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CITY OF ENCINITAS  
PUBLIC WORKS DEPARTMENT  
WASTEWATER MAINTENANCE SECTION



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SEWER SYSTEM MANAGEMENT PLAN

NOVEMBER 2014



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## Abbreviations & Acronyms

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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
OES	Office of Emergency Services
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow / Sewer Overflow
SWRCB	State of California Water Resources Control Board
WDR	Waste Discharge Requirements

## Introduction

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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 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 1 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 results 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, stormdrains, or waters of the State.

The Order requires the following:

1. 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.

2. 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 CIWQS – the California Integrated Water Quality System.
3. A Sewer System Management Plan (SSMP) must be developed and address specific milestones. The milestones in the Order are:
  - a) SSMP Development Plan and Schedule
  - b) Goals and Organizational Structure
  - c) Overflow Emergency Response Program
  - d) Legal Authority
  - e) Wastewater Program
  - f) Grease Control Program
  - g) Design and Performance Provisions
  - h) System Evaluation and Capacity Assurance Plan
  - i) Monitoring, Measurement, and Program Modifications
  - j) SSMP Program Audits
  - k) Communication Program
  - l) Final SSMP, incorporating all of the SSMP requirements
4. 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.

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 California Integrated Water Quality System (CIWQS) survey that is updated annually.

The two year City of Encinitas internal audit was conducted on August 2013.

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

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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 Overflow's (SSO's) as well as mitigate any SSO's that do occur.

### SSMP Goals

- Properly manage and maintain all parts of the sanitary sewer system
- Continual improvement to reduce all preventable SSO's
- Provide capacity to convey sewage during peak flows
- Minimize the frequency of sanitary sewer overflows
- Mitigate and reduce the impact of SSO's
- 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 COMPLIANCE

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

### 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 SSO's, from receipt of a complaint or other information, including the person responsible for reporting SSO's to the State and Regional Water Board and other agencies if applicable (such as; County Health Officer, County Environmental Health Agency, and/or State Office of Emergency Services (OES)).

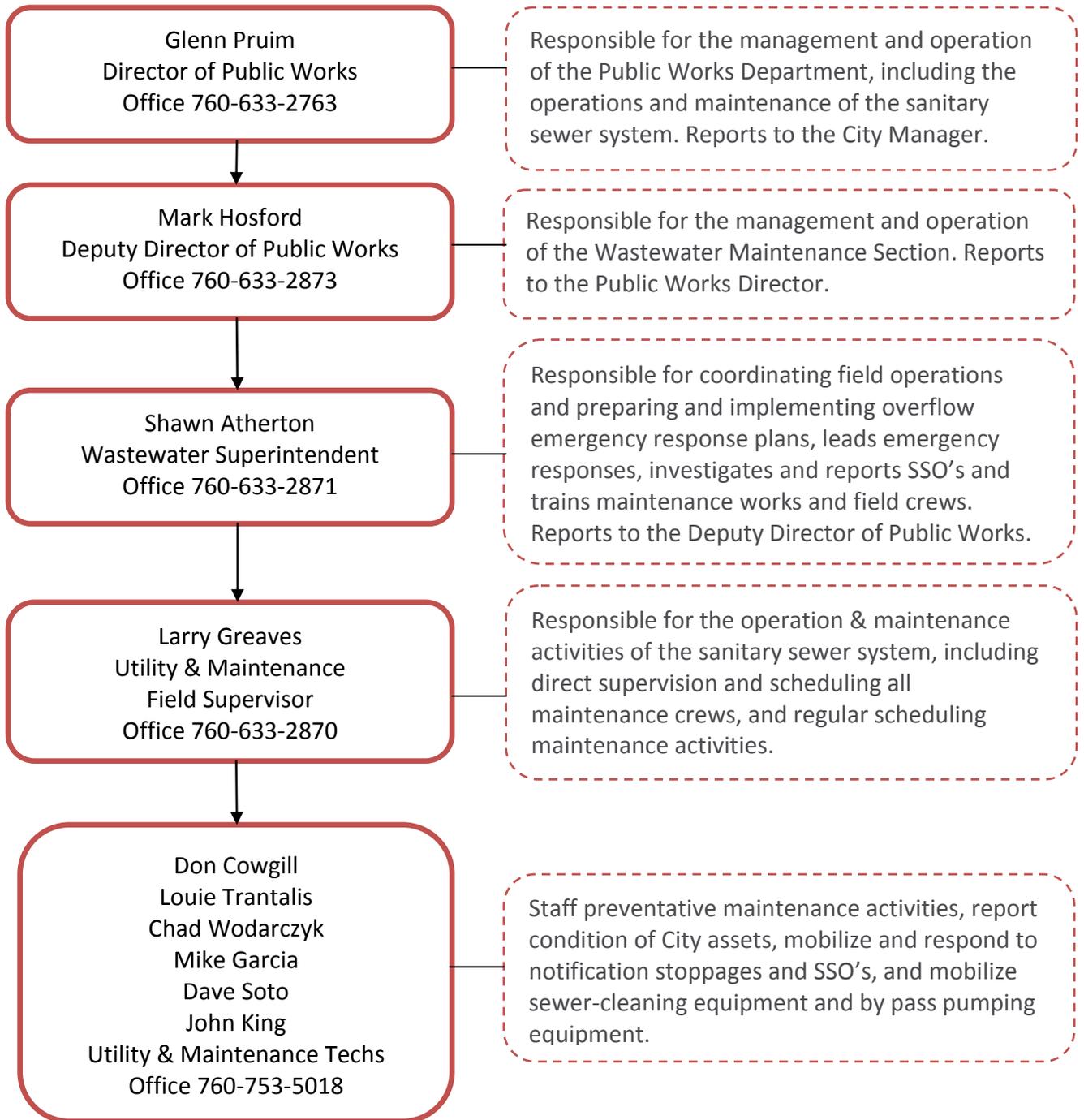
### Organization

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.

Glenn Pruum	Director of Public Works
Mark Hosford	Deputy Director of Public Works
Shawn Atherton	Wastewater Superintendent

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 SSO's, from receipt of a complaint or other information, including the person responsible for reporting SSO's to the State and Regional Water Board and other agencies.

**SSO: Responding to a Sewer Overflow, During 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 personal 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 California Integrated Water Quality System (CWIQS) website within 48 hours.

**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 have been notified.
    2. Written report must contain an itemization of all expenses incurred and the total amount of personal 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 California Integrated Water Quality System (CWIQS) 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 County Health Department and San Diego Water Control Board. Sewer spills that may be a threat to the general public must be reported to the office of emergency services (800/852-7550).

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 will probably 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 County Health Department. As of June 2001, Clay Clifton is our contact person. He can be reached at (619) 338-2386. If after hours call (858) 565-5255. Give Clay all the details of the spill, and he will assist you with the health department's requirements.
- F. Next, you must notify the Regional Water Quality Control Board at (858) 636-3155. If after hours call (858) 822-8344. They will ask you a series of questions related to the spill. Also, the Water Quality Control Board requires notification immediately and that a form be filled out and faxed to them within 24 hours of the spill start date (if the spill reaches a storm drain, body of water or is more than 1000 gal.). This form should be in

the stand by duty folder or can be obtained from the Wastewater Collection office, or you may simply request the form from the Regional Water Quality Board.

- G. Also report sewer spills to the Office of Emergency Services. This is a state-related office requesting notification of sewer spills greater than 1000 gallons. The telephone number is 1-800-825-7550.
- H. The requirements of the Health Department and Water Quality Control and Office of Emergency Services are different from each other. It is best to notify them if possible, before clean up procedures begin. They again, 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

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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. Authority to inspect grease producing dischargers.
- G. Authority to enforce sewer-related ordinances.

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

## SECTION IV: OPERATION AND MAINTENANCE PROGRAM

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The General Waste Discharge Requirements (GWDR) requirements 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 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 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 program 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.

### Operations and Maintenance Program

The following is the City's Operations and Maintenance Program that respond to the requirements of the GWDR's.

#### 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. Preventive 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, Closed-Circuit TV (CCTV) inspection and rehabilitation and replacement of sewers that are in poor condition.

The details of the City's 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 paper work.
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 paper work 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 paper work.
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 11 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 SSO's and in responding to contractor-caused SSO's.

#### 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 system facilities 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 Maintenance Section Superintendent	1
Wastewater Maintenance Section Field Supervisor	1
Wastewater Maintenance Section Utility & Maintenance Worker IV's	2
Wastewater Maintenance Section Utility & Maintenance Worker III	1
Wastewater Maintenance Section Utility & Maintenance Worker II's	3
Total Full Time Employee's	8

Equipment	Full Time Positions
Vac-Con Combination Sewer Cleaners	2
Sewer Equipment Company of America Continuous Rodder	1
Sewer Easement Cleaner	1
Cues 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**

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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 & EMERGENCY RESPONSE PLAN

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Each enrollee shall develop and implement an overflow 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 SSO's 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, regional water boards, water suppliers, etc.) of all SSO's that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP)). All SSO's shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System permit requirements. The Sewer System Management Plan should identify 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 SSO's, 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 CONTROL PROGRAM

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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 SSO's 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) address 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 heavy 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 Carroll 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 September 2014. The analysis showed that we have experienced “zero” sewer main FOG-related SSO’s.

The low incidence of FOG-related SSO’s 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 SSO’s 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

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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 storm or wet weather event. 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 SSO's 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.

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

The Executive Summary of the Master Plan is attached (Appendix D). Because the City's Master Plan Document is very large in volume The City's Master Plan Document is 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

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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: PROGRAM AUDITS**

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As part of the SSMP, the City shall conduct periodic internal audits, appropriate to the size of the system and the number of SSO's. 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 August of 2013, the next audit is scheduled for August of 2015 and every other August 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**

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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 agenzized at an open meeting for public review and comment.

### **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 SSO's 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](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**

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

**Sewer System Management Plan**

Approved for implementation as authorized by Encinitas City Council on February 13, 2008;

Glenn Pruim  
City of Encinitas  
Director of Public Works



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Signature

*Nov 20, 2014*

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Date

CHAPTER 18.01 SANITARY SEWER

GENERAL PROVISIONS

18.01.010 Purpose. It is the purpose of this Title to establish procedures and regulations for the use and protection of the City's sanitary sewer system (Ord. 95-16).

18.01.020 Severability. If any provision of this Title or the application thereof to any person or circumstance is held invalid, the remaining portions of the Title and the application of such provisions to other persons or circumstances are to be considered valid.

18.01.030 Definitions. For the purposes of this Title, the words set out in this section shall have the following meanings:

"Applicant" means any person or group of persons who applies for sewer services.

"Cost" means the cost of labor, material, transportation, supervision, engineering and all other necessary overhead expenses.

"Customer" means any person, firm, association, corporation or government agency served or entitled to be served sewer service by the City for compensation.

"Developer" means any person or group of persons, including contractors, corporations or public entities, who request to extend or connect to the sewer system.

"District" Any reference to the "Cardiff Sanitation District" by that name or any other reference within this code shall mean the City of Encinitas. (Ord. 2002-05)

"Extension" means an extension of an existing sewer main.

"Equivalent Dwelling Unit (EDU)" means the unit of measure which is based on the flow characteristics of an average single-family residence in terms of sewage quantity and constituent quality.

"Fiscal Year" means the period from July 1 to June 30, both inclusive.

"Garbage" means the animal and vegetable waste from the handling, preparation, cooking, dispensing, and disposal of food.

"Grease" means any material which is extractable from an acidified sample of water by hexane or other designated solvent and as determined by the appropriate procedure in standard methods. "Grease" includes fats and oils.

"Grease Interceptor" means a pretreatment device designed and installed to separate fats, oils, and grease from wastewater.

"Industrial Waste" means solid, liquid, or gaseous substances discharged or flowing from an industrial, manufacturing, or commercial premises resulting from manufacturing, processing, treating, recovery, or development of natural or artificial resources of whatever nature.

"Industrial Wastewater" means all water-carried wastes and wastewater of the community, excluding domestic wastewater and uncontaminated water. Includes all wastewater from any producing, manufacturing, processing, institutional, commercial, agricultural, or other operation. These may also include wastes of human origin similar to domestic wastewater.

"Interceptor Line" refers to a large sewer line to which many trunk lines are connected and which serves the primary purpose of transporting sewage from trunk lines to the disposal.

"Main or Sewer Main" is a sewer pipeline in the sanitary sewer system of the City. Individual service laterals discharge sewage into sewer mains which convey the sewage toward trunk lines and interceptor lines and ultimately to the disposal.

"Maximum Charge" refers to the maximum amount residential accounts can be charged for annual sewer service. This amount is based on indoor water usage for a household of six persons. (Ord. 98-10).

"Median Annual Water Usage" means the annual water use at which exactly half the customers in the classification are under the amount and half the customers are above the amount. (Ord. 98-10).

"Minimum Charge" refers to the minimum amount residential accounts can be charged for annual sewer service. This charge covers the fixed costs incurred by the City in providing sewer service to a customer, regardless of the amount of water usage. (Ord. 98-10).

"Multi-Family Residential" means the residential classification with more than one living unit served by a single water meter, and shall include all residential accounts other than single-family residential. (Ord. 98-10).

"Non-Residential" means the classification which includes all accounts other than single-family residential and multi-family residential customers. (Ord. 98-10).

"Owner or Property Owner" means the person owning the fee, the person in whose name the legal title to the property appears, by deed duly recorded in the County Recorder's office, or the person in possession of the property or buildings under claims of, or exercising acts of ownership over same for himself, or as executor, administrator, guardian or trustee of owner. Includes a holder in fee, life tenant, fiduciary, lessee or licensee holding under government lease or license of real property.

"Person" means any individual, property owner, partnership, co-partnership, firm company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.

"pH" indicates the intensity of acidity and alkalinity on a pH scale running from 0 to 14. A pH value of 7.0, the midpoint of the scale, represents neutrality. Values above 7.0 indicate alkalinity and those below 7.0 indicate acidity.

"Premises" means any lot, piece or parcel of land, building or establishment.

"Pretreatment or Treatment" is the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing to the sewer system.

"Return to Sewer" is the percentage of metered water usage, measured in hundred cubic feet, that is discharged into the sanitary sewer system for collection and treatment. This percentage excludes storm, surface, and groundwaters not intentionally admitted in to the sewer system. (Ord. 98-10).

"Regular Sewer Service" means the sewer service and facilities rendered for normal domestic and industrial or commercial purposes on a permanent basis and the sewer system available - therefore.

"S.S." means suspended solids, a measure of the strength of wastewater. (Ord. 98-10).

"Sanitary Sewer or Sewer" shall mean a sewer which carries sewage and to which storm, surface, and groundwaters are not intentionally admitted.

"Self-regenerating or Automatic Water Softener" is a water softener unit which is a water conditioning apparatus such as zeolite and resinous ion-exchange softeners or diminerlizers or other like devices which require the periodic discharge of brine solutions in their operation.

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18.01.030

"Sewage" means the waterborne wastes derived from ordinary human living processes and of such character as to permit satisfactory disposal, without special treatment, into the public sanitary sewer, a private sanitary sewer, or by means of household septic tank systems.

"Sewer, Building or House" means that portion of a pipe or conduit carrying sanitary sewage and/or industrial wastes from a building to the public sanitary sewer or a common sewer.

"Sewer Lateral or Service Lateral" means the service pipes extending from the private property line to the public sanitary sewer main in a public street, alley or easement. It is the connection of any domestic, commercial or industrial sanitary sewer lines to the City's system after the payment of established fees and charges and City approval. (Ord. 97-04)

"Sewer, Private" refers to a privately owned sanitary sewer which is not directly controlled by the City.

"Sewer, Public" refers to the sanitary sewer system under the jurisdiction of the City and the sewage treatment plant where the sewage will be processed.

"Sewer System" means the sanitary sewer system of the City. Includes all construction and appurtenant equipment utilized in the collection, transportation, pumping, treatment and final disposal of sewage.

"Single-Family Residential" means the residential classification where one living unit is served by one water meter, with the exception that where two or more living units are attached they are treated as multi-family residential regardless of the number of water meters. (Ord. 98-10).

"Slug" means any discharge of water, sewage or industrial wastes which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen minutes more than five times the average twenty-four hour concentration of flows during normal operation.

"Standard Methods" means the current edition of Standard Methods for the Examination of Water and Wastewater as published by the American Public Health Association, and Water Pollution Control Federation.

"Sub-classification" refers to the individual uses arranged under the classification. (Ord. 98-10).

"Sub-meter" means a device used in addition to a water utility meter maintained by the San Dieguito Water District or Olivenhain Municipal Water District to measure the water usage within a dwelling unit or outside a dwelling unit for the purpose of isolating outdoor water usage. (Ord. 98-10).

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18.01.030

"Suspended Solids" means solids that either float on the surface of, or are in suspension in water, sewage, or other liquids; and which are largely removable by laboratory filtering and as determined by the appropriate procedure in standard methods.

"Trunk Line" means a main sewer line to which many sewer mains are connected and which serves the primary purpose of transporting sewage from sewer mains to the disposal.

"Utility Hole" is an access to underground utilities. It is also referred to as a manhole.

"Wastewater" means waste and water, whether treated or untreated, discharged into or permitted to enter a public sewer.

18.01.040 Grammatical Interpretation. For the purpose of this Title:

- A. All words used in the present tense shall include the future;
- B. All words in the masculine gender shall include the feminine;
- C. The word "shall" is mandatory and "may" is permissive;
- D. All words in the plural number shall include the singular number; and
- E. All words in the singular number shall include the plural number.

07-02  
18.04.010

CHAPTER 18.04  
GENERAL SEWER REGULATIONS

18.04.010 Title. This Chapter shall be known as the "City of Encinitas Sewer Regulations Ordinance." (Ord. 95-16).

18.04.020 Purpose of Rules and Regulations. The purpose of these rules and regulations is to set forth the terms and conditions under which the City will authorize connections and provide sewer service to customers.

18.04.030 Sewer System. The City will furnish a system, works and infrastructure used for and useful for collection of domestic and industrial sanitary sewage, including all parts of the enterprises, all appurtenances to it, and lands, easements, rights in land, contract rights, franchises, and other sewage collection facilities and equipment.

18.04.040 Sewer Service and Connection Conditions. All applicants for sewer service or sewer connections shall be required to accept such conditions of connection and service as may be provided by the City. The construction, installation, or repair of sewer service laterals and house sewers and connections to the *sewer main and sewer system* shall be completed in accordance with all existing laws, ordinances, and rules of the City, County of San Diego, and the State of California or any department thereof. The type of sewage discharged into the sewer system shall meet the requirements and restrictions of the Encina Wastewater Authority or the San Elijo Joint Powers Authority as applicable. (Ord. 2002-05).

18.04.050 Tampering with City Property. No one except an employee or representative of the City shall at any time in any manner operate the valves, motors, gates, machinery, sewage treatment plant, sewer utility holes, or siphons of the City system or interfere with sewer lines or other parts of the sewer system.

18.04.060 Damage to City Sewers. No person shall willfully break, damage, destroy, uncover, deface or tamper with any structure, appurtenances or equipment which is part of the City's sewer system. Any person who willfully or negligently damages any City sewer or facility thereto is liable for the cost of repair, including the cost of replacement thereof.

18.04.070 Right to Inspect and Enter Private Property for Work within Sewer Easements. With the permission of the property owner, the officers, employees and agents of the City bearing proper credentials and identification shall have the right to enter upon any premises within the City to inspect and determine if this Title is being complied with, and for the purposes of, but not

limited to, inspection, observation, measurement, sampling, repair, replacement and maintenance of any portion of the sewer system within any easements on the property.

18.04.080 Unlawful to Make Sewer Connection without Payment of Fee.

A. No person shall connect to the City's sewer system or sewer main without first submitting an application for sewer connection/capacity and obtaining the approval of the City Engineer authorizing such connection. (Ord. 2002-05).

1. Approval of the application shall be given if the applicant is able to deliver sewage to points and elevations designated by the City and has paid all related fees and charges.

2. All applicants for new connections must be served within the boundary of the City or within the sphere of influence of the City with a submitted request for annexation into the City through the Local Agency Formation Commission procedure. (Ord. 2002-05).

B. It is unlawful for any person:

1. To place, discharge or dispose of any material, solid or liquid, into the sewer system, or any part thereof, without first obtaining a permit from the City pursuant to this Title, and without having first paid all fees required by this Title; or

2. To place, discharge or dispose of any substance into the sewer system except substances of waste materials originating on the premises to which a sewer connection permit has been issued.

18.04.090 Enforcement Measures in Case of Delinquency. When any fee or charge imposed by this Title becomes delinquent, the enforcement agents are authorized to take any or all of the following actions in accordance with the law:

A. Any steps authorized by law to collect fees and charges;

B. Disconnect the premises from the City's sewer system; prior to such disconnection, notice of such delinquency shall be given to the occupant of the premises by United States mail with return receipt, or by posting such notice on the premises; the occupant will be given the opportunity for informal hearing with the City Manager prior to said disconnection, and if requested, within five days thereafter appeal to the City Council; concurrently with the disconnect, a copy of the City's notice to occupant will be furnished to the regional office of the County Health Department. When a premises has been disconnected, it shall not be reconnected until all delinquent fees and charges have been paid, together with a charge for such disconnection and reconnection, as established by resolution of the City Council.

18.04.100 Maintenance of Sewer Lateral.

A. The property owner serviced by a sewer lateral shall be responsible for cleaning, maintaining and repairing the sewer lateral between the sewer main and the lateral connection to the structure.

B. The property owner shall do such work at the property owner's sole expense and only after the required permits have been issued.

C. The owner of such property shall reimburse the City for work on sewer laterals for the removal of obstructions, when the work is designated as necessary for public safety. (Ord. 2002-05).

18.04.110 Restrictions Relating to Use of Public Sewers.

A. No person shall discharge or cause to be discharged any storm water, surface water groundwater, unpolluted industrial process water, roof runoff, subsurface drainage, or any waters from an uncontaminated cooling system, swimming pool, decorative fountain or pond, into any public sewer or any private sewer which is connected to the public sewer without written permission from the City Engineer in conformance with adopted regulations.

B. No person shall enter, obstruct, uncover, or tamper with any portion of the public sewer, or connect to it, or dispose septic tank/cesspool wastes, or dispose of anything into any sewer and/or sewer utility hole without the written permission of the City Engineer.

C. No person shall remove or demolish any building or structures with plumbing fixtures connected directly or indirectly to the public sewer as follows:

1. The person shall notifying the City Engineer prior to commencing work;

2. The person shall ensure that all openings in or leading to the public sewer line or lines caused by such work shall be sealed watertight; and

3. The person shall ensure that the work is inspected by the City Engineer or his representative before being backfilled.

D. No person shall fill or backfill over, or cause to cover, or obstruct access to, any sewer utility hole.

E. No person shall erect any improvements, structures, or buildings over public sewers or sewer easements without the written permission of the City Engineer.

F. Except as hereinafter provided in this section, no person shall discharge or cause to be discharged any of the following described substances, waters or wastes into any public sewer:

1. Liquid or vapor having a temperature higher than 140 degrees Fahrenheit;

2. Water or waste which may contain more than 200 mg/l for inorganic or 400 mg/l of organic concentration of fats oils, grease, or waxes, or containing substances which may solidify or become viscous at temperatures between 32 degrees and 150 degrees Fahrenheit;

3. Gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas;

4. Toxic, noxious or malodorous liquid, solid, or gas deemed a public hazard and nuisance;

5. Paints, or waste products from paint manufacture;

6. Garbage that has not been properly shredded to a size of one-fourth inch or less so that all particles will be carried freely under normal flow conditions in the public sewers;

7. Ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar plastics, wood, paunch manure, paper substances or normally dry, solid wastes capable of causing obstruction to the flow in or damage to sewers or other interference with the proper operation of the sewerage works;

8. Water or wastes having a pH lower than 5.5 or higher than 11.0 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewerage works;

9. Water or wastes containing any substance in sufficient quantity to discolor, injure, disrupt or interfere with the normal operation of any sewage treatment process, constitute a hazard to human or animal life, create a public nuisance, or significantly lower the quality of the receiving waters;
10. Water or wastes containing suspended solids of such character or quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant;
11. Unusual volume of flow or concentration of wastes constituting “slugs” as defined in Section 18.01.020;
12. Radioactive wastes or isotopes of such half-life or concentration that may exceed limits established by the City Engineer in compliance with the applicable state or federal regulations;
13. Water added for the purpose of diluting wastes which could otherwise exceed applicable maximum concentration limitations; or
14. Water or wastes containing substances which are not amenable to treatment or reduction by the treatment processes normally employed.

#### 18.04.120 Pumping Interceptors/Grease Traps.

A. No person shall discharge or cause to be discharged any fats, greases, and waxes to the sewer system if their concentration and physical dispersion results in separation and adherence to sewer structures and appurtenances. If there is evidence of adherence of such materials to said structures, or if such materials cause blockage in the sewer system, then the wastewater carrying such materials must be effectively pretreated by a process or device to effect removal from the flow before its discharge to the sewer system. Grease, oil, and sand interceptors shall be installed when deemed necessary by the City Engineer for the proper handling of liquid waste containing grease in excessive amounts, and flammable materials, sand, and other harmful ingredients. All interceptors shall be of a type and capacity acceptable to the City Engineer and shall be located as to be readily accessible for cleaning and inspection.

B. Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction,

watertight, and equipped with easily removable covers which when bolted in place shall be gastight and watertight.

C. All grease, oil, and sand interceptors shall be maintained in continuously efficient operation at all times by the owner at his expense. In the maintaining of these interceptors, the owner shall be responsible for the costs and the proper removal and disposal by appropriate means of the captured material and shall maintain records of the dates, amounts, and means of disposal which are subject to review by the City Engineer.

18.04.130 Surcharge. Any person who discharges or causes to be discharged into the public sewers any water or wastes having more than 200 mg/l of inorganic or 400 mg/l of organic grease or oil shall be obligated to pay a surcharge, occasioned by the extent to which such water or waste contains an excess over the foregoing limitation of concentration, or by the estimated cost of the City services required to remedy the effect of the discharge.

18.04.140 Self-regenerating or Automatic Water Softeners Prohibited.

A. It is unlawful for any person to install or replace any plumbing equipment, including any automatic or self-regenerating water softener unit, the operation of which may result in the discharge of saline waste into the sewerage facilities, or the discharge of such wastes that might pollute any surface or underground stream, watercourse, lake or body of water, including any underground, natural or artificial storage reservoir, or which might impair or contribute to the impairment of the usefulness of such waters for human or animal consumption, or domestic, agricultural, industrial, or recreational purposes or for any other useful purpose.

B. Self-regenerating water softener units which are found discharging to the City sewer shall be removed on demand of the City Engineer. Should any such installation not be removed on demand of the City Engineer, the City may remove such installation at the expense of the customer or take action to disconnect the premise in accordance with this Title.

18.04.150 Septic Tanks. (See Municipal Code Section 11.04.020, subsections N and O)

18.04.160 Violation -- Penalty. For the failure to comply with all or any part of this Title, any ordinance, resolution or order of the City pertaining to the delivery of public sewer services, in addition to any other penalty or remedy provide by law, the City may discontinue sewer service in accordance with an order of court. Any person violating any of the provisions of this

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18.04.160

Title is liable to the City for any expense, loss or damage, and for any increase in the cost of maintenance or repair, occasioned by the City as a result of such violation.

CHAPTER 18.08  
SEWER CONNECTION FEES AND SEWER SERVICE CHARGES

18.08.010 Application for Sewer Connections and/or Monthly Sewer Service --Applicant Responsibilities. (Ord. 95-16).

A. Applications. Applications for sewer connections and/or sewer service shall be submitted at the Engineering Services Department counter at the Civic Center on prescribed forms provided by the City.

B. Compliance of Applicant. Application approved for sewer service and/or sewer connections will signify the applicant's willingness and intention to comply with all ordinances and regulations relating to sewer service and/or connections and to make payment for such sewer service fees, connection/capacity fees, sewer construction permit deposits, and inspection fees, as well as other pertinent contingent fees set forth by resolution and by other applicable rules and regulations. (Ord. 97-04).

18.08.020 Sewer Connection/Capacity Fees.

A. The sewer connection/capacity fee shall be set by ordinance. (See H/S § 5474) (Ord. 97-04).

B. Connection/capacity fees and inspection fees are due and payable at the time of application for a Wastewater Discharge Permit. The number of equivalent dwelling units shall be used to compute the amount of the connection fee. (Ord. 97-04).

C. If the proposed connection cannot be made, the fee will be refunded when approved by the City Engineer.

18.08.025 Equivalent Dwelling Unit Determination. (Ord. 98-10).

A. RESIDENTIAL. The number of equivalent dwelling units (EDU) assigned to each structure is determined as follows:

- |    |   |         |
|----|---|---------|
| 1. | Single Family Residence,<br>per each individual dwelling unit, per lot<br>(Includes manufactured homes, and mobile<br>homes which are on private lots). | 1.0 EDU |
| 2. | Residential condominiums<br>per each individual living unit.  | 1.0 EDU |

- |    |  |         |
|----|--|---------|
| 3. | All apartments and accessory units,<br><br>regardless of number of bedrooms, per each individual living unit on the same lot. (Ord. 97-11) | 0.8 EDU |
| 4. | Mobile Home and Trailer Parks, per each individual space. *  | 0.5 EDU |
|    | a. Mobile Home   | 0.5 EDU |
|    | b. Trailer Space   | 0.5 EDU |
|    | c. Recreational Vehicle Park,<br>occupied or not   | 0.5 EDU |
- \* Any accessory facilities such as laundry, dining, recreational area, residence, etc., shall be considered separately in addition to trailer spaces, as per this ordinance.

**B. COMMERCIAL/INDUSTRIAL/SCHOOL FACILITIES.**

- |    |  |         |
|----|--|---------|
| 1. | Food Service Establishments.   |         |
| a. | Take-out restaurants with disposable utensils, no dishwasher, and no public restrooms.   | 3.0 EDU |
| b. | Miscellaneous food establishments: ice-cream/yogurt shops, bakeries, or equivalent (sales on premise only).  | 3.0 EDU |
| c. | i. Take-out/eat-in restaurants with disposable utensils, but with minimum seating and public restrooms.  | 3.0 EDU |
|    | ii. Restaurants with re-usable utensils, seating and public minimum restrooms, includes cocktail bars.<br>One EDU is assigned for each 6-seat unit as follows:<br>1-18 seats = 3.0 EDU (minimum);<br>Each additional 6-seat unit will be assigned 1.0 EDU. The number of seats will be equal to eighty percent of the maximum occupant load for the eating area as defined by the current Uniform Building Code. | 3.0 EDU |

2. Hotels and Motels. \*
- a. Per living unit without kitchen 0.38 EDU
- b. Per living unit with kitchen 0.60 EDU
- \* Any accessory facilities such as laundry, dining, recreational area, residence, etc., shall be considered separately in addition to living units, as per this ordinance.
3. Commercial, Professional, Industrial Buildings, to include Markets, Recreational Facilities, Full-Service Laundries/Dry Cleaners, Mortuaries, and all variations thereof, and Establishments not Specifically Listed Herein.
- a. Any office, store, motor-vehicle wash, or industrial condominium or establishment.
- i. First 1,000 square feet 1.2 EDU
- ii. Each additional 1,000 square feet or portion thereof 0.7 EDU
- b. Where occupancy type or usage is unknown at the time of application for service, the following EDU's shall apply. This shall include, but not be limited to shopping centers, industrial parks, and professional office buildings.
- i. First 1,000 square feet of gross building floor area 1.2 EDU
- ii. Each additional 1,000 square feet of gross building floor area. Portions less than 1,000 square feet will be prorated. 0.7 EDU
4. Self-service Laundry, Per Washer. 1.0 EDU
5. Churches, theaters, and auditoriums per each 150 person seating capacity, or fraction thereof. (Does not include office spaces, school rooms, day care facilities, food preparations areas, etc. Additional EDU's will be assigned for these supplementary uses.) 1.5 EDU

- 6. Schools, to include day-care centers, boarding schools, or other combined youth educational, recreational and residential facilities.
  - a. Elementary Schools, for 50 pupils or fewer 1.0 EDU
  - b. Junior High Schools, for 40 pupils or fewer 1.0 EDU
  - c. High Schools, for 24 pupils or fewer. 1.0 EDU

Additional EDU's shall be prorated based on above values. The number of pupils shall be based on the average daily attendance of pupils at the school during the preceding fiscal year, computed in accordance with the education code of the State of California. However, where the school has had no attendance during the preceding fiscal year, the City Engineer shall estimate the average daily attendance for the fiscal year for which the fee is to be paid and compute the fee based on such estimate.

- 7. Convalescent Homes. \*
  - a. Skilled nursing care facilities, psychological hospitals, convalescent hospitals; licensed by the Department of Health. 0.7 EDU/bed
  - b. Community Care Facilities with 16 or more beds licensed by the State Department of Health. 0.5 EDU/bed
  - c. Small Community Care Facilities with 7 to 15 beds licensed by the County Department of Social Services. 0.5 EDU/bed
  - d. Community Care Homes with six or fewer total residents, including resident staff and housekeepers (to be the same EDU as a single family residence). 1.0 EDU

\* Any accessory facilities such as laundry, dining, recreational area, residence, etc., shall be considered separately in addition to beds/residents, as per this ordinance.

- 8. Automobile Service Station.
  - a. Four gasoline/diesel/natural gas pumps or less 2.0 EDU
  - b. More than four gasoline/diesel/natural gas pumps 3.0 EDU
  - c. Each floor drain connected to sewer 0.5 EDU
- 9. Warehouse or equivalent, per four fixture unit increment. 1.0 EDU

10. Other.

In the case of commercial, industrial, and other establishments not included in Commercial/Industrial items (1) through (9) inclusive, or when the EDU's specified in items (1) through (9) are not representative of actual flow due to the number of employees or type of operation, the number of equivalent dwelling units shall be determined in each case by the City Engineer and shall be based upon the estimated volume and type of wastewater discharge into the sewer.

18.08.030 Sewer Service Charges.

- A. The sewer service charges shall be set by ordinance. (See H/S § 5471)
- B. A sewer service charge is levied and charged upon each premise which discharges sewage that ultimately passes through the City's sewer system. (Ord. 98-10).
- C. The property owner of record shall be responsible for payment of the sewer service charge. Any agreement between landlords and tenants to the contrary will not relieve the landlord or record owner of the property of the responsibility for payment of the sewer service charges to the City. (Ord. 98-10).
- D. Sewer service charges may be collected either through the tax roll of the County of San Diego, on the property's water bill, or by issuing a manual bill for payment. The method utilized is determined by the Public Works Director or his designee. (Ord. 98-10).
- E. Payment of sewer service charges for new connections are paid for at the time the Wastewater Discharge Permit is issued. If the permit is for an existing building the sewer service charges will be prorated for the fiscal year based upon the date the permit is issued. If the permit is for new construction or connection, then a time credit of four months shall be allowed when computing the amount of sewer service charges. This prorated amount shall be paid at the time the Wastewater Discharge Permit is issued. (Ord. 2002-05).

F. Provided, however, in the case of other businesses and establishments that have unusual character insofar as sewage is concerned, the rate shall be established in each case by the City Manager or his designee. The rate so established shall be fixed in consideration of the estimated or actual volume of flow and suspended solids (ss) and/or biological oxygen demand (BOD) content from such. (Ord. 98-10).

G. The annual sewer service charges for all properties discharging sewage that passes through the City's sewer system, excluding schools, will be determined by applying the volume sewer charge per hundred cubic feet (HCF) for each customer classification to each parcel as determined by the water utility meter readings. The annual sewer service charges for schools shall be determined by applying the number of equivalent dwelling units (EDU) assigned per the average daily attendance of pupils at the school at the current rate set by ordinance. (Ord. 98-10).

H. The property owner of record at the time the annual sewer service charge is billed shall be responsible for the sewer service charge associated with the metered water use occurring during the time period in which it is recorded. (Ord. 98-10).

18.08.040 Sewer Service Outside City Limits. When it appears to be in the best interest of the City and the people thereof, the City Engineer may prepare an agreement for property situated outside the City to be permitted to connect to the sewer system. The agreement may state the terms of connection, special conditions and limitations, cost for service, annexation fees, connection/capacity fees, and other conditions of sewer service. (Ord. 98-10)

18.08.050 Refunds, Back Charges, and Changes in Use Resulting in Different Rates, Sewer Service Charges and/or Connection/Capacity Fees. (Ord. 97-04).

A. Increased Rates. Whenever the use of any premises previously connected to the City system is changed so that there is a fee applicable to such premises increased from that which existed at time original application was made, there shall immediately become due, owing and payable to the City the increase in fees applicable. The charges imposed by this regulation shall become delinquent sixty days following the date it becomes due.

B. Back Charges for Unpaid Sewer Service. The City Engineer is authorized to require back charges in the event that a property has been discharging into the sewer system without payment of sewer service charges. The back charges may be imposed up to four years in arrears. (Ord. 97-04).

C. Refund/Reduction of Sewer Service Charges and/or Connection/Capacity Fees. The Public Works Director is authorized to allow refunds of annual sewer service charges and/or connection/capacity fees to non-discharging parcel owners and to property owners which have been over-charged for sewer service and/or connection/capacity fees. The Public Works Director is authorized to discontinue charging non-discharging parcels for sewer and to reduce the sewer service charge of over-charged parcels. Only those amounts which were over-charged will be refunded, and without accrued interest. Refunds shall be issued for up to four years in arrears during which the property owner was over-charged for sewer service. (Ord. 98-10).

18.08.060 Exceptions. The Public Works Director or his designee shall have the power to grant exceptions and to establish policies for the granting of such exceptions from the established sewer service charges. Such exceptions shall only be granted when one or more of the following situations exist: (Ord. 98-10).

- A. Where the premises are not connected to the sewer system of the City.
- B. When water is supplied to premises through a separate water meter and such water is used entirely for irrigation purposes.
- C. Where the city has entered into a separate service agreement.

18.08.070 Adjustment of Sewer Service Charges Authority. The Public Works Director or his designee shall have the power to adjust the annual sewer service charge when one or more of the following situations exist: (Ord. 98-10).

- A. When excessive water consumption is caused by unknown water pipe leaks and it is positively demonstrated to the satisfaction of the City that above-mentioned water consumption is not discharged into the sewer system.
- B. Where it can be positively demonstrated to the satisfaction of the City that the percentage of return to sewer is less than the amount calculated for that customer classification due to a substantial portion of the water used for industrial, recreational, horticultural or agricultural purposes.
- C. When water is supplied to premises by more than one water meter and one or more of such additional water meters does not provide water which is discharged into the sewer system.
- D. When ownership of the parcel changes after the period during which the water meter readings are recorded and the amount of water used during that period is above the median annual water use for that customer classification. It must be positively demonstrated by the customer that the recorded amount is not representative of their actual consumption for the type of use.

18.08.080 Calculation of Annual Sewer Service Charge (Ord. 98-10)

A. **SINGLE FAMILY RESIDENTIAL** The annual sewer service charge for single family residential customers shall be determined by applying the sewer charge per hundred cubic feet (HCF) to the adjusted annual water usage. For customers of the San Dieguito Water District, the service charge will be based on the two lowest bi-monthly water meter readings from December through May, multiplied by three to arrive at the annual water usage in HCF. For customers of the Olivenhain Municipal Water District, the service charge will be determined by combining monthly water meter readings from December through May to produce three bi-monthly readings. The service charge will be based on the lowest two readings multiplied by three to arrive at the annual water usage. The annual water usage is adjusted by applying a percentage return to sewer to determine the adjusted annual water usage. The minimum and maximum charges established by ordinance will apply to all single family residential customers whose water utility meter readings fall under or over the established limits.

B. **MULTI-FAMILY RESIDENTIAL** The annual sewer service charge for multi-family residential customers shall be determined in the same manner as for single-family residential customers. For multi-family residential customers with separate parcels sharing a single water utility meter, the annual total water usage shall be divided among the number of parcels served and applied to each parcel equally. The annual sewer service charge will be based on the adjusted annual water usage for the parcel. The minimum and maximum charges established by ordinance will apply on a per unit basis to all multi-family residential customers whose water utility meter readings fall under or over the established limits.

C. **NON-RESIDENTIAL** The annual sewer service charge for non-residential customers shall be determined by applying the sewer charge per hundred cubic feet (HCF) to the adjusted annual water usage. The annual water usage is based on the prior twelve months metered water usage from May through April for the customer and is adjusted by applying a percentage return to sewer to determine the adjusted annual water usage. A minimum charge has been established for non-residential customers.

D. When less than two full bi-monthly billing periods (four full monthly periods for customers of the Olivenhain Municipal Water District) of metered water use is available from December through May for residential customers, the median annual water use for that customer classification, as set by ordinance, shall apply.

E. When less than three full bi-monthly billing periods (six full monthly periods for customers of the Olivenhain Municipal Water District) of metered water use is available for non-residential customers for the prior year, the median annual water use for that customer sub-classification, as set by ordinance, shall apply. When more than three full billing periods, but less than six full bi-monthly periods (twelve full monthly periods for customers of the Olivenhain Municipal Water District) of metered water use is available for non-residential customers for the prior year, the use shall be normalized to one year. (Ord. 2002-05).

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18.08.080

F. When a single water meter serves more than one customer classification on a parcel, the highest strength classification will be used in determining the rate per hundred cubic feet of water usage.

G. When no median annual water use exists for a non-residential sub-classification, the number of equivalent dwelling units assigned to the parcel for the purpose of determining the sewer connection/capacity fees shall be used, multiplied by the median annual sewer service charge for the single family residential customer sub-classification.

H. When the non-residential sub-classification for a customer changes prior to the determination of the annual sewer service charge for the customer, the rate for the new sub-classification shall apply and the annual water usage for each customer sub-classification shall be used to determine the annual sewer service charge.

18.08.090 Challenge of Sewer Service Charge Determination (Ord. 98-10).

A. Administrative Review. The property owner of record or his designee subject to the sewer service charge may apply in writing to the Public Works Director or his designee for an exception or adjustment as hereinabove provided in Sections 18.08.060 and 18.08.070; however, no rebate of fees upon such exception shall be allowed for any fees paid one year or more preceding the filing of such application. The applicant shall complete an official Application for Review of Annual Sewer Service Charge, supplied by the Public Works Department. The applicant shall furnish necessary factual data to support such application. The Public Works Director or his designee shall review the application and approve or deny the application based on the information provided by the applicant.

B. Appeal to City Manager. Upon denial or conditional approval by the Public Works Director or his designee, any applicant dissatisfied with such decision may appeal same to the City Manager.

C. Appeal to City Council. Upon denial or conditional approval by the City Manager, any applicant dissatisfied with such decision may appeal same to the City Council. Such appeal must be filed in writing with the City Clerk within thirty (30) days after the notice of such decision.

18.08.100 Sub-Meters. If the property owner determines that it is in their best interest, a sub-meter may be used to demonstrate to the satisfaction of the City that the percentage of return to sewer is less than the amount calculated for that customer classification. (Ord. 98-10).

A. Readings obtained from sub-meters installed for the purpose of measuring exclusively indoor or outdoor water use in HCF may be used by the City for the purpose of calculating the annual water usage if the following conditions are met:

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18.08.100

1. An application requesting that the water readings from a sub-meter be considered in determining the annual sewer service charge be completed by the customer prior to the installation of a new sub-meter.

2. The use of the sub-meter be pre-approved by the Public Works Director or his designee prior to installation.

3. The sub-meter be connected to a water line exclusively used for indoor or outdoor water use.

4. An annual service charge may be imposed by the respective water agency for the meter reading during which the usage is recorded. The above-mentioned charge shall be set by ordinance. (Ord. 2002-05).

5. An annual service charge may be imposed by the respective water agency for the meter reading during which the usage is recorded. The above-mentioned charge shall be set by ordinance.

B. A penalty will be imposed by the City for any sub-meter found to be tampered with, adjusted, or improperly installed to produce false readings.

07-02

18.12.010

CHAPTER 18.12  
SEWER CONSTRUCTION REIMBURSEMENT CONNECTION FEE

18.12.010 Purpose. It is the purpose of this Chapter to allow a reimbursement connection fee at the time of connection when the sewer service has been made available by a private developer prior to the time that the City would have been able to make the sewer service available. The purpose of the reimbursement connection fee is to reimburse the person privately constructing the sewer main which is dedicated to the public and offered to the City. (Ord. 2002-05).

18.12.020 Procedure.

A. The City and the developer may enter into a reimbursement agreement in which the developer agrees to dedicate the sewer main to the public and offer the main to the City.

B. Upon acceptance of the sewer main by the City in accordance with Section 4742.3 of the Health and Safety Code, the City shall adopt an ordinance imposing a reimbursement connection fee for connections to that sewer main. The reimbursement connection fee shall be determined by the City Engineer and City's administrative manual and shall provide funds to reimburse the developer for costs of the main which benefit other property owners which connect to the main. The reimbursement connection fee shall include a 6% per annum simple interest charge to partially compensate developer for his financing costs. The developer shall not be reimbursed for his fair share of the project costs (that portion of the improvement costs that directly benefits his/her development). The City shall return the collected reimbursement connection fees to the developer, less administration fees and any other costs or fees, in accordance with the terms of the reimbursement agreement. (Ord. 2002-05).

18.12.030 Term of Agreement. The period over which special connection fees are collected shall be 20 years: (Ord. 2002-05).

18.12.040 Reimbursement of Costs by Benefiting Property Owners Connecting. When a sewer main extension has been installed and a reimbursement agreement amount has been approved by the City Council, any benefiting property owner, prior to connection to the sewer main, who has not either himself or through his predecessor in interest contributed toward the cost of such installation, shall pay to the City, in addition to any sewer connection fees required by this Code or any other ordinance of the City, the reimbursement connection fee for such sewer main extension, at the rate provided for by ordinance of the City Council. (Ord. 2002-05).

The following sewer reimbursement ordinances have been approved by the City Council: (Note: All references to "District" or "Cardiff Sanitation District" means City or City of Encinitas.) (Ord. 2002-05).

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18.12.100

18.12.100 William J. Ackerman Reimbursement Connection Fee (92-01). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$7,750.00 plus 6% annual simple interest upon the effective date of Ordinance No. 92-01 (December 10, 1992), adopted by the Board of the District for premises connecting directly to the sewer line (CS079) as shown on plan attached as Exhibit A to the "Reimbursement Agreement Between William J. Ackerman and the Cardiff Sanitation District," on file in the Office of the District Clerk. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee. This agreement expires on December 10, 2002.

18.12.120 Philip Boczanowski Reimbursement Connection Fee (89-03). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$1,330.00 plus 6% annual simple interest computed from the effective date of Ordinance No. 89-03 (April 6, 1989), for premises connecting directly to the sewer line (PC1971) as shown on plan attached as Exhibit A to the "Reimbursement Agreement Between Philip Boczanowski and the Cardiff Sanitation District," on file in the Office of the District Clerk. This agreement expires on April 6, 1999.

18.12.121 Raymond and Lilly Bosch and Mike and Katie Colton Reimbursement Connection Fee (96-01). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$7,112.71 plus 6% annual simple interest computed from the effective date of Ordinance No. 96-01 (March 29, 1996), until paid for equivalent dwelling units connecting directly to the sewer facility known as CS183 located in Fortuna Ranch Road, generally west of Rancho Summit Drive and east of Akita Lane in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 20 years from the effective date of Cardiff sanitation district Ordinance No. 96-01. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee. This agreement expires on March 29, 2016.

18.12.122 Gary Bukamier Reimbursement Connection Fee (96-02). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$16,723.56 plus 6% annual simple interest computed from the effective date of Ordinance No. 96-02 (January 17, 1997), until paid for equivalent dwelling units connecting individual lateral(s) directly to the sewer facility known as CS121 running easterly in Fortuna Ranch Road, thence northerly and thence easterly in Bukamada Lane in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 20 years from the effective date of Cardiff Sanitation District Ordinance No. 96-02. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee. This agreement expires on January 17, 2017.

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18.12.140

18.12.140 Reimbursement Fee – Cardiff Sanitary Division. In addition to any other fees for connections to a public sewer main within the Division, there is established a reimbursement fee of \$46,086.71 plus 6% annual simple interest computed from the effective date of this Ordinance 2003-01 for each parcel which connects its lateral directly to the sewer main known as CS271 located in the vicinity of Bumann Road in Encinitas, as more fully set forth in the Notice of Competition CCE99D filed in the Office of the City Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas Ordinance 2003-01, or until such time as the reimbursement agreement expires, whichever is sooner. (Ord. 2003-01).

18.12.160 DuVivier Company Reimbursement Connection Fee (86-58). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$1,240.00 per primary benefiting acre and \$620.00 for each secondary benefiting acre that flows directly or indirectly through the sewer line (PC1846) plus 6% annual simple interest for premises connecting directly or indirectly to the sewer line as shown on plan attached as Exhibit “A” to the “Reimbursement Agreement Between Du Vizier Company and the Cardiff Sanitation District”, on file in the Office of the District Clerk. This agreement expires on January 16, 2007.

18.12.180 (Reserved: E)

18.12.200 (Reserved: F)

18.12.220 (Reserved: G)

18.12.240 Stephen and Karen Hoffman Reimbursement Connection Fee (98-03). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement fee of \$11,140.01 plus 6% annual simple interest computed from the effective date of Ordinance No. 98-03 (July 24, 1998) until paid for equivalent dwelling units connecting directly to the sewer facility known as CS193 located in Sereno View Lane, generally south of 9<sup>th</sup> Street and west of Rancho Santa Fe Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 10 years from the effective date of Cardiff Sanitation District Ordinance No. 98-03. This agreement expires on July 24, 2008.

18.12.241 Reimbursement Fee - Stephen and Karen Hoffman (2008-18)

In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$11,140.01 plus 6% annual simple interest computed from the effective date of Ordinance No. 98.03 (August 14, 1998) until paid for equivalent dwelling units connecting directly to the sewer facility known as SC193 located in Sereno View Lane, generally

south of 9<sup>th</sup> Street and west of Rancho Santa Fe Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no

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18.12.241

further effect on and after 10 years from the effective date of City of Encinitas Ordinance 2008-18.

18.12.260 (Reserved: I)

18.12.280 (Reserved: J)

18.12.300 (Reserved: K)

18.12.320 (Reserved: L)

18.12.340 Michael J. Mahon Reimbursement Connection Fee (91-04). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$2,264.16 plus 6% annual simple interest upon the effective date of Ordinance No. 91-04 (October 10, 1991), adopted by the Board of the District for premises connecting directly to the sewer line (PC1989) as shown on plan attached as Exhibit A to the "Reimbursement Agreement between Michael J. Mahon and the Cardiff Sanitation District," on file in the Office of the District Clerk. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee. This agreement expires on October 10, 2001.

18.12.341 C. Samuel and Anne Marasco Reimbursement Connection Fee (99-01). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement fee of \$9,466.05 plus 6% annual simple interest computed from the effective date of Ordinance No. 99-01 (July 30, 1999) until paid for equivalent dwelling units connecting directly to the sewer facility known as CS073 located in Cole Ranch Road, generally south of Lone Jack Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 20 years from the effective date of Cardiff Sanitation District Ordinance No. 99-01. This agreement expires on July 30, 2019.

18.12.360 (Reserved: N)

18.12.380 Patrick O'Connor Reimbursement Connection Fee (89-02). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$1,900.00 plus 6% annual simple interest computed from the effective date of Ordinance No. 89-02 (April 6, 1989), for premises connecting directly to the sewer line (PC1814) as shown on plan attached as Exhibit A to the "Reimbursement Agreement Between Patrick O'Connor and the Cardiff Sanitation District, " on file in the Office of the District Clerk. This agreement expires on April 6, 1999.

18.12.381 Olivenhain Sewer Joint Venture (John Cover) Reimbursement Connection Fee (93-01). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$4,012.00 plus 6% annual simple interest computed from the effective date of Ordinance No. 93-01 (July 9, 1993), for premises connecting directly to the sewer line (PC1889, PC1906) as shown on plan attached as Exhibit A to the "Reimbursement Agreement, on file in the Office of the District Clerk. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee. This agreement expires on July 9, 2003.

18.12.400 (Reserved: P)

18.12.420 (Reserved: Q)

18.12.440 Michael Riley Et Al Reimbursement Connection Fee (93-06). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$3,966.00 plus 6% annual simple interest computed from the effective date of Ordinance No. 93-06 (February 11, 1994), until paid for equivalent dwelling units connecting directly to the sewer facility know as CS025 running South in Rancho Santa Fe Road, thence westerly in Whisper Wind Drive in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 20 years from the effective date of Cardiff Sanitation District Ordinance No. 93-06 (this agreement expires on February 12, 2014). The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee.

18.12.460 Schibler and Tracy Reimbursement Fee. In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$51,873.30 plus 6% annual simple interest computed from the effective date of Ordinance No. 2004-01 until paid for equivalent dwelling units connecting directly to the sewer facility known as CS400 located in the vicinity of Fortuna Ranch Road and Akita Lane in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas Ordinance 2004-01. (Ord. 2004-01).

18.12.461 Reimbursement Fee – Sinnett. In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$32,014.50 plus 6% annual simple interest computed from the effective date of Ordinance No. 2008-17 until paid for equivalent dwelling units connecting directly to the sewer facility known as CS502 located in the vicinity of west side of Rancho Santa Fe Road in between Woodwind Drive and Encinitas Boulevard in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas Ordinance 2008-17. (Ord. 2008-17)

18.12.480 Paul Trester Et Al (9th Street Extension) Reimbursement Connection Fee (93-04). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$2,460.00 plus 6% annual simple interest computed from August 4, 1983 until paid for equivalent dwelling units connecting directly to the sewer facility known as PC1614 running north in Cole Ranch Road thence westerly in Ninth Street in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after August 4, 2003. The agreement states that the District retains an administrative fee which is 5% of the gross reimbursement connection fee.

18.12.500 (Reserved: U)

18.12.520 (Reserved: V)

18.12.540 Ray Wakeham Et Al Reimbursement Connection Fee (93-03). In addition to any other fees for connections to sewer lines within the District, there is established a reimbursement connection fee of \$4,316.00 plus 6% annual simple interest computed from the effective date of Ordinance No. 93-03 (November 12, 1993), until paid for equivalent dwelling units connecting directly to the sewer facility known as CS108 running West in Ninth Street, thence northwesterly in Sereno View Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the District Clerk. This section shall have no further effect on and after 10 years from the effective date of Cardiff Sanitation District Ordinance No. 93-03 (this agreement expires on November 12, 2003). The agreement states that District retains an administrative fee which is 5% of the gross reimbursement connection fee.

18.12.541 Reimbursement Fee – Bruce Wiegand et al. In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$10,624.50 plus 6% annual simple interest computed from the effective date of Ordinance 2003-02 until paid for equivalent dwelling units connecting directly to the sewer facility known as CS267 located in the vicinity of 5<sup>th</sup> Street and Rancho Santa Fe Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas Ordinance No. 2003-02.

18.12.542 Reimbursement Fee – Walker and Harrison. In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$10,861.36 plus 6% annual simple interest computed from the effective date of Ordinance No. 2005-13 until paid for equivalent dwelling units connecting directly to the sewer facility known as CS403 located in the vicinity of Copper Crest Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas Ordinance No. 2005-13.

18.12.560 (Reserved: X)

18.12.580 (Reserved: Y)

18.12.600 Reimbursement Fee – Zimdars et al. In addition to any other fees for connections to sewer lines within the Division, there is established a reimbursement fee of \$21,504 plus 6% annual simple interest computed from the effective date of Ordinance No. 2006-03 until paid for equivalent dwelling units connecting directly to the sewer facility known as CS303 located in the vicinity of Copper Crest Road in Olivenhain, as more fully set forth in the agreement filed in the Office of the Division Clerk. This section shall have no further effect on and after 20 years from the effective date of City of Encinitas. (Ordinance 2006-03.)

CHAPTER 18.16  
SEWER CONSTRUCTION REQUIREMENTS

18.16.010 Purpose. The purpose of this Chapter is to specify some of the City's requirements relating to sewer construction. (Ord. 95-16)

18.16.020 Sewer Utility Holes Must be Accessible by City Maintenance Vehicles. The developer shall be required to grade an access road to maintain any public sewers constructed within easements and may be required to dedicate additional access easements to maintain the public sewers. All of the sewer utility holes must be accessible by vehicle. In order to be accepted into the City's publicly maintained sewer system, all new sewer mains shall be constructed only within maintained roadways that have all-weather surfacing.

18.16.030 Installation of Sewer Lateral Connections from Main to the Property Lines are Required for Unconnected Properties When a Sewer Main is Constructed. When a sewer main is constructed as part of a public right of way improvement plan, the developer is required to install sewer lateral connections to the property line for each developed, unconnected lot that could be served by that sewer main. This is to limit the construction on newly improved public roadways. In addition, the developer is required to show the all lateral locations on the improvement plan installed by the developer. (Ord. 2002-05).

18.16.040 Cost of Sewer Lateral Construction. The expense of construction, installation, replacement, and maintenance of the sewer laterals are solely the responsibility of the applicant. Sewer lateral work in the public right of way requires a City permit. (Ord. 2002-05).

18.16.050 Separate Sewer Laterals. Separate sewer laterals are required for each single family dwelling, and condominium. However, a separate sewer lateral is not required for an approved accessory unit to a single family dwelling, on the same lot. Every separate residential building or other building on one lot connected to the sewer main shall be separately and independently connected with the City sewer system. The exception to this rule, is the situation where there is a building in the rear of a lot without access to any other available sewer main. In this case, it may be connected with the sewer of the building in the front of the same lot. All condominiums shall have separate connections, unless a homeowner's association is formed to manage and maintain the private sewer lateral. (Ord. 2002-05)

18.16.060 Privately Owned Sewer Pumps. Private sewage discharge pumps may be permitted only if it can be determined that no other alternatives exists or that an unnecessary hardship is thereby created. Sewer pump proposals will require the applicants to have a civil engineer review the alternatives and submit their finds to the City Engineer for review. If the sewer pump is permitted, the property owner will assume all liability and responsibility associated with the maintenance and operation of the sewage pump. (Ord. 2002-05)

18.16.070 No Surface Water Connection Allowed to the Sewer System. No person shall make connection of roof downspouts, exterior foundation drains or other sources of surface runoff or groundwater to a building drain which in turn is connected directly or indirectly to a public sewer.

18.16.080 Excavations to be Properly Barricaded and Noticed. All excavations for building sewer installation shall be adequately guarded with barricades, lights, and signage so as to protect the public from hazard. Streets, sidewalks, parkways, sewer easements and other public property disturbed in the course of the work shall be restored in a timely manner, to the satisfaction of the City.

18.16.090 Sewer Utility Easements. Sewer utility easements shall be obtained for all sewer main extensions, except for sewer mains to be located within a public street. Under no circumstances shall any structure be placed over or around any sewer main or extension, or within a City utility easement, unless an encroachment permit has been granted by the City Engineer.

18.16.100 Inspection. Inspection of all sewer construction shall be made by personnel of the City or its authorized representative as deemed necessary by the City Engineer. Sewer construction shall include, but not be limited to sewers, pump stations, treatment plants, pretreatment facilities, food establishment facilities, or other facilities which discharge grease and oils that may cause blockages. Inspections may be made to determine that such facilities are being adequately maintained and operated and meet the provisions of this Code. Sewer facilities under construction shall be inspected periodically or as deemed necessary by the City Engineer to assure that construction conforms to the intent of the approved plans and specifications, City design standards and other applicable codes. No person shall bury or backfill new sewers or laterals until inspected by personnel of the City or its authorized representative. No person shall interfere with or delay entrance by an authorized City inspector attempting to inspect any sewer construction.

18.16.110 Responsibility for Damages to Sewers or Streets by Person Doing Work. Any person who shall do or cause to be done work provided for in this Chapter shall be liable for any damage to any sewer or to any public street or to any other public property.

18.16.120 Sewer Construction Permits.

A sewer construction permit must be issued before the material sewer connection can be made to the public sewer system. Prior to a sewer connection permit being issued the property must be within the jurisdiction of the City's sewer system, and the wastewater discharge permit fees paid, as well as all other required sewer fees. In cases of sewer lateral installation in a new subdivision or on a public sewer main extension under construction, the issuance of wastewater discharge permits may be deferred until prior to issuance of any building permits. Right-of-way construction permits are required when sewer construction permits are issued for work in the public right-of-way. The cost of all soils and material testing, as well as the cost of any necessary special inspection, shall be directly borne by the applicant/developer. The applicant shall provide security guaranteeing proper completion of the work conforming to Section 23.36.130.D. of the City of Encinitas Municipal Code. A sewer construction permit shall be valid for a length of time not to exceed one year from the date of issuance. (Ord. 97-04)

18.16.125 Requirements and Standards – City Engineer authorization. The City Engineer may authorize exceptions to requirements and standards contained in this Chapter subsequent to issuing a finding of practicality and substantial consistency with the intent of this Code to the City Manager. The City Engineer may impose conditions on any said exception necessary to preserve the intent of this Code. (Ord. 2002-05).

18.16.130 Sewer Lateral Cleanout Covers Required. Cleanout caps or plugs are required on all cleanouts installed on sewer laterals and on all access points to the lateral. The cleanout above-ground access points shall be closed and water tight. (UPC707.1) (Ord. 97-04)

CHAPTER 18.20  
COST RECOVERY FOR PROTECTIVE SEWER SERVICES

18.20.010 Purpose. The purpose of this Chapter is to establish procedures for obtaining reimbursement from responsible persons for the expenses of any emergency response by the City to protect the public from sewage spills and other health and safety concerns related to sewage. (Ord. 95-16)

18.20.020 Sewage Spills are Unlawful. In accordance with the Health and Safety Code Section 4476, a person who causes or allows to overflow, any sewage, sludge, cesspool or septic tank effluent or accumulation of human excreta, or any garbage, in or upon any street, alley, public highway, or road in common use or upon any public park or other public property, or upon any private property into or upon which the public is admitted by easement, license or otherwise is guilty of a misdemeanor. Section 1.08.030 of the City of Encinitas Municipal Code states that it is unlawful for any person to create, cause, commit or maintain a public nuisance within the City and that the violation of any regulatory provision of the City's Code constitutes a public nuisance.

18.20.030 Reimbursements Required. A person who acts negligently or in violation of the law and thereby requires the City to provide an emergency response to a danger posed by sewage and/or hazardous substances shall reimburse the City for the costs incurred. If the person does not immediately correct the cause and/or the resulting health and safety problem, then the City is hereby authorized to correct the problem situation at the person's expense.

18.20.040 Report. City personnel involved in an emergency response shall submit a report to the Public Works Director indicating:

- A. The costs incurred;
- B. The person or entity apparently responsible for reimbursing the City and the basis of the determination regarding responsibility.

18.20.050 Notice to Responsible Party.

- A. If it is reasonably likely that the party identified in the report is responsible for reimbursing the City, the Public Works Director may submit a demand to the identified party, The Public Works Director is authorized to accept a reasonable offer of reimbursement.

B. The Public Works Director may set the matter for administrative hearing by the City Council. Notice of the date set for hearing and the report shall be sent to the person or entity to be charged together with a copy of administrative hearing procedures contain in the Municipal Code.

18.20.060 Action by City Council. If the matter is referred to the City Council for administrative hearing, the City Council shall, by resolution:

- A. Confirm or disallow the charge, in full or in part;
- B. Determine the amount of the reimbursement owed by the party to the City; and
- C. Direct that the City commence collection proceedings against the party.

07-02  
18.24.010

CHAPTER 18.24  
INDUSTRIAL WASTEWATER PRETREATMENT

18.24.010 Title. This Chapter shall be known as the "City of Encinitas Industrial Wastewater Pretreatment Ordinance." (Ord. 95-16)

18.24.020 Purpose. The purpose of this Chapter is to provide for the maximum beneficial public use of the City's wastewater system through adequate regulation of sewer construction, sewer use, and industrial wastewater discharge, to provide for equitable distribution of the City's costs, and to provide procedures for complying with wastewater discharge requirements placed upon the City by Encina Wastewater Authority, and other regulatory bodies.

18.24.030 Scope. This Chapter shall be interpreted in accordance with the definitions set forth herein and the provisions of this Chapter shall apply to the direct or indirect discharge of all waste into the City's sewer system. This Chapter provides for the regulation of sewer construction in areas within the former Encinitas Sanitary District boundaries, the quantity and quality of discharged wastes, the degree of wastewater pretreatment required, provision for fees and charges, the issuance of permits for industrial wastewater discharge, and the establishment of penalties for violation of the ordinance codified in this Chapter.

18.24.040 Adherence to Pretreatment Ordinance of Encina Wastewater Authority. The City of Encinitas is a member of the Encina Wastewater Authority and therefore has adopted the Encina Wastewater Authority's Pretreatment Ordinance. No user shall contribute or cause to be contributed, directly or indirectly, any such influent that is inconsistent with the Encina Wastewater Authority's Pretreatment Ordinance, on file in the Office of the City Clerk of the City of Encinitas, and any amendments thereto. In the event of any inconsistencies between regulations approved by Encina Wastewater Authority, the City Council and other regulations adopted by the City, the more restrictive regulations shall apply

18.24.045 Adherence to Pretreatment Sections of the Encinitas Municipal Code. No user shall contribute or cause to be contributed, directly or indirectly, any such influent that is inconsistent with the Encinitas Municipal Code Sections on Pretreatment, on file in the Office of the City Clerk, and any amendments thereto. In the event of any inconsistencies between regulations approved by the City of Encinitas Municipal Code Sections on Pretreatment, and San Elijo Joint Powers Authority, and other regulations adopted by the City, the more restrictive regulations shall apply. (Ord. 2002-05).

18.24.050 Industrial Wastewater Discharge Permit Required. No person shall connect to or otherwise discharge, or cause to be discharged into the sewer system of the City, any industrial waste unless the City Engineer determines that such discharge meets the industrial waste discharge standards established by the rules or regulations adopted as herein provided, in which case no industrial waste permit shall be required. If the discharge does not meet the industrial waste discharge standards established by this Title, then an industrial waste discharge permit is required.

18.24.060 Issuance of Industrial Wastewater Discharge Permit. Industrial wastewater permits may be co-issued by the City and the Encina Wastewater Authority or by the City and San Elijo Joint Powers Authority, according to this Code and Encina Wastewater Authority or San Elijo Joint Powers Authority regulations. No person shall discharge or cause to be discharged any industrial wastewaters directly or indirectly to sewerage facilities without first obtaining a permit for industrial wastewater discharge. The permit for industrial wastewater discharge may require pretreatment of industrial waste before discharge, restriction of peak flow discharges, prohibition of discharge of certain waste components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased costs created by the waste discharge, and such other conditions as may be required to effectuate the purpose of this Chapter. (Ord. 2002-05).

No permit shall be issued to any person to discharge industrial waste into the sewer system of the City if such discharge will be a hazard or danger to the health or safety of any person or to the property of any person or if such discharge will result in a danger to the capacity, construction, use or proper performance or utilization of the sewer system or be otherwise detrimental or injurious to such systems or either of them, and unless the applicant has complied with all state, federal, and local laws and with all the provisions of this Code and with all applicable rules and regulations adopted as provide for in this Title.

18.24.070 Fees for Industrial Wastewater Discharge Permits. Fees may be charged by the City for industrial wastewater discharge permits, for both the issuance of original permits and renewals.

18.24.080 Pretreatment Plans Required. In the event the City Engineer determines that pretreatment is required to make the waste acceptable, the applicant shall be so notified and shall submit suitable engineering plans and specifications showing in detail the proposed pretreatment facilities and pretreatment operational procedures which shall be included within and become a part of the original application. A permit shall not be issued until such plans, specifications and operational procedures have been reviewed and approved by the City Engineer.

18.24.090 Access for Monitoring. When required by the City Engineer, the owner of any property served by a building sewer carrying industrial wastewater shall install monitoring and recording equipment, and a suitable control access hole in the building sewer to facilitate observation, sampling and measurement of the wastes. Such access hole shall be readily accessible and safely located, and shall be constructed in accordance with plans by the City Engineer. The access hole shall be installed and maintained by the owner at the owner's expense. If no special access hole is available, the sampling location shall be determined by the City Engineer - which may be the nearest downstream utility hole from the point at which the building sewer is connected.

18.24.100 Self-monitoring and Reporting. All industrial users shall be subject to self-monitoring and reporting requirements. The requirements for each applicable user shall be determined by the City Engineer and included in the user's discharge permit.

18.24.110 Public Access to Information. Information and data provided by an industrial user identifying the nature and frequency of a discharge shall be available to the public without restriction. Any information or data which is submitted or which may be furnished by a user in connection with required periodic reports shall also be available to the public unless the user or other interested person specifically identifies and is able to demonstrate to the satisfaction of the City Engineer that the disclosure of such information or a particular part thereof to the general public would divulge methods or processes entitled to protection as trade secrets.

18.24.120 Revisions to Permits. The City Engineer shall be empowered to revise discharge permit requirements to comply with evolving federal, state, and local laws. Permit revisions or modifications shall not be inconsistent with applicable federal pretreatment standards.

18.24.130 Permit Expiration, Transference, Revocation or Suspension. Any permit issued in accordance with the provisions of this Chapter shall be valid for a specified period, and is not transferable unless such permit is revoked or suspended as provided in this Title and in the rules and regulations adopted pursuant thereto.

18.24.140 Violation -- Disconnection of Facilities -- Reconnection Charge. The City Engineer may revoke or suspend the permit issued to any person in the event of a violation by the permittee of any provision of any applicable state, federal or local laws or this Chapter or of any of the rules and regulations adopted in the manner provided for herein. The City Engineer, in accordance with the law, may disconnect from the public sewer any connection to a sewer, main line sewer, or other facility which is constructed, connected or used without a permit, or constructed, connected or used contrary to any of the provisions of any applicable federal, state, or local law or this Chapter or the rules and regulations adopted as provided for in this Chapter. When a premises has been disconnected, it shall not be reconnected until the violation for which it was disconnected has ceased or been remedied and a reasonable charge for such disconnection and reconnection, as established by the City Engineer, has been paid.

18.24.150 Notice of Intention to Disconnect Premises. The City Engineer shall give not less than five days notice of intention to disconnect the premises or to suspend or revoke a permit, stating the reasons therefore, and may grant a reasonable time for elimination of the violation; provided, however, that if the City Engineer determines that the danger is imminent and such action is necessary for the immediate protection of the health, safety or welfare of the persons or property or for the protection of the sewer system, any premises may be disconnected and service terminated concurrently with the giving of such notice. Notice shall be given to the occupant of the premises, if any, and to the record owner of the property as shown

upon the last equalized assessment roll of the County of San Diego by United States mail, registered or certified, return receipt requested, or by posting such notice on the premises.

18.24.160 Enforcement. The City Engineer is charged with the duty of enforcing the provisions of this Chapter and the rules and regulations adopted as provided in this Chapter. The City Engineer and the City/Encina Wastewater Authority's duly authorized agents and employees are authorized and shall be permitted to enter upon all properties at all reasonable times, and during operating hours of businesses for the purpose of inspection, observation, measurement, sampling, testing, or other reasons to assure the enforcement and proper application of all the provisions, rules and regulations as provide in this Chapter.

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## **CHAPTER 4**

### **SEWER DESIGN REQUIREMENTS.**

#### **4.100 GENERAL INFORMATION.**

The City Engineering Department reviews and approves designs for sewer improvements. The intent of this chapter is to describe City of Encinitas sanitary sewer design criteria and permitting. Sanitary sewer modeling and design requirements are discussed in Sections 4.200 and 4.300 below. Information on sewer easements, permits, and sewer reimbursement districts is presented in Sections 4.400, 4.500, and 4.600 respectively.

The City of Encinitas is served by three sewer agencies: Cardiff Sanitation District (CSD), Encinitas Sanitary District (ESD), and Leucadia Wastewater District (LWD). The Cardiff Sanitation and Encinitas Sanitary Districts are now administered by the City, but billing and fees remain different for the two districts. Leucadia Wastewater District is a separate agency from the City and must be contacted separately for that district's requirements. The requirements discussed herein pertain only to the districts administered by the City, CSD and ESD. A map of the areas included in each of the three sewer districts is included as Appendix 4.8 of this manual.

Because of the unique nature of each sewer project, the information presented here is intended as a guideline for the minimum requirements of the City of Encinitas; more stringent requirements may be applied. Deviations from the criteria herein will be allowed with advance written approval by the City Engineer.

#### **4.101 *DEFINITIONS, ABBREVIATIONS, AND TERMINOLOGY.***

Certain words and phrases used in this manual are defined as set forth below. All definitions provided in the City of Encinitas Municipal Code shall also be applicable to this

manual, and said definitions are hereby incorporated by this reference.

- A. ADWF: shall be used as an abbreviation for "Average Dry Weather Flows".
- B. CFS: shall be used as an abbreviation for "Cubic Feet per Second".
- C. CSD: shall be used as an abbreviation for "Cardiff Sanitation District".
- D. EDU: is used as an abbreviation for "Equivalent Dwelling Unit". EDUs are used as a method for converting various kinds of sewer usages to an equivalent multiple of residential dwelling unit usage.
- E. ESD: shall be used as an abbreviation for "Encinitas Sanitary District".
- F. Infiltration: shall mean the total extraneous flow entering a sewer system, excluding sanitary sewage, because of poor construction, corrosion of the pipe, ground movement or structural failure through joints, porous walls or breaks.
- G. Inflow: shall mean the extraneous flow which enters a sanitary sewer from sources other than infiltration, such as roof drains, basement drains, land drains or manhole covers.
- H. Interceptor Sewer: shall be used to mean a publicly maintained sewer ranging from 10 to 30 inches in diameter and which collects the sewage from public sewer mains and conducts such sewage to a sewer trunk or point of treatment.
- I. LWD: shall be used as an abbreviation for "Leucadia Wastewater District".
- J. PDWF: shall be used as an abbreviation for "Peak Dry Weather Flows".

- K. Private Sewer: shall mean any sewer serving more than one property, not lying within any public sewer easement or right-of-way, and not maintained by the City.
- L. Public Sewer: shall be used to mean any sewer, other than a sewer lateral, which has been constructed in a public street, alley, or other public right-of-way, or in a public sewer easement, and is proposed to be a part of the sewer system publicly maintained by the City.
- M. Outfall Sewer: shall mean a major sewer that receives treated wastewater from a treatment plant and carries flows to a point of disposal.
- N. Sewer Lateral: shall mean a sewer pipe conveying wastewater from the private connection point to the public sewer main or private sewer. The private property owner is entirely responsible for the repair and maintenance of the entire sewer lateral serving his or her property. Permits are required for any work within public rights-of-way or easements.
- O. Sewer Main: shall be used to mean a publicly maintained sewer pipe to which sewer laterals are joined. The term "sewer main" shall be used herein to describe requirements pertaining to sewers generally; the terms "interceptor sewer" and "trunk sewer" shall be used when the requirements for larger sewer pipes differ from those for the typical 8-inch sewer main.
- P. SFR: shall be used as an abbreviation for "Single Family Residence".
- Q. Trunk Sewer: shall be used to mean a publicly maintained sewer pipe 30 inches or more in diameter and having tributary sewer mains and interceptors.

#### **4.102 STATUTES AND REQUIREMENTS.**

Sewer designs and plans shall conform to all of the following:

- A. City of Encinitas Municipal Code.

- B. Requirements as specified in the associated Conditions of Approval, if any.
- C. County of San Diego Regional Standard Drawings.
- D. Standard Specifications for Public Works Construction ("Greenbook") specifications.
- E. Requirements and guidelines as specified in this manual.
- F. Staff Policies.
- G. Generally accepted engineering principles and practices.
- H. State of California Department of Health Services specifications.

#### **4.200 SEWER STUDY AND SEWER FLOWS.**

A sewer study may be required at the discretion of the City Engineer when a proposed development intensifies land use from the existing condition, when the project has the potential to generate additional sewer flow, when the existing sewer infrastructure is insufficient to support the project, or when the sewer infrastructure is prone to failure due to the inadequacy of a portion of the sewer system.

The sewer study shall address:

- A. The existing condition, in order to identify existing deficiencies in the system;
- B. The condition with the proposed development, in order to identify additional deficiencies created by the proposed development; and
- C. The General Plan ultimate land use condition, in order to identify the ultimate pipe size required for the ultimate improvements and condition.

The sewer study shall be submitted to the Engineering Department for review and approval. Most often, projects required by the Engineering Department to perform a study shall satisfactorily complete the study prior to the issuance of any discretionary permits for the project. The sewer study shall follow the methodology outlined in this chapter. If computer models are utilized to prepare the sewer study, the program name together with a brief description of the methodology, organization of the output data, and input parameters used in the program shall be provided to the City Engineer.

#### **4.201 GENERAL SEWER FLOW CONSIDERATIONS.**

Each service area will have unique characteristics which may preclude the use of a uniform approach to sewer flow calculations. However, the information presented in this manual shall be used for the preparation of the sewer flow

calculations unless a more detailed analysis is authorized by the City Engineer.

The following criteria shall be evaluated to project wastewater flows; each is discussed in greater detail later in this section.

- A. Tributary Areas.
- B. Estimation of Ultimate Population.
- C. Ultimate Land Use.
- D. Flow Types.
  - 1. Per-capita Flows
  - 2. Residential Flows
  - 3. Commercial Flows
  - 4. Industrial flows
- E. Major Point Source Discharges.
- F. Inflow and Ground Water Infiltration.

4.201.1 Tributary Area. The tributary area of a sewer shall include all areas that will contribute to the flow in the sewer system, including flows from the ultimately developed service area and basin to basin flow routings. Tributary areas may be limited by topography as well as natural or human-made boundaries. Flows to the point of connection at the main line shall be estimated and included. The boundaries of the tributary area used in the sewer design shall be submitted to the City on a plat also showing the topography of the area, any existing sewer facilities, and existing or proposed sewer connections.

4.201.2 Estimation of Ultimate Population. The population of the tributary area is the basis for the sewer design flow calculations. The population estimate shall be based upon the proposed development and the ultimate land use for the service area. The population shall be estimated as accurately as possible using the most recent information.

4.201.3 Ultimate Land Use. The type of land use defines both the population densities and the type of contributors within the areas tributary to the sewer. Land use considerations shall be based upon the ultimate use and zoning maps. A field

review shall be utilized to verify the reasonableness of the projections.

- 4.201.4 Flow Types. The type of contributor, residential, commercial, or industrial, determines the level of flow that may be anticipated from each contributor. The flow rates may be determined from the ultimate land use according to the table presented in Appendix 4.1 of this manual.

Industrial flow may vary significantly with industry type, size, and method of wastewater discharge. The design engineer shall identify any industrial uses within the service area and shall determine the magnitude of the industries' wastewater contributions to the sewer. The determination shall be reviewed and approved by the City Engineer.

- 4.201.5 Major Point Source Discharges. Major point source discharges include flows from institutional, industrial, and commercial establishments. Existing major point source discharges within the tributary area shall be identified, and the engineer shall confirm the exact discharge location of the major point source. Potential major discharges from future point sources shall also be incorporated into the design flows.

- 4.201.6 Inflow and Ground Water Infiltration. The sewer design capacity shall include an allowance for extraneous flows which inevitably become a part of total flow. These flows include ground water infiltration through defective pipes, joints, manholes, and cleanouts as well as inflow from cross connections.

#### **4.202 SEWER FLOW CALCULATIONS.**

All new or replacement sanitary sewers shall be designed with size and flow capacity as needed to accommodate the ultimate conditions of the areas they serve. In certain cases in which the flow in an existing sewer main is increased by proposed developments or improvements, the project may be required to upgrade the existing system.

- 4.202.1 Peaking Factor. The sewer design flows may be calculated based upon peak dry weather flows. Use of the following equation shows the relationship between average dry weather flows (ADWF) and peak dry weather flows (PDWF) expressed in cubic feet per second (CFS):

$$Q_{PDWF} = 2.64 ( Q_{ADWF} )^{0.905}$$

- 4.202.2 Flow Contributions from Residential Populations. Flows from residential populations shall be based upon the ultimate density with the number of people per household determined as follows:

Residential Dwelling Unit = 3.5 people per unit

Accessory Unit = 70% of a dwelling unit =  
(0 .70) x (3.5 people per unit) = 2.45 people per unit

Daily per capita residential sewer flow contributions shall be based upon 80 gallons per capita, per day (gpcd). The City of Encinitas bases sewer flow calculations on the concept of Equivalent Dwelling Units (EDUs) which converts various kinds of sewer usages to an equivalent multiple of residential dwelling unit usage.

1 EDU = (3.5 people/ residential dwelling unit) x 80 gpcd

Wastewater discharge fees are assessed as a predetermined sum per EDU multiplied by the number of EDUs of the proposed usage. Reference Municipal Code CHAPTER 18.08 for information on EDUs and Appendix 4.4 for information on the wastewater discharge fee.

- 4.202.3 Flow Contributions from Non-Residential Uses. Flow contributions from non-residential uses shall be determined consistent with the average daily sewer flow projections listed in Appendix 4.6.

4.202.4 Sewer Flow Table. The table included as 4.4 of this manual may be utilized for sewer flow calculations if, at the discretion of the City Engineer, the complexity and scope of the sewer study do not necessitate computer modeling.

## **4.300 SEWER SIZING AND MINIMUM REQUIREMENTS.**

### **4.301 SEWER DEPTH OF FLOW REQUIREMENTS.**

Sewer pipes shall not be designed to flow at full capacity in order to allow for the flowage of sewer gases. The gases flow in the space between the wastewater surface and the top of pipe. A sewer pipe full with wastewater inhibits the free flow of air and sewer gases, creating a pressure which pushes these gases through openings such as maintenance holes. The sewer gases may be combustible or toxic and have a strong undesirable odor. To avoid the odor problems associated with the sewer gases, sanitary sewers shall allow for the transport of the air and gases by designing the sewer to run less than full. Sewer mains and interceptors less than 16 inches in diameter shall be designed to flow a maximum of half (50%) full, and interceptor and trunk sewers of 16 inches or more in diameter shall be designed to flow a maximum of three-quarters (75%) full. At the discretion of the City Engineer, improvement to or upgrading of an existing sewer system may be required if the proposed development or improvements result in the sewer main flowing more than 50% full (75% for interceptor and trunk sewers 16 inches in diameter and larger).

### **4.302 GENERAL SEWER DESIGN CRITERIA.**

The following general criteria apply to the design of sewer systems in the City.

- A. Alignment. The preferred location of the sewer main is on the centerline. In cases in which a raised center median exists, the sewer shall be constructed outside of the median, unless otherwise approved by the City Engineer. Where the sewer is located along the street or alley centerline and the centerline is a curve, the sewer shall be constructed as a series of straight segments connected by manholes. Alternately, the sewer may be constructed along the centerline with a minimum radius of 200 feet and in accordance with the manufacturer's recommendations. Vertical curves and horizontal curves less than 200 feet are discouraged

and shall be approved in writing in advance by the City Engineer.

- B. Depth. The sewer main shall be buried a minimum of 5 feet below grade to the top of the pipe and a maximum of 20 feet below grade. Deeper sewer mains may be constructed if allowed by the City Engineer in writing. An increase in depth will result in one or more of the following requirements: a stronger pipe material, special beddings, concrete encasement and/or additional easement width.
  
- C. Structural Design Requirements. Structural design may be required by the City Engineer if the clearance between the sewer and another utility is 18 inches or less. When a sewer pipe crosses another pipe or utility trench, the sewer pipe section shall be designed to span the utility trench and must be continuous for a minimum of 10 feet on either side of the trench or pipe centerline. A detail to be used in the case in which pipes must cross is included in Appendix 4.3.
  
- D. Location. Mainline sewers shall be located along street or alley centerline whenever possible. Sewers mains shall be located beneath the street pavement, not within the parkway. The sewer trench shall not be allowed to extend underneath the sidewalk or curb and gutter areas.
  
- E. Manhole Construction. Manholes shall be designed and installed as per the current San Diego Regional Standard Drawing specification. The diameter of the base ring of manholes shall be 60 inches. The minimum diameter of the upper manhole rings shall be 36". The inside of the sewer manholes shall be coated with epoxy in order to prevent the deterioration caused by the sewer gases. In cases in which existing manholes must be raised, such as for a street pavement overlay, plastic riser rings shall not be allowed. Drop manholes shall not be allowed for public sewers; an alternative manhole design is included in Appendix 3.10 of this manual.

- F. Manhole Locations. Manholes shall be provided at intersections of mains, at changes in slope, size, and horizontal or vertical alignment, and at a maximum of 350 feet on center. The use of horizontal and vertical curves is discouraged; the utilization of both a horizontal and a vertical curve or a reverse curve between manholes shall not be allowed. A manhole with a 5' stub or a cleanout, based on the City Engineer's discretion, shall be installed at the end of all sewers. Manholes shall be installed at the location of intersection of a proposed main with an existing one.
- G. Material. Sewers shall be constructed of Polyvinyl Chloride (PVC) with a minimum rating of SDR 35. Alternate materials may be utilized with prior written approval from the City Engineer. All pipes shall be designed to withstand H-20 highway loading.
- H. Private Sewer. Private sewer mains are not allowed unless approved in advance by the City Council. In the case in which a private sewer is accepted, the sewer shall be privately maintained and a private sewer easement shall be granted over the private sewer.
- I. Radius. The minimum radius for a curved section of 8-inch pipe shall be 200 feet. Larger pipes may require a larger radius. The manufacturer's specifications showing that the sewer pipe joints can allow the deflection necessary to achieve the radius shall be provided to the City.
- J. Separation From Water and Reclaimed Water Lines. For special designs and restrictions for locations in which a sewer must cross a water or reclaimed water main, please refer to Appendix 4.3.
- K. Size. The sewer main shall be sized according to the provisions of this chapter. The minimum sewer main pipe size shall be an 8" inside diameter.
- L. Slope. Sewer pipes shall be designed with a minimum slope of 1%, when possible. Where a 1% slope is not feasible, the City Engineer may allow a minimum of 0.4% slope.

M. Velocity. The minimum design velocity shall be 2 feet per second. The roughness coefficient used in calculations shall be  $n=0.013$ . Because PVC sewer mains suffer roughening of the inside pipe surface, the roughness coefficient used for PVC sewers shall also be  $n=0.013$ .

#### **4.303 SEWER MAIN EXTENSIONS AND CONNECTIONS TO THE SEWER.**

4.303.1 Requirement for Connection to Sanitary Sewer. Proposed development projects that trigger public improvement requirements per Municipal Code Section 23.36 shall be required to extend the sewer main and connect to the sanitary sewer unless the project qualifies for one or more of the exceptions described below:

- A. Single family residence (SFR) additions of less than 500 SF of habitable and less than 750 SF of combined habitable and non-habitable additions are exempt from sanitary sewer connection provided that the proposed addition does not create a new residential or commercial unit and the septic system has adequate capacity to accommodate the additional flow.
- B. SFR additions between 500 SF and 2000 SF of habitable area or 750 SF and 2500 SF of combined habitable and non habitable areas shall connect to sanitary sewer if a sewer main is available adjacent or within the property, at the discretion of the City Engineer. If the sewer main is not extended to the property the City Engineer may require extension of a private sewer lateral to the main.
- C. New SFRs on existing legal lots (not in connection with a subdivision), SFR additions greater than 2000 SF of habitable area or greater than 2500 SF of combined habitable and non-habitable area, and commercial additions between 500 SF and 2000 SF which could create additional sewer flow shall extend the sewer main if required and connect to the sanitary sewer system. The main extension is normally equal to the

property frontage contiguous to the sewer main or the length necessary to bring the sanitary sewer to the nearest boundary of the subject property, whichever is greater. The City Engineer may allow other acceptable sewer disposal/ improvements if the sewer main extension required to service the property exceeds the length of the property frontage contiguous to the sewer main.

D. In addition to the requirement to extend the sewer main along the property frontage and/ or the length of the property frontage and to connect to the sanitary sewer, multifamily residential, commercial, and subdivision projects may be required to provide an offsite (beyond the property) sewer main extension. In cases in which the proposed residential parcels are one acre or greater in size, sewer is not available for a main extension, and the proposed lots meet all County Department of Environmental Health requirements, an alternate method of sewage disposal may be approved by the City Engineer.

E. The City Engineer may require a project with a failing septic system to connect to sanitary sewer regardless of the project scope. The County Department of Environmental Health shall review and approve projects proposing the expanded use of an existing septic system or the construction of a new septic system. The approval shall be obtained prior to issuance of a grading or building permit, whichever is issued first. As per General Plan Policy 1.12, development within unsewered areas shall only be allowed after testing proves that septic systems would not create potential pollution, and all development within unsewered areas shall be limited to parcels of at least one acre in size.

4.303.2 Requirement for Separate Sewer Laterals. Separate sewer laterals are required for each lot, but a separate sewer lateral is not required for an approved accessory unit to a single family dwelling located on the same property.

Projects proposing a condominium form of ownership for an existing or proposed development shall provide

separate lateral connections for each condominium. A shared lateral may be allowed by the City Engineer for commercial or multi-family residential projects when a homeowner's association or other acceptable legal entity is established to ensure the maintenance of the sewer lateral and assessment of costs into perpetuity.

- 4.303.3 Pumped Sewer Laterals. Private sewer pumps shall be allowed only when the City Engineer determines that no other alternatives exist or that an unnecessary hardship would be created by the requirement to provide a gravity sewer lateral.

In the case in which a sewer pump is proposed, the applicant shall provide a design submittal to the City for review and approval. The submittal shall be prepared by a registered Civil Engineer and shall include the proposed pump specifications and details. The City shall review and approve the application prior to issuance of a sewer discharge permit and/ or prior to issuance of a grading or building permit, if applicable.

The design for a pumped system shall include a private manhole located within the private property. The sewer lateral shall be pumped to the private manhole and allowed to gravity flow from the manhole to the sewer main. The connection of a pressure lateral directly to the sewer main will not be allowed. A detail for the design of the required private manhole is included in Appendix 3.10 of this manual.

- 4.303.4 Permits for Construction of a Sewer Lateral. A project proposing to connect to the sanitary sewer system is required to obtain permits and pay required fees. The permits required for a connection within the public right-of-way or a private street to an existing main include the wastewater discharge and sewer construction permits issued by the Engineering Department and the plumbing permit issued by the Building Department. A sewer construction permit is not required for a connection to a sewer lateral which has been stubbed out from the main to the property line, provided that no work within the public

right-of-way or a public easement is necessary. Projects with an existing connection to the sewer main proposing to augment usage may be required to obtain wastewater discharge and plumbing permits; the Engineering and Building departments should be consulted to determine which permits are required. The permits and fees associated with the sewer connection or augmentation of sewer usage are discussed below.

A wastewater discharge permit and the associated fees are required when a connection to the public sewer is being added, when a connection to a lateral stubbed out from the main to the property line is being made, and when additional sewer discharge is proposed. The sewer fees for Cardiff and Encinitas Sanitary districts are assessed as indicated in Appendix 4.4. In the case of sewer lateral installation in a new subdivision or connections to a public sewer main extension under construction, the issuance of wastewater discharge permits may be deferred until prior to issuance of any building permits. Properties serviced by Leucadia Wastewater District shall obtain a permit from LWD and shall pay the applicable fees assessed by that district.

A sewer construction permit shall be obtained for a connection to a public or private sewer. Connection to the sewer within the Leucadia Wastewater District requires a permit from LWD and a construction permit from the City if the work is proposed in the right-of-way, City easements, or City-owned properties.

In addition to the above fees, a sewer connection proposed within an area designated as a sewer reimbursement district, reimbursement fees in accordance with Section 4.600 below shall be paid.

- 4.303.5 Construction Requirements for Sewer Laterals. Sewer laterals shall be a minimum of five feet deep at the project property line in order to ensure adequate depth within the public right-of-way. Laterals shall comply with San Diego Regional Standard Drawing SS-01 through SS-04 and shall be a minimum of four inches in diameter for single family homes and units and six inches in diameter for other uses.

Laterals shall not discharge directly into a manhole and shall have a minimum slope of 2%. Deviation from these requirements shall be approved by the City Engineer in writing. The private property owner is responsible for the maintenance and repair of the lateral serving his or her property from its connection with the public sewer main to its termination on the private property. Permits are required for any work within public rights-of-way or easements.

Sanitary sewer laterals are intended for the purpose of providing a connection of sewer service from one private property to the sewer main. Sewer laterals generally extend across public rights-of-way or public sewer easements. The extension of sewer laterals longitudinally along the street or public easement in order to avoid the construction of a sewer main extension shall not be allowed.

- 4.303.6 Grease/ Oil/ Sand Interceptors. Fats, greases, and waxes can adhere to sewer structures and appurtenances, obstructing flows, causing system back-ups and potentially storm water pollution. Flows containing such materials shall be pre-treated prior to discharge into the public sewer system by a process or device to remove the materials from the flows. Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature and shall be watertight with easily removable covers that are both watertight and gastight when secured in place. All grease, oil, and sand interceptors are required to be maintained by the owner at owner's expense. Failure to provide or adequately maintain a grease, oil, and sand interceptor when required by the City may result in a citation and an order to comply with the applicable regulations in conformance with Section 18.04.120 of the Municipal Code. All new restaurants and food preparation facilities with the potential of releasing greases into the sewer shall provide grease traps to the satisfaction of the City Engineer. Existing restaurant and food preparation facilities without a grease trap and which propose an addition in excess of 500 square feet shall also provide grease traps.

4.303.7 Unauthorized Sewer Connection and Unauthorized Sewer Discharge. No connections shall be made to the public sewer system without prior submittal of an application for sewer connection/ capacity, payment of applicable fees and reimbursement district costs, if any, and approval of the City Engineer authorizing the connection. No materials, solid or liquid, may be disposed or discharged into the public sewer system without a permit issued by the City.

No discharge of storm water, surface water, groundwater, unpolluted industrial process water, roof runoff, subsurface drainage, or any waters from a cooling system, swimming pool, decorative fountain, or pond shall be allowed. Prior written permission from the City Engineer in conformance with adopted regulations is required for any variations from the prohibitions listed above.

Enforcement measures shall include any steps authorized by law to collect any fees or charges due and possible disconnection of the lateral from the public sewer system. Restrictions regarding the use of public sewers and enforcement measures are discussed in Sections 18.04.080 through 18.04.110 of the Municipal Code.

## **4.400 SEWER AND ACCESS EASEMENTS.**

### **4.401 SEWER EASEMENT REQUIRED.**

A minimum 20 foot wide sewer easement shall be granted to the City if the sewer is not proposed within the right-of-way. The sewer easement must be designed to allow truck access over the entire proposed sewer and shall be centered on the sewer main. In special circumstances where a 20 foot wide easement is infeasible, an easement of 15 feet in width may be allowed, at the discretion of the City Engineer.

No grading, trees, walls, fences, structures, or gates are allowed in the sewer easements. Landscape and irrigation that impair truck accessibility will also not be allowed within the sewer easements. Enhanced paving may be allowed within the sewer easement with an encroachment permit provided that the paving is designed to withstand truck loading.

In some cases, a sanitary sewer main may not be available to service a certain area. The City Engineer may require as a condition of sewer connection the dedication of a public sewer easement to facilitate future expansion of sewer infrastructure.

### **4.402 SEWER ACCESS EASEMENT REQUIRED.**

If the entire sewer easement is not accessible by trucks due to natural topography, the City Engineer may require an access road to provide maintenance truck access to manholes and certain portions of the sewer system. A public sewer easement a minimum of 20 feet wide shall be granted over the entire access.

- 4.402.1 Requirements for Access Road. Minimally, sewer easements and access easements must be paved with granular base material to withstand truck loading, allow all-weather access, and provide erosion control. The minimum pavement section shall be six inches of class II base material topped with two inches of  $\frac{3}{4}$ " crushed rock for erosion control purposes.

Sewer easements and access easements shall be designed to include a 25' near-level area in front of access holes, and a hammerhead turnaround graded at no more than 5% shall be provided for easements exceeding 250 feet in length. Overhangs such as wires, tree branches, and building eaves shall allow a minimum 15-foot clearance from the road. The minimum centerline radius shall be 36 feet.

**4.403      *CONSIDERATIONS FOR SEWER EASEMENT LOCATION AND WIDTH.***

The minimum easement width is 20 feet. In circumstances in which a 20 foot wide easement is infeasible, an easement 15 feet wide may be allowed at the discretion of the City Engineer. Additional width is necessary if a sewer is constructed at a depth greater than nine feet or if the ground longitudinal or cross-slope exceeds 10%, or based upon the special circumstances of the property or the proposed sewer.

Sewer easements should be as far as practical from buildings. Footings and roof overhangs shall not be allowed within an easement. The vertical distance between the sewer and the footing must be such that excavating for sewer construction or repair does not endanger the building; the City may require additional easement width if existing or proposed buildings or structures are located relatively close to the proposed sewer easement. Whenever possible, sewer easements parallel to lot lines shall not straddle the lot line but shall be located entirely on one parcel.

- 4.403.1      Shared Sewer Easements. Typically, a sewer easement is reserved for the exclusive purpose of a single utility pipe. Within a standard easement, a single sewer shall be constructed at easement centerline to provide room for access and future maintenance.

If multiple pipes will occupy an easement, the City may require additional easement width in order to allow adequate space for maintenance.

Public sewer easements are for the exclusive use of public sewers. The City Engineer shall approve in writing construction of any other utility or use with a public sewer easement. A conflicting use or placement of a utility which impedes maintenance access shall not be allowed.

4.403.2 Sewer Within Private Street. When a public sewer is proposed within a private street, a sewer easement at least 20 feet wide shall be granted over the sewer main in the street. If the private street is not accessible from the public right-of-way without crossing over private property, an access easement to allow City access to maintain the sewer facilities may be required. Sewer access easements are discussed in Section 4.402 above.

4.403.3 Granting of Sewer Easements. Sewer easements shall be dedicated to the public on a map/ parcel map or dedicated by a separate easement document. For information on easements granted on a map, refer to Map Manual Section 1.506.

When an easement is to be granted by a separate document, the City will prepare the easement document language for processing by the developer. The developer shall retain a qualified, licensed civil engineer or land surveyor to prepare the legal description and plat of the sewer easement. Title reports or grant deeds showing the current property ownership shall be provided to the City to assist in the preparation of the easement document. Lenders shall execute a City-approved subordination agreement subordinating their interest in the property to the public sewer easement. The proposed easement shall be surveyed and the traverse tapes submitted to the City for review and approval prior to recordation of the easement. The easement document shall be recorded with the County Recorder prior to issuance of any permit for the sewer construction.

#### **4.500 SEWER IMPROVEMENT PLANS AND PERMITS.**

Proposed sewer main improvements must be permitted by a City improvement permit. The applicant shall process with the City a sewer improvement plan. Standard notes for sewer improvement plans are included as Appendix 2.32 of this manual. When all City comments on the plans have been resolved through plancheck, the final drawings will be approved. At that time, a letter will be issued to the applicant detailing the final bond and fee requirements for issuing the permit. Following completion of those requirements, including payment of fees and posting of sureties, the permit will be issued. Information on the improvement permit application, plancheck, approval, bonding, and permitting process can be found in Chapter 2 of this manual.

## **4.600 SEWER REIMBURSEMENT DISTRICTS**

### **4.601 GENERAL INFORMATION.**

Pursuant to Health and Safety Code Section 4742.3 and Encinitas Municipal Code Chapter 18.12, when public sewers are installed, and the City Council determines that the sewer is necessary and can serve properties other than the property belonging to the person making the installation, the City Council may approve a sewer reimbursement district. The purpose of the sewer reimbursement district is to allow the developer to recoup a pro-rated portion of the sewer construction costs at such time as one or more of the properties identified in the reimbursement district connect to that sewer system. The option of a sewer reimbursement district is available only for public sewers within public sewer easements or street rights-of-way. Upon the City Council approval of a sewer reimbursement district, the City will collect a reimbursement fee from the property owners connecting to the sewer. The amount of the total reimbursement fee is established based on the original installation costs plus interest and is approved by the City Council.

### **4.602 ADMINISTRATION OF REIMBURSEMENT AGREEMENTS.**

The decision to establish a sewer reimbursement district shall be agreed upon by both the City and the developer, and the developer shall agree to the stipulated terms of the reimbursement agreement. The establishment of a sewer reimbursement district may be denied by the City if the developer fails to agree to the terms and policies governing the establishment of a district.

The developer shall be responsible for all of the costs associated with the construction of the sewer main including, but not limited to, construction, easement acquisition, permitting, and administrative costs, and the owner shall pay a fee to the City as compensation for City's costs to administer the agreement. A deposit account shall be established with the City, and an initial deposit in compliance with City requirements shall be made in order to compensate the City for initial time and

expenses until such time as the reimbursement district agreement is finalized.

During construction of the sewer main, the developer shall retain invoices for all items to be included in the reimbursement agreement and evidence of payment of those invoices. The copies of invoices and proof of payment shall be submitted to the City for consideration not longer than 90 days following acceptance of the sewer by the City. Reimbursable costs shall ultimately be approved by the City Engineer and may include payments made by the developer for engineering, surveying, right-of-way or easement acquisition, permits, material testing, construction, inspection, and installation related to the sewer main.

The proposed sewer main shall be designed in accordance with public standards and City requirements and to the satisfaction of the City Engineer. Reimbursement payments for the sewer reimbursement district shall be collected by the City for connections to the sewer made within the term of the agreement.

There are no assurances that the developer will recoup the maximum reimbursement amount or any portion thereof. The number of possible connections used to determine the reimbursement fee is an estimate, and there is no guarantee that all or any of the connections will be made. Parcels will not be responsible for the reimbursement fee if a connection is made after the expiration of the reimbursement district. Likewise, parcels will only be responsible for the reimbursement fee if the parcel connects a lateral directly to the sewer main as identified in the reimbursement district or if the parcel connects to a future extension of that sewer main. If the City collects any reimbursement fees, payment shall be sent to the developer within ninety days of collection of the fee, until the developer has recouped the maximum reimbursement amount or until the agreement expires.

Information on sewer reimbursement districts can be found in Chapter 18.12 of the Municipal Code. Particulars on the establishment of a district and an overview of the process are included in the City administrative manual,

number G042, which is included in this manual as Appendix 4.5.

**4.603**      ***PROPERTIES INCLUDED IN THE REIMBURSEMENT DISTRICT.***

The developer shall engage the services of a registered civil engineer licensed to perform such work in order to prepare for the City information on which properties could potentially benefit from the construction of the sewer main, including the developer's property or properties. Those properties shall be determined based upon topography, availability of necessary easements, and other factors which would allow or impede the connection of a private sewer lateral to the sewer from each property. Properties which would be required to obtain an easement over private property that has not been guaranteed by the terms of the agreement shall not be included in the district. Properties which may connect only by use of a pumped sewer lateral are not eligible for inclusion in the district. The selection of parcels for inclusion into the reimbursement district is subject to review and approval by the City Engineer.

A preliminary sewer improvement plan shall be submitted to the Engineering Department for review and comment prior to submittal of the sewer improvement plans. The plan shall clearly delineate all properties that will be included in the proposed sewer reimbursement district upon adoption of a Code change by the City Council, the preliminary conceptual plan for the sewer reimbursement district shall be approved by the City Council prior to preparation of the sewer improvement plans and issuance of the improvement permit. Engineering approval of the preliminary or final sewer plans shall not be construed as the City Council approval of the sewer reimbursement district, nor shall it be interpreted as any guarantee whatsoever by City staff relative to the Council action on the proposed sewer reimbursement district.

The number of parcels to be included shall be determined based upon the existing zoning at the time the sewer main is constructed, and shall assume that vacant properties will be developed to the mid-range density allowed by the zoning. If a single lot is assessed for more than a

residential or a commercial unit, the fees will be collected at the time that each individual unit is developed.

In some situations, a parcel may have been included in an existing sewer reimbursement district, but an extension of the main constructed as a part of the reimbursement district may be necessary to facilitate the desired improvement of that parcel. In such cases, the parcel is not exempt from the terms of the reimbursement agreement as originally established and shall make payment of the reimbursement fee prior to establishing a connection to the sewer.

**4.604      *CALCULATION OF THE REIMBURSEMENT FEE.***

Once the parcels to be included in the reimbursement district have been agreed upon by both the developer and the City, the per-parcel reimbursement fee may be calculated. The fee shall be calculated by dividing the total sum of costs determined by the City Engineer to be eligible for reimbursement by the total number of potential connections to service unconnected parcels. For example, if the reimbursable costs of the sewer main are \$100,000.00 and there are ten potential connections, the reimbursement fee would be \$10,000.00 per connection.

At the time that a new connection to the sewer main is sought, a property identified in the district shall make payment for the reimbursement fee together with any other applicable sewer or permit fees prior to issuance of a permit for the connection. The total amount due prior to connection shall be the original pro-rata share for the connection, plus 6% annual simple interest accumulated from the date the reimbursement district is approved by the City Council to the date the City receives payment for the reimbursement fee from each benefited party. The total reimbursement to the developer shall not exceed the maximum reimbursement amount.

The developer's property or properties will be included in the determination of the total number of possible connections. The developer's pro-rata share of the total reimbursement amount shall be deducted from the total reimbursable costs instead of collected at a later time.

**CITY OF ENCINITAS**

**SEWER OVERFLOW RESPONSE PLAN**

**CITY COUNCIL**

Kristin Gaspar - Mayor  
Tony Kranz – Deputy Mayor  
Teresa Arballo Barth – Council Member  
Lisa Shaffer – Council Member  
Mark Muir – Council Member

**CITY MANAGER**

**GUS VINA**

**DIRECTOR OF PUBLIC WORKS**

**Glenn Pruim**

## SEWER OVERFLOW RESPONSE PLAN

The City of Encinitas Wastewater Maintenance Section developed two response plans for handling sewer overflow emergencies to help prevent and minimize spill from reaching the MS4 or water bodies: "During Working Hours Response Plan" and "After Working Hours Response Plan." The hour at which a sewer overflow emergency occurs is the determining factor regarding which plan will be followed. If the emergency occurs during regular working hours, Monday through Friday from 7:00 am to 4:30 pm, then staff will follow the 'During Working Hours Response Plan' procedures. Otherwise, staff will follow the "After Working Hours Response Plan" procedures.

The During Working Hours Plan assumes that any of our 6 crew members, the field supervisor and/or the maintenance supervisor will respond to the emergency call. Usually, the Wastewater Maintenance Crew Member(s) closest to the site will respond first. This plan assumes that when responding to an emergency call staff will usually have with them the necessary equipment and/or vehicles. The Wastewater Maintenance Section staff maintains the following equipment and vehicles: continuous rodder, combination sewer cleaning machine, CCTV pipe inspection vehicle, sewer easement cleaner, safety equipment and emergency response vehicle.

The After Working Hours Plan assumes that the standby person will respond to the emergency call. The standby person is determined through a monthly rotation of crew members who serve on a one-week "on-call" basis. The standby person will respond to the call and will request additional help, as needed. Although the standby person drives a duty vehicle to the site, he/she will occasionally need to arrange for additional equipment at the site.

### **Responding to a Sewer Overflow, During 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 personal 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 California Integrated Water Quality System (CWIQS) website within 48 hours.

**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 have been notified.
  2. Written report must contain an itemization of all expenses incurred and the total amount of personal 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 California Integrated Water Quality System (CWIQS) website within 48 hours.

**For a spill that could threaten water quality, contact the following agencies:**

County of San Diego, Environmental Health Services

Keith Kezer (858) 495-5579  
 FAX (858) 694-3670

California Regional Water Quality Control Board, Spill Incident Response Team

Eric Becker (858) 492-1785  
 (858) 571-6972 FAX  
 Christopher Means (619) 521-3365

California Emergency Management Agency, Formerly (OES) (800) 852-7550

County Parks, if spill threatens San Elijo Lagoon

Jessica Cissal (858) 966-1329  
 Cailin Hunsaker (858) 966-1367

San Elijo Lagoon Conservancy

Doug Gibson (760) 436-3944  
 (760) 944-9606

Dept. of Fish & Game (858) 467-4201

# CARDIFF AND ENCINITAS SEWER MASTER PLAN UPDATE

Prepared For:



City of Encinitas  
505 South Vulcan Avenue  
Encinitas, CA 92024

Prepared By:

**DUDEK**

605 Third Street  
Encinitas, CA 92024

**April 2011**

### ES-1 INTRODUCTION

The purpose of this Sewer Master Plan Update is to evaluate the City of Encinitas (City) existing and future sewer facility needs, make recommendations and prepare a preliminary opinion of probable cost for each of the proposed improvements. This Master Plan evaluates the condition and capacity of the major elements of the existing wastewater collection systems within both the Cardiff and Encinitas Sanitary Divisions, and makes recommendations for future system improvements.

The primary components of the Master Plan include the following Sections and Evaluations

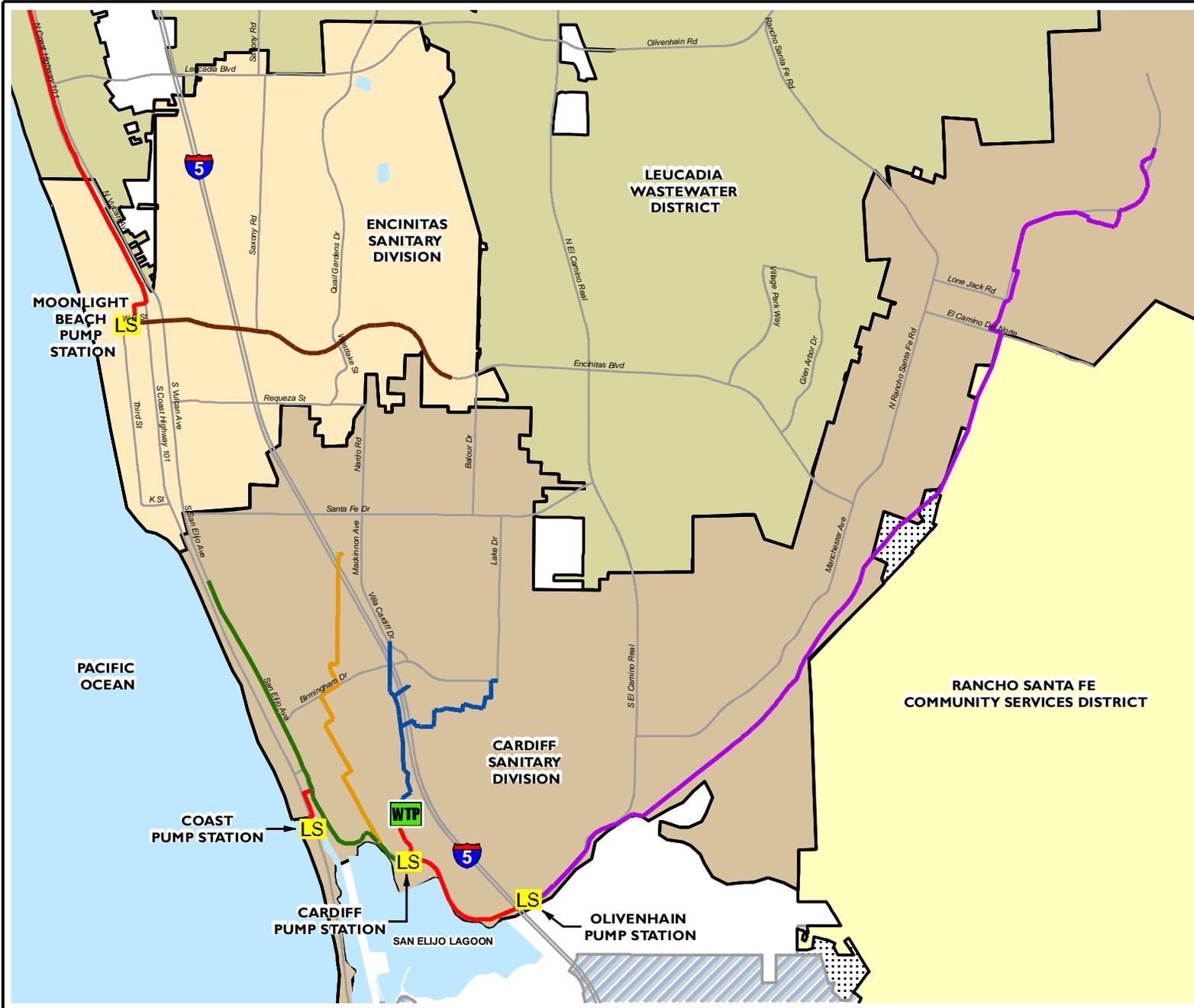
1. Documentation of existing facilities;
2. Sewer flow generation analysis and evaluation of the existing system;
3. Projection of ultimate sewer flows and evaluation of future infrastructure needs;
4. Alternative Analysis for addressing capacity issues within the Olivenhain Trunk Sewer (OTS);
5. Review of existing CCTV pipeline inspection video and provide recommendations;
6. Condition assessment of the OTS manholes;
7. Field review of existing sewer pump stations; and
8. Preparation of recommended Capital Improvement Program projects.

The following Figure ES-1 shows the boundaries of the Encinitas Sanitary Division, Cardiff Sanitary Division and the major trunk sewers and facilities used in the development of the hydraulic modeling.

### ES-2 ENCINITAS SANITARY DIVISION

The Encinitas Sanitary Division (ESD) is a part of the City of Encinitas Public Works Department. The ESD serves a population of approximately 16,500 residents in a three (3) square-mile area in the westerly central portion of the City. ESD serves primarily residential units with some commercial development in the downtown area. The ESD service area lies entirely within the boundary of the City of Encinitas, primarily along the coast and the Cottonwood Creek drainage basin. The service area is bounded on the north and east by the Leucadia Wastewater District (LWD) and on the south and east by the CSD service area. The ESD service area extends from the Pacific Ocean approximately 1 mile inland and represents about 10 percent of the total land area within the City of Encinitas.

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**Legend**

-  SAN ELIJO WATER RECLAMATION FACILITY
-  EXISTING LIFT STATIONS
- EXISTING TRUNK GRAVITY MAINS (MODELED)**
-  CARDIFF GRAVITY TRUNK SEWER (CSD)
-  CARDIFF RELIEF TRUNK SEWER (CSD)
-  CARDIFF TRUNK SEWER (CSD)
-  OLIVENHAIN TRUNK SEWER (CSD)
-  ENCINITAS TRUNK SEWER (ESD)
-  EXISTING FORCE MAINS
- CITY OF ENCINITAS**
-  CARDIFF SANITARY DIVISION
-  ENCINITAS SANITARY DIVISION
-  WATER BODIES
-  MAJOR ROAD

**DUDEK**



**FIGURE ES-1**

**CITY OF ENCINITAS  
EXISTING TRUNK SEWER  
COLLECTION SYSTEM**

The majority of flows generated within the Encinitas Sanitary Division are collected in the Encinitas Boulevard Trunk Sewer, described below. All flow from the ESD drains into the Moonlight Pump Station, which is pumped through a forcemain to the Batiquitos Pump Station, a joint facility with Leucadia Wastewater District (LWD), and then pumped together with flow from LWD to the Encina Wastewater Authority (EWA).

### **ES-2.1 Encinitas Boulevard Trunk Sewer (ETS)**

The ETS begins at Sweet Alice Lane and flows west in Encinitas Boulevard. East of I-5 it collects flow from the western portion of Encinitas Ranch, and miscellaneous commercial and residential areas along both sides of Encinitas Boulevard. West of I-5 the ETS picks up flows from the community of Leucadia and Old Encinitas, including the downtown commercial area. The ETS terminates just west of Highway 101 at the Moonlight Beach Pump Station. Flows from areas west of Highway 101 enter the pump station directly from the west. Pipelines in the ETS range from 8 to 15-inches in diameter. Portions of ETS were recently replaced to increase capacity, as recommended in the 2003 Master Plan.

### **ES-3 CARDIFF SANITARY DIVISION**

Similar to the ESD, The Cardiff Sanitary Division (CSD) is a part of the City of Encinitas Public Works Department. The CSD services a population of approximately 19,600 residents in a 12 square-mile area in the southern and easterly portions of the City. There are approximately 84 miles of sewer mains and 600 manholes in the collection system. CSD serves primarily residential units, with some commercial such as stores, restaurants, offices, and medical buildings, including Scripps Hospital.

Flows generated within the Cardiff Sanitary Division are collected in one of four trunk sewer systems and then pumped or conveyed by gravity to the San Elijo Water Reclamation Facility (SEWRF). The following section describes the four trunk sewer systems.

#### **ES-3.1 Cardiff Trunk Sewer (CTS) and Cardiff Relief Sewer**

The original CTS was constructed in the early 1950's to serve the community of Cardiff-by-the-Sea. Pipeline sizes range from 8 to 15-inches in diameter. As development increased in the Cardiff area, flat sections of the CTS started flowing full. A new sewer was constructed through central Cardiff to intercept flows from eastern portions of the service area and discharge the flows to more steeply sloped sections of CTS further downstream.

#### **ES-3.2 Cardiff Gravity Trunk Sewer (CGTS)**

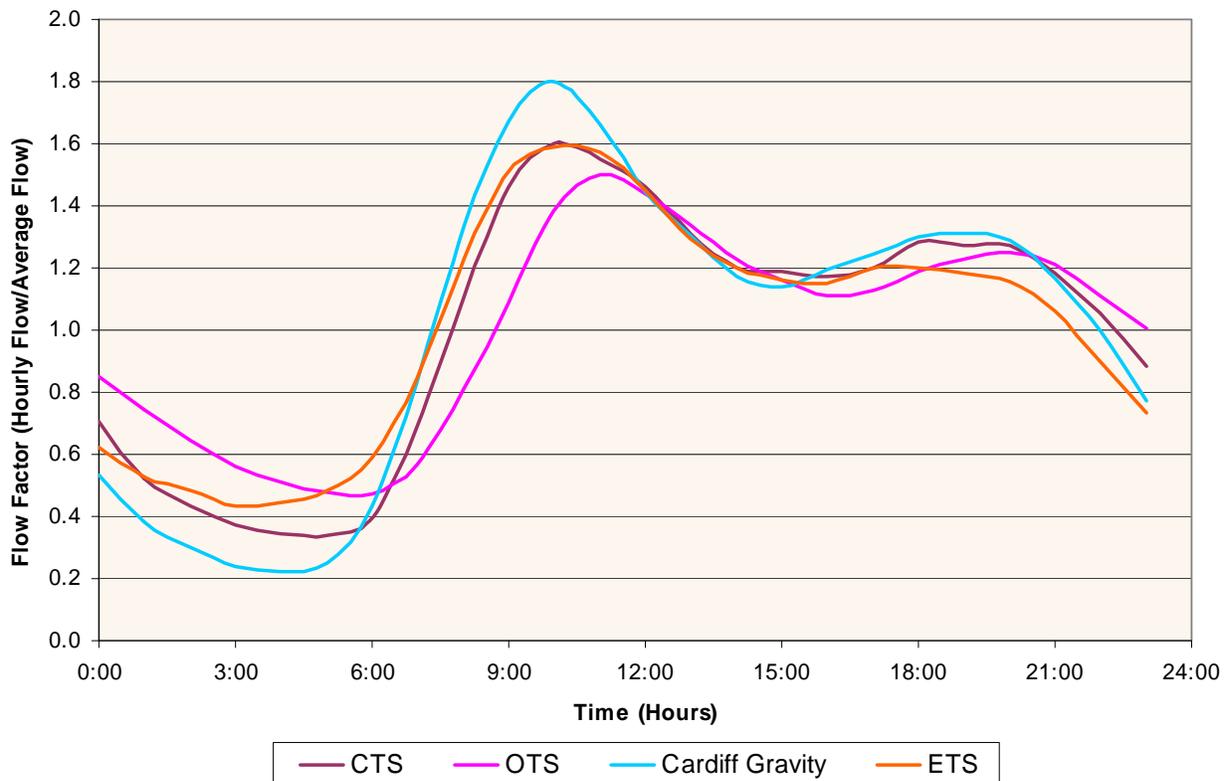
The Cardiff Gravity Trunk Sewer (CGTS) collects flows from residential areas east of I-5, and from apartment complexes along the west side of I-5. The pipelines are 8 and 10-inches in diameter. The CGTS was previously termed the "backdoor" gravity sewer, since flow enters the plant from the backside and not from the front entrance, like the other trunk sewer systems.

### ES-3.3 Olivenhain Trunk Sewer (OTS)

The original 1972 OTS extends as a 21-inch sewer from the Olivenhain Pump Station (OPS) upstream along Manchester Ave to El Camino Real and then continues upstream in an alignment between Escondido Creek and Rancho Santa Fe Road ending as a 10-inch sewer at El Camino Del Norte. Going upstream from Manchester and El Camino Real, OTS is located in open space easements within the 100 year frequency flood plain of San Elijo Lagoon and Escondido Creek and crosses sensitive and protected wetlands and wetlands habitat. Along OTS, there is one short section of three 10-inch diameter inverted siphon pipelines crossing under a now-abandoned irrigation pipeline. There are four connections to OTS by formal agreement with Rancho Santa Fe Community Services District (RSFCSD) between El Camino Real and El Camino Del Norte. A newer extension of OTS continues northerly from El Camino Del Norte as an 8-inch sewer parallel to Lone Jack Road and extending up into the Copper Creek rural development area. Rehabilitation of portions of the OTS has been completed to offset higher than normal flow during wet weather conditions, however, high wet weather flow continues to be a concern today.

The following figure presents the dry weather 24-hour diurnal curve pattern for each of the four major trunk sewers.

**Figure ES-2 Weekend Dry Weather Diurnal Peaking Curves**



## ES-4 EXISTING FACILITIES

The majority of collection system information, necessary for capacity analysis, was collected and quantified from the City GIS system. Further details of pump stations, treatment plants, flow metering, and other information were collected to complete the development of a computerized hydraulic model. Capacity analysis was limited to major trunk sewers. Collection system flow and capacity was evaluated based on existing flow meter data and future wastewater flow projections. Table ES-1 below summarizes the collection system pipelines for both Cardiff Sanitary Division (CSD) and Encinitas Sanitary Division (ESD). Table ES-2 summarizes existing pump station facilities.

**Table ES-1 Existing Pipeline Inventory**

Pipeline Diameter (in)	Total Length of Pipelines		
	CSD (lf)	ESD (lf)	Total (lf)
6	15,067	30,760	45,827
8	369,242	156,445	525,687
10	14,544	8,611	23,154
12	5,752	4,292	10,045
14	331	106	437
15	2,949	--	2,949
18	62	--	62
Unknown	34,065	7,900	41,966
<b>Total</b>	<b>442,012</b>	<b>208,114</b>	<b>650,126</b>
	<b>84 miles</b>	<b>39 miles</b>	<b>123 miles</b>

**Table ES-2 Existing Pump Station Inventory**

Pump Station Name	Trunk Sewer System	Construction /Rehab Date	Pump/Motor Information			Station Capacity <sup>(1)</sup>		Force Main Dia.	Comments
			Qty.	Motor Size	Design Point	(gpm)	(mgd)		
Cardiff	CTS	1963/1991	1	25 Hp	900 gpm @ 43'	1,490	2.1	10"	210,000 gal storage basin
			2	40 Hp	1000 gpm @ 43'				
Coast Blvd	CTS	1959/2001	2	11.65 Hp	300 gpm @ 30'	300	0.4	4"	4,000 gal wet well
Olivenhain <sup>(2)</sup>	OTS	2011	3	40 Hp	900 gpm @ 70'	1,800	2.6	14"	216,000 gal storage basin
Moonlight Bcl	ETS	1974/2006	3	60 Hp	1000 gpm @ 107'	2,000	2.9	14"	180,000 gal storage basin

(1) Station capacity is the duty capacity with one pump out-of-service.

(2) Information is based on design plans for the new pump station that will replace the existing pump station.

## ES-5 FLOW GENERATION AND HYDRAULIC MODEL DEVELOPMENT

Existing system sewer flow generation was derived from review of flow meters at several locations over the past several years, including sewer flows through pump stations and flows entering the two downstream treatment plants. An estimate of the average daily flow for each major drainage basin was determined, as well as the identification of the relative volume of inflow and infiltration that occurs during heavy storm events. This information was used for development of the existing system hydraulic model and subsequent capacity analysis.

Future flow projections were based on plan development through 2035, which is considered “build out” per the City General Plan. Wastewater flow generation factors were used to apply sewer flows to future developable parcels. The largest contribution to future flow is by residential development, estimated by a flow factor of 200 gpd/dwelling unit. Unit flows for other residential and non-residential uses were derived by comparing existing and surrounding agency flow factors.

Table ES-3 summarizes the existing and ultimate projected wastewater flows. Based on the comparison of Average Dry Weather Flow (ADWF) for the existing system versus the ultimate build out of each drainage basin, the Cardiff Gravity sewer basin appears to be currently at 94% of the ultimate projected flow, while the Olivenhain sewer drainage basin is only at 50% of the ultimate projected sewer flows. For analyzing the existing system capacity and identify if future capacity upgrades are needed, the Projected Ultimate Peak Wet Weather Flows (PWWF) were used.

**Table ES-3 Existing and Ultimate Sewer Flow Projection**

Drainage Basin	Existing ADWF mgd	Projected Ultimate		Increase Over Ex. Flows	Projected Ult PWWF	
		ADWF mgd	PDWF mgd		mgd	gpm
Cardiff/Cardiff Relief	0.65	0.77	1.22	18%	1.92	1,340
Cardiff Gravity	0.19	0.20	0.36	6%	0.61	430
Olivenhain <sup>(1)</sup>	0.68	1.02	1.53	50%	3.23	2,240
Encinitas	1.04	1.25	1.99	20%	2.69	1,860

(1) Includes flows from the City of Solana Beach & RSFCSD, projected at 0.097 mgd and 0.250 mgd, respectively.

Computerized network hydraulic modeling software was used for evaluating the capacity of the sewer system. The existing GIS layering information of the sewer system was used for creation of the modeling network. Dry weather wastewater flows were distributed into the model using City billing data and individual parcel locations and calibrated to match flow metering records. An evaluation of the existing pipeline capacity was performed. Then projected future sewer flows were added to the modeling software to simulate the ultimate build-out of the collection system. This process is used to identify deficiencies within the existing system that will need to be addressed in the future.

## ES-6 CAPACITY ANALYSIS

### ES-6.1 Pump Stations:

All pump stations within the CSD and ESD are projected to have adequate pumping capacity for the ultimate Peak Weather flow condition, with the exception of the Olivenhain Pump Station (OPS). Based on the design report for new OPS, currently under construction, the planned storage basin will be used to equalize ultimate peak wet weather flow. Recommendations within this Master Plan seek to reduce inflow and infiltration within the Olivenhain Trunk Sewer (OTS), reducing ultimate peak wet weather flows and minimizing the potential need for use of the planned overflow storage basin at the OPS.

## ES-6.2 Encinitas Sanitary Division

During existing peak dry weather conditions, hydraulic simulations showed that no pipelines 12-inches and larger exceeded 75% of capacity. For ultimate system model analysis, the trigger point for consideration of upgrades is greater than 90% of capacity. Surcharging, if short in distance and duration is also considered acceptable. The ultimate system analysis of the Encinitas Trunk Sewer has shown that the pipeline can contain both ultimate peak dry and wet weather flows without exceeding 90% capacity.

## ES-6.3 Cardiff Sanitary Division

During existing peak dry weather conditions, hydraulic simulations showed that no pipelines 12-inches and larger exceeded 75% of capacity with the Cardiff Trunk Sewer, Cardiff Relief Trunk Sewer or the Olivenhain Trunk Sewer (OTS). For ultimate system model analysis, the trigger point for consideration of upgrades is greater than 90% of capacity during peak wet weather conditions. Surcharging, if short in distance and duration is also considered acceptable.

During ultimate system analysis, the Cardiff Trunk Sewer was found to flow less than 90% full during peak wet weather conditions with exception of immediately upstream of the Cardiff Pump Station. This short and very deep sewer segment was not determined to need improvement.

A portion of the Cardiff Relief Trunk Sewer near Somerset Avenue was identified as an area of concern during ultimate system flows in the 2003 master plan. As flows have decreased from 2003 in this reach, concern of capacity issues within this section have decreased as ultimate peak wet weather flow did not exceed 90% capacity. Flow monitoring is recommended in this area to measure inflow and infiltration during storm events and to identify whether replacement or diversion is required.

Within the OTS, areas of existing concern are reiterated within the ultimate system during peak wet weather flow conditions. Based on the current contribution of wet weather inflow and infiltration (I&I), the majority of the OTS from 5th Street to the OPS shows the potential for surcharging, as projected flows exceed the full pipe flow capacity. In the 2003 master plan, the solution to the capacity issues was the recommendation of a new larger diameter pipeline for the OTS. As I&I is the underlying justification for the need to upsize, the recommendation for this master plan update is to investigate the nature of the I&I prior to consideration of replacement pipeline. According to City staff, the existing OTS pipeline is in good shape. As observed during condition assessments conducted in the dry summer months, discussed below, not only are the majority of manholes along the OTS in need of rehabilitation, several manholes had streaming inflow of groundwater through cracks in the concrete. Leaks such as these are amplified during wet winter months. Therefore the recommended approach to address I&I within the OTS is rehabilitation of the manholes, followed by a phased flow monitoring program to focus on the location of the remaining upstream I&I.

## **ES-7 CONDITION ASSESSMENT**

### **ES-7.1 Pipeline CCTV Inspection**

Approximately 11,000 feet of gravity pipeline CCTV inspection video was reviewed as part of the project. Areas reviewed include 4,000 feet of pipe in downtown Encinitas and 7,000 feet of pipeline between Clark Avenue and Encinitas Blvd. Many significant problem areas were observed in both reaches of CCTV reports. For the downtown area along 2<sup>nd</sup> Street, a replacement project was ultimately recommended to relocate the existing pipeline from alleyways to the roadway. The new pipeline will allow abandonment of the existing pipeline that had numerous condition issues and sags, which result in added risk of blockage and backup of flows. The pipeline from Clark Street to Encinitas Blvd also revealed many problem areas. Recommended repairs include numerous point repairs, slip lining and in several locations, replacement of the existing pipeline.

### **ES-7.2 OTS Manhole Inspection**

Also included in the condition assessment tasks of the project was inspection of manholes along the Olivenhain Trunk Sewer. Dudek conducted a pole camera video inspection of 27 of the existing 54 manholes along the OTS between El Camino Del Norte and Manchester Ave. Access was impeded in many areas as the easement along the existing OTS is not currently drivable. In general, the majority of manholes were heavily corroded due to long term hydrogen sulfide exposure, infiltration and age. The observed structural defects within the base, wall and cone portions of the manhole ranged from minor cracking to the exposure of rebar, with the most common being the exposure of aggregate. Significant inflow was observed at three locations through faulty joint or pipe wall connections. Inspection was conducted during the summer when lagoon and groundwater levels are at their lowest. Therefore inflow is expected to be greater during wetter periods of the year. Evidence of surcharging was evident at five manholes.

### **ES-7.3 Pump Station Field Reviews**

A site visit and field review of the Moonlight, Cardiff, and Coast Pump Stations was conducted. As a major renovation of the Moonlight Pump Station was completed in 2006, noted improvements were generally repairs to the surrounding structure and specific projects to improve operation and functionality of the building and various internal and external equipment. The Coast Pump Station is showing significant signs of deterioration and is need of either a full evaluation for rehabilitation needs or consideration of a replacement pump station. Cardiff Pump Station is in need of several improvements to provide more efficient operation, less clogging of pumps, increase reliability of the electrical system and provision of capability to easily install a pumped bypass. The Olivenhain Pump Station was not reviewed as the CSD has completed final design of a new pump station with construction anticipated to be complete in 2012.

## ES-8 OTS ALTERNATIVE ANALYSIS

Several alternatives were evaluated for the OTS to quantify the improvements and costs necessary to divert some or all of the existing flow through a new collection system to the OPS. One alternative included the construction of a new pump station at Rancho Santa Fe Road to divert upstream flows to a parallel gravity sewer in Manchester Ave. Rehabilitation of 31 existing manholes would be necessary. A second alternative consisted of two new pump stations to divert both upstream OTS flow and additional flow from the CSD away from the downstream section of the OTS. Hydraulic model analysis was conducted to confirm sizing and configuration of both alternatives. Compared to the replacement of the pipeline as proposed in 2003, the two pump station alternatives were significantly higher in cost and both additionally added new infrastructure (pump stations) that would require additional operation and maintenance resources indefinitely. Therefore, the recommended approach is to address rehabilitation of the existing sewer manholes and conduct a phased flow monitoring and remote level sensing program to locate the source of upstream I&I.

## ES-9 JOINT FACILITIES/ TREATMENT PLANTS

### ES-9.1 Joint Facilities

The Moonlight Beach Forcemain discharges to the Batiquitos Influent Sewer at the corner of La Costa Avenue and Highway 101. This sewer conveys wastewater from Leucadia Wastewater District (LWD) and ESD to the Batiquitos Pump Station operated by LWD. The Batiquitos Pump Station discharges through duty and standby 24-inch diameter ductile iron pipe forcemains to the Lanakai Gravity Sewer in Carlsbad. The Lanakai Sewer discharges the combined ESD and LWD flows to the Occidental Trunk Sewer operated by the City of Carlsbad and jointly owned by ESD, LWD, and Carlsbad. The 39-inch to 48-inch diameter Occidental Trunk Sewer conveys wastewater to a junction with a City of Vista and City of Carlsbad sewer and the four-agency flows are conveyed in a 60-inch sewer to the headworks of the Encina Wastewater Authority (EWA) WPCF. The various existing Agreements governing all of these facilities are currently being reviewed by all of the included agencies for possible revision in the near future.

### ES-9.2 Encina WPCF

ESD wastewater is processed and treated at the Encina WPCF. ESD has a contract treatment capacity right of 1.8 mgd based on average dry weather flows, with a peak wet weather treatment inflow limit of 2.76 mgd. Projected ultimate dry weather flow for ESD is 1.25 mgd. Ultimate peak wet weather flow is projected at 2.69 mgd.

### ES-9.3 San Elijo Water Reclamation Facility

Treatment of CSD wastewater is processed at the San Elijo WRF. The average dry weather flow allocation to CSD at SEWRF is 2.5 mgd. The projected ultimate average dry weather flow of the CSD is 1.99 mgd. There is no contractual limitation on peak flows from CSD to the San Elijo WRF.

## ES-10 RECOMMENDED CAPITAL IMPROVEMENT PROJECTS

The Master Plan incorporates the findings of the capacity evaluation and condition assessments for the ESD and CSD into a comprehensive list of recommended capital improvement projects. Projects are recommended into a near term (5 year) and long term (10-year) planning horizons.

In addition to pipeline and pump station capacity and rehabilitation projects, the recommended CIP also includes projected Agency cost sharing for CIP projects planned at the treatment plants and several redundancy projects to provide both a backup in the event of an emergency and a means of maintaining the facility over time. The summary of grouped recommended CIP projects by Division and planning phase are provided in the following Tables ES-4 and ES-5.

**Table ES-4 ESD Recommended CIP Projects**

<b>Project Description</b>	<b>Total Estimated Project Cost</b>
Pipeline Improvement Projects – Phase I	\$3,001,600
Pipeline Rehabilitation Projects – Phase I	\$943,800
Pump Station Improvements – Phase I	\$48,300
Sewer Programs – Phase I	\$50,000
Treatment Plant CIP Projects – Phase I	\$4,126,000
<b>Total Phase I Projects (5-year)</b>	<b>\$8,169,700</b>
Pipeline Rehabilitation Projects – Phase 2	\$500,000
Sewer Programs – Phase 2	\$50,000
Treatment Plant CIP Projects – Phase 2	\$1,710,000
<b>Total Phase 2 Projects (10-year)</b>	<b>\$2,260,000</b>

**Table ES-5 CSD Recommended CIP Projects**

<b>Project Description</b>	<b>Total Estimated Project Cost</b>
Pipeline Improvement Projects – Phase I	\$1,670,200
Rehabilitation Projects – Phase I	\$2,965,400
Pump Station Improvements – Phase I	\$2,520,000
Sewer Programs – Phase I	\$272,000
Treatment Plant CIP Projects – Phase I	\$2,516,000
<b>Total Phase I Projects (5-year)</b>	<b>\$9,943,600</b>
Pipeline Rehabilitation Projects – Phase 2	\$6,850,000
Pump Station Forcemain Redundancy Projects – Phase 2	\$1,723,400
Sewer Programs – Phase 2	\$50,000
Joint Facilities/Treatment Projects – Phase 2	\$2,575,000
<b>Total Phase 2 Projects (10-year)</b>	<b>\$11,198,000</b>

Appendix E

# **C i t y W o r k s**

## **W a s t e w a t e r**

### **M a n u a l**

**City of Encinitas**

December 1, 2006

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# Introduction

The City of Encinitas has configured their enterprise service request and work order system, Cityworks, to handle Public Works Wastewater related work. The system supports the entry of citizen complaints and requests, work order and inspection related costs, status searches, and report generation. All of the information stored in the system is accessible through the City's standard GIS application - CityGIS.

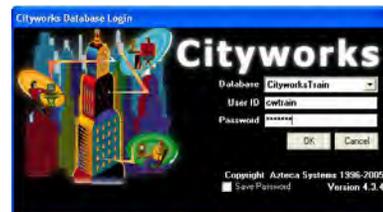
**\*Note:** Daily maintenance work orders such as Rodding, Jetting, and TVing lines will be completed using the upstream manholes to that line. This solves issues with multiple pipe segments, and downstream manholes having many upstream pipes.

## Getting Started

1) To access CityGIS, locate the following icon on your desktop. Double-click this icon to begin.



a) A login screen for Cityworks is displayed. Be sure the database is set to "Cityworks", and then enter your specific User ID and Password. Select the "Save Password" checkbox, and then click "OK."



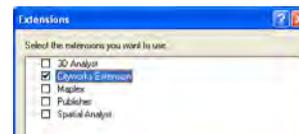
Cityworks Login

b) CityGIS will load and display with the default map layers and toolbars visible. Take a moment to locate the Cityworks toolbar, shown on the right.



Cityworks Toolbar

c) If the Cityworks login screen did not appear, or the toolbar is not visible, click "Tools" on the CityGIS menu bar and then "Extensions." Check the box for Cityworks, click close, and drag the toolbar to the position shown on the right.



Cityworks Extensions

d) If the bar appears but all of the functions are grey, restart CityGIS and be sure you receive no errors performing step 1.a. This is usually due to a failed login.



Cityworks Toolbar in Position

2) You are ready to start using Cityworks! Let's explore the functionality of the Cityworks Toolbar:

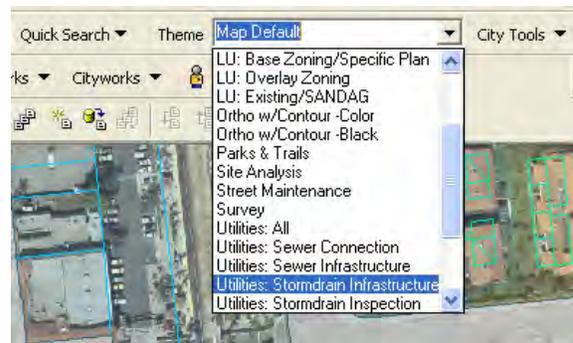


- a) **Cityworks Dropdown Menu:** Displays additional Cityworks tools and commands.
- b) **Create & Search Service Request Tool:** Performs creation and query of service requests.
- c) **Create Work Order on Selected Feature Tool:** Performs creation of work order on selected asset.
- d) **Search Work Order on Selected Feature Tool:** Performs query of work orders on selected asset.
- e) **Cityworks Asset Identify Tool:** Returns information on selected Assets.
- f) **Identify Cityworks Event Feature Tool:** Identifies Cityworks Event Features. \*Not used at this time.
- g) **Selectable Layers Tool:** Displays checkboxes for setting selectable CityGIS layers.
- h) **Move Request/Work Order Location Tool:** \*Un-usable at this time.

**Turning on Specific Groups of Layers**

CityGIS table of contents holds all available layers. To display specific groups of layers, you can select them from the Theme drop down list.

Wastewater related themes include 'Utilities: Sewer Infrastructure', 'Utilities: Stormdrain Infrastructure', and to view the storm and sewer layers at once you can use the 'Utilities: Sewer&Storm Infrastructure'.

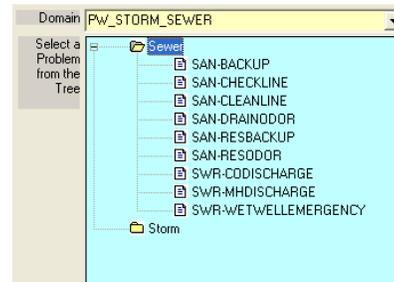


# Creating a Service Request

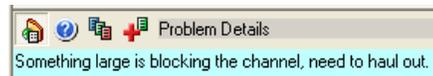
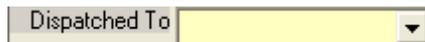
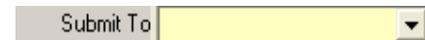
## Documenting the Problem

- 1) Create a new request by clicking on the **Service Request** button on toolbar.
- 2) Select the type of problem from the **problem tree** by opening a folder and selecting a problem. The request is now ready to use.

Cityworks menus are set to save the view from the last time they were used. So, if the Problem Tree is not visible, select the "Request" button on the main toolbar, then select the tree icon and the problem tree will appear.

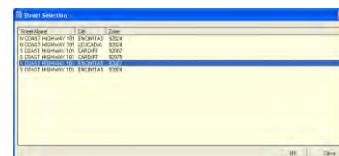
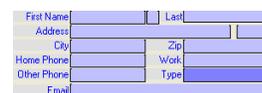


- 3) Change the **Priority** if necessary.
- 4) Select the person to **Submit** request to from the drop down list. Defaulted to Ben.
- 5) Select person to **Dispatch** request to from the drop down list. Defaulted to Shawn.
- 6) If the problem is an **emergency** click check box 'Is this incident an emergency?'
- 7) If the problem should be grouped with a **Project**, then use "**Attach To**" to attach it to an existing project.
- 8) Enter supporting text in '**Problem Details**' window. This is limited to 256 characters.
- 9) Any additional useful information should be entered in the '**Work Comments**' section.



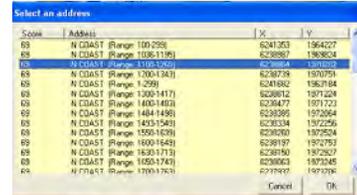
## Entering Incident Location

- 10) Fill out the **Incident** and **Reporting Party**
  - a) After you enter the first three letters of the street name, you can press 'Enter' to obtain a list of valid streets. For example: 'COA' will find all the N and S Coast Highway 101 roads.
  - b) Select the correct street
  - c) Enter customer information or copy up the incident address.



11) Associate the Service Request to an **Address**

- Click the **red pushpin** button to spatially locate the incident on the map.
- If you have not filled in the house number, and are not using an intersection, you will receive a list of all valid address on the street.
- Click on the header of the second column to sort the list by address number.
- Now when you click on an address the map will pan to that location and display a red crosshairs on top of the address.
- Find the correct address and click the 'OK' button.
- Be sure to update the incident address by filling in the number.



12) Choose the **GIS information** button to see the Thomas Brothers Page and Grid information in the lower right pane.

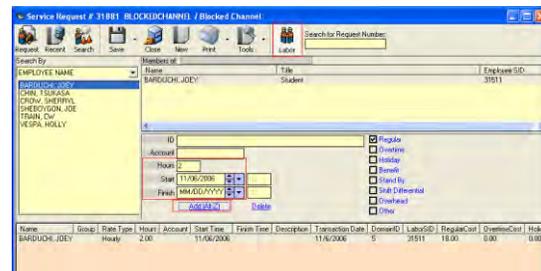


13) Complete the Service Request by clicking on the 'Save' button at the top of the SR form.



## Entering Labor (time) Information

- Any time spent on investigating the problem can be documented clicking the 'Labor' button and the screen at the right will appear.
- Choose the staff from the list on the left, enter the hours and date of investigation, and **click the 'Add' button**. Click the 'Request' button on the SR form to return to the general form. **Save the SR.**



## Printing a Service Request

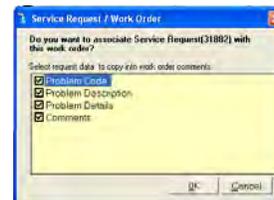
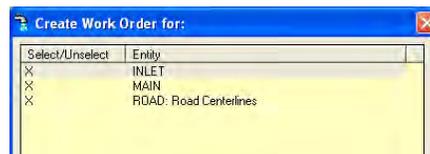
Make sure **Microsoft Word** is closed before attempting to print. **Click** the "Print" button at the top of the SR.



# Creating a Work Order

## From a Service Request

- 1) **Open** the proper Service Request if it is not already open.
- 2) **Click** on the **Red Push Pin** to spatially locate the Request.
- 3) **Switch to CityGIS**. You will see cross hairs indicating the location of the incident. Use the pan/zoom tools if necessary to zoom into the location. Get close enough to have the assets turn on. Use the **'Select Features'** tool to **select the proper asset**. (You may have to look at the detail information from the service request to locate the correct asset.) It will change to a cyan highlighted color once selected.
- 4) **Click** on the "Create WO on selected Asset" button from the Cityworks Toolbar.
- 5) If you have multiple types of assets selected, the form at the right will appear. Turn **OFF** the **'X'** to the left of each asset you **DO NOT** want attached to your work order.
- 6) The system will display a form that asks if you want the new work order related to the open Service Request, and lists several pieces of information that will be transferred from the service request to the work order. Check all the check boxes and **Click 'OK'**.
- 7) The system will display the form: 'Work Order'. Based on the asset selected, the form will display the Utility, selected Asset, and list the available types of Work Orders for that asset. **Double click** the type of work order needed from the right hand column.

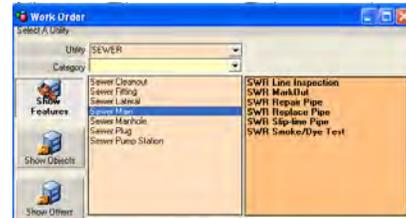
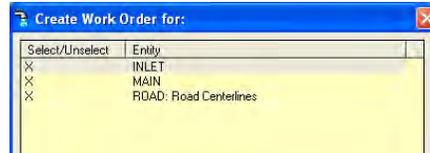


## Without a Service Request

- 1) **In CityGIS** use the **'Find'** tool to locate an address or intersection in the map. Use the pan/zoom tools if necessary to zoom into the location. Use the **'Select Features'** tool to **select the proper asset**. It will change to a cyan highlighted color once selected.

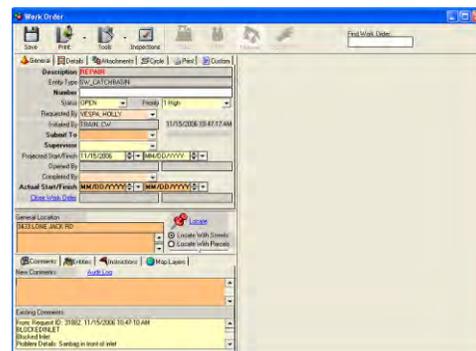


- 2) **Click** on the “Create WO on selected Asset” button from the Cityworks Toolbar.
- 3) If you have multiple types of assets selected, the form at the right will appear. Turn **OFF** the **‘X’** to the left of each asset you **DO NOT** want attached to your work order.
- 4) The system will display the form: ‘Work Order’. Based on the asset selected, the form will display the Utility, selected Asset, and list the available types of Work Orders for that Asset. **Double click** the type of work order needed from the right hand column.



Fill out the additional required information:

- 1) The Work Order form will open. **Change the following fields** to the appropriate values:
  - a) ‘Priority’
  - b) ‘Submit To’
  - c) ‘Supervisor’
- 2) Notice that under the **‘Comments’** tab you will see the Problem Details and Problem Comments from the Service Request, if the Work Order was opened from a Service Request. You can **add additional comments at any time**.
- 3) If there is additional information about the location such as the name of a business, ne/se corner, or linear feet, it may be helpful to type it into the ‘General Location’ box right below the address. This information gets printed with the Work Order.



## Save Work Order

Click the **‘Save’** button to record the work order and to give it a Work Order number. No labor, material, equipment, or inspections can be entered until the Work Order is saved..

## Printing a Work Order

Open the Work Order to be Printed and make sure **Microsoft Word is CLOSED** before attempting to print. Click the **‘Print’** button.



# Adding Labor, Equipment, and Material to a Work Order



Open the Work Order if it is not already open.

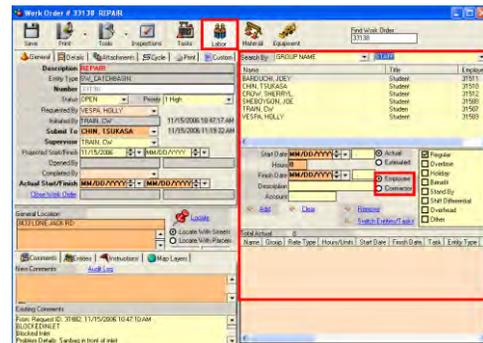
## Labor

- 1) If you click the **'Labor'** button, the screen on the right appears.
- 2) If entering staff time Select **'Group Name'** under 'Search By'; then Select **'Staff'** or the appropriate group from the drop down list on the right side. This will populate the list of employees to choose from. Highlight one or more staff to add to the work order.



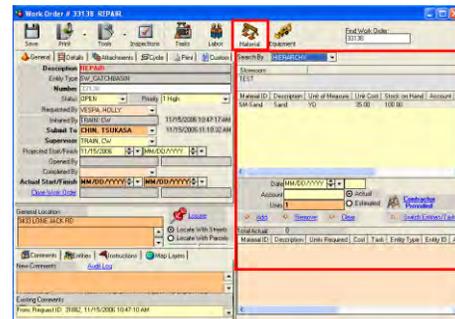
If entering contractor time/cost change the option to **Contractor**, Select **'Contractor Hierarchy'** under search by, and select a contractor from the list.

- 3) Then fill in the **'Hours'**, **'Start Date/Time';** **Finish Date/Time'**. Enter 'Amount' for contractors.
- 4) Click the **'Add'** button to add the employee's or contractor's time and cost.



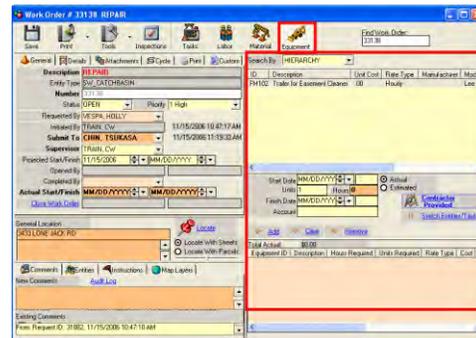
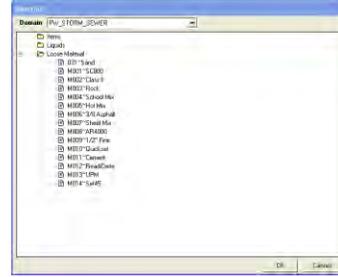
## Material

- 1) If you click the **'Material'** button, the screen on the right will appear.
- 2) To complete the materials form, click on the **'HIERARCHY'** on the search by drop-down list. You will see a screen containing folders and a list of materials similar to the one on the right.
- 3) Select the correct material.
- 4) If the material is NOT provided by a contractor, fill out the **Units** and click the **'Add'** button.
- 5) If the material is provided by a contractor, click the **'Contractor Provided'** button and fill out the Contractor, Units, and Total Cost.

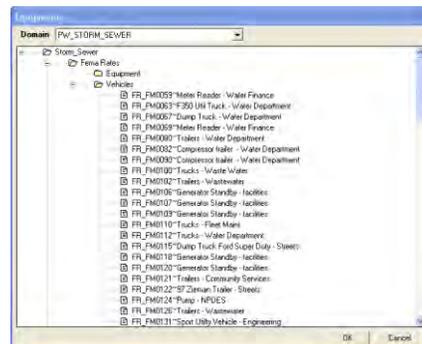


## Equipment/Vehicles

- 1) If you click the **'Equipment'** button, the screen on the right will appear.
- 2) To complete the Equipment form, click on the **'HIERARCHY'** from the search by drop-down list. You will see a screen that looks like the one on the right.
- 3) Find the correct equipment or vehicle and select it.
- 4) If the equipment is NOT provided by a contractor, fill out the **'Hours'** and click the **'Add'** button.
- 5) If the equipment was provided by a contractor, click on the **'Contractor Provided'** button and fill out the Contractor, Hours, Units, and Total Cost fields and click **'OK'**



**Note:** The rates in the system are the standardized citywide rates. Items starting with 'FR' use FEMA rates, otherwise the item uses city rates.



## Work Order Custom Fields

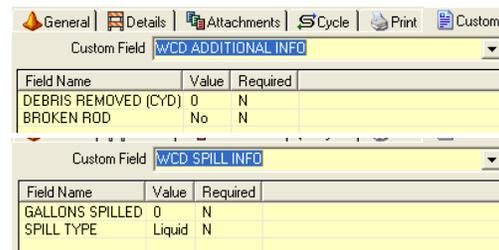
- 1) Fill out the custom fields in the upper left pane by choosing the **'Custom'** tab. These include broken rod, debris amount when emptying the vac-cons, and spill information for spill clean up work orders. Click in the value column to enter information. Click the **'General'** tab to return to the main panel.

## Entering Dailies

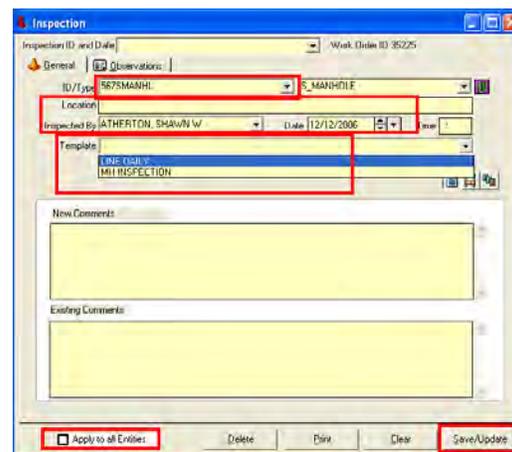
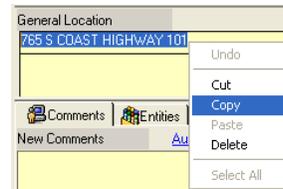
Open your daily work order if not already open.

**Copy the address** of the incident from the work order.

- 1) **Click** on the **'Dailies'** button at the top of the form.
- 2) **Paste** the address into the **'Location'** field.



- 3) **Select** the **correct inspector** from the drop down list.
- 4) **Select** the **date** and enter the time if required.
- 5) **Select** the **'Line Daily'** from the drop down list.
- 6) **Add** any **needed comments** to the comments section.
- 7) To copy the date/location/inspectedby information to all the assets you have in the work order, check the 'Apply to all Entities' box in the lower left hand corner.
- 8) You must **save the inspection** by clicking the **'Save'** button **PRIOR** to filling out 'Observations'.
- 9) **Click 'Yes'** when asked if you want to create a new inspection.
- 10) Click OFF the 'Apply to all Entities' box in the lower left hand corner.
- 11) Choose the first asset in the ID/Type dropdown list.
- 12) **Click** on the **'Observations'** tab.
- 13) **Answer** each question and click on **'Add'** after each answer.
- 14) When you are at the end of the question list, **click** the **'Save/Update'** button to save the inspection results. Click **'Yes'** to update.
- 15) If you have multiple assets, return to the General tab of the Inspection form and select the next Facility ID from the ID drop down list, and repeat steps 12-14.
- 16) **Close** the inspection window when complete.



## Entering MH Inspections

Similar to Dailies, except the template type is MH Inspection, and the observations will be different.

## Closing a Work Order

After all inspections are completed and labor, equipment, material, costs, and comments are entered into the work order, the time period of the work should be entered and the work order closed from the **General** tab.

- 1) Select the staff from the '**Completed By**' drop down list.
- 2) **Click** on the down arrows on '**Actual Start/Finish**' dates and enter the start and finish dates for all work completed.
- 3) Use the blue '**Close Work Order**' button. Once closed, a work order can not be altered.

Sequence	Observation	Result	Instruction	Explanation	QuestionID
1	Manhole to Manhole Distance	124			121
2	Flow Directionality	Upstream			122
3	Condition of Line	Odor			123
4	Upstream Manhole Condition	Work Completed In Field			135

## Searching

### Quick Find Service Requests

- 1) **Click** on '**Create/Search Service Request**' button.
- 2) '**Search for Request Number**' field is available in the top right corner of any request screen. If you know the Request number you can type it in here and it will open.

OR

- 3) The '**Recent**' button on the top request tool bar opens the following screen.
  - a. Single click on any '**Display these items in Search Result**' field from the list in the upper left box will highlight it. Any highlighted field will show in the list in the lower pane.
  - b. Change the number of hours in the '**List Service Requests in last \_\_\_ Hours**' to show those service requests in the list at in the bottom half of the form.
  - c. Double clicking any service request from the list will open it.

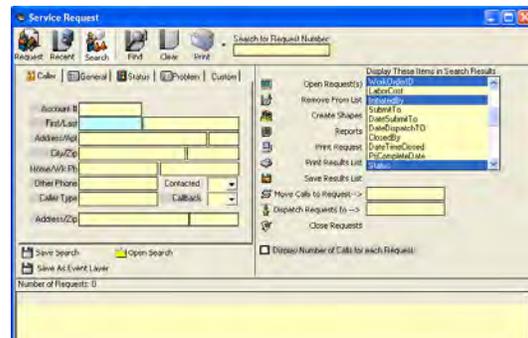
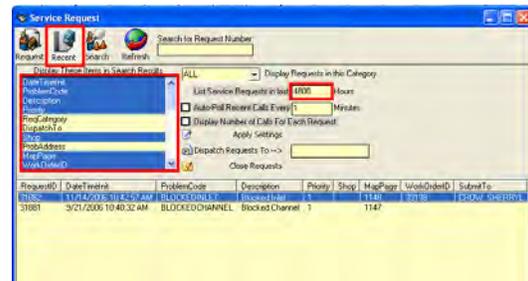
<b>Description</b> REPAIR	
Entity Type	SW_GRAVITYMAIN
Number	33137
Status	OPEN
Priority	3 Medium
Requested By	SHEBOYGON, JOE
Initiated By	TRAIN, CW
Submit To	CHIN, TSUKASA
Supervisor	TRAIN, CW
Projected Start/Finish	09/21/2006
Opened By	
Completed By	BARDUCHI, JOEY
Actual Start/Finish	11/01/2006
	11/02/2006
<a href="#">Close Work Order</a>	

## Searching Service Requests

- 1) Click on **'Create/Search Service Request'** button.
- 2) Click on **'Search'** button from the top Service Request tool bar. Then choose **'Clear'** to clear any old search criteria from the forms.
- 3) The form on the right appears with several tabs and choices to use in searching for Service Requests. Below are some typically used choices. Any number of choices can be used in a single search. Use the **'Clear'** button to clear all forms of all choices.
  - a. **'Caller'** tab
    - i. **Last Name** or **Address** to look up a specific request from a caller or location
  - b. **'General'** tab
    - i. **Initiated** date ranges when you know the approximate date the request was created
    - ii. **Closed** date ranges when you know the approximate date the request was closed
    - iii. **Initiated By, Submt To,** and **Closed By** fields to find requests related to specific staff
  - c. **'Status'** tab
    - i. **Status** field to limit the list to Open or Closed requests
    - ii. **Category** or **Project** field to find specific groupings or types of requests
    - iii. **Past Hours** similar to the **'Recent'** button.
  - d. **'Problem'** tab
    - i. Used to search for requests of a specific problem type
  - e. **'Custom'** tab
    - i. Used to search custom fields for exact values
- 4) Single click on the fields from the **'Display these items in Search Result'** list in the right side box to highlight it. Any highlighted field will show in the list below.
- 5) Click on **'Find'** button at top of form to perform the search. The Requests that match



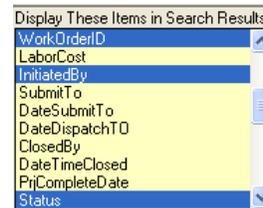
Search for Request Number:



the search will display in the lower section of the form and list information for the fields that are highlighted from the **'Display these items in Search Result'** list.

- 6) Double click on any Service Request in the list to open it.
- 7) You can print the list of Service Requests by choosing the **'Print Results List'** on the right side of the main search form. You can also save the list to a text file using the **'Save Results List'**.
- 8) You can print a single request or multiple requests (the entire request) from the list by highlighting the requests in the list you wish to print, and choosing the **'Print Request'** on the right side of the main search form.

## Searching Work Orders on an Asset



- 1) In **CityGIS** use the **'Find'** tool to locate an address or intersection in the map. Use the pan/zoom tools if necessary to zoom into the location. Use the **'Select Features'** tool to **select the proper asset**. It will change to a cyan highlighted color once selected.
- 2) Select the **'Search Work Orders on selected features'** button from the Cityworks menu.
- 3) If you have multiple types of assets selected, the form at the right will appear. Turn **OFF** the **'X'** to the left of each asset you **DO NOT** want to search for work orders on.
- 4) This will bring up a list of Work Orders that are related to the asset. Double click any of the work orders to open them.

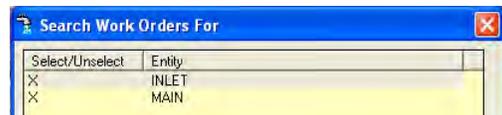


## Searching Work Orders

- 1) In CityGIS use the 'Clear Selected Features' tool to clear out any selected assets. If there are no features selected, this tool will be greyed out.
- 2) Select the 'Search Work Orders on selected features' button from the Cityworks menu.
- 9) The form on the right appears with several tabs and choices to use in searching for Work Orders. Below are some typically used choices. The General tab for Work Order Searches contains most the regularly used search criteria. Any number of choices can be used in a single search. Use the 'Clear Search' button in the lower right panel to clear all forms of all choices.

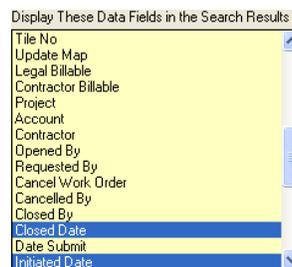


- a. 'General' tab
  - i. **ID** field to enter a known work order ID
  - ii. **Status** field to limit the search to Closed or Open work orders
  - iii. **Initiated By** with date ranges when you want to limit the search to the person that initiated the work order, and/or the approximate date the work order was created
  - iv. **Closed By** with date ranges when you want to limit the search to the person responsible for closing the work order and/or the approximate date the work orders were closed
  - v. **Actual Start/Finish** date ranges to limit the time period the work order was completed in
  - vi. **Past Hours** returns work orders initiated in the past number of hours
- b. 'Facilities/Activities' tab
  - i. Allows you to limit the search to specific assets or work order types.
- c. 'Details' tab
  - i. **Project, Map Page, Tile No.** fields to retrieve groups of



- Work Orders
        - ii. **Request ID** field to find Work Orders related to a specific Service Request.
      - d. **'Custom'** tab
        - i. Used to search custom fields for specific values
- 10) Single click on the fields from the **'Display these items in Search Result'** list in the right side box to highlight it. Any highlighted field will show in the list of search results.
- 11) **Click** on **'Search'** button in the lower right portion of the form to perform the search. The Work Orders that match the search will display in a **'Results'** form and list information for the fields that are highlighted from the **'Display these items in Search Result'** list.
- 12) The list of Work Orders can be saved to a text file using the **'Save List'** button at the bottom of the Results screen, or each highlighted (selected) work order can be printed by using the **'Print'** button at the bottom of the Results screen.

*End of Cityworks Manual*



LARRY G.

**City of Encinitas  
Public Works Department  
Wastewater Collection Division**

**Sewer System Management Plan  
August 2013 Internal Program Audit**

All Wastewater Collection Division staff will participate in conducting internal audit of our SSMP every other year as required by the State Water Resource Control Board. In addition, members from outside agencies may be asked to participate.

This audit shall 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 included in the audit report and kept on file.

As part of the audit team, please complete the following;

Review all eleven chapters of the SSMP. As you read each chapter, take note of what the regulatory requirements are and evaluate our SSMP for compliance and identify any deficiencies and steps to correct them.

Use this form to document that you have reviewed each chapter of our SSMP and note any specific changes or recommendations you are suggesting.

**Section I: Goals**

I have reviewed the regulatory requirements for this section, Larry Brown 9-5-13

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Larry Brown

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Section II: Organization Compliance**

I have reviewed the regulatory requirements for this section, Fanny Brunner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Fanny Brunner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section III: Legal Authority**

I have reviewed the regulatory requirements for this section, Fanny Brunner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Fanny Brunner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section IV: Operation and Maintenance Program**

I have reviewed the regulatory requirements for this section, Larry Bruner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Larry Bruner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section V: Design and Performance Provisions**

I have reviewed the regulatory requirements for this section, Larry Bruner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Larry Bruner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section VI: Overflow & Emergency Response Plan**

I have reviewed the regulatory requirements for this section, Fanny Brun

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Fanny Brun

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section VII: FOG Control Program**

I have reviewed the regulatory requirements for this section, Fanny Brun

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Fanny Brun

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section VIII: System Evaluation and Capacity Assurance**

I have reviewed the regulatory requirements for this section, Tammy Bruner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Tammy Bruner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section IX: Monitoring, Measurement, and Program Modifications**

I have reviewed the regulatory requirements for this section, Tammy Bruner

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Tammy Bruner

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section X: Program Audits**

I have reviewed the regulatory requirements for this section, Samy Brown

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Samy Brown

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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**Section XI: Communication Program**

I have reviewed the regulatory requirements for this section, Samy Brown

I have evaluated this section and feel the City is in compliance with the requirements of the SSMP as outlined in the WDR, Samy Brown

I have evaluated this section and feel that the City is not in compliance with the requirements of the SSMP as outlined in the WDR and I recommend the following changes;

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