
CITY OF ENCINITAS
UTILITIES DEPARTMENT
WASTEWATER COLLECTION DIVISION



SEWER SYSTEM MANAGEMENT PLAN

MARCH 2022



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Abbreviations & Acronyms

BMP	Best Management Practice
CCTV	Closed-Circuit TV
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
DEH	Department of Environmental Health
FOG	Fats, Oils, Grease
GIS	Geographical Information System
GWDR	General Waste Discharge Requirements
I/I	Inflow/Infiltration
MRP	Monitoring and Reporting Plan
O&M	Operation and Maintenance
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow / Sewer Overflow
SWRCB	State of California Water Resources Control Board
WDR	Waste Discharge Requirements

Introduction

On May 2, 2006, the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sewer Systems (Order No. 2006-0003-DWQ). The intent of the Order is to regulate all collections systems in the State in an effort to reduce or eliminate the number of Sanitary Sewer Overflows (SSOs) which, by their nature, pollute the environment. The Order is applicable for all publicly owned sewage collection systems with more than one mile of sewer pipe. The City of Encinitas has more than one mile of sewer pipe and therefore, is subject to this Order.

In response to the 2006 Waste Discharge Requirements (WDR) Order, the City of Encinitas submitted an application for permit coverage with the State Water Resources Control Board and was issued Agency WDID # 9SSO10650.

The City of Encinitas is required to comply with all conditions of the Order and is subject to enforcement action for any noncompliance therewith.

Order No. 2006-003-DWQ prohibits any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States or that result in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m).

The California Water Code provides various enforcement options, including civil monetary remedies, for violations of Order No. 2006-0003-DWQ.

A SSO is any overflow, spill, release, discharge, or diversion of wastewater from a sewer system. SSOs include:

- overflows or releases of wastewater that reach waters of the United States;
- overflows or releases of wastewater that do not reach waters of the United States; and
- Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is a SSO when sewage is discharged off a private property into streets, storm drains, or waters of the State.

The Order requires the following:

- A. In the event of a SSO, all feasible steps shall be taken to contain and mitigate the impacts of a SSO. This includes taking steps to prevent untreated or partially treated wastewater from discharging from storm drains into flood control channels or waters of

the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

- B. If a SSO does occur, it must be reported to the SWRCB using an online reporting system developed by the SWRCB and within the timelines prescribed in the Order. This reporting system is referred to as the California Integrated Water Quality System (CIWQS).
- C. A Sewer System Management Plan (SSMP) must be developed and address specific milestones. The milestones in the Order are:
 - 1. Goals
 - 2. Organization and Structure
 - 3. Legal Authority
 - 4. Operations and Maintenance Program
 - 5. Design and Performance Provisions
 - 6. Overflow and Emergency Response Plan
 - 7. Fats, Oils, and Grease (FOG) Control Program
 - 8. System Evaluation and Capacity Assurance Plan
 - 9. Monitoring, Measurement, and Program Modifications
 - 10. SSMP Program Audits
 - 11. Communications Program
 - 12. Final SSMP, incorporating all of the SSMP requirements
- D. The SSMP and the City's program to implement the SSMP must be certified by the City and must be presented to the City Council for approval at a public meeting. The City also is required to certify that the milestones have been completed within the time frames identified in the Order.
 - 1. In order to complete the certification, the City's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box and submitting the form electronically to the State Water Resources Control Board. This is the CIWQS survey that is updated annually.
 - 2. The two year City of Encinitas internal audit was conducted on September 2017.
 - 3. The SSMP must be updated every five (5) years and must include significant program changes, if any. Recertification by the City Council is required when significant updates to the SSMP are made. To complete the recertification process, the City must enter the data in the Online SSO Database and mail the form to the State Water Resources Control Board.

SECTION I: GOALS

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of its wastewater collection system. This will help reduce and prevent Sanitary Sewer Overflows (SSOs) as well as mitigate any SSOs that do occur.

SSMP Goals

- Properly manage and maintain all parts of the sanitary sewer system
- Continual improvement to reduce all preventable SSOs
- Provide capacity to convey sewage during peak flows
- Minimize the frequency of SSOs
- Mitigate and reduce the impact of SSOs
- Provide training on a regular basis for staff
- Identify and prioritize deficiencies and implement maintenance and rehabilitation actions to address each deficiency
- Meet all applicable regulatory requirements
- Provide excellent customer service

SECTION II: ORGANIZATION AND STRUCTURE

This section of the SSMP identifies City staff that is responsible for implementing this SSMP, responding to SSO events, and reporting SSOs.

Identification

The collection system agency's SSMP must identify:

- A. The name of the responsible or authorized representative.
- B. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation.
- C. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Boards and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, and/or California Emergency Management Agency).

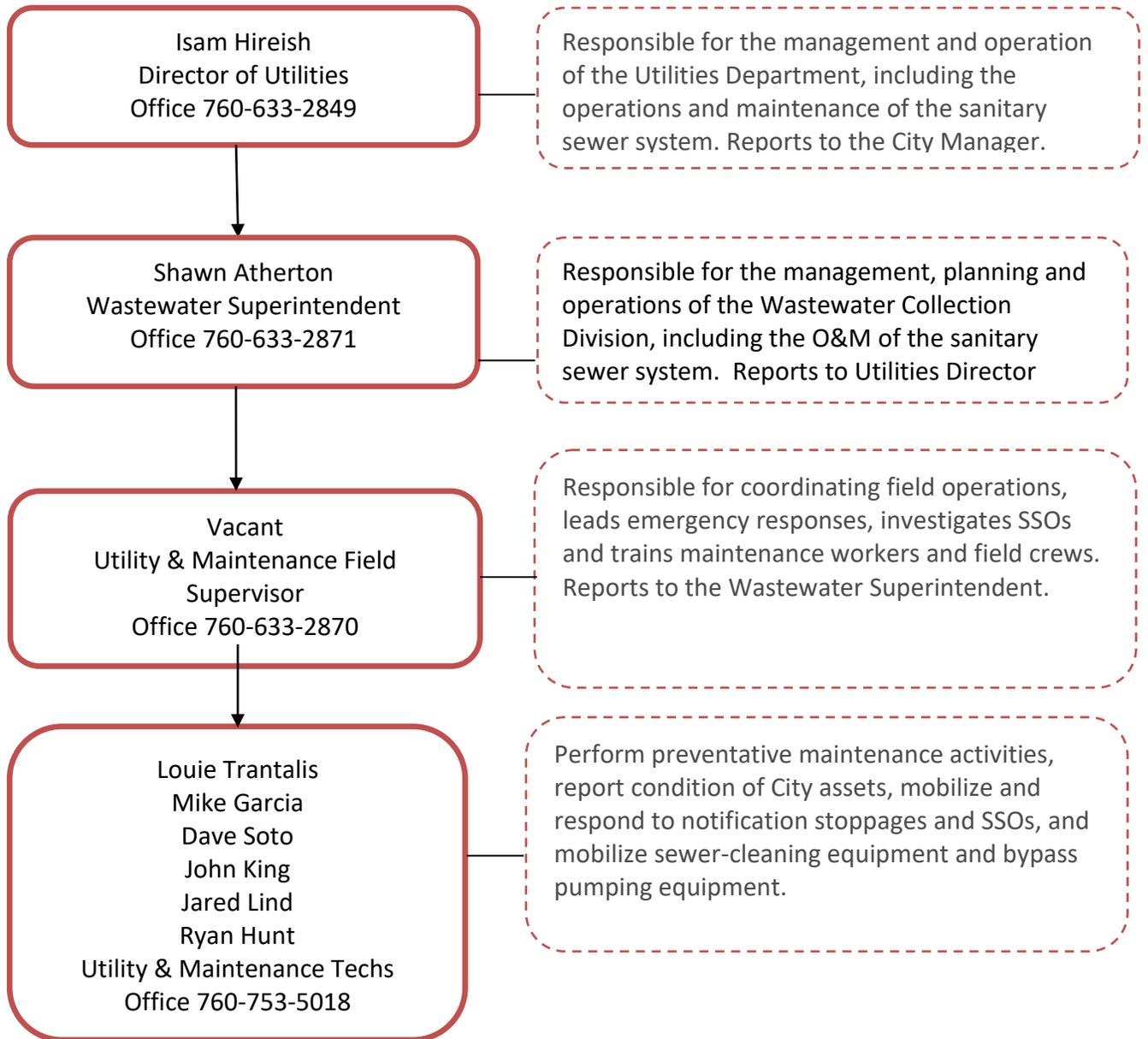
Organization

For the purpose of meeting the State Waste Discharge Requirements (Section ii–a), the following are the names of the City of Encinitas responsible or authorized representatives as described in Section J of the order.

Isam Hireish	Director of Utilities
Shawn Atherton	Wastewater Superintendent
Vacant	Wastewater Field Supervisor

For the purpose of meeting the State Waste Discharge Requirements (section ii–b), the following are the names and telephone numbers for Administrative, Management, and Maintenance Positions responsible for implementing the SSMP program. The specific responsibilities and lines of authority are as outlined.

Waste Discharge Requirements (WDR) Organization Chart



For the purpose of meeting the State Waste Discharge Requirements (section ii - c) the following Wastewater Maintenance Section Standard Operating Procedures are to be used to describe the chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Boards and other agencies.

SSO: Responding to a Sewer Overflow-Normal Work Hours

The following procedure is to be followed when responding to all sewer overflow emergencies to prevent the overflow from reaching the MS4 or water bodies:

- A. Emergency call received by Wastewater Maintenance Section.
If no Wastewater Maintenance Section personnel are available to answer the call, the caller is then instructed by the recording to call the Emergency Answering Service. The answering service personnel will then proceed to page the Wastewater Maintenance Section supervisor or lead worker.
- B. Crewmember (s) dispatched to emergency.
- C. Supervisor and/or lead worker responds to call.
- D. First crew member(s), lead worker, or supervisor at site evaluates situation. During evaluation the first person(s) at site has five duties:
 - 1. Determine cause of overflow emergency.
 - 2. Determine a remedy - plan of action.
 - 3. Determine what resources are needed to remedy situation.
 - 4. Take pictures of overflow to be used to assist with determining spill rate and documentation purposes.
 - 5. Notify supervisor and/or lead worker whenever a sewer spill occurs or a home is flooded.
- E. Initiate plan of action.
As needed, call for additional help, appropriate vehicles and equipment, and/or whatever else is needed.
- F. Stop the overflow.
Completely contain the overflow as close as practical to the overflow location to prevent or minimize any environmental impacts. Completely recover the contained overflow and return it to the sewer system.

- G. Clear blockage.
Once the blockage is cleared, it is very important to investigate the area for any claims of flooded or damaged homes. If found, take pictures and document carefully.
- H. Clean up of overflow site.
Clean up of site requires 5 steps:
 1. Obtain before clean-up and after clean-up photographs of the site to document the conditions.
 2. Thoroughly clean the site.
 3. Disinfect the site.
 4. Determine the size of the spill.
 5. If house is flooded, advise homeowner to file a claim with Risk Management. Also, immediately notify supervisor and/or designee.
- I. Written report (work order) from crewmember (s) who responded to call.
 1. Written report must contain the following information regarding the spill: size, address, time, and who has been notified.
 2. Written report must contain an itemization of all expenses incurred and the total amount of personnel time spent responding to the emergency (to be used for purposes of potential cost recovery).
- J. Supervisor and/or designee shall consult with the Department of Environmental Health and the Regional Board to meet all legal reporting and posting requirements. All reports are required to be posted on the CIWQS website within 3 business days.

SSO: Responding to a Sewer Overflow-After Normal Work Hours

The following procedure is to be followed when responding to all sewer overflow emergencies to prevent the overflow from reaching the MS4 or water bodies:

- A. Emergency call received by emergency answering service.
If caller phones Wastewater Maintenance Section number, they are instructed by the recording to phone emergency answering service. The answering service personnel will then page the Wastewater Maintenance Section standby person.
- B. Standby person dispatched to emergency. (The standby policy and its requirements are described in the City of Encinitas Administrative Manual, Policy No. P008.)
- C. Standby person responds to call.

- D. Standby person evaluates situation. During evaluation the standby person has five duties:
1. Determine cause of overflow emergency.
 2. Determine a remedy - plan of action.
 3. Determine what resources are needed to remedy situation.
 4. Take pictures of overflow to be used to assist with determining spill rate and documentation purposes.
 5. Notify supervisor and/or lead worker whenever a sewer spill occurs or a home is flooded.
- E. Initiate plan of action.
As needed, call for additional help, appropriate vehicles and equipment, and/or whatever else is needed.
- F. Stop the overflow. Completely contain the overflow as close as practical to the overflow location to prevent or minimize any environmental impacts. Completely recover the contained overflow and return it to the sewer system.
- G. Clear blockage.
Once the blockage has been cleared, it is very important to investigate the area for any claims of flooded or damaged homes. If found, take pictures and document carefully.
- H. Clean up of overflow site.
Clean up of site requires 5 steps:
1. Obtain before clean-up and after clean-up photographs of the site to document the conditions.
 2. Thoroughly clean the site.
 3. Disinfect the site.
 4. Determine the size of the spill.
 5. If a house is flooded, advise the homeowner to file a claim with Risk Management. Also, immediately notify supervisor and/or designee.
- I. Written report (work order) from standby person to supervisor.
1. Written report must contain the following information regarding the spill: size, address, time, and who has been notified.
 2. Written report must contain an itemization of all expenses incurred and the total amount of personnel time spent responding to the emergency (to be used for purposes of potential cost recovery).

- J. Supervisor and/or stand by person shall consult with the Department of Environmental Health and the Regional Board to meet all reporting and posting requirements. All reports are required to be posted on the CIWQS website within 48 hours.

SSO: Reporting

All sewer spills that enter a storm drain, body of water, or are over 1000 gallons must be reported to the Department of environmental Health and Regional Water Quality Control Board. Sewer spills that may be a threat to the general public must be reported to the California Emergency Management Agency (formerly the Office of Emergency Services) at (619) 521-3365.

The following procedures shall be used to meet these requirements:

- A. Document the address, cause of spill, start and stop time of the spill, and the estimated gallons spilled.
- B. Follow the spill to see where the water (spill) is going. Example: Into the storm drain, into the ground, into a creek or ocean, etc.
- C. If the sewer spill is going into the ocean or an area that is easily accessible to the public, it may be posted (quarantined). Keep this in mind when notifying the Health Department; they will direct you of their requirements.
- D. The most important task at this point is to clear the blockage.
- E. Once the spill has stopped, using the information obtained above, call the Department of Environmental Health. As of March 2022, Joseph Palmer is our contact person. He can be reached at (858) 505-6640. If after hours call (858) 505-6657. Give Joseph all the details of the spill, and he will assist you with the Department of Environmental Health's requirements.
- F. Next, you must notify the Regional Water Quality Control Board, Keith Yeager at (619) 521-5899 or Joann Limb at (619) 521-3362. If after hours call (858) 822-8344. They will ask you a series of questions related to the spill.
- G. Also report sewer spills to the California of Emergency Services. This is a state-related office that requires notification of all SSOs that reach/enter surface waters. The telephone number is 1-800-852-7550.
- H. The requirements of the Department of Environmental Health, Regional Water Quality Control Board, and the California Emergency Management Agency are different from each other. It is best to notify them, if possible, before clean up procedures begin. They may have special requirements that you must follow, depending on the location, size, accessibility, and type of sewer spill you are reporting. Use new reporting requirements.

SECTION III: LEGAL AUTHORITY

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

- A. Prevent illicit discharges into its wastewater collection system.
- B. Require that sewers and connections be properly designed and constructed.
- C. Ensure access for maintenance, inspection, or repairs for sewer lines owned or maintained by the City.
- D. Limit the discharge of fats, oils, and grease and other debris that may cause blockages.
- E. Enforce any violation of its sewer ordinances.
- F. Inspect grease producing dischargers.
- G. Enforce sewer-related ordinances.

City of Encinitas Municipal Code Sect 18 (Appendix A).

SECTION IV: OPERATIONS AND MAINTENANCE PROGRAM

The General Waste Discharge Requirements (GWDR) for the Operations and Maintenance Program are:

- A. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments, manholes; pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities.
- B. Describe routine preventative operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance Program should have a system to document scheduled and conducted activities, such as work orders.
- C. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The plan should include regular visual and TV Inspections of manholes and sewer pipes. 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.
- D. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.
- E. Provide equipment and replacement part inventories, including identification of critical replacement parts.

The following is the City's Operations and Maintenance Program that meets the GWDR:

A. Collection System Maps

The City has a Geographical Information System (GIS) that includes the information for its wastewater collection system assets including; gravity line segments, manholes, pumping facilities, and pressure pipes (force mains). The City also has information in its GIS for its storm drainage system. The GIS information is available to City staff. The field crews access the GIS maps and work orders utilizing lap top computers. The lap top computers are issued to each Wastewater Maintenance Section crew and the Supervisors. Any corrections found are noted by field crews and submitted to the Wastewater Supervisor. The Wastewater Supervisor submits the corrections to the

City's GIS staff. The Wastewater Maintenance Section has five lap top computers dedicated for use only by its staff.

B. Preventative Operation and Maintenance

The elements of the City's sewer system Operations and Maintenance (O&M) program include proactive, preventive, and corrective maintenance of gravity sewers.

The details of the City's Preventative O&M programs are:

1. The City cleans its gravity sewer system approximately every 15 months. Trouble spots are cleaned four times per year or every three months.
2. The City performs CCTV inspection for both periodic condition assessments and for follow-up on SSO events.
3. City crews or outside contractors correct problems that are identified by CCTV and sewer cleaning crews. Repairs are completed in priority order.
4. The City repairs significant structural defects as they are identified. Gravity sewer maintenance is currently scheduled using maps and lists of "Trouble Spot" line segments. Completed gravity sewer maintenance is documented and recorded on lap top computers by our field crews.

SSO: Combination Sewer Cleaner Procedures

1. Do a pre-trip inspection to comply with federal regulations and city procedures.
2. Proceed to job site.
3. Review maps and begin filling out daily paperwork.
4. Position sewer cleaner properly over manhole.
5. Set-up proper traffic control.
6. Test manhole for gasses.
7. Open sewer manhole.
8. Following the proper procedures, lower hose, and begin cleaning sewer line in upstream direction.
9. Consult with work partner to verify the distance between the manholes being cleaned. Partner should then proceed to upstream manhole to verify that the cleaning hose has reached the proper distance.
10. If vacuuming is required, proceed as necessary following the proper procedures.
11. When finished cleaning the sewer line, wash the inside and close the manhole, checking to see that the cover is secure.
12. Pick-up traffic control.

13. Fill out the required paperwork to document condition and any comments necessary.
14. Check to see if water is needed. If so, fill tank with water and proceed to next manhole.
15. Begin procedure No. 3, repeating all procedures as required.

SSO: Continuous Rodder Sewer Cleaner Procedures

1. Do a vehicle pre-trip inspection as required to comply with city regulations.
2. Proceed to job site.
3. Review maps and begin filling out daily paperwork.
4. Position rodder near the manhole as needed.
5. Set-up proper traffic control.
6. Test manhole for sewer gasses.
7. Open sewer manhole.
8. Following the proper procedures, select and attach the correct tool to the rod and begin rodding the sewer line.
9. Consult with work partner to verify the distance of the line being cleaned. (Partner should proceed to the next manhole to signal operator when the tool reaches the manhole).
10. Reverse direction of rod to retrieve tool.
11. Remove rod and tool from manhole.
12. Close manhole, checking to see that the cover is secure.
13. Pick-up traffic control.
14. Fill out the required paperwork to document condition of line and any comments necessary.
15. Proceed to next manhole.

C. Rehabilitation and Replacement Program

The City's goal is to inspect the condition of its gravity sewers on a regular basis. In addition, the City hires an outside Engineering firm to conduct a detailed Sewer Master Plan every eight to ten years. This information is used as the basis for the rehabilitation and replacement program. Information gathered during routine maintenance and the sewer master plan assessment is used to select individual gravity sewers for repair, rehabilitation, or replacement. The City plans projects for rehabilitation and replacement of its sanitary sewer system on a yearly basis. The funds that support the Capital Improvement Program come from the City's Sewer Fund. The Sewer Fund is an enterprise fund, and sewer fees are established to meet projected needs. The City's Capital Improvement Program has approximately 15.9 million dollars allocated for rehabilitation and replacement projects during the next five years.

D. Training

The City uses a combination of in-house classes, on the job training, conferences, seminars, and other training opportunities to train its wastewater collection system staff. The City requires outside contractors working in the wastewater collection system to provide training for their employees in the activities that may cause SSOs and in responding to contractor-caused SSOs.

E. Replacement Equipment and Parts

1. Combination sewer cleaners replaced every seven years
2. Continuous rodder truck replaced every five years
3. The City houses an assortment of critical replacement parts including: manhole grade rings, manhole rings and covers, repair pipe, and couplings. The City has agreements with outside contractors and informal agreements with neighboring agencies for equipment and support in the event of a sewer emergency.

F. Operation and Maintenance Resources

The City's staff that is dedicated to the maintenance of the collection and storm drain systems is listed below. The major equipment to support the maintenance activities is also included. The staff and equipment resources exceed the projected workload.

Personnel Title	Full Time Positions
Wastewater Collection Division Superintendent	1
Wastewater Collection Division Field Supervisor	1
Wastewater Collection Division Utility & Maintenance Worker IV	1
Wastewater Collection Division Utility & Maintenance Worker III	3
Wastewater Collection Division Utility & Maintenance Worker II	0
Wastewater Collection Division Utility & Maintenance Worker I	2
Total Full Time Employees	8

Equipment	Full Time Positions
Vac-Con Combination Sewer Cleaners	2
Sewer Equipment Company of America Continuous Rodder	1
Sewer Easement Cleaner	1
Envirosight Video Inspection Van	1
Pick-up truck 4x4	1
Pick-up truck 2x4	1
Confined Space Entry Vehicle	1

SECTION V: DESIGN AND PERFORMANCE PROVISIONS

The City's design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations, and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems are used by City staff and are communicated to consulting engineers and developers at the start of a design process or proposed development.

City staff has procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Design Criteria

The City's design criteria for new and rehabilitated sewers are specified in the City of Encinitas Engineering Design Manual 2009 (Appendix B).

Construction Standards

The City's Sewer Construction Requirements are specified in the City of Encinitas sewer ordinances in Chapter 18.16 (Appendix A).

SECTION VI: OVERFLOW AND EMERGENCY RESPONSE PLAN

Each enrollee shall develop and implement an Overflow and Emergency Response Plan that identifies measures to protect public health and the environment. At a minimum, this Plan must include the following:

- A. Proper notification procedures so that the primary responders and agencies are informed of all SSOs in a timely manner.
- B. A program to ensure appropriate response to all overflows.
- C. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, state and regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable State Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System permit requirements. This Sewer System Management Plan identifies the officials who will receive immediate notification.
- D. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained.
- E. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.
- F. A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The City of Encinitas Overflow and Emergency Response Plan is included in this report (Appendix C).

SECTION VII: FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

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

- A. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.
- B. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area.
- C. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.
- D. Requirements to install grease removal devices (such as traps or interceptors), design standards for the grease removal devices, maintenance requirements, Best Management Practices (BMP) requirements, record keeping, and reporting requirements.
- E. Authority to inspect grease producing facilities, enforcement authorities, and determination of whether the collection system agency has sufficient staff to inspect and enforce the FOG ordinance.
- F. An identification of sewer system sections subject to FOG blockages and the establishment of a cleaning maintenance schedule for each section.
- G. Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (F) above.

System Evaluation

The City's Municipal Code (Chapters 18.01 and 18.04, Appendix A) addresses Legal Authority to prohibit illegal discharges into the sewer system and the installation and pumping of Grease Traps/Interceptors.

The City has six sewer line locations historically known to have concentrations of grease when cleaned.

- “Cardiff” Restaurant Row, on Hwy. 101 from manhole #1830 north to Coast Blvd. lift station.
- “Cardiff” Manhole #2153 on Via Cardiff west to Manhole #1688 on Carol View Dr.
- “Encinitas” In the alley between 2nd & 3rd St, from “I” to “C” St.
- “Encinitas” On Hwy. 101 from Melrose Ave south to “A” St.
- “Encinitas” On “A” St from 3rd West to 4th St.
- “Encinitas” Line in alley between R/R Tracks and Hwy. 101 from “ D “ Street(MH 2687) south to “ E “ Street(MH 2689).

These locations are considered trouble spots and are on an accelerated cleaning schedule. All six of these locations are cleaned on a quarterly basis.

Conclusion

The City has analyzed all FOG related sewer spills from March 2004 thru January 2018. The analysis showed that we have experienced zero sewer main FOG-related SSOs.

The low incidence of FOG-related SSOs indicates that the City's historical management of FOG dischargers, combined with the City's sewer system preventive maintenance program, has been effective and that there is no basis for developing a FOG control program. The City will continue to gather information on its FOG-related SSOs, and it will evaluate the need for any additional FOG control measures during the next update of its SSMP.

City of Encinitas Municipal Code Chapter 18.04.120 Pumping Interceptors/Grease Traps has more detailed information. (Appendix A).

SECTION VIII: SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

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

- A. Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity), and the major sources that contribute to the peak flows associated with overflow events.
- B. Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (A) above to establish appropriate design criteria.
- C. Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, inflow and infiltration (I/I) reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
- D. Schedule: The City shall develop a schedule of completion dates for all portions of the capital improvement program developed in (A)-(C) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

System Evaluation and Capacity Assurance Plan

In 2011, the City selected an outside engineering firm (DUDEK) to prepare and update the Encinitas and Cardiff Sanitary Divisions sewer master plans. The previous sewer master plans were completed in 2003 for Encinitas and Cardiff. In June of 2011, the City did complete and update the master plan for both Cardiff and Encinitas.

The purpose of the master plan is to evaluate the City's existing and future sewer capacity and rehabilitation needs, make recommendations, and prepare a preliminary opinion of probable costs for each of the proposed improvements. Collection system capacity needs were determined based on existing and future wastewater flow estimates. Rehabilitation needs were

developed based on video inspections of a combination of both critical areas identified by the City's Wastewater Maintenance Section and other randomly selected areas, as well as onsite inspection of key facilities including pump stations.

In 2015, the City selected Atkins to complete a comprehensive wastewater asset management plan to systematically operate and proactively maintain its wastewater collection infrastructure. The goal of the plan was to ensure sustainable delivery of its wastewater service with an effective financial management strategy that will allow the City to provide the desired level of service.

Both capacity improvements and rehabilitation projects are critical to ensure optimal maintenance and to prevent blockages as the City's infrastructure ages.

Because both, the City's Sewer Master Plan and the Wastewater Asset Management Plan, documents are very large in volume, they are available by request or for review by the Public at Encinitas City Hall located at 505 S. Vulcan Ave. Encinitas, CA 92024.

SECTION IX: MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

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

The City shall:

- A. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.
- B. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.
- C. Assess the success of the preventative maintenance program.
- D. Update program elements, as appropriate, based on monitoring or performance evaluations.
- E. Identify and illustrate SSO trends, including: frequency, location, and volume.

Performance Measures

The City of Encinitas Public Works Department uses a work management system called Cityworks in conjunction with a GIS program. Cityworks is a computer based system that tracks work and documents daily records. Cityworks tracks the spending of monies, use of materials, sewer overflows, equipment used, and all sewer lines that have been cleaned by section staff. The system has the ability to query information to create reports. The GIS program works in conjunction with Cityworks to track asset inventory. The procedure for retrieving the information is found in the Public Works Cityworks User's Manual (Appendix E).

The following information will be maintained and used to monitor and measure the effectiveness of the City's SSMP:

- Linear feet of sewer lines cleaned
- Linear feet of sewer lines televised
- Number of mainline blockages
- Location of all blockages
- Location of all sewer spills
- Amount of gallons spilled

- Cause of blockage
- The tracking of all work orders

The City's Wastewater Maintenance Section staff will review the above information as well as all elements of the SSMP when a sewer spill occurs or as needed. They will assess the success of the preventative maintenance program and make necessary updates as needed for the continued success of the SSMP program.

SECTION X: SSMP PROGRAM AUDITS

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

Program Audit Procedures

The City's last audit of the SSMP was in September of 2017; the next audit is scheduled for September of 2019 and every other September thereafter.

The audit will be conducted by key personal from the Public Works Department and may contain members from outside agencies. The audit will focus on evaluating the effectiveness and the City's compliance with the requirements of the SSMP as outlined in the WDR.

The results of the audit, including identification of any deficiencies in the SSMP and steps to correct them, will be in the audit report and kept on file.

SSMP Updates

Based on information obtained during review of the Monitoring, Measurement, and Program Modification (Section IX) and the bi-annual audit, the City will make any necessary updates to the SSMP within six months of the completion of the audit.

SSMP Audit Checklist

The audit team shall focus on reviewing each of the required eleven sections of the SSMP and will use the minimum requirements of each section to identify any deficiencies in the SSMP and steps to correct them. Appendix F is an example of the audit checklist.

The bi-annual audit reports will be kept on file and added to the SSMP for review as requested.

SECTION XI: COMMUNICATION PROGRAM

The City shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the City as the program is developed and implemented.

Communication during SSMP Development and Implementation

At its regularly scheduled meeting on February 13, 2008, the City Council accepted and adopted an implementation schedule for the City's Sanitary Sewer Management Plan. This item was heard and discussed at an open meeting for public review and comment. This current version of the SSMP was recertified by the City Council at the August 8, 2018 meeting.

Communicating Sanitary Sewer System Performance

The City will make information on the performance of its sanitary sewer system performance available for review. The performance information will include the performance indicators listed in Section IX of the SSMP (Monitoring, Measurement, and Program Modifications) and will be compiled annually. Notice that the performance information is available for review will be posted on the City's website and updated as necessary.

The most recent compilation of the City's sanitary sewer system performance information is available for review at City of Encinitas Public Works located at 160 Calle Magdalena during normal business hours. Interested parties can contact Shawn Atherton at 760-633-2871 or satherton@encinitasca.gov for additional information.

The City reports SSOs electronically to the CIWQS. The electronic SSO data, as well as information regarding regulatory actions, is available at: http://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml The City will direct interested parties to the CIWQS public access website.

IMPLEMENTATION SIGNATURE PAGE

**City of Encinitas
Public Works Department
Wastewater Maintenance Section**

Sewer System Management Plan

Approved for implementation as authorized by Encinitas City Council on

_____;

Isam Hireish
City of Encinitas
Director of Utilities

Signature

Date

