permit Requirements*: An encroachment permit from the City will be required for any work within the public right-of-way or a City easement. The following information shall be provided:

   a. Plot plan showing existing street/easement improvements and right-of-way, property/easement lines, sewer mains and proposed lateral location with elevation at the main and property line, and a cleanout behind the property or easement line. Plot plans shall include pad elevation and upstream manhole elevation for backwater valve needs. Elevation can be referenced from the top of the manhole.
   b. Traffic control plans in accordance with Appendix A of the Regional Standard Drawings.
   c. Storm Water Pollution Prevention Plan.
   d. Name, address and telephone number of the owner and contractor. The contractor shall also provide a 24-hour contact number.
   e. Grease interceptor size, location, and maintenance and cleaning frequency for food service establishment projects in accordance with the Uniform Plumbing Code and the City's FOG ordinance, (If required).
   f. Lint interceptor device for certain types of industries in accordance with the Plumbing Code, (If required).
   g. Trench shoring and dewatering plans. Trenches deeper than 5 feet require a CALOSHA permit.
   h. Underground conflict verification including Underground Alert notification 1-800 Dig Alert.
   i. Contractor shall have a class "A" license or class "C-42" license and a City business license.
   j. Liability insurance ($1,000,000 minimum) and endorsement certificate naming the City as additionally insured.
   k. Performance bond or deposit in the amount of $2,500 (minimum) or 100% of construction cost whichever is higher.
   l. Payment of fees.

2. *Fees and Licenses:* Work will be subject to the following fees in accordance with the current City of La Mesa's Fee Schedule (where applicable):

   - Encroachment Permit Fee
   - Inspection Fee
   - Traffic Control Plan Check Fee
   - New Sewer Connection Fees (includes properties with previously abandoned laterals as per Section D.1)
   - Field investigation costs (includes CCTV of sewer and/or storm drain, dye testing smoke testing etc.
   - Sewer Service Agreement without Annexation
   - FOG Permit

3. *Pre-Construction:* Contractor must call the Public Works Inspector at 619-667-1166 to set up a pre-construction meeting 48-hours prior to the start of the work. the applicant shall note that any item of work that has not been inspected and approved by the City inspector is subject to removal at applicant's expense.

4. *Permit Release and Deposit Refund:* Deposit will be released after the following items are completed:

   a. Project is inspected at each stage of construction by the City Public Works Inspector.
   b. Final inspection is performed by the City Public Works Inspector.
   c. Permit is "Signed Off" by the City Public Works Inspector.

d. A verified record plot plan showing location of the sewer lateral in relation to the centerline of downstream manhole is submitted.

C. Sewer Lateral Maintenance

1. *Maintenance Responsibility:* The property owner is responsible for maintaining, cleaning and servicing the sewer lateral from the house or building to the connection at the public sewer in the street or easement. This includes the portion of the lateral on private property and the portion in the right-of-way or easement.

2. *Sewer Lateral Failure or Stoppage:* Whenever failure or blockage of a sewer lateral occurs, City crews will respond only to check the City's sewer main to verify that it is open and flowing. If the sewer main is found to be clear, it is the responsibility of the property owner to call a licensed plumbing contractor to correct the problem.

   If the following has been performed:

   a. Property owner obtained the services of a licensed plumber and the licensed plumber certifies in writing that they cannot clear the stoppage using proper tools, and;
   b. The stoppage has occurred between a property line cleanout and the public sewer main, and;
   c. The property has a "Wye" type property line cleanout and the property owner has located and uncovered the property line cleanout, or a qualified plumber has installed a new "Wye" type property line cleanout.

   And the blockage has still not been cleared,

   Then, the City may provide additional assistance to investigate if resources are available to clear blockage in the lateral. If it is found that the obstruction is in the private lateral, then the City may seek reimbursement of incurred costs.

   The City may issue a notice of correction to the property owners with chronic sewer lateral problems. In such cases the property owners are required to submit an action plan to the City Engineer. Failure to comply to the notice may result in further action against the property owner including but not limited to administrative citation by the City.

3. *Root Intrusion:* Root intrusion into a private sewer lateral is typically a symptom of a defect in the sewer lateral. If the roots entered at a joint or connection of a sewer lateral, the property owner is responsible to repair or correct the situation.

   If it is determined that a root from a City tree has broken or crushed the sewer lateral, the City will repair the broken/crushed section of the pipe.

   Root intrusion into sewer laterals shall not be grounds for removal of a tree in the public right-of-way. The property owner is responsible for regular cleaning or root treating or replacing the lateral.

4. *Root Intrusion from Lateral into Main Line:* Public Works crews are responsible to notify property owners in writing when they find roots from a sewer lateral protruding into the sewer main line. The property owner is then responsible to remedy the sitation.

5. *Sewer Lateral Overflow*: Where sewage from a private sewer lateral overflows into the street, the property owner is responsible for immediate cleaning of the spill within the street. In instances where the sewage could reach or enter a storm drain structure or when the property owner has not mobilized to clean the street, the City's Public Works maintenance crew will attempt to prevent storm water pollution and protect public health. If required, the maintenance crew will call on private contractors to secure, mitigate, clear the blockage, and clean and sanitize the area. The cost of abatement and administration may be billed to the property owner.

   A sewer overflow is a violation of Sections 5411 and 5412 of the State Health and Safety Code and Section 405 of the Clean Water Act if the overflow reaches surface or state waters. The responsible party

may be required to reimburse the City, its contractors, and the County Department of Environmental Health all costs incurred to mitigate the threat of contamination and to protect the health and safety of the public. Furthermore, any violation of Section 405 of the Clean Water Act may be subject to a civil penalty, not to exceed, $25,000 per day for each violation and is subject to criminal penalties of $2,500 to $25,000 per day of the violation.

D. Miscellaneous

1. *Abandonment of Sewer Lateral*

When demolishing a structure or when a sewer lateral is realigned to a new connection point to the public sewer main, the existing sewer lateral shall be abandoned by cutting, plugging, sealing at the sewer main and repair the public sewer pipe. A permit shall be obtained to abandon the lateral.

If a demolished property remains vacant for more than two years from the date of completion of demolition or redevelopment plan approval whichever is longer, the property is subject to connection fees and no credit to the connection fees shall be allowed for the abandoned connection.

2. *Sewer Services to Unincorporated Areas*

Sewer services to unincorporated areas must be in accordance with the Department of Public Works' "Policy and Procedure for La Mesa City Sanitary Sewer Service to Properties in the Unincorporated Areas."

APPROVAL: 

Gregory Humora
Director of Public Works/City Engineer

REFERENCES:

1. City Council Minutes April 11, 1978 and March 9, 1982
2. City Engineer's Memo August 25, 1977
3. San Diego Regional Standard Drawings – latest adopted edition
4. Public Works Standard Specifications and San Diego Supplement – latest adopted edition
5. City of La Mesa Standard Drawings - latest edition
6. Uniform Plumbing Code, Section 710.1 Sump, Interceptors
7. Chapters 7.08 and 17.18 of the City of the La Mesa Municipal Code
8. Sections 17.20.434 and 17.20.435 of the City of La Mesa Municipal Code
9. The City of La Mesa Tree Policy Manual

CITY OF LA MESA
JEWEL of the HILLS

DEVELOPMENT CONDITIONS
SEWER GENERATION AND CONDITION REPORTS

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION
8130 Allison Avenue, La Mesa, CA 91942

REVISION DATE: April 12, 2023

SUBJECT: Policy for Sewer Generation and Condition Reports for Private Development

PURPOSE: Provide Uniform Guidelines for Developers of Sewer Generation and Condition Reports

POLICY:

Sewer Generation Analysis

When a private development is proposed that may increase the sewer discharge load, a sewer generation analysis is required. This requirement may be waived provided if sufficient justification is provided and accepted by the City Engineer.

1. The analysis shall be according to the City of La Mesa's Sewer Generation Analysis of Sewer Master Plan.

2. The peaking value shall be derived form the graph in the City of La Mesa's Sewer Generation Analysis.

3. If the sewer flow is increased by one or more of the following development conditions:
    a. All types of new developments
    b. Minimum increase of 5 Equivalent Dwelling Units
    c. Increased occupancy load
    d. Increased developed commercial area

4. The extent of the study shall be as per the City Engineer and at minimum will include all lines downstream of the connection point up to the next sewer main junction.

Sewer Condition Assessment

The extent of sewer condition assessment shall at minimum be same as to the extent of coverage of sewer generation at the discretion of the City Engineer.

The assessment will generally include a closed-circuit television (CCTV) inspection of the sewer pipe and visual inspections of the manholes according to the attached the City's standards.

APPROVAL: _____

Michael Throne, PE
Director of Public Works/City Engineer

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CITY OF LA MESA
JEWEL of the HILLS

DEVELOPMENT CONDITIONS
SEWER GENERATION AND CONDITION REPORTS

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION
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APPROVAL: _____

Michael Throne, PE
Director of Public Works/City Engineer

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CCTV DELIVERABLE POLICY

PUBLIC WORKS DEPARTMENT / ENGINEERING DIVISION
8130 Allison Avenue, La Mesa, CA 91941
Phone: (619) 667-1166 • Fax: (619) 667-1380

Standards for Delivery of CCTV files for Sewer and Storm Drain Data:

The City of La Mesa is currently using the following software programs to maintain & access its Sewer and Storm Drain information:

- ESRI's ArcGIS v.10.3 (GIS layers)
- CarteGraph OMS v.8.0 (Work Orders and Reporting)
- GraniteNET (Video capture and inspections)

It is preferred that any deliverables be in the same format as the above-mentioned programs for efficient data exchange. The sections below describe in detail the process for receiving and delivering data related to CCTV activities. Database samples, templates, and maps can be provided upon request. A sample of the data deliverable should be submitted for final approval.

GIS Layers:

Upon working with and delivering any type of GIS layers to the City, ensure that the unique feature ID is included as part of the attribute table (see feature types and ID field names below).

Dataset	Feature class	ID Field
Sewer Collection:		
	Gravity Main	Pipe ID
	Manhole	Facility ID
Stormwater Collection:		
	Gravity Main	Pilot ID
	Inlet/Outlet	Pilot ID
	Clean Out	Pilot ID
	Cross Gutter	Pilot ID

Databases:

With any CCTV deliverable, a database should be submitted listing the PipeID and relationships to other pertinent information (photos, videos, inspections, observations, etc.). **If using GraniteNET, exported database must be version 3.6.5 or above. If not using Cues products, export database using NASSCO formatting.**

Videos & Photos:

Any video or photo captured should be associated to an existing GIS feature by unique ID. **Video files must be delivered in .mp4 format. File naming convention should inlclue the unique feature ID or node-node.**

Videos: .mp4
Photos: .jpg
Inspection Report: .pdf

Videoing Process

The CCTV shall be done using a proper sewer camera with a rotating head and distance measuring gauge, capable of annotating on the video. Unless the CCTV is of a sewer lateral, no CCTV footage using push camera is allowed.

The video shall have at the beginning of the clip date, the pipe ID, length, D/S MH ID, U/S MH ID, length, the pipe material and the name of the street.

During the CCTV, the video clip shall continue to have pipe ID throughout the footage. The video footage shall be MH to MH and in case of multiple runs, the video clips shall be truncated to each segment.

While videoing coming across defects in the pipe, the camera will be stopped and the operator shall record/annotate the nature and extent of the defect according to NASSCO standards while panning and zooming to the defect.

If a sewer lateral connection is encountered, the camera shall be panned to the lateral and record the connection condition. Details of the connection shall be annotated.

Deliverables:

Electronic files of the CCTV footage complying to these conditions shall be submitted to the City Engineer or his/her designee.

PDF summary report to the CCTV shall be created and submitted to the City. A sample of a summary report is attached.

For City Use Only:

Upon receiving a CCTV deliverable, please submit to the GIS Technician on staff for further processing.

APPROVAL: _____

Michael Throne, PE
Director of Public Works/City Engineer

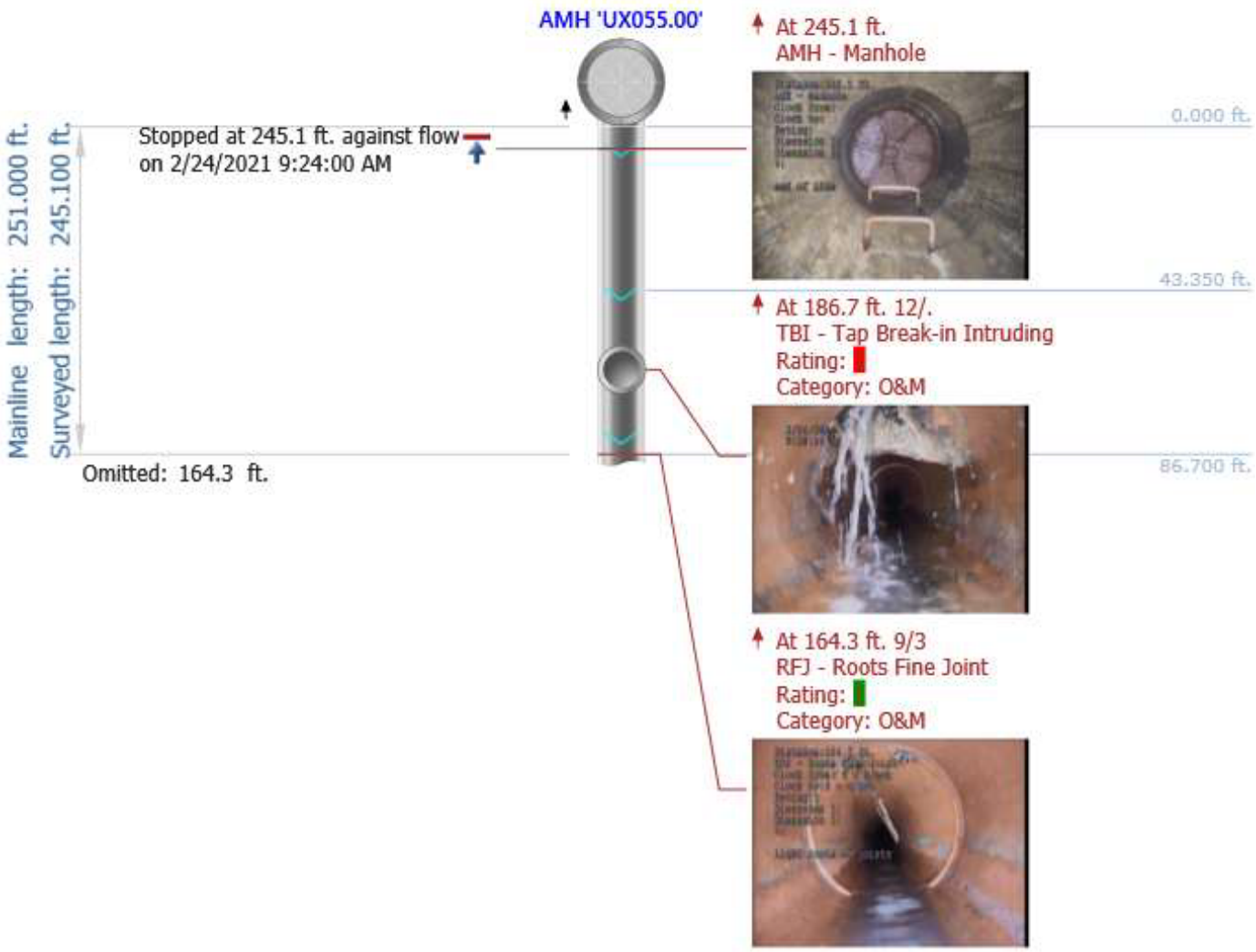
GraniteNet
ASSET INSPECTION / DECISION SUPPORT SOFTWARE

SAMP

CUES, Inc.
3600 Rio Vista Avenue
Orlando, FL 32805
Phone: 407-849-0190
Fax: 407-425-1569

Main Inspections Pipe Run with Images

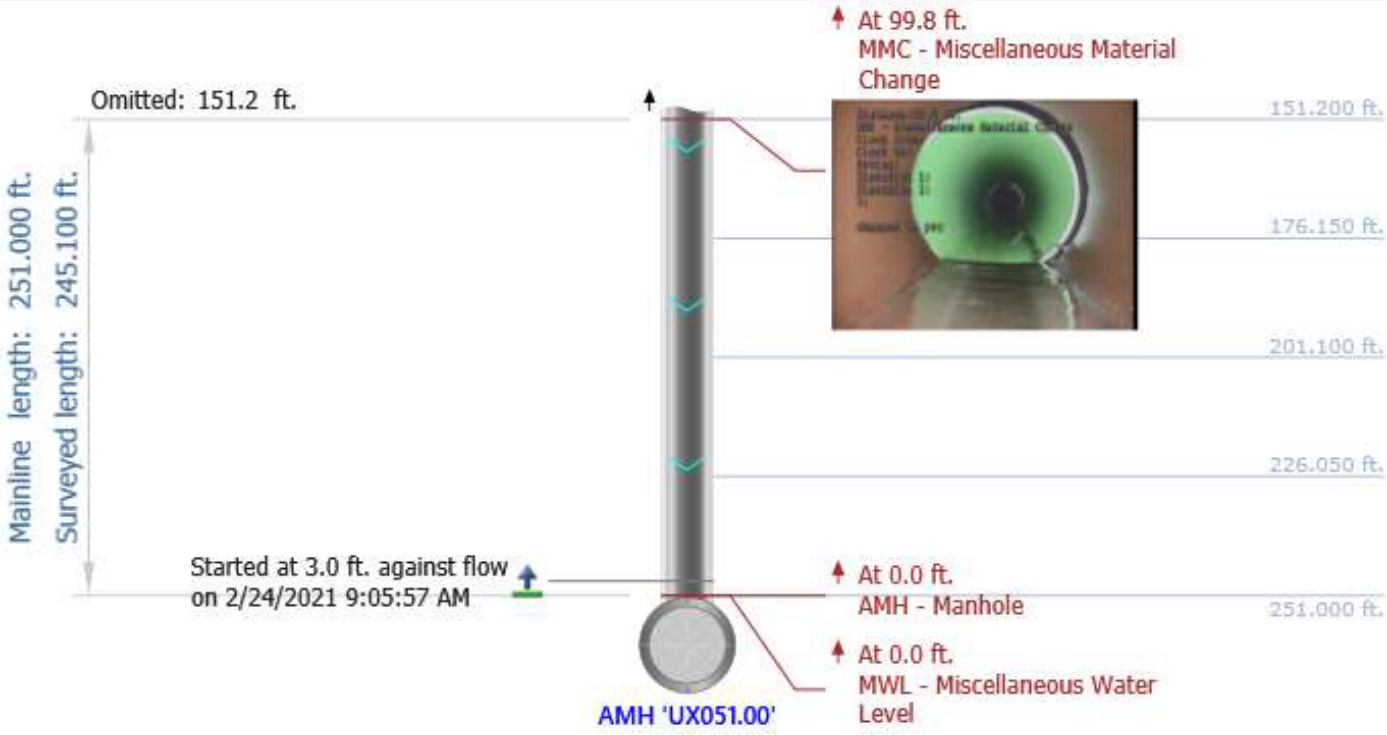
Project name:	Mainline ID:	City:	Street:
Phase 6	**PUX055.00**	**City**	**Pearson St**
Start date/time:	Direction:	Weather:	Location code:
2/24/2021 9:05 AM	**U**	**1**	
Shape:	Material:	Height:	Width:
C	**VCP**	**6 in.**	



Project name:	Mainline ID:	Start date/time:	Direction:
Phase 6	**PUX055.00**	**2/24/2021 9:05 AM**	**U**

Weather:

1



Chapter 3
Wastewater Generation Analysis

This chapter describes the methodologies used to develop existing unit generation rates for wastewater flows from the City of La Mesa. Wastewater flows are then compared and calibrated to existing metered flows, to develop uniform generation rates used to establish existing flows by basin and project future wastewater flows. Future wastewater flows are then compared to the City's contracted capacity in the Metro system. This chapter presents future wastewater generation projections that can be used by the City to establish a basis for future Metro capacity needs.

3.1 Background

As described in Chapter 2, wastewater generated within the City of La Mesa is collected by City-owned facilities which connect to Metro conveyance and treatment facilities for treatment and disposal. The City currently has capacity rights in the Metro system of 6.634 mgd.

The City has Metro flow meters at seven (7) locations, and has a number of small interagency connections as shown on Figure 3-1. Based on meter records and information provided by Metro Technical Advisory Committee (Metro TAC) and the City, existing flows from each of the sewer basins was determined as shown in Table 3-1. A summary of all interagency connections is provided in Appendix A.

Table 3-1
City of La Mesa Existing Wastewater Flows by Basin

Basin	Existing Flow (mgd)
Alvarado	3.040
University	1.286
Spring Valley	0.648
Lemon Grove	0.193
San Diego[(1)]	0.106
Total	**5.27**

[(1)] Includes small interagency connections with the City of San Diego. Reference Figure 3-1.

3.2 Wastewater Generation Rates

The existing City flows were compared with land use data and population projections to develop unit wastewater generation rates within each sewer basin. Unit generation rates were estimated independently using two sources: 1) the City's current land use data; and 2) population

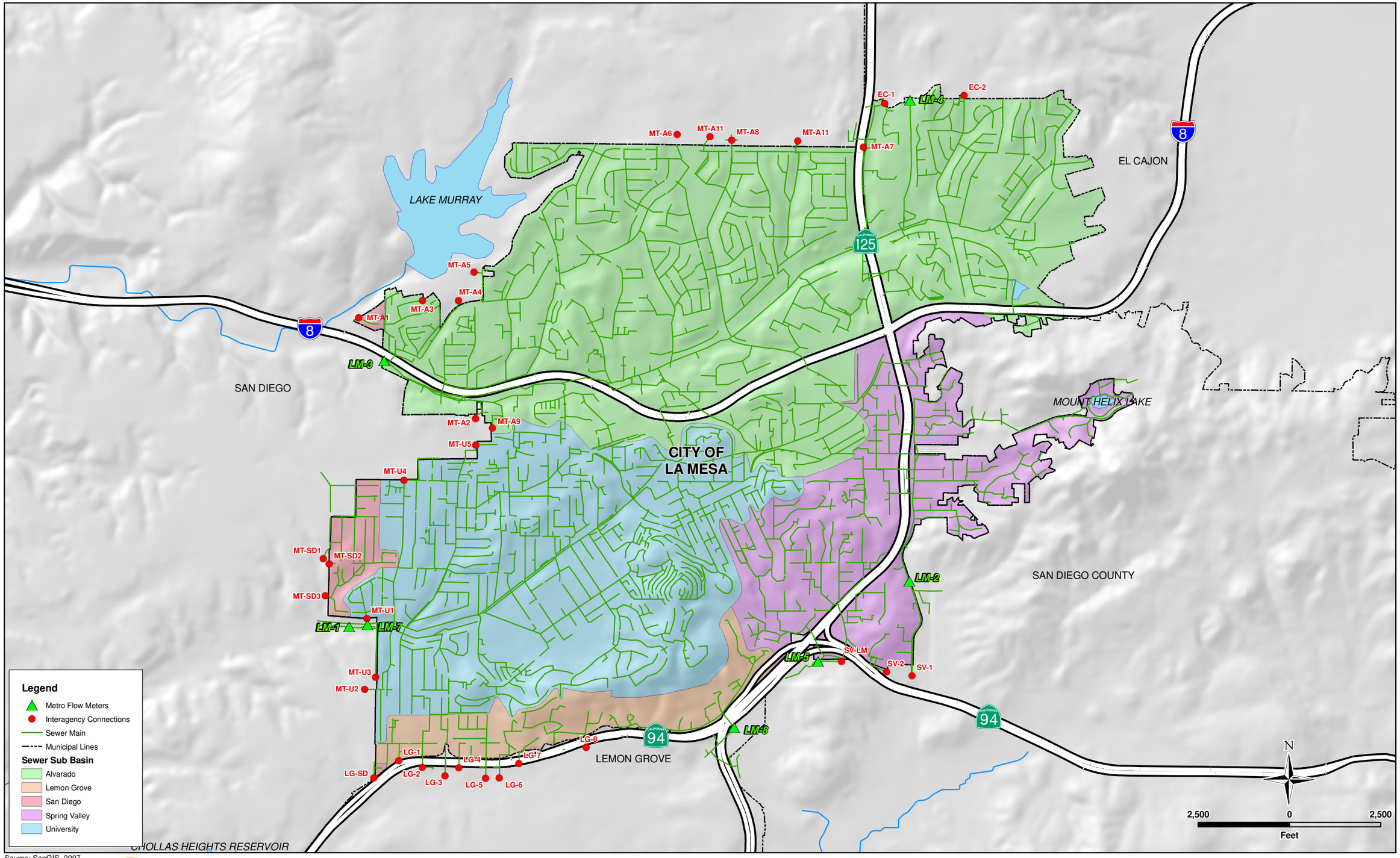
projections compiled by SANDAG (Series 7), for comparison purposes in developing the unit generation rates.

3.2.1 Generation Rates Using City Land Use Data

As shown in Figure 2-1, the City's existing land uses include single-family residential, multifamily residential, industrial, commercial and institutional. When the GIS land use coverage is overlaid with the City's parcel database, it was possible to determine the number of single-family and multi-family dwelling units (DU) and acres of industrial, commercial and institutional acreage for each basin. The number of dwelling units and land use acreages, by parcel and basin, are included in Appendix B. Unit wastewater generation rates were "calibrated" to less than 10% of existing flows through an iterative process using typical local-agency standards as guides. Typically, design standards for agencies in San Diego County assume wastewater flows between 200-400 gpd/du for single-family residential, with multi-family residential ranging from 60% to 75% of single-family residential, and 500-1500 gpd/acre for nonresidential land uses.

Table 3-2 summarizes the calibration of sewer flows for each basin with estimated unit wastewater generation rates summarized by land use. All basins were estimated to have a nonresidential (commercial, institutional, and industrial) unit wastewater generation rate of 500 gpd/ac. Wastewater flows for park land use were not included as these flows are assumed negligible. All basins, with the exception of the University Basin, were estimated to have a calibrated single-family residential and multi-family residential unit generation rate of 270 gpd/du and 180 gpd/du respectively. The University Basin had a calibrated single-family and multi-family residential unit generation rate of 195 gpd/du and 130 gpd/du respectively. All of these unit generation rates are within typical planning and design standards of local county agencies. Although the University Basin's residential unit generation rates are slightly lower, they appear reasonable based upon the sewer basin characteristics. The University Basin is an older area of the City, both demographically and by sewer infrastructure age. For that reason, there are generally fewer people per household and a population that is likely more conscious of water usage. The calibrated unit generation rates for the University Basin will be utilized for the existing system capacity analysis. The higher calibrated unit generation rates will be used for all future development including development within the University Basin.

The 2000 census projected 2.78 persons per single family dwelling unit and 2.22 persons per household for multi-family units. Assuming three (3) people per single-family dwelling unit and two (2) people per multi-family dwelling unit, the residential flow per capita ranges from 65 to 90 gallons per day per capita (GPDC). Typically, planning and design standards for sewer agencies in San Diego County typically assume wastewater flows between 65 and 100 gpdc for residential land uses. The aforementioned per capita unit generation rates will be used for comparison with the unit generation rates utilizing existing SANDAG population projections.



Source: SanGIS, 2007

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FIGURE 3-1
FLOW MONITORING LOCATIONS AND INTERAGENCY CONNECTIONS

Table 3-2
Unit Wastewater Generation Rate Calibration based on Land Use

Basin	Units		Unit Generation Rate		Estimated Wastewater Generation	
Alvarado						
Single-Family Residential	5,038	DU	270	gpd/DU	1,360,260	gpd
Multi-Family Residential	7,834	DU	180	gpd/DU	1,410,120	gpd
Commercial	304.9	ac	500	gpd/ac	152,470	gpd
Industrial	32.2	ac	500	gpd/ac	16,110	gpd
Institutional	184.7	ac	500	gpd/ac	92,340	gpd
Subtotal					**3.031**	**mgd**
				Existing Flow =	**3.040**	**mgd**
				Calibration =	**-0.3**	**%**
University						
Single-Family Residential	4,042	DU	195	gpd/DU	788,190	gpd
Multi-Family Residential	3,571	DU	130	gpd/DU	464,230	gpd
Commercial	121.3	ac	500	gpd/ac	60,646	gpd
Industrial	0.9	ac	500	gpd/ac	434	gpd
Institutional	126.3	ac	500	gpd/ac	63,138	gpd
Subtotal					**1.377**	**mgd**
				Existing Flow =	**1.286**	**mgd**
				Calibration =	**7.1**	**%**
Spring Valley						
Single-Family Residential	1,515	DU	270	gpd/DU	409,050	gpd
Multi-Family Residential	1,119	DU	180	gpd/DU	201,420	gpd
Commercial	35.2	ac	500	gpd/ac	17,621	gpd
Industrial	9.6	ac	500	gpd/ac	4,811	gpd
Institutional	23.1	ac	500	gpd/ac	11,530	gpd
Subtotal					**0.644**	**mgd**
				Existing Flow =	**0.648**	**mgd**
				Calibration =	**-0.6**	**%**
Lemon Grove						
Single-Family Residential	315	DU	270	gpd/DU	85,050	gpd
Multi-Family Residential	646	DU	180	gpd/DU	116,280	gpd
Commercial	1.4	ac	500	gpd/ac	721	gpd
Industrial	1.5	ac	500	gpd/ac	748	gpd
Institutional	9.5	ac	500	gpd/ac	4,756	gpd
Subtotal					**0.208**	**mgd**
				Existing Flow =	**0.193**	**mgd**
				Calibration =	**7.5**	**%**
San Diego						
Single-Family Residential	331	DU	270	gpd/DU	89,370	gpd
Multi-Family Residential	92	DU	180	gpd/DU	16,560	gpd
Commercial	0.0	ac	500	gpd/ac	0	gpd
Industrial	0.0	ac	500	gpd/ac	0	gpd
Institutional	0.0	ac	500	gpd/ac	0	gpd
Subtotal					**0.106**	**mgd**
				Existing Flow =	**0.106**	**mgd**
				Calibration =	**-0.1**	**%**

3.2.2 Generation Rates Using SANDAG Population

SANDAG provided 2007 residential and employment population projections by basin for the City. These projections were extrapolated from SANDAG (Series 7) data. Through an iterative process, per capita generation rates for residential and employment populations were estimated. Table 3-3 summarizes the estimated unit generation rates by population through the flow calibration process. Per capita unit generation rates were calibrated to less than ten (10) percent of existing flows.

Table 3-3
SANDAG Unit Generation Rates Calibration

Basin	Existing Population	Unit Generation Rate	Estimated Wastewater Generation
Alvarado			
Residential	29,493	90 gpdc	2,654,370 gpd
Employment	32,728	15 gpdc	490,920 gpd
Subtotal			**3.145 mgd**
		Existing Flow =	**3.040 mgd**
		Calibration =	**3.5 %**
University			
Residential	18,893	60 gpdc	1,133,580 gpd
Employment	18,407	15 gpdc	276,105 gpd
Subtotal			**1.410 mgd**
		Existing Flow =	**1.286 mgd**
		Calibration =	**9.6 %**
Spring Valley			
Residential	6,050	90 gpdc	544,500 gpd
Employment	5,549	15 gpdc	83,234 gpd
Subtotal			**0.628 mgd**
		Existing Flow =	**0.648 mgd**
		Calibration =	**-3.1 %**
Lemon Grove			
Residential	2,451	75 gpdc	183,788 gpd
Employment	1,839	15 gpdc	27,585 gpd
Subtotal			**0.211 mgd**
		Existing Flow =	**0.193 mgd**
		Calibration =	**9.5 %**
San Diego			
Residential	1,025	90 gpdc	92,205 gpd
Employment	728	15 gpdc	10,920 gpd
Subtotal			**0.103 mgd**
		Existing Flow =	**0.106 mgd**
		Calibration =	**-2.7 %**

Existing (2007) population data was obtained by averaging the 2004 and 2010 SANDAG Series 7 data

Typically, design standards for agencies in San Diego County assume per capita wastewater generation rates between 65-100 gpdc for residential and 15-35 gpdc for employment populations. Table 3-3 summarizes the calibration for each sewer basin. All basins had an estimated employment per capita unit generation rate of 15 gpdc. All basins, with the exception of the University and Lemon Grove Basins, had an estimated residential per capita unit generation rate of 90 gpdc. This per capita unit generation rate is equivalent to the one estimated from the land use calibration. The University and Lemon Grove Basins had calibrated residential per capita unit generation rates of 60 and 75 gpdc, respectively. The Lemon Grove Basin's per capita unit generation rate is slightly lower than the other basins' rate. The University Basin rates, similar to the land use calibration methodology, were also slightly lower than typical standards for County agencies. As discussed above, we believe these rates are reasonable and will be used in the hydraulic model analysis of the existing conditions.

A comparison of the estimated flows for the Land Use and SANDAG-based flow generation methodologies shows a reasonable calibration. Typical standards for calibration to average-day sewer flows range from 5 to 15 percent. The City's sewer generation rates for each basin were calibrated to less than 10 percent.

3.2.3 Recommended Unit Generation Rates

For future development within the City, it is important to develop uniform unit generation rates. The City has relatively uniform wastewater generation for land use and population projections based on our unit generation rate analyses. Therefore, for the existing system analysis, the calibrated unit generation rates shown above will be used and for future wastewater generation, the more uniform and conservative generation rates will be used. The sewer generation rates to estimate future flows are summarized in Table 3-4. To determine Equivalent Dwelling Units (EDUs) for non-single family residential land uses, simply calculate the estimated flow based on the recommended unit generation rate for single-family residential land use. The City of San Diego and the County of San Diego utilize 280 and 240 gpd/EDUs respectively.

Table 3-4
Recommended Unit Generation Rates

Land Use / Population	Recommended Unit Generation Rate	
Land Use		
Single-Family Residential	270	gpd/DU
Multi-Family Residential	180	gpd/DU
Commercial	500	gpd/AC
Industrial	500	gpd/AC
Institutional	500	gpd/AC
Population		
Single-Family Residential	90	gpdc
Multi-Family Residential	15	gpdc

3.3 Population Growth Forecasts

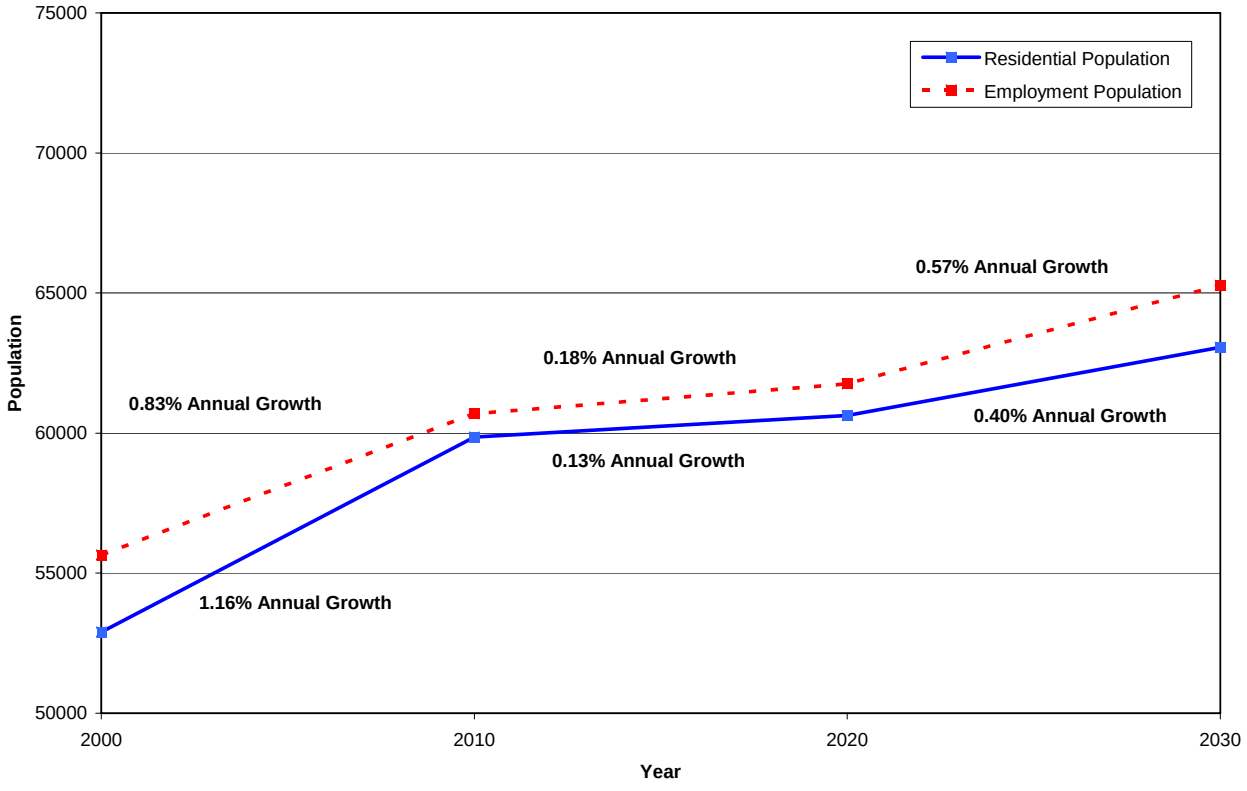
SANDAG population estimates and projections were available for 2004, 2010, 2020, and 2030. Table 3-5 summarizes the residential and employment projections for each sewer basin. Based on the projections shown in the table, the average annual residential growth rates are 1.16%, 0.13%, and 0.63%, for the periods 2004 to 2010, 2010 to 2020, and 2020 to 2030, respectively. The employment growth rates are 0.83%, 0.18%, and 0.57%, for the same periods. Figure 3-2 illustrates the projected City growth rates.

Table 3-5
SANDAG Population Projections

Basin	Residential					Employment				
	2004	2007	2010	2020	2030	2004	2007	2010	2020	2030
Alvarado	28,271	29,493	30,715	30,950	32,515	31,842	32,728	33,614	34,206	36,072
University	18,225	18,893	19,561	20,095	20,095	17,908	18,407	18,906	19,342	20,306
Lemon Grove	2,348	2,451	2,553	2,482	2,882	1,761	1,839	1,917	1,876	2,140
Spring Valley	6,074	6,050	6,026	6,103	6,521	5,560	5,549	5,538	5,627	6,011
San Diego	1,039	1,025	1,010	996	1,055	738	728	719	710	748
Total	**55,957**	**57,911**	**59,865**	**60,626**	**63,068**	**57,809**	**59,252**	**60,695**	**61,761**	**65,278**

2007 Population data was obtained by averaging the 2004 and 2010 SANDAG Series 7 data

Figure 3-2
SANDAG Population Growth Projections



3.4 Wastewater Flow Projections

By applying the recommended unit generation rates to the projected increase in population, wastewater flow projections were determined at ten (10) year increments through 2030. These projections form the basis for sewer input flows to the hydraulic model, and analyses of future capacity needs in the wastewater collection system.

In order to determine more accurately the magnitude, location and timing of future sewer flows, specific land development information was researched with the City Planning Department. The City provided a current list of approved developments that ranged in size from a few dwelling units up to several hundred units. In addition, the City maintains a list of various development proposals that was used to estimate development beyond the next 3-4 years.

The City's vacant land for future development is less than five (5) percent and, accordingly, most planned development projects are re-development in nature. The City has several specific planning areas of re-development including Alvarado Creek and Fletcher Parkway. These redevelopment areas are likely the City's greatest potential for significant residential growth. In addition, the Grossmont Shopping Center may re-develop with a housing element and the Grossmont Hospital site may undergo additional expansion. These have been assumed in this study.

Based on coordination and input from the Planning Department, future development including approved, proposed, and re-development projects were applied to the parcel database to develop build-out flow projections. Our approach used land use and dwelling unit estimates to generate future flow estimates. Figure 3-3 represents the City's current development planning. Table 3-6 summarizes the City's estimated future flows based on our assumed development absorption through 2030.

Table 3-6
City of La Mesa EDU Demand Projections

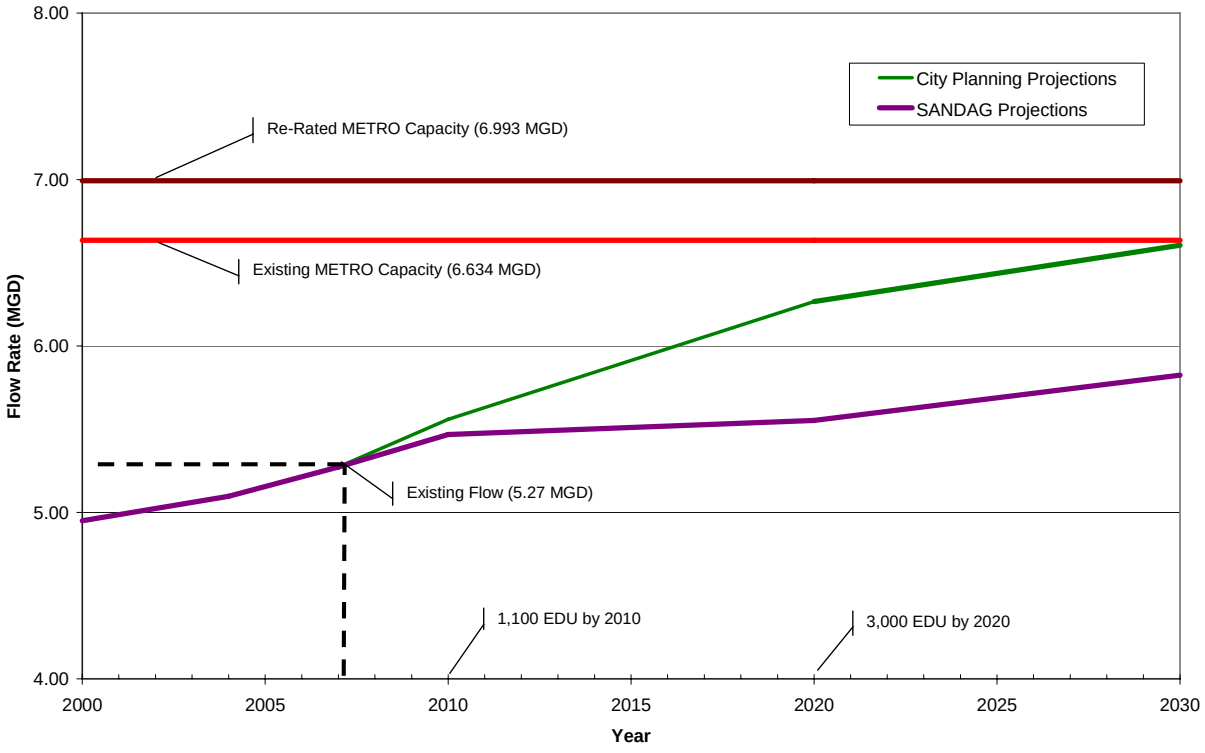
	2000	2007	2010	2020	2030
Approved Project Sites[(1)]		0 EDU	818 EDU	0 EDU	0 EDU
Proposed Project Sites[(2)]		0 EDU	0 EDU	1,427 EDU	0 EDU
Redevelopment Areas[(3)]		0 EDU	200 EDU	700 EDU	700 EDU
Grossmont Center Redevelopment[(4)]		0 EDU	50 EDU	500 EDU	550 EDU
Total Dwelling Units		**0 EDU**	**1,068 EDU**	**2,627 EDU**	**1,250 EDU**
Cumulative Dwelling Units		0 EDU	1,068 EDU	3,695 EDU	4,945 EDU
Cumulative Demand (270 GPD/EDU)[(5)]		5.27 MGD	5.56 MGD	6.27 MGD	6.61 MGD
SANDAG Flow Projections (90/15 gpdc)		5.27 MGD	5.47 MGD	5.55 MGD	5.82 MGD
Re-Rated Metro Capacity	6.993 MGD	6.993 MGD	6.993 MGD	6.993 MGD	6.993 MGD
Existing Metro Capacity	6.634 MGD	6.634 MGD	6.634 MGD	6.634 MGD	6.634 MGD

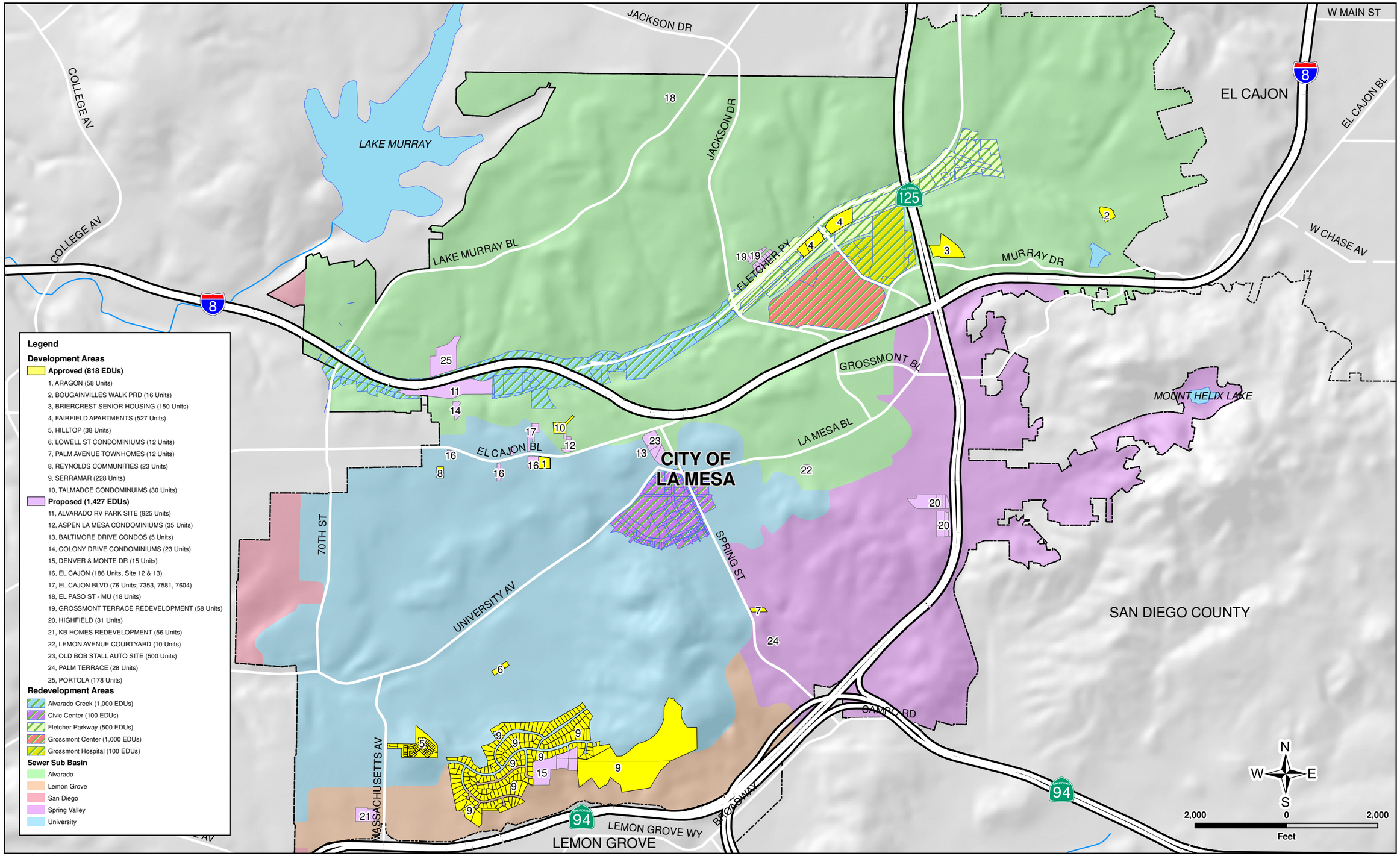
(1) Assumes 100% of 2006 Approved Residential Development Projects are built by 2010.
(2) Assumes 100% of Proposed Projects are built by 2020.
(3) Projections for the Alvarado Creek (1,000 EDU), Civic Center (100 EDU) and Fletcher Parkway (500 EDU) Re-development Projects.
(4) Assumed Re-development Potential for Shopping Center, including Commercial Development and Hospital (100 EDU)
(5) Based on 270 GPD/cap; 3.0 people per unit

The City may choose to give flow credits for properties when demolition and redevelopment occurs. The City shall estimate the average flow rate of the existing property utilizing the recommended unit generation rates or existing flow meter data.

Using the methodologies outlined above, projected wastewater flow rates generated under City build-out conditions (year 2030) are 6.61 mgd based upon the current City planning and 5.82 mgd based solely upon SANDAG population projections. Figure 3-4 graphically presents the projected wastewater flows through 2030. Both estimates are conservative in that the University Basin under ultimate flows was assumed at the higher unit generation rates (40 percent higher) than its existing generation.

Figure 3-4
Wastewater Flow Projections





Source: SanGIS, 2007

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FIGURE 3-3
CITY OF LA MESA DEVELOPMENT PLANS

3.5 Metro Capacity

The City currently has capacity rights in the Metro system (comprised of conveyance, treatment, and disposal facilities) equal to 6.634 mgd. Metro is in the process of completing a re-rating study, which will re-allocate capacity to all the participating agencies driven by the new South Bay Reclamation Plant and increased Metro system treatment capacity. This effort has been ongoing for the past three (3) years and can not be officially allocated until the City of San Diego has completed financial audits. Our latest estimate is by late 2008 participating agencies will have received formal notice of their increase in Metro capacity. The preliminary re-rating studies to date have allocated an additional 0.65 mgd of sewer capacity to the City resulting in a total capacity of 6.993 mgd in the Metro System.

The City estimated their average 2006 and 2007 flows at 5.148 mgd, and is currently being billed on 5.148 mgd for Fiscal Year 2008 by San Diego Metro. Based on the current billing flow, La Mesa has an estimated 1.486 mgd of available capacity in the Metro system.

Figure 3-4 shows Metro capacity thresholds based on the future flow estimates given in Table 3-6. Based on current projections, the City's existing Metro capacity rights will be reached by year 2030, assuming the more conservative population forecast. Additional capacity due to the expected re-rating would indicate that the City will have available capacity to serve planned development at build-out based on both the population and land use forecasts.

3.6 Conclusions

Existing average wastewater flows generated within the City of La Mesa are approximately 5.27 mgd. Currently, the City is being billed by the City of San Diego for 5.148 mgd for Fiscal Year 2008. Based on land use and City planning information, the estimated average flow rate at build-out of the City per the current General Plan is 6.61 mgd. Based on SANDAG population projections, the average flow rate at build-out is estimated as 5.82 mgd.

The City's current capacity right in the Metro system is 6.634 mgd. Based on the City's current General Plan projections, the average flow is expected to reach the current capacity around 2030. However, based on the Metro re-rating the City will receive an increase to approximately 6.993 mgd of Metro capacity. Therefore, it is our opinion that with the re-rating the City does not need to acquire any additional sewer capacity. Moreover, because our projections are relatively close to the Metro capacity values, it is unlikely that the City would be in any short-term position to sell excess sewer capacity to another participating agency. The City would be prudent to maintain its current ownership of Metro capacity as other re-development projects may be proposed that would require additional sewer capacity.

Appendix D
Training Program Materials

City of La Mesa Department of Public Works
SAMPLE TRAINING AGENDA
Waste Water Quarterly Meeting

I. Meeting Background/Format, Organization, and Frequency

II. SSO Response
- Worksheets/Procedures Review
- SSO Response Procedures
- Cat 1,2,3,4 Spills
- Roundtable Scenarios
- Director's Update

III. Smart Covers/Meters

IV. Redlines

V. CCTV Status

VI. CIP Update

VII. Other/Adjourn

Appendix E
Equipment and Inventory Lists

City of La Mesa
Sewer Equipment List

Equipment	Contact Name	Telephone Number	
Gap Vax	Matt Bell	619-954-5339	
Pipes and Appurtenances	Matt Bell	619-954-5339	
Manhole Lids	Matt Bell	619-954-5339	
Manhole Pullers/Composite Tools	Matt Bell	619-954-5339	
Confined Space Equipment	Matt Bell	619-954-5339	
Cleaning Supplies	Matt Bell	619-954-5339	