

FOCUSED MUNICIPAL SERVICE REVIEW

Orange County Sanitation District
Service Area 7

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Comparative Matrix of Alternative Service Providers

OCSD	EOCWD	IRWD
<i>Current</i>	<i>Proposed</i>	<i>Proposed</i>
<i>Benchmark</i>	<i>Alternative</i>	<i>Alternative</i>

Primary Service Activities

<i>Sewer Line Cleaning</i>	<p>12-18 month cycle depending on the zone. High risk areas are on a 12-month cleaning schedule, while lower risk areas are on an 18-month schedule.</p> <p>Certain enhanced maintenance areas are cleaned weekly, monthly, quarterly, or in six or nine month periods, as necessary, to prevent blockages.</p>	<p>12-18 month cycle depending on the zone. High risk areas will be on a 12-month cleaning schedule, while lower risk areas will be on an 18-month schedule.</p> <p>Certain enhanced maintenance areas will be cleaned weekly, monthly, quarterly, or in six or nine month periods, as necessary, to prevent blockages.</p>	<p>12-24 month cycle depending on the zone.</p> <p>High risk areas are on a monthly, quarterly, or semi-annual cleaning schedule depending on condition assessment to prevent blockages.</p>
<i>Sewer Line Inspection</i>	5-year schedule	5-year schedule	10-year schedule (trouble areas inspected with a greater frequency)
<i>Fats, Oils, and Grease (FOG) Control Program</i>	<p>FOG program includes permits for Food Service Establishments (FSEs) discharging into sewers. Cleaning of the grease interceptors required every 6-months. District performs routine inspections of FSEs.</p>	<p>Draft FOG program specifies permits for Food Service Establishments (FSEs) discharging into sewers. Cleaning of the grease interceptors required every 6 months. District to perform routine inspections of FSEs.</p>	<p>FOG program includes permits for Food Service Establishments (FSEs) discharging into sewers. Cleaning of the grease interceptors required every 3-6 months. District inspection FSEs on a two-year schedule.</p>
<i>Emergency Response</i>	<p>60 minutes</p> <p>Current SSO frequency rate of 1-2 spills per 100 miles of pipeline per year in Service Area 7.</p>	20 minutes	<p>30 minutes</p> <p>Current SSO frequency rate of less than 1 spill per 100 miles of pipeline per year in IRWD Service Area.</p>

Comparative Matrix of Alternative Service Providers

OCSB	EOCWD	IRWD
<i>Current</i>	<i>Proposed</i>	<i>Proposed</i>
<i>Benchmark</i>	<i>Alternative</i>	<i>Alternative</i>

<i>Operating and Regulatory Staffing & Equipment</i>			
<i>Staffing</i>	<p>Existing staff and equipment provide emergency response and contract administration.</p> <p>OCSB has over 30 years of experience providing local sewer service. District offers extensive operational (25 employees with collection facilities and O&M experience) and regulatory (33 employees involved with environmental compliance) experience.</p>	<p>Currently 6 full-time employees operate wholesale and retail water operations.</p> <p>EOCWD plans to add 2 new staff for sewer operations and cross train several current employees for sewer system certifications.</p> <p>Use of contracts to provide routine services.</p> <p>EOCWD has no past experience with local sewer service as not presently able to provide service.</p>	<p>Currently 16 full-time employees for sewer operations.</p> <p>IRWD plans to add 2 new staff to support sewer services and contract for FOG and vector control services.</p> <p>IRWD has over 50 years of experience providing local sewer service. The District’s has extensive operational (20 employees with collection systems and O&M experience) and regulatory (8 employees involved with environmental compliance) experience.</p>

Comparative Matrix of Alternative Service Providers

	OCSD <i>Current Benchmark</i>	EOCWD <i>Proposed Alternative</i>	IRWD <i>Proposed Alternative</i>
<i>Equipment</i>	Existing equipment includes two large vehicles for emergency response (1995 Vactor Truck and 2000 Hydroflusher truck). The District contracts for routine maintenance of service vehicles and replaces vehicles after 10-years or 100,000 miles.	OCSD to transfer two large vehicles for emergency response (1995 Vactor truck and 2000 Hydroflusher truck). No other equipment or maintenance / replacement costs were included in budget.	Existing equipment includes service fleet and purchasing warehouse. IRWD plans to purchase a new combination Vactor / Hydroflusher truck to accommodate new service territory. The purchase is included in the District’s proposed budget. IRWD also provides in-house fleet maintenance services.

Financial Information: Snapshot of Current and Proposed Budgetary Information

<i>Revenues (property taxes & sewer service fees)</i>	Historic five-year average (FY 2009/10 to 2013/14) \$5,990,034	Projected five-year average (FY 2016/17 to FY 2020/21) \$5,481,766	Projected five-year average (FY 2016/17 to FY 2020/21) \$3,193,000
<i>Expenditures</i>	Historic five-year average (FY 2009/10 to FY 2013/14) \$1,048,753	Projected five-year average (FY 2016/17 to FY 2020/21) \$803,944	Projected five-year average (FY 2016/17 to FY 2020/21) \$822,759
<i>Transfer to Reserves</i>	Historic five-year average (FY 2009/10 to FY 2013/14) \$4,941,281	Projected five-year average (FY 2016/17 to FY 2020/21) \$4,677,822	Projected five-year average (FY 2016/17 to FY 2020/21) \$2,370,242

Comparative Matrix of Alternative Service Providers

	OCSB <i>Current Benchmark</i>	EOCWD <i>Proposed Alternative</i>	IRWD <i>Proposed Alternative</i>
<i>Local Sewer User Fee</i>	\$216	\$196 (Static for 20-years)	\$108 (Static for 5-years, then increases 2 percent per year)
<i>Capital Financing Plan</i>	Capital reserve fund to finance infrastructure replacement on a pay-as-you-go basis.	Capital reserve fund to finance infrastructure replacement on a pay-as-you-go basis.	Blend of capital reserve financing and bond issuance. Debt repayments financed through annual 2 percent increase in sewer service fees after 2055.

Supplemental Service Related Information

<i>Local Sewer Service Connections</i>	17,377 (local sewer connections in OCSB Service Area 7)	0 Assumption of local sewer service would result in new service to 17,377 connections.	97,000 Assumption of local sewer service would result in an additional 17,377 service connections, increasing the current number of local connections by 18 percent to 114,377.
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MSR Determinations

Government Code Section 56430(a) outlines the written determinations that LAFCO is required to make when conducting an MSR.

MSR Determinations (Government Code §56430(a)):

- Growth and population projections for the affected area.
- The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence.
- Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged, unincorporated communities within or contiguous to the sphere of influence.
- Financial ability of agencies to provide services.
- Status of, and opportunities for, shared facilities.
- Accountability for community service needs, including governmental structure and operational efficiencies.
- Any other matter related to effective or efficient service delivery, as required by LAFCO policy.

Service Delivery and Governance Structure Alternatives (Government Code §56430(b)):

- In conducting a service review, the Commission shall comprehensively review all of the agencies that provide the identified service or services within the designated geographic area. The Commission may assess various alternatives for improving efficiency and affordability of infrastructure and service delivery within and contiguous to the sphere of influence, including, but not limited to, the consolidation of governmental agencies.

Activation of Latent Powers – Plan for Service Review Requirements

Government Code Sections 56653(b) and 56824.12(a) outline the requirements for a Plan for Service prepared for the activation of a latent power.

General Requirements for All LAFCO Proposals (Government Code §56653(b)):

- An enumeration and description of the services to be extended to the affected territory.
- The level and range of those services.
- An indication of when those services can feasibly be extended to the affected territory.
- An indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed.
- Information with respect to how those services will be financed.
- Any additional information required by the Commission or LAFCO Executive Officer.

Special Requirements for Latent Power Activation (Government Code §56824.12(a)):

- The total estimated cost to provide the new or different function or class of services within the special district's jurisdictional boundaries.
- The estimated cost of the new or different function or class of services to customers within the special district's jurisdictional boundaries. The estimated costs may be identified by customer class.
- An identification of existing providers, if any, of the new or different function or class of services proposed to be provided and the potential fiscal impact to the customers of those existing providers.
- A written summary of whether the new or different function or class of services or divestiture of the power to provide particular functions or classes of services, within all or part of the jurisdictional boundaries of a special district, pursuant to subdivision (b) of Section 56654, will involve the activation or divestiture of the power to provide a particular service or services, service function or functions, or class of service or services.
- A plan for financing the establishment of the new or different function or class of services within the special district's jurisdictional boundaries.
- Alternatives for the establishment of the new or different functions or class of services within the special district's jurisdictional boundaries.

Standards for Evaluating Service Plans and Preparing Municipal Service Reviews

I. BACKGROUND

Section 56653 of the Cortese/Knox Local Government Act of 1985 states that **“whenever a local agency submits a resolution of application for a change of organization or reorganization the local agency shall submit a plan for providing services within the affected territory.”**

LAFCOS are also required to comprehensively review all municipal services provided by agencies with spheres of influences. Service reviews are conducted before, or in conjunction with, but no later than the time LAFCO establishes or updates SOIs. Service reviews are not intended to be agency specific. Rather, they focus on all public and private service providers within an identified geographic area that provide the service under review. A service review process must include adoption of written evaluations of service related issues (§56430).

This policy is based on existing circumstances unique to Orange County and is primarily directed to ensuring that local services are provided efficiently and economically. They are designed to provide a broad range of criteria in which to review service plans and to conduct municipal service reviews. As such, these standards are not intended to preclude any Commission action which may conflict with these standards if special circumstances surrounding a specific proposal warrant such action.

II. SERVICE PLANS

The following standards have been adopted by the Orange County Local Agency Formation Commission to assist in the review of service plans and to facilitate **consistency with LAFCO’s stated purposes and objectives**. LAFCO staff has the responsibility for determining on a case by case basis, which standards should be applied to a proposed service plan:

- A. The plan for Services shall include all of the following information:
 1. An enumeration and description of the services to be extended to the affected territory;
 2. The level and range of those services;
 3. An indication of when those services can feasibly be extended to the affected territory;
 4. An indication of any improvement, or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory;

5. **An indication of how the agency's services will be financed if the change of organization is approved;**
 6. An indication of whether the affected area is or will be proposed for inclusion with an existing or proposed improvement zone, redevelopment area, assessment district or community facilities district.
- B. The Plan for Services shall be prepared and submitted by a local agency for all proposed changes of organization initiated by resolution and, if determined necessary by the Executive Officer, for proposed changes of organization initiated by petition.
 - C. The Plan for Services must be signed and dated by an official representative of the affected city or district.
 - D. In the case of a proposed annexation, the Plan for Services should demonstrate that the range and level of services currently available within the study area will be maintained or exceeded by the annexing agency.
 - E. In the case of a proposed annexation, the Plan for Services should demonstrate that the cost of services to existing residents will not increase as a result of the annexation, unless a corresponding increase in the levels of service also occurs.
 - F. The Plan for Service should demonstrate that proposed services will not result in any unnecessary duplication of services.
 - G. The Plan for Services should demonstrate that each service provider represents the most efficient and cost effective source of service delivery.
 - H. In the case of a proposed reorganization consisting of annexations to multiple agencies, the Plan for Services shall address each of the items specified above for each annexing agency.

III. MUNICIPAL SERVICE REVIEWS

The following guidelines are intended to assist in the preparation of municipal **service reviews and to facilitate consistency with LAFCO's stated purposes and objectives.** LAFCO staff has the responsibility for determining on a case by case basis, which portions of the following policy should be applied to a proposed municipal service review. All municipal service reviews are required to be consistent with existing State laws.

LAFCO shall conduct a service review of all municipal services provided in the county or other **appropriate designated area.** LAFCO can use a **"horizontal"** approach to municipal service reviews where particular services are examined **on a regional basis or a "vertical" approach which would examine a range of services within an area and for agencies specified by LAFCO.** (§56430).

LAFCO's MSR Program is designed to promote a unique and innovative strategy and programmatic approach to the MSRs. Therefore, MSRs should be:

- Future-oriented studies that address future growth and municipal service and infrastructure needs and opportunities over the next 15 to 20 years
- Valuable to the stakeholders and the public as the ultimate end-users of the studies
- Conducted through an open and inclusive process.

LAFCO shall comprehensively review all services of the agencies and private entities that provide the identified service or services within the designated area (§56430). Service reviews do not replace designations or updates of SOIs, LAFCO will attempt to minimize the number of required service reviews by clustering services or agencies as feasible and appropriate.

LAFCO shall work to streamline service review processes by (1) integrating SOI proposal processing and related CEQA processes with service reviews where appropriate; (2) placing high priority on reviews of services affected by pending or anticipated proposals where feasible and fair; (3) using existing information resources, technical support from the county, cities and special districts when available and adequate; and (4) using other innovative strategies to reduce service review processing costs and timelines. The Commission may reaffirm previously approved municipal service review reports and SOIs where deemed appropriate.

LAFCO shall encourage collaboration, cooperation and information sharing among service review stakeholders including participation in designing the service review, negotiating funding strategies, developing information needs assessment and collection strategies, identifying applicable industry standards, selecting consultants if appropriate, and evaluating technical drafts. LAFCO shall encourage private service providers to fully participate in service review processes (§56430).

LAFCO shall independently review and verify service review information compiled by other agencies. Appropriate local, state, federal and industry standards, identified during the scoping process, will be used to support analysis of technical data and conditions.

Service reviews shall contain conclusions and recommendations for SOI or other government structure changes needed to implement positive service changes.

For each service review, LAFCO shall adopt a written statement of its determinations with respect to each of the following:

- (1) Growth and population projections for the affected area.
- (2) Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies.
- (3) Financial ability of agencies to provide services.

- (4) Status of, and opportunities for, shared facilities.
- (5) Accountability for community service needs, including governmental structure and operational efficiencies.
- (6) Any other matter related to effective or efficient service delivery, as required by commission policy.

LAFCO may consider SOI actions that are based on an approved service review immediately after adoption of written determinations. Such action should be delayed if imminent requests for reconsideration are expected or oral or written requests for delay are received prior to the end of the service review hearing.

Original Adoption Date: 1989
Date of Last Review: 4/9/2014
Date of Last Revision: 3/11/2009

OC LAFCO Outreach for Focused MSR

On June 17, 2015, OC LAFCO hosted a Community Workshop at Foothill High School located in Service Area 7. The purpose of the workshop was to provide an overview of the Focused MSR for OCSD Service Area 7 and receive comments and questions from the public. The Community Workshop was attended by over 30 people including staff and representatives from affected agencies, residents within and adjacent to OCSD Service Area 7 and representatives from the Foothill Community Association. In general, the following represent the questions and comments discussed at the workshop:

❖ Sewer Service

Residents expressed interest in the response times of OCSD, EOCWD, and IRWD to sewer emergencies and customer complaints. Residents also inquired about the costs for conversion from a septic system to a sewer system. City of Tustin provided comments on the property owner's responsibility for repairing sewer lines.

❖ Sewer Assets

Residents asked questions concerning the transfer of emergency response vehicles from OCSD to EOCWD and the life expectancy of the sewer pipes in the area. The discussion of sewer pipe replacement led to discussion of the reserve account funding and use.

❖ Finance

Several residents asked questions related to sewer fees and the financing of future replacement of the sewer pipes in the area. Residents also asked about the current status of the reserve account and how reserve funds would be used.

❖ Operational & Regulatory Experience

Residents inquired about the operational and regulatory experience that EOCWD and IRWD have related to sewer system operations. A resident from an adjacent community spoke positively of water and sewer service provided to his community by IRWD after the District had assumed the services from a former mutual water company.

❖ Governance

Some residents expressed the importance of local representation from an agency that Board members reside within OCSA Service Area 7.

❖ LAFCO Process

Residents inquired about future opportunities for public input and participation regarding the MSR and applications submitted by EOCWD and IRWD.

❖ Private utilities

Residents were interested about the role of the private water company, Golden State Water Company, in the MSR process and asked whether the company could assume local sewer service through a similar process.

LAFCO staff addressed each of the questions and comments during the Community Workshop and informed the attendees of the process to submit their comments to the Commission. Attendees were informed that written comments could be submitted by email or sent to the LAFCO office, and that oral comments could be provided directly to the Commission at the LAFCO regular meetings in July and August. Written comments received are included as Attachment 1.

I'm John Sears, a resident of unincorporated North Tustin and a Board Member of the influential Foothill Communities Association.

I understand that OC Sanitation District entered into an agreement with EOCWD last year... for operation of the sewer system in question, Area 7.

That a vote was taken by OCS D recommending to LAFCO that EOCWD be awarded the Area 7 sewer service responsibility....And that EOCWD's boundary of over 16 sq. miles closely encompasses that of service Area 7 and it is mostly within their Sphere of Influence.

Just last week The City Council of Orange by a vote continued its support for EOCWD and I understand that the City of Tustin is supportive of EOCWD operating the sewers as well.

The water ratepayers in North Tustin... have recently become highly aware of the importance in our community of having local control of our necessary services which, of course now potentially includes the sewer operation.

Having local representation is important to our residents. EOCWD is here and accessible. They will provide the public access and accountability in this matter.

Their sewer technicians will be required to live in the community and the close proximity of their headquarters and key technical staff will go to their ability to respond faster to any and all emergencies such as sewage spills.

Lisa Ohlund the District's General Manager, has 33 years of experience with the collection and treatment of wastewater in both public and private sector agencies.

EOCWD is a regional utility agency; it is a wholesale and retail water purveyor, providing water to the Cities of Orange and Tustin, to the Irvine Ranch Water District and to the private Golden State Water Company.

EOCWD is operated prudently, has no debt, and has kept its water rates low with no tiers. I am confident that they will have a well operated and financially stable service plan.

Having the support from the Foothill Communities Association, the OC Sanitation District, the Cities of Orange and Tustin indicates to me that EOCWD would be the best fit for each of our communities.

Thank you



10532 MIAA VISTA DR
SANTA ANA, CA. 92705

LAFCO- Sewer Services for North Tustin

Mr. Ben Legbandt, Project Manager

Dear Ben,

Please forward this letter to all LAFCO members.

This letter has three parts and all three point to the reason why EOCWD should not be considered for providing North Tustin with sewer service.

First- I believe LAFCO would be going against its own Mission Statement. Orange County LAFCO should be looking for ways to consolidate government services not expand them. To allow EOCWD to provide sewer service to North Tustin when, in fact, EOCWD has never provided sewer service period, would not be an "efficient use of services" and would, instead, be a huge disservice to the very people LAFCO is responsible to.

I sat on the City of Orange's MSR Plan for the city's SOI in 2004- 2006 and it is plain and simple that there are many government services that need consolidation- not expansion to an entity without any experience. This is not an experiment, it is a critical situation, and the people of North Tustin deserve the best service possible.

Second- IRWD already handles sewers. IRWD is a very professional organization with solid leaders who understand water delivery and sewers. There is no learning curve needed with IRWD, they have the work force, the vehicles, and the expertise to get the job done. I cannot imagine the citizens of North Tustin having to work with an organization whose leaders and labor force have never dealt with a sewer system.

Third- Having sat through the LAFCO workshop on June 17, I noticed that many are concerned about the size of each organization. Some folks liked the small size of EOCWD; some thought IRWD would be better suited because of their size. Smaller is not better in this situation! I have been involved in small and small doesn't work in the water and sewer world. I can tell you from first-hand knowledge when the Orange Park Acres Mutual Water Company (OPAMWC), I sat on that BOD, was looking for a suitor we looked at EOCWD along with many others, including Golden State, Serrano Water District and the City of Orange. Only IRWD had the ability and wherewithal to step into a situation where a small time water company had basically run its course. IRWD upgraded the system, lowered rates, and managed the water company all more efficiently than the small water company was able to do. IRWD had expertise and resources that no other organization possessed.

The issue of response time was brought up by EOCWD saying IRWD was not as close in proximity as EOCWD to respond to an emergency. That is pure bunk! IRWD is much better suited to respond to any type of emergency both in locale and personnel, that shouldn't even be an argument. EOCWD needs this "deal" for survival. I completely understand OCSD's desire to be out of the sewer delivery business and stick to the treatment of sewage. It seems to me that politics has entered into this process, as it seems to in many instances. It is LAFCO's job to help sort out right from wrong, and maybe there isn't a wrong here, but there is, clearly, a "right suitor" and a "wrong suitor"- the right suitor is IRWD.

Thank you to the LAFCO board and staff for your dedication to the citizens of Orange County.

Sincerely,



Tom Davidson
Orange, CA



March 9, 2011

CHAIR
JOHN MOORLACH
Supervisor
2nd District

Larry R. Crandall, Chair
Orange County Sanitation District (OCSD)
10844 Ellis Avenue,
Fountain Valley, CA 92708-7018

VICE CHAIR
CHARLEY WILSON
Director
Santa Margarita
Water District

PAT BATES
Supervisor
5th District

PETER HERZOG
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City of Lake Forest

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JOHN WITHERS
Director
Irvine Ranch Water District

ALTERNATE
BILL CAMPBELL
Supervisor
3rd District

ALTERNATE
JAMES FISLER
Director
Mesa Consolidated
Water District

ALTERNATE
DEREK J. MCGREGOR
Representative of
General Public

ALTERNATE
BOB RING
Councilmember
City of Laguna Woods

JOYCE CROTHWAITE
Executive Officer

Dear Chair Crandall,

The OCSD staff recently presented your agency's "Five-Year Strategic Plan" to the staff of the Orange County Local Agency Formation (LAFCO). At that meeting, OCSD staff requested that LAFCO write a letter supporting the following goal identified in your Strategic Plan:

"Local Sewer Service-Transfer back to cites and sanitary districts local sewer assets that are not serving a true regional purpose. Targeted for completion in FY 12-13"

The Commission understands that OCSD's eventual goal is to focus district resources on regional sewer collection and treatment. The Commission also recognizes that there are many challenging issues that OCSD and our Orange County cities/or special districts must mutually resolve before any transfer of local sewer assets occurs.

The Commission discussed the request of the OCSD staff at its March 9th 2011 meeting. The Commission noted that, while LAFCO has no purview over contracts between two public agencies, and there remain outstanding service and infrastructure issues among some local and regional sewer providers, it generally supports OCSD's goal in the long-term.

John Moorlach
Chair, LAFCO

OPERATIONS COMMITTEE

Meeting Date 05/06/15	To Bd. of Dir. 05/27/15
Item Number 5	Item Number 7

AGENDA REPORT

Orange County Sanitation District

FROM: James D. Herberg, General Manager
Originator: Nick Arhontes, P.E., Director of Facilities Support Services

SUBJECT: SEWER LINE CLEANING FOR CITY OF TUSTIN AND UNINCORPORATED COUNTY PROPERTY

GENERAL MANAGER'S RECOMMENDATION

Award a Sole Source contract to Performance Pipeline Technologies for a six-month period, effective July 1, 2015 through December 31, 2015, with (one) 6-month renewal option, for the cleaning services of approximately 90 miles of Area 7 sewer pipelines and manholes for an amount not-to-exceed \$202,204.

SUMMARY

We use contractor services to clean the local sewers in Service Area 7. This area includes the City of Tustin and unincorporated county areas north of Tustin, including the El Modena Islands. Services include combination cleaning per our specifications to remove debris, roots, and grease from 6-inch to 18-inch diameter pipelines and their respective manholes. A quick visual inspection of the related manholes and their frames and covers is also included. Contractor work is monitored by staff.

Performance Pipeline Technologies (PPT) is the current contractor and the current contract will expire on June 30, 2015. PPT was originally the lowest responsive bidder using a competitive process and has been performing this service for the past five years through annual renewals. The subject sewers are currently in the process of being transferred following LAFCO's process. We expect the transfer of ownership to be completed in the next six months or less. A month to month type service following our current cleaning plan and schedule best meets our needs. PPT has agreed to hold its current unit price schedule firm during the subject period. We do not need another long term agreement. This approach is recommended by staff as compared to a full new bid process that would only be needed for a short period of time. This approach also provides no lapse in services. This also avoids risks in start-up and learning the system as would be required for potentially a new contractor and their staff.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

In 2010, an annual service contract with four renewals was awarded for this which complied with authority levels of the OCSD's Delegation of Authority. In 2010 the services were budgeted items as part of OCSD's Operational Budget (2010/11

BUDGET PAGE, SECTION 4, PAGE 11, ITEM "LOCAL SEWER LINE CLEANING", PO# 103937-OB / PR# 75791-OR). PPT was the lowest responsive bidder.

The total agreement cost is not guaranteed nor is it paid to the Contractor should services not be utilized.

CEQA

N/A

BUDGET / PURCHASING ORDINANCE COMPLIANCE

This request complies with authority levels of the OCSD's Purchasing Ordinance OCSD-44 (Article 1, Section 1.07A). This repair will be funded through the Facilities Engineering and Repair Services Operating Budget (2014–2015 & 2015-2016 Budget Section 6 – Page 56) Object number 54030. The budget is adequate to cover this contract.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
5/27/15	\$ 202,204	

ATTACHMENT

The following attachment(s) may be viewed on-line at the OCSD website (www.ocsd.com) with the complete agenda package and attachments:

- Sole Source Contract

MAE:JF:eh

SOLE SOURCE SERVICE CONTRACT
Performance Pipeline Technologies
Sewer Line Cleaning for City of Tustin and Unincorporated County Property

THIS CONTRACT is made and entered into as of the date fully executed below, by and between Orange County Sanitation District, with a principal place of business at 10844 Ellis Avenue, Fountain Valley, CA 92708-7018 (hereinafter referred to as "OCSD") and Performance Pipeline Technologies with a principal business at 5305 Industrial Drive, Huntington Beach, CA 92649 (hereinafter referred to as "Contractor") collectively referred to as the "Parties".

WITNESSETH

WHEREAS, OCSD desires to retain the services of Contractor for Sewer Line Cleaning for City of Tustin and Unincorporated County Property "Services"; and

WHEREAS, OCSD has chosen Contractor to conduct Services in accordance with Ordinance No. OCSD-44; and

WHEREAS, on May 27, 2015, the Board of Directors of OCSD, by minute order, authorized execution of this Contract between OCSD and Contractor; and

WHEREAS, Contractor is qualified by virtue of experience, training, and education and expertise to accomplish such Services,

NOW THEREFORE, in consideration of the promises and mutual benefits exchanged between the Parties, it is mutually agreed as follows:

1. Introduction

1.1 This Contract and all exhibits hereto (called the "Contract") is made by OCSD and Contractor. The Terms and Conditions herein exclusively govern the purchase of Services as described in the Scope of Work, attached hereto and incorporated herein by reference as Exhibit "A".

1.2 Exhibits to this Contract are incorporated by reference and made a part of this Contract as though fully set forth at length herein. Exhibits to this Contract are as follows in order of precedence:

Exhibit "A"	Scope of Work
Exhibit "B"	Not Used
Exhibit "C"	Acknowledgement of Insurance Requirements
Exhibit "D"	Not Used

1.3 In the event of any conflict or inconsistency between the provisions of this Contract and any of the provisions of the exhibits hereto, the provisions of this Contract shall in all respects govern and control.

1.4 The provisions of this Contract may be amended or waived only by a writing executed by authorized representatives of both Parties hereto.

1.5 The various headings in this Contract are inserted for convenience only and shall not affect the meaning or interpretation of this Contract or any Paragraph or provision hereof.

1.6 The term “days”, when used in the Contract, shall mean calendar days, unless otherwise noted as business days.

1.7 OCSD holidays (non-working days) are as follows: New Year’s Day, Lincoln’s Birthday, Presidents’ Day Monday, Memorial Day Monday, Independence Day, Labor Day Monday, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, and Christmas Day.

1.8 The term “hours”, when used in this Contract, shall be as defined in Exhibit “A”.

1.9 Contractor shall provide OCSD with all required premiums and/or overtime work at no charge beyond the price provided under “Compensation” below.

1.10 Except as expressly provided otherwise, OCSD accepts no liability for any expenses, losses, or action incurred or undertaken by Contractor as a result of work performed in anticipation of purchases of said services by OCSD.

2. Compensation Compensation for this Contract shall not exceed the total amount of Two Hundred Two-Thousand Two Hundred Four Dollars (\$202,204.00).

3. California Department of Industrial Relations (DIR) Registration; Record of Wages Contractor shall comply with the registration requirements of Labor Code Section 1725.5. Pursuant to Labor Code Section 1771.4, the work is subject to compliance monitoring by the California Department of Industrial Relations. Contractor shall maintain accurate payroll records and shall submit payroll records to the Labor Commissioner pursuant to Labor Code Section 1771.4(a)(3). Penalties for non-compliance with the requirements of Section 1776 may be deducted from Contract payments per Section 1776. Contractor shall comply with the job site notices posting requirements established by the Labor Commissioner per Title 8, California Code of Regulations Section 16461 €.

4. Payments Payments shall be made upon approval by the OCSD Project Manager or designee, of invoices submitted for Services completed as described in Exhibit “A”. OCSD, at its sole discretion, shall be the determining party as to whether the Services have been satisfactorily completed.

5. Invoices

5.1 OCSD shall pay within thirty (30) days of completion and receipt and approval by the OCSD Project Manager or designee of an itemized invoice, in a form acceptable to OCSD to enable audit of the charges thereon. Invoices shall include the Purchase Order Number.

5.2 Invoices shall be emailed by Contractor to OCSD Accounts Payable at APStaff@OCSD.com and reference the following in the subject line: “INVOICE”, the Purchase Order number, the Project Manager, and Sewer Line Cleaning for City of Tustin and Unincorporated County Property.

6. Audit Rights Contractor agrees that, during the term of this Contract and for a period of three (3) years after its termination, OCSD shall have access to and the right to examine any directly pertinent books, documents, and records of Contractor relating to the invoices submitted by Contractor pursuant to this Contract.

7. **Scope of Work** Subject to the terms of this Contract, Contractor shall perform the Services identified in Exhibit "A". Contractor shall perform said Services in accordance with generally accepted industry and professional standards.

8. **Modifications to Scope of Work** Requests for modifications to the Scope of Work hereunder can be made by OCSD at any time. All modifications must be made in writing and signed by both Parties.

9. **Contract Term** The Services provided under this Contract are made and entered into, to be effective July 1, 2015, and terminate December 31, 2015.

9.1 OCSD may exercise the option to renew the Contract for up to one (1) six-month period based upon the criteria set forth in Exhibit "A", if mutually acceptable Contract terms can be negotiated. OCSD shall make no obligation to renew nor give reason if it elects not to renew.

9.2 Renewals may be made through the OCSD Purchase Order Process.

10. **Termination**

10.1 OCSD reserves the right to terminate this Contract for its convenience, with or without cause, in whole or in part, at any time, by written notice from OCSD of intent to terminate. Upon receipt of a termination notice, Contractor shall immediately discontinue all work under this Contract (unless the notice directs otherwise). OCSD shall thereafter, within thirty (30) days, pay Contractor for work performed (cost and fee) to the date of termination. Contractor expressly waives any claim to receive anticipated profits to be earned during the uncompleted portion of this Contract. Such notice of termination shall terminate this Contract and release OCSD from any further fee, cost or claim hereunder by Contractor other than for work performed to the date of termination.

10.2 OCSD reserves the right to terminate this Contract immediately upon OCSD's determination that Contractor is not meeting specification requirements, if the level of service is inadequate, or any other default of this Contract.

10.3 OCSD may also immediately cancel for default of this Contract in whole or in part by written notice to Contractor:

- if Contractor becomes insolvent or files a petition under the Bankruptcy Act; or
- if Contractor sells its business; or
- if Contractor breaches any of the terms of this Contract; or
- if total amount of compensation exceeds the amount authorized under this Contract.

10.4 All OCSD property in the possession or control of Contractor shall be returned by Contractor to OCSD upon demand, or at the termination of this Contract, whichever occurs first.

11. **Insurance** Contractor and all of its subcontractors shall purchase and maintain, throughout the life of this Contract and any periods of warranty or extensions, insurance in amounts equal to the requirements set forth in the signed Acknowledgement of Insurance Requirements (attached hereto and incorporated herein as Exhibit "C"). Contractor shall not commence work under this Contract until all required insurance is obtained in a form acceptable to OCSD, nor shall Contractor allow any subcontractor to commence service pursuant to a subcontract until all insurance required of the subcontractor has been obtained. Failure to maintain required insurance coverage shall result in termination of this Contract.

12. Indemnification and Hold Harmless Provision Contractor shall assume all responsibility for damages to property and/or injuries to persons, including accidental death, which may arise out of or be caused by Contractor's services under this Contract, or by its subcontractor or by anyone directly or indirectly employed by Contractor, and whether such damage or injury shall accrue or be discovered before or after the termination of the Contract. Except as to the sole active negligence of or willful misconduct of OCSD, Contractor shall indemnify, protect, defend and hold harmless OCSD, its elected and appointed officials, officers, agents and employees, from and against any and all claims, liabilities, damages or expenses of any nature, including attorneys' fees: (a) for injury to or death of any person or damage to property or interference with the use of property, arising out of or in connection with Contractor's performance under the Contract, and/or (b) on account of use of any copyrighted or uncopied material, composition, or process, or any patented or unpatented invention, article or appliance, furnished or used under the Contract, and/or (c) on account of any goods and services provided under this Contract. This indemnification provision shall apply to any acts or omissions, willful misconduct, or negligent misconduct, whether active or passive, on the part of Contractor or of anyone employed by or working under Contractor. To the maximum extent permitted by law, Contractor's duty to defend shall apply whether or not such claims, allegations, lawsuits, or proceedings have merit or are meritless, or which involve claims or allegations that any of the parties to be defended were actively, passively, or concurrently negligent, or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage, or injury. Contractor agrees to provide this defense immediately upon written notice from OCSD, and with well qualified, adequately insured, and experienced legal counsel acceptable to OCSD.

13. Safety Standards and Human Resources (HR) Policies OCSD requires all contractors and service providers to follow and ensure their employees and all subcontractors follow all Federal and State regulations as well as the OCSD Safety Standards while working at OCSD locations. If during the course of the Contract it is discovered that OCSD Safety Standards do not comply with Federal or State regulations then the Contractor is required to follow the most stringent regulatory requirements at no additional cost to OCSD. Contractor and all their employees and subcontractors, shall adhere to all applicable OCSD Safety Standards and Human Resources Policies found at: OCSD.com, "Doc Central" (bottom of page), under "Safety".

14. Warranties In addition to the Warranties stated in Exhibit "A", the following shall apply:
 14.1 Manufacturer's standard warranty shall apply. All manufacturer warranties will begin at date of completion of this Contract.

14.2 Contractor's warranty: If, within the 12-month period following completion of its Services, OCSD informs Contractor that any part of the Services fails to meet the standards required under this Contract, Contractor shall, within the time agreed to by OCSD and Contractor, take all such actions as are necessary to correct or complete the noted deficiency(ies) at Contractor's sole expense.

15. Performance Time is of the essence in the performance of this Contract and the provisions hereof.

16. Force Majeure Neither party shall be liable for delays caused by accident, flood, acts of God, fire, labor trouble, war, acts of government or any other cause beyond its control, but said party shall use reasonable efforts to minimize the extent of the delay. Work affected by a Force Majeure condition may be rescheduled by mutual consent or may be eliminated from the Contract.

17. Freight (F.O.B. Destination) Contractor assumes full responsibility for all transportation, transportation scheduling, packing, handling, insurance, and other services associated with delivery of all products deemed necessary under this Contract.

18. Familiarity with Work By executing this Contract, Contractor warrants that: 1) it has investigated the work to be performed; 2) it has investigated the site of the work and is aware of all conditions there; and 3) it understands the facilities, difficulties and restrictions of the work under this Contract. Should Contractor discover any latent or unknown conditions materially differing from those inherent in the work or as represented by OCSD, it shall immediately inform OCSD of this and shall not proceed, except at Contractor's risk, until written instructions are received from OCSD.

19. Regulatory Requirements Contractor shall perform all work under this Contract in strict conformance with applicable Federal, State, and local regulatory requirements including, but not limited to, 40 CFR 122, 123, 124, 257, 258, 260, 261, and 503, Title 22, 23, and California Water Codes Division 2.

20. Licenses, Permits, Ordinances and Regulations Contractor represents and warrants to OCSD that it has obtained all licenses, permits, qualification and approvals of whatever nature that are legally required to engage in this work. Any and all fees required by Federal, State, County, City and/or municipal laws, codes and/or tariffs that pertain to work performed under the terms of this Contract will be paid by Contractor.

21. Applicable Laws and Regulations Contractor shall comply with all applicable Federal, State, and local laws, rules, and regulations. Contractor also agrees to indemnify and hold harmless from any and all damages and liabilities assessed against OCSD as a result of Contractor's noncompliance therewith. Any permission required by law to be included herein shall be deemed included as a part of this Contract whether or not specifically referenced.

22. Contractor's Employees Compensation

22.1 Davis-Bacon Act - Contractor will pay and will require all subcontractors to pay all employees on said Contract a salary or wage at least equal to the prevailing rate of per diem wages as determined by the Secretary of Labor in accordance with the Davis-Bacon Act for each craft or type of worker needed to perform the Contract. The provisions of the Davis-Bacon Act shall apply only if the Contract is in excess of two thousand dollars (\$2,000.00) and when twenty-five percent (25%) or more of the Contract is funded by Federal assistance. If the aforesaid conditions are met, a copy of the provisions of the Davis-Bacon Act to be complied with are incorporated herein as a part of this Contract and referred to by reference.

22.2 General Prevailing Rate – OCSD has been advised by the State of California Director of Industrial Relations of its determination of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of the same are on file in the office of the engineer of OCSD. The Contractor agrees that not less than said prevailing rates shall be paid to workers employed on this Contract as required by Labor Code Section 1774 of the State of California. Per California Labor Code Section 1773.2, OCSD will have on file copies of the prevailing rate of per diem wages at its principal office and at each job site, which shall be made available to any interested party upon request.

22.3 Forfeiture For Violation - Contractor shall, as a penalty to OCSD, forfeit fifty dollars (\$50.00) for each calendar day or portion thereof for each worker paid (either by the Contractor or any subcontractor under it) less than the prevailing rate of per diem wages as set by the

Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.

22.4 Apprentices – Sections 1777.5, 1777.6, 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices are applicable to this Contract and the Contractor shall comply therewith if the prime contract involves thirty thousand dollars (\$30,000.00) or more or twenty (20) working days or more; or if contracts of specialty contractors not bidding for work through the general or prime Contractor are two thousand dollars (\$2,000.00) or more or five (5) working days or more.

22.5 Workday – In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and the Contractor shall not require more than eight (8) hours of labor in a day from any person employed by it hereunder except as provided in paragraph 19.2 above. Contractor shall conform to Article 3, Chapter 1, Part 7 (Section 1810 et seq.) of the Labor Code of the State of California and shall forfeit to OCSD as a penalty, the sum of twenty five dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the project.

22.6 Record of Wages; Inspection - Contractor agrees to maintain accurate payroll records showing the name, address, social security number, work classification, straight-time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by it in connection with the Contract and agrees to require that each of its subcontractors do the same. All payroll records shall be certified as accurate by the applicable Contractor or subcontractor or its agent having authority over such matters. Contractor further agrees that its payroll records and those of its subcontractors shall be available to the employee or employee's representative, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards and shall comply with all of the provisions of California Labor Code Section 1776, in general. Penalties for non-compliance with the requirements of Section 1776 may be deducted from Contract payments per the requirements of Section 1776.

23. South Coast Air Quality Management District's (SCAQMD) Requirements It is Contractor's responsibility that all equipment furnished and installed be in accordance with the latest rules and regulations of the South Coast Air Quality Management District (SCAQMD). All Contract work practices, which may have associated emissions such as sandblasting, open field spray painting or demolition of asbestos containing components or structures, shall comply with the appropriate rules and regulations of the SCAQMD.

24. Governing Law This Contract shall be governed by and interpreted under the laws of the State of California and the Parties submit to jurisdiction in Orange County, in the event any action is brought in connection with this Contract or the performance thereof.

25. Breach The waiver of either party of any breach or violation of, or default under, any provision of this Contract, shall not be deemed a continuing waiver by such party of any other provision or of any subsequent breach or violation of this Contract or default thereunder. Any breach by Contractor to which OCSD does not object shall not operate as a waiver of OCSD's rights to seek remedies available to it for any subsequent breach.

26. Remedies In addition to other remedies available in law or equity, if the Contractor fails to make delivery of the goods or Services or repudiates its obligations under this Contract, or if OCSD rejects the goods or Services or revokes acceptance of the goods or Services, OCSD may (1) cancel the Contract; (2) recover whatever amount of the purchase price OCSD has paid, and/or (3) "cover" by purchasing, or contracting to purchase, substitute goods or Services for those due from Contractor. In the event OCSD elects to "cover" as described in (3), OCSD shall be entitled to recover from Contractor as damages the difference between the cost of the substitute goods or Services and the Contract price, together with any incidental or consequential damages.

27. Dispute Resolution

27.1 In the event of a dispute as to the construction or interpretation of this Contract, or any rights or obligations hereunder, the Parties shall first attempt, in good faith, to resolve the dispute by mediation. The Parties shall mutually select a mediator to facilitate the resolution of the dispute. If the Parties are unable to agree on a mediator, the mediation shall be conducted in accordance with the Commercial Mediation Rules of the American Arbitration Agreement, through the alternate dispute resolution procedures of Judicial Arbitration through Mediation Services of Orange County ("JAMS"), or any similar organization or entity conducting an alternate dispute resolution process.

27.2 In the event the Parties are unable to timely resolve the dispute through mediation, the issues in dispute shall be submitted to arbitration pursuant to California Code of Civil Procedure, Part 3, Title 9, Sections 1280 et seq. For such purpose, an agreed arbitrator shall be selected, or in the absence of agreement, each party shall select an arbitrator, and those two (2) arbitrators shall select a third. Discovery may be conducted in connection with the arbitration proceeding pursuant to California Code of Civil Procedure Section 1283.05. The arbitrator, or three (3) arbitrators acting as a board, shall take such evidence and make such investigation as deemed appropriate and shall render a written decision on the matter in question. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California. The arbitrator's decision and award shall be subject to review for errors of fact or law in the Superior Court for the County of Orange, with a right of appeal from any judgment issued therein.

28. Attorney's Fees If any action at law or inequity or if any proceeding in the form of an Alternative Dispute Resolution (ADR) is necessary to enforce or interpret the terms of this Contract, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which he may be entitled.

29. Survival The provisions of this Contract dealing with Payment, Warranty, Indemnity, and Forum for Enforcement, shall survive termination or expiration of this Contract.

30. Severability If any section, subsection, or provision of this Contract, or any agreement or instrument contemplated hereby, or the application of such section, subsection, or provision is held invalid, the remainder of this Contract or instrument in the application of such section, subsection or provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby, unless the effect of such invalidity shall be to substantially frustrate the expectations of the Parties.

31. Damage to OCSD's Property Any of OCSD's property damaged by Contractor, any subcontractors or by the personnel of either will be subject to repair or replacement by Contractor at no cost to OCSD.

32. **Disclosure** Contractor agrees not to disclose, to any third party, data or information generated from this Contract without the prior written consent from OCSD.
33. **Independent Contractor** The legal relationship between the parties hereto is that of an independent contractor, and nothing herein shall be deemed to make Contractor an OCSD employee. During the performance of this Contract, Contractor and its officers, employees, and agents shall act in an independent capacity and shall not act as OCSD's officers, employees, or agents. Contractor and its officers, employees, and agents shall obtain no rights to any benefits which accrue to OCSD's employees.
34. **Limitations upon Subcontracting and Assignment** Contractor shall not delegate any duties nor assign any rights under this Contract without the prior written consent of OCSD. Any such attempted delegation or assignment shall be void.
35. **Third Party Rights** Nothing in this Contract shall be construed to give any rights or benefits to anyone other than OCSD and Contractor.
36. **Non-Liability of OCSD Officers and Employees** No officer or employee of OCSD shall be personally liable to Contractor, or any successor-in-interest, in the event of any default or breach by OCSD or for any amount which may become due to Contractor or to its successor, or for breach of any obligation for the terms of this Contract.
37. **Read and Understood** By signing this Contract, Contractor represents that he has read and understood the terms and conditions of the Contract.
38. **Authority to Execute** The persons executing this Contract on behalf of the Parties warrant that they are duly authorized to execute this Contract and that by executing this Contract, the Parties are formally bound.
39. **Entire Contract** This Contract constitutes the entire agreement of the Parties and supersedes all prior written or oral and all contemporaneous oral agreements, understandings, and negotiations between the Parties with respect to the subject matter hereof.

40. Notices All notices under this Contract must be in writing. Written notice shall be delivered by personal service or sent by registered or certified mail, postage prepaid, return receipt requested, or by any other overnight delivery service which delivers to the noticed destination and provides proof of delivery to the sender. Rejection or other refusal to accept or the inability to deliver because of changed address or which no notice was given as provided hereunder shall be deemed to be receipt of the notice, demand or request sent. All notices shall be effective when first received at the following addresses:

OCSD: Larry Roberson
Senior Contracts Administrator
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

Contractor: Gene Glassburner
Performance Pipeline Technologies
5305 Industrial Drive
Huntington Beach, CA 92649

Each party shall provide the other party written notice of any change in address as soon as practicable.

IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Contract to be signed by the duly authorized representatives.

ORANGE COUNTY SANITATION DISTRICT

Dated: _____ By: _____
Tom Beamish
Chair, Board of Directors

Dated: _____ By: _____
Kelly A. Lore
Clerk of the Board

Dated: _____ By: _____
Contracts/Purchasing Manager

COMPANY

Dated: _____ By: _____

Print Name and Title of Officer

IRS Employer's I.D. Number

EXHIBIT "A"
SCOPE OF WORK
SEWER LINE CLEANING FOR CITY OF TUSTIN
AND UNINCORPORATED COUNTY PROPERTY

- A. Background** – Orange County Sanitation OCSD (OCSD) is a public agency responsible for collecting, treating, and safely disposing of wastewater and its residuals for 2.2 million residents and businesses in Orange County. OCSD operates two (2) treatment plants: Plant 1 located in Fountain Valley and Plant 2 located in Huntington Beach, California. In addition, OCSD operates over 600 miles of large pipelines, and seventeen (17) remote pump stations, which convey flows to the treatment plants.
- B. General** – Contractor will furnish all labor, materials, equipment and incidentals necessary for the cleaning of approximately 175 ± miles of sewer lines and manholes described herein. The Contractor shall be responsible for the removal of debris from the pipeline and manholes, and shall take all the necessary steps to ensure that no spills of any sewage occur. Pipeline debris is described as, but not limited to, sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid materials. The sewers in this Contract area are scheduled to be cleaned every twelve (12) to eighteen (18) months. Sewer lines are vitrified clay pipe (VCP), ductile iron pipe (DIP), and polyvinyl chloride (PVC) and range in sizes from 6 to 18 inches in diameter. Lengths shown are approximate. Payment will be for actual footage cleaned.

6"	=	2,500'
8"	=	850,000
10"	=	31,000
12"	=	26,000
15"	=	13,098
18"	=	2,383

Work crews may be on site from 7:00 a.m. to 3:30 p.m., Monday through Thursday. No line work shall be performed on Fridays. These sewers are located in the Unincorporated County Property located in the Cowan Heights, Lemon Heights, North Tustin, East Tustin, Tustin Foothills, and Red Hill areas; some portions of the City of Orange; and the City of Tustin as shown on atlas maps provided to the Contractor. All sewers on the sewer cleaning sequence shall be cleaned every eighteen (18) months. Sequence of work shall be per the attached Sewer Cleaning Sequence (Exhibit A-4).

C. Cleaning Equipment

1. Combination of high velocity hydro-cleaning and vacuum removal equipment shall be utilized and shall have the following features as a minimum:
 - a. A minimum of 900 feet of 1 inch diameter high pressure hydro flushing hose.
 - b. A dual degree nozzle with six (6) jets at 15 degrees and six (6) jets at 45 degrees is preferred by OCSD to be used for normal cleaning. A comparable nozzle may be used upon approval by OCSD. In addition, a grease nozzle and penetrating head nozzle shall be available. Nozzle skids shall be used for the appropriate size of pipe being cleaned. The nozzle used for normal cleaning shall be specifically sized for the jetter pump used for this Contract and shall be brand new. Nozzle specifications listing the orifice diameter shall be submitted to OCSD. The nozzle shall be considered worn out when the orifices measure 0.005-inch over and shall be replaced with new nozzle. The nozzle shall be checked for wear on a quarterly basis and replaced with a new one as

- needed.
- c. At least one (1) root cutter attachment for 6 inch through 12 inch pipe.
 - d. A high-pressure handgun for washing and cleaning manhole walls, channels, shelves, and manhole cover frames.
 - e. A 1,500-gallon minimum water tank, pump and a hydraulically driven hose reel.
 - f. Debris catcher with telescoping poles for roots and grit.
 - g. Minimum working pressure of 1,200 pounds per square inch at 65 gallons per minute (GPM) rate.
 - h. Centrifugal or positive displacement blower vacuum equipment suitable to remove all debris at the downstream manhole while the hydro flushing is being performed.
 - i. Two (2) two-way hand held radios for communication in easements.
 - j. Small hand tools for changing fittings and removing bolt down manhole covers.
 - k. Spill containment equipment.
 - l. Availability of a closed circuit television (CCTV) crawler camera rig with DVD recording capability.

- D. Cleaning Precautions** – During sewer cleaning operations, satisfactory precautions shall be taken in the use of cleaning equipment to ensure that the water pressure or head created does not damage or cause flooding of public or private property being served by the sewer. Care shall be exercised in the selection and use of the cleaning tools to avoid pipe damage. Contractor shall be responsible for all costs for repairs and/or clean up to OCSD, city owned or private property to OCSD's satisfaction. Use of a nozzle skid is required to prevent accidental entry of nozzle into house connections.

There are also a few areas where certain homes are affected by cleaning operations whereby 'toilet burps' occur. These 'toilet burps' are caused by the vacuum created during high pressure jetting which pulls the water from the house connection and when the vacuum subsides the back pressure causes the toilet bowl to splash water out of the bowl. These areas will be identified and a notice shall be placed on the residence door the day before cleaning these particular sewers

- E. Sewer Cleaning Procedures** – The designated sewer line segments will be cleaned using combination high-velocity jet with vacuum removal. The normal cleaning operation shall be to jet from the downstream manhole towards the upstream manhole thereby pulling any debris back to the downstream manhole. **A minimum of two (2) passes shall be made for each line segment.** Pullback rate on jetting shall not be greater than 40 feet per minute. If, after the second pass, debris is encountered the entire run shall be made repeatedly until debris is no longer present. At any sign of significant dirt and gravel the cleaning operation for that pipe shall cease and OCSD shall be notified of a possible line break. If any abnormal conditions are encountered, OCSD shall be contacted by phone and email. Contractor shall be ready to CCTV the section of sewer creating cleaning problems.

Once the appropriate traffic control has been placed, the Contractor shall wash the upstream manhole with the high-pressure water gun while being cautious not to spray any surrounding vehicles or pedestrians. All manholes, except for inaccessible manholes, shall be washed and any loose debris shall be removed. Evidence of unwashed manholes shall result in re-cleaning of that pipe segment. Any major defects in the manhole or the frame and cover shall be noted and brought to the attention of OCSD for remedy. No debris from the cleaning work shall be left on the roadway. (Note: All manhole covers removed that were sealed will be resealed upon replacing – OCSD will supply sealing material at no cost to the Contractor

during the Contract).

Selection of the equipment used will be based on the conditions of the sewer lines at the time work commences. The equipment and methods selected must be satisfactory to OCSD's representative(s). The equipment shall be capable of removing dirt, grease, roots and other materials and obstructions from the sewer lines and manholes. If cleaning of an entire section cannot be successfully performed from the downstream manhole, the equipment will be set up on the upstream manhole and cleaning will again be attempted. If successful cleaning again cannot be performed or the equipment fails to traverse the entire manhole section, it will be assumed that a major blockage exists and the Contractor will notify OCSD's representative(s) of this condition immediately for further instructions.

Contractor shall be prepared to use root saw tool on approximately thirty percent (30%) of the sewers to be cleaned. This percentage may be higher as needed. The OCSD shall designate areas to be root sawed. Lines that are designated for root sawing shall upon CCTV inspection have no more than one half inch of root stub present. Longer lengths of roots remaining shall result in a repeat root sawing effort by the Contractor at no additional cost to OCSD. Debris catcher tool shall be used to prevent cut roots from traveling downstream.

For pipeline segments with extremely steep slopes, where the jetter nozzle fails to climb to the upstream manhole the cleaning method shall be to jet from the upstream manhole down slope for washing purposes. Then, jet from the downstream manhole upslope so that the cleaning directions overlap.

Water for cleaning will be from the closest available fire hydrant. The Contractor shall make arrangements with the local water agency for the water meters and any other equipment needed to get water from the local fire hydrant. Contractor shall submit to OCSD evidence of arrangements made with water agency before proceeding with cleaning in those areas. Water costs will be paid by the Contractor directly to the water agency. Copies of the water bills shall be submitted to the OCSD on a schedule agreed upon by the various water agencies. A list of the various water agencies in the service area with telephone numbers and map of boundaries will be issued to the awarded contractor.

Trouble spot and siphon lists are in Exhibit A-3. If there are any questions regarding these lists or previous cleaning data, they should be directed to an OCSD representative. Siphon and trouble spots will be cleaned/maintained on a routine basis, typically a one (1) to two (2) month frequency. However, the Contractor is still required to provide line cleaning in these areas as shown in the cleaning sequence.

Line cleaning sequence cannot be changed such that debris from upstream reaches will be deposited into recently cleaned downstream reaches. If this is found to occur, Contractor will re-clean the downstream reaches at no additional cost to OCSD.

- F. Permits and Access** – Contractor shall pay all required fees and obtain licenses for any encroachment permits required by the various cities or the County of Orange when cleaning and inspections are necessary on their right-of-ways. OCSD will reimburse Contractor for actual permit fees upon proof of payment provided by the Contractor.

For easement cleaning where entry must be made onto homeowner's property, advance notice must be given for permission to enter property. Coordination of sewer cleaning will be made through an OCSD representative. The OCSD representative shall be notified one (1)

week in advance of the Contractor's anticipated cleaning area. The OCSD representative will provide assistance with manhole access and make arrangements as needed for entry onto private property for the cleaning of easements. An easement atlas will be provided to the Contractor. A sewer atlas with the trouble spots and siphons highlighted will be provided to the Contractor.

Easements requiring additional manpower for making turns in manholes or for pulling the jetter hose, coordination will be made through the OCSD representative. Two-way hand held radios may be needed for communication.

- G. Material Removed** – The Contractor shall be responsible for the removal of debris from the pipeline and cleaning and/or re-cleaning the pipe wall to OCSD's satisfaction as proven by the closed circuit television (CCTV) video inspection. All sludge, dirt, sand, rocks, roots, grease and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing material from manhole section to manhole section, which may cause line stoppages, shall not be permitted.

Lines shown by CCTV to contain root balls or other debris that may potentially cause a stoppage, that were reported to have been cleaned, may require an emergency call out by the Contractor to remove the debris, at no additional cost to OCSD. Contractor shall respond to site once contacted within one (1) hour. If unable to contact or not able to be on site within the hour response time OCSD will respond and clean the area and back charge the Contractor for the costs incurred.

- H. Material Disposal** – Liquids shall be decanted and drained back to the sewer. All solids or semisolid resulting from the cleaning operations will be removed from the work site and disposed of at no added cost to the Contractor in the Digester cleaning beds at OCSD's Plant 1 located in Fountain Valley. Amounts and disposal dates shall be reported to the OCSD as part of biweekly cleaning submittals. All materials will be removed from the work site at the end of each workday. Under no circumstances will the Contractor be allowed to accumulate debris, etc. on the site of work beyond a single workday, except in totally enclosed leak and odor proof containers and as approved by OCSD's representative(s). See Exhibit A-2 "Sewer Grit Disposal Procedure".

- I. Spill Reporting and Handling** – Contractor shall immediately notify OCSD's representative(s) of any manhole overflow or interruption/backup of customer service and Contractor shall contain and control all overflow. The OCSD spill policy is in Exhibit A-1. Contractor shall be responsible for any fines levied by others as a result of the Contractor's work.

Exhibit A-1 is the "Notification Guidelines for a Spill" which includes the telephone numbers of the various agencies. Ultimately, if the Contractor is involved with a spill, it must:

1. First and immediately, notify OCSD's Control Center at (714) 593-7025. OCSD will then make the required notifications.
2. Second, the Contractor must attempt to contain the spill to isolate it from entry to any waterways.
3. Third, the Contractor must attempt to relieve the spill. Once the spill has been contained and relieved, the area must be cleaned up.
4. Last, follow-up reports must be made. Once a spill is reported to OCSD's Control Center, personnel will be dispatched for response.

Contractor shall be responsible for any fines levied by others, reimbursement of any agency incurred costs, damage, cleanup, restoration of flow, and any disruption of service costs to customers as of a result of Contractor's work. This is in addition to any and all costs incurred by the customer.

Contractor shall also notify OCSD's Control Center immediately of any apparent non-Contractor related spills and/or any abnormal conditions.

- J. Confined Space Issues and Safety Issues** – All manholes in this work are defined as Title 8 Permit Required Confined Spaces. The Contractor's attention is directed to the General Industry Safety Orders of the State of California, Article 108, Confined Spaces, Section 5157 (Title 8 of California Code of Regulations, Sections 5167, 5157, 5158). Contractor shall attend a safety meeting at OCSD with the Risk Management Division, prior to the start of work under this Contract, for the purpose of reviewing the Contractor's safety manuals, its knowledge of Title 8, and to discuss all safety aspects of the job.

All work shall be conducted from above ground. Manhole entry, if required, shall be conducted in strict accordance with permit required confined space entry regulations. These regulations include, at a minimum: entry permit, trained authorized entrant(s), attendant(s), entry supervisor(s), full body harness (with life line), mechanical retrieval device, continued force air ventilation, continuous air monitoring, communication system (minimum of two (2) types), and all other protective equipment that may be required. Work shall be conducted in accordance with all Federal, State, and local laws and regulations.

The local fire department may be able to offer services for confined space rescue. Contractor shall make any and all arrangements necessary at no additional cost to OCSD.

- K. Traffic Control** – All traffic control shall be in accordance with the latest MUTCD (Manual on Uniform Traffic Control Devices) and based on the speed limits posted in the work zones. Flagmen may be required in some locations. Additional local regulations shall have precedence. Contractor shall apply for all traffic control permits and pay all fees and obtain all licenses for said permits. OCSD will reimburse the Contractor for traffic control permits and for detailed traffic control plans signed by a traffic engineer registered in the State of California, where required by the local agency. Safe and adequate pedestrian and vehicular access shall be provided in accordance with the Standard Specifications for Public Works Construction, Latest Edition.

NOTE – Inadequate or improper signage and delineation for traffic control may be cause for the cancellation of the Contract.

- L. Work Plan** – The Contractor shall prepare a weekly work plan and submit it one (1) week in advance to an OCSD representative for review and approval. The work plan shall verify the cleaning sequence and identify all the line sections to be cleaned based on OCSD maps and sequence data provided. The work plan may be amended due to weather or local road maintenance or construction issues discovered by either party. OCSD estimates a maximum of 5,000 feet of sewer lines (without root cutting) can be cleaned in an 8 hour shift.
- M. Work Documentation** – Biweekly reports based on the work plan shall be submitted for OCSD review on the last Friday of the two-week period. Contractor's log sheets, with a section-by-section breakdown including comments, shall be maintained on site, in a legible manner, for review at all times. Comments on log sheets shall include notice of badly worn


manhole frames and covers, broken manhole caps, buried manholes, unmapped manholes, badly deteriorated manhole concrete structures, and shall include the type and amount of debris encountered.

- N. Contractor Crew** – Contractor shall provide a minimum of a two-person crew at all times, one person shall witness the jetting nozzle reaching the upstream manhole. A crew of three shall be utilized for all work in confined spaces. Additional personnel shall be utilized when needed for traffic control flagmen.

The Contractor's foreman must be able to communicate both verbally and in writing with OCSD staff as well as with his or her crew. The Contractor's foreman must demonstrate the capability to read, interpret, and understand the OCSD Safety Standards and Cal/OSHA requirements, OCSD's plans, drawings, specifications and work direction, as necessary.

In addition, a field supervisor shall be provided by the Contractor to oversee the crew's work and provide quality control. The field supervisor shall have a cell phone and email to communicate with OCSD at any time. The field supervisor shall prepare the forward work plan and also document work performed, resolve crew and/or OCSD concerns and serve as the cleaning program manager and primary contact. The field supervisor shall be on the job site not less than eight (8) hours per week and available for OCSD staff at any time during the work day or for off hours emergencies.

- O. Television Inspection** – After each biweekly cleaning report submittal, at least ten percent (10%) of the total footage cleaned will be selected by OCSD for closed circuit television (CCTV) inspection by an independent CCTV contractor on a random basis to determine the effectiveness of the cleaning operations. The CCTV inspection shall occur within two (2) weeks of receiving the cleaning submittal. Pipeline segments found to be unacceptably cleaned during the CCTV review shall be re-cleaned by Contractor at no additional cost to OCSD. CCTV inspections resulting in more than ten percent (10%) of the pipeline being unacceptably cleaned shall result in the entire pipeline included in the bi-weekly submittal being re-cleaned at no additional cost to OCSD. Any line segments requiring re-cleaning will be one hundred percent (100%) CCTV reviewed. This additional CCTV cost will be paid by the Contractor. This CCTV submittal shall be delivered to OCSD within three (3) weeks. No further scheduled cleaning shall take place until all unacceptable pipeline segments are re-cleaned to the satisfaction of the OCSD.
- P. Submittals** – Submittals, except for payment invoices, shall be made electronically through email. As previously mentioned the Contractor shall submit: (1) a weekly cleaning schedule; (2) a biweekly submittal of cleaned pipe listing the line segments and footages, any defective manhole structures including frames, covers, and caps; (3) dates of debris disposal; (4) and any water usage billed by the various water agencies.
- Q. OCSD's Equipment and Labor** – OCSD's equipment and labor, except for the OCSD's representative to monitor the work, shall not be utilized at any time.
- R. Sewer Atlas (Map)** – Two (2) DVDs of the OCSD Electronic Map Book showing all the sewers in the service area to be cleaned shall be given to the Contractor at no charge.

 Orange County Sanitation District	Procedure No: TS-ECRA-SOP-009
	Path: H:\ntglobal\Control Center Reports\Spill Procedures & Forms\SSO Notification Procedures_Official_08-21-07.doc
Sanitary Sewer Overflow Notification Procedures	Date: January 16, 2009
	Approved by: Edward M. Torres

PROCEDURE REVISION HISTORY		
Rev.	Date	Approval
0	March 30, 2004	Robert P. Ghirelli, Technical Services Director
1	April 12, 2006	Robert P. Ghirelli, Technical Services Director
2	August 21, 2007	Edward M. Torres, Technical Services Director

1. PURPOSE AND SCOPE

The purpose of the Sanitary Sewer Overflow (SSO) Notification Procedures is to provide a procedure for prompt notification to Orange County Sanitation District (OCSD) staff and appropriate public agencies of an unauthorized release of wastewater (raw or treated sewage or industrial wastewater). It also clarifies the roles of each division regarding SSO response and reporting responsibilities.

2. DEFINITIONS

- A. **CIWQS:** California Integrated Water Quality System - SSO Reporting System
- B. **GWDR:** Statewide General Waste Discharge Requirements for sanitary sewer systems issued on May 2, 2006, by the SWRCB to all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility.
- C. **LRO:** Legally Responsible Official that certifies SSO Reports in CIWQS
- D. **Non-Working Hours:** Hours when day-shift staff are not on-site.
- E. **OCHCA:** Orange County Health Care Agency
- F. **OCSD's Service Area:** Includes corridors where the regional trunk sewers, interceptor, and pump stations are located. Also includes local sewers where OCSD has operations and maintenance responsibility.
- G. **OES:** California Office of Emergency Services
- H. **Private Property SSO:** Sewage discharges that are caused by blockages or other problems within a privately owned lateral. SSOs that are caused by a blockage in an OCSD-owned line are not considered private property per the definition in the Statewide GWDR permit.
- I. **OC PUBLIC WORKS:** Orange County department that protects the public county-wide from the threat of floods by constructing, operating and maintaining major flood control channels, dams, retarding basins, pump stations.
- J. **RWQCB:** California Regional Water Quality Control Board, Santa Ana Region

- K. **SSO:** Sanitary Sewer Overflow; or sewage spill
- L. **SWRCB:** California State Water Resource Control Board
- M. **Working Hours:** Monday – Friday, 6:30 a.m. – 5:00 p.m.

3. RESPONSIBILITIES OVERVIEW

- A. **Division 152, Public Information Office:** Receive and respond to phone calls from the media or general public related to SSOs. Visit an SSO site when media is present. Notify cities, fire departments, police departments, etc. of SSOs when public relations are warranted.
- B. **Division 153, Safety & Health:** Respond to and assist with emergency response coordination of large OCSD safety issues, SSOs, and incident command center activations.
- C. **Division 250, Information Technology:** Work with Division 870, 620, and 830 to resolve problems with Internet/Network connection when non-operational. Once the Internet/Network is operational, relay the information to the appropriate division.
- D. **Division 870, Collection Facilities O&M:** Project manager and the division responsible for the GWDR to develop, implement, maintain a preventative maintenance program, and certify SSO reports. Respond to reports of possible SSOs from OCSD's facilities; Contain and coordinate the clean up of OCSD SSOs, including making every effort to recover sewage from the storm drain system before it reaches a surface water; Document actions taken using field reports, pictures, maps, etc.; Assist member agencies when possible and document actions; Deal directly with private property owners, this does not necessarily mean field staff but individuals should be instructed to contact supervisors/management if they have specific questions. The Manager is a designated LRO that can certify SSO Reports.

Designated Collection Office Staff (and back-up person)

- Compile all GWDR required SSO information, including field reports, pictures, maps, sampling results, calculations, problem reports, and submit package to Division 620 in a timely manner for review (i.e.,: For a Category 1, report submit information by the second day. For a Category 2 report, submit information by the 15th of the following month). File in appropriate directories;
 - Coordinate with ECRA regarding CIWQS SSO Reporting System issues;
 - Provide training for Division 870 CIWQS SSO Reporting System issues and reporting responsibilities;
 - Point of contact for Division 620. Relays information provided by 620 to 870 staff.
- E. **Division 620, Environmental Compliance & Regulatory Affairs (ECRA):** Liaison with regulators and GWDR compliance overseer. Assure regulatory agency notifications and any additional necessary notifications are fulfilled. Visit SSO site as required in the ECRA Sanitary Sewer Overflow Response Procedure, TS-ECRA-SOP-008. Submits drafts of the Category 1 and 2 SSOs to CIWQS for compliance with the GWDR. Review SSO reports before certification by Legally Responsible Official. Assist with SSO tracking and attend meetings to clarify compliance related issues and requirements. Provide support by

contacting CASC contractors to respond to SSOs that enter flood control channels.

- F. **Division 630, Environmental Sciences Lab:** If deemed necessary by the OCHCA and the SSO occurs during working hours, take sewage samples of SSO and runoff in designated areas. Perform analyses on sewage samples. Report results to Divisions 421 and 620. If SSO occurs during non-working hours, ECRA will take samples in accordance with lab guidelines and coordinate with Division 630 staff for proper and timely analyses.
- G. **Division 640, Source Control:** Respond to reports of possible SSOs that may involve industrial process waters, assist Collections staff as necessary, and document actions taken.
- H. **Division 830, Operations – Plant No. 1: Control Center:** Coordinate SSO response by receiving and processing preliminary information on possible SSOs. Notify necessary divisions, member agencies, and regulatory agencies (after-hours) by phone, radio, text (PNA) and numeric pagers, and e-mail as necessary. Document actions by filling out the SSO report in the CIWQS SSO Reporting System. If the CIWQS SSO Reporting System is down at the time of the SSO, complete the SSO report on the appropriate CIWQS SSO Reporting System data sheet found in the Collection System Binder and follow up by entering the data into the CIWQS SSO Reporting System at a later time.
- I. **Member Agencies (Cities and Sanitation Districts):** Respond to reports of SSOs that may involve their collection systems or private sewer systems that may impact the municipal storm drain system. Contain and clean-up their respective SSOs, protect their storm drains, and notify necessary regulatory agencies.
- J. **Orange County Health Care Agency:** Goal is to protect the public health from an SSO including responding to SSOs and closing beaches and other recreational waters.
- K. **Private Property Owner:** Remove the blockage (e.g., call a plumber) and stop using water that goes to the sewer until the blockage is removed. OCSD may assist with containment and clean-up if sewage enters public right-of-way. Local city or OC Public Works or OCHCA stormwater code/ordinance enforcement can assist with uncooperative owners. OCSD is not authorized and will not participate in the cleaning of any privately owned lateral lines.
- L. **OC PUBLIC WORKS and Stormwater Co-permittees:** Protect County and co-permittee stormwater conveyance facilities from illegal discharges (including sewage). Coordinate response to SSOs or other illegal discharges from private property that are impacting storm drains and code enforcement may be used if necessary (if property owner can not be reached or is uncooperative. Provide support by contacting CASC contractors to respond to SSOs that enter flood control channels.

4. SSO REPORTING AND NOTIFICATION PROCEDURES

NOTE: Regulatory and other affected agencies require initial notification as soon as possible without jeopardizing the response process (usually within one hour).

A. SSO Report Received

- (1) Control Center staff shall initiate documentation of the reported SSO (who, what, when, where, why) on a Spill Interview Form (Attachment A).
- (2) Control Center staff shall determine whether the reported SSO is in the OCSD's service area or is the responsibility of another agency using the Sphere of Influence, Sewer Atlas, other available resources in the Control Center, and/or with the assistance of Collections staff.

B. SSO from the OCSD's Facilities

- (1) If the Control Center determines that the possible SSO may be related to the OCSD's facilities, Control Center staff shall contact and relay the available information for investigation and/or control of reported SSO to the on-duty Collection Facilities Supervisor or Designee during the day shift or standby Collection Facilities staff during after-hours.
- (2) Control Center staff shall notify OCSD staff and regulators of the possible SSO via an Outlook e-mail and provide the available information to the *Spill Notification* distribution list (see Attachment B for recipients – includes internal, OCHCA, OC Public Works, and RWQCB staff). For small, non-critical events (using the Operations supervisor's best judgment) when reports are taken between 10 p.m. and 5 a.m., the control center staff may utilize the *Spill Notification w/o PNA* (Attachment B) (no pagers are notified). The following information should be included in the preliminary e-mail notification if available:
 - Responsible city, agency, private property owner
 - Date and time
 - Incident location including address and city
 - Problem description
 - Response status
 - If it entered a storm drain
 - Estimated volume
- (3) Upon arrival on site and preliminary investigation of reported SSO, Collection Facilities staff will confirm whether or not there is an SSO and the status of their response and containment.
- (4) Collection Facilities staff will make sketches and take photographs of the SSO, and they will forward digital files or hard copies (if a traditional camera is used) to the designated Collection Office staff responsible for compilation of SSO reports. Collection Facilities staff will file all SSO documents on the electronic server at: H:\dept\ras\870\Field Photos\Spill Reporting Photos.
- (5) Control Center staff will send out intermittent updates as new information becomes available to the *Spill Notification* subscribers.
- (6) The on-duty member of the ECRA staff (Control Center staff during evening shifts and weekends or if ECRA staff can not be reached) shall notify RWQCB and OCHCA staff with a phone call for any SSO volume (see Attachment C). If the SSO is equal to or greater than 1,000 gallons also contact OES.

- During the night and weekend shifts: contact the County of Orange Control 1 instead of OCHCA; contact OES instead of RWQCB.
 - Responsible staff shall complete all applicable regulatory notifications in accordance with the Decision Table in Attachment C.
 - As revised by Order No. WQ 2008-0002-Exec OES, RWQCB, and OCHCA must be notified immediately, but no later than 2 hours of an SSO.
 - Additionally, OCSD must certify to RWQCB through the SSO Database that OES and OCHCA were notified within 24 hours.
- (7) Collection Facilities staff or managers may request Control Center staff to contact other staff that may be required (e.g., ESL, Public Information Officer, ECRA, Contractors). They may also request Control Center staff to determine the location and direction of flow for storm drains in the SSO area. This information is located on a set of 80 large County of Orange facility drawings in the Control Center or online at OC Public Works website http://www.ocwatersheds.com/watersheds/intro_highres_map.asp
- (8) Control Center staff shall create a service request number in the CMMS System. Staff will then enter the SSO data into the CIWQS SSO Reporting System or if it's non-operational on the appropriate CIWQS SSO Reporting System data sheet found in the Collection System Binder and follow up by entering the data into the CIWQS SSO Reporting System at a later time. Documentation in either the CIWQS SSO Reporting System or data sheet will continue throughout the SSO response and related preliminary information received during communications with the responding Collection Facilities staff. Control Center staff shall confirm all field-related preliminary information on Tabs 1 and 2 of the CIWQS SSO Reporting System with Collections staff and send updates to the *Spill Notification* distribution list as information becomes available.
- (9) When Collection Facilities staff and Control Center staff believe the preliminary information is as complete as possible for the response and clean-up (usually after Collection Facilities staff leaves the site), Control Center staff shall e-mail the SSO Report to the Outlook distribution list, *Spill Notification w/o PNA* (no pagers will be notified).
- (10) By the end of the reporting period, the designated Collection Office Staff shall review the SSO report and any information provided by other divisions including Source Control, Collections, and Construction Management to verify the preliminary information and to ensure accuracy. The designated Collections Office staff will make any necessary changes and additions in the CIWQS SSO Reporting System and submit the final report to ECRA staff in a timely manner for their review. ECRA shall perform Quality Assurance/Quality Control of the final report and make necessary corrections in the CIWQS SSO Reporting System. When all changes are complete, ECRA staff will click on the Ready to Certify button so that the LRO can certify the SSO report for compliance. (see ECRA Sanitary Sewer Overflow Response Procedure, TS-ECRA-SOP-008)

C. SSO from Private Property

- (1) Control Center staff shall notify and/or dispatch Collection Facilities staff, especially in Area 7, to determine if the OCSD sewer is causing the problem.
- (2) See Section B above. Response is the same. However, no field pictures, sketches or calculations are required. Control Center staff shall note in the CIWQS SSO Reporting System that the problem was a Private Property SSO. Information provided in the CIWQS SSO Reporting System will include the following:
 - Responsible city, member sanitation agency, or private property owner
 - Date and time
 - Incident location including address, city and zip code
 - Problem description
 - If it entered a storm drain
 - Estimated volume
- (3) If Collection Facilities staff informs Control Center staff that the blockage is located in the private property owner's lateral, they may request that Control Center staff call the owner/property manager (if they are not onsite) and have the owner/property manager relieve the blockage (including calling out a plumber immediately if necessary). Due to liability concerns and the possibility of damage to the property owner's line in OCSD trying to solve the situation, it is against OCSD policy for Collection Facilities staff to work on private lines, although supervisors or management may authorize this work on a case-by-case basis.
- (4) ***If the property owner or the occupant of the property can not be reached or refuses to call a plumber AND the private property discharge is entering the public right-of-way or a storm drain, Control Center staff shall call OC Public Works (714-955-0200) (Control 1 after hours – 714-628-7008) to request stormwater code/ordinance enforcement assistance.*** Control Center staff can also request response from the City of Tustin Code Enforcement Office during working hours (714-573-3106) for issues within the City limits (NOT in Unincorporated OCSD 7). The County and the local cities are required by their NPDES permit to not allow sewage to discharge to storm drains, and they have the legal authority to enforce their requirements, which may include shutting off the water supply and other measures.
- (5) If none of these agencies can respond and assist with the enforcement issues, the Orange County Health Care Agency can also be called for assistance at either 714-433-6000 during business hours or through Control 1 (714-628-7008) after hours.
- (6) If a member of the public calls to report a reoccurring or ongoing SSO on private property or that we can not otherwise assist them, they can report the problem by calling **24-Hour Water Pollution Problem Reporting Hotline 714-955-0200** or logging onto **<http://www.ocwatershed.com/>** and clicking on Pollution Hotline. Staff can also use this mechanism, but official agency calls should be made to Control Center.

- (7) Control Center staff shall provide the completed SSO report through *Spill Notification w/o PNA (Attachment B)* as usual.
- (8) ECRA staff will include the SSO report as part of the GWDR reporting period submittal.

D. SSO NOT Located in the OCSD’s Service Area or OCSD Staff Does Not Respond to SSO Site

- (1) Control Center staff shall:
 - a. Refer the problem to the correct agency.
 - b. Document the agency’s name, contact person, time of contact, and phone numbers on the internal Collection System Problem Report.

E. SSO NOT OCSD’s Facility BUT Responsible Agency Requests Assistance

- (1) Control Center staff shall notify and/or dispatch Collections Facilities staff, if available.
- (2) See Section B above. Response is the same. However, no field pictures, sketches or calculations are required. Control Center staff shall note in the internal Collection System Problem Report that the problem was not an OCSD's SSO.
- (3) Provide notification through *Spill Notification w/o PNA (Attachment B)* as usual.

5. REFERENCES

- California Code of Regulations, Title 23, Section 2250
- California Fish and Game Code, Chapter 2, Article 1, Section 5650
- California Health and Safety Code, Division 5, Chapter 6, Article 2, Sections 5410-5415, 5460-5462
- California Water Code (Porter Cologne Act) Section 13271
- ECRA Sanitary Sewer Overflow Response Procedure, TS-ECRA-SOP-008
- State Water Resources Control Board Order No. 2006-0003, Statewide General WDR for Wastewater Collection Agencies

6. ATTACHMENTS

- A. Control Center Spill Interview Form
- B. Spill Notification Contacts
- C. Spill Notification Decision Matrix and Contact List

Attachment A
Collection System Problem Report – Sample Form
Page 1 of 2

Orange County Sanitation District
CONTROL CENTER SPILL INTERVIEW FORM

Call Initiated: _____ Date: _____ Time: _____ CMMS Work Order #: _____

PERSON REPORTING PROBLEM:

Name: _____ Agency: _____

Spill Location: _____

City: _____ Phone # _____
(Use Unincorporated County if applicable)

Nearest Cross Street: _____ Thomas Guide® Page & Coordinates: _____

IF A RESIDENT IS REPORTING PROBLEM:

Notes:

Example Opening Statement: We'll be dispatching our field crew momentarily. To help us most effectively respond to your call, we need some additional information. These questions should only take a minute, but will help us tremendously in better responding to your call.

For the field responders, is there a good reference landmark? (shops, houses, etc.)

Did you see water flowing from a manhole? Yes No Don't Know

If not, where is it coming from?

Why do you think it is sewage? (Is there an odor? / Does the manhole say "OCSD" or "sewer?")

How fast is the water flowing? (Is it a small trickle out the side or is it gushing through all outlets with force?)

Is the water flowing in or to the street gutter? Yes No Don't Know

Do you know if a storm drain catch basin is nearby? Yes No Don't Know

Is the water flowing to or about to get to that catch basin? Yes No Don't Know

Approximately how wide and deep is the (flowing or wet) water path? Deep: _____ Wide: _____

Have you called any other agencies or did another agency refer you to us?

IF ANOTHER AGENCY IS REPORTING PROBLEM:

Notes:

If we find out the spill belongs to another city/agency always ask the question: "Is your agency handling all notifications & documentation? If they are, OCSD only has to document our involvement.

Do you have a crew currently onsite? Yes No Don't Know

If so, have they contained the spill and protected storm drains? Yes No Don't Know

If not, will your agency be responding? Yes No Don't Know

Is the water flowing in or to the street gutter? Yes No Don't Know

Is the water flowing to a storm drain/catch basin? Yes No Don't Know

Approximately how wide and deep is the (flowing or wet) water path? Deep: _____ Wide: _____

If the answers to **1a and 1b. are NO**, and **2 or 3 is YES**, then you should state the following:

Although we will be responding as quickly as possible, we request that your staff start protecting the storm drains, setting up containment and any necessary traffic control until we arrive onsite. These measures are important to protect the environment and possibly prevent a beach closure.

How fast is the water flowing? (Is it a small trickle out the side or is it gushing through all outlets with force?)

Attachment A
Collection System Problem Report – Sample Form
Page 2 of 2

Orange County Sanitation District
CONTROL CENTER SPILL INTERVIEW FORM

QUESTIONS FOR THE COLLECTIONS CREW:

Notes:

Fill in the Blanks: If there are any blanks left on page one, ask Collections these questions when they arrive onsite.

General information:

Is this a District problem (i.e., in, from, or caused by District's facilities)? Yes No

Type of spill: Sewage Chemical (I.W.) Other _____

Size of line (not cleanout): _____ inches **Did any sewage reach storm drain?** Yes No

List **receiving water** (if known): Newport Bay Santa Ana River San Gabriel River Other _____

Cause of spill: Grease Roots Other Debris Rain-related Inflow Line Break
Vandalism Other _____

Initial Estimated **volume**: _____ gallons Estimated amount **recovered** to sewer or vectored: _____ gallons

Response:

Responding Personnel: _____

Responding Vehicles: _____

1.) Time Collections was first contacted: _____ 2.) Time arrived onsite: _____

3.) Time containment set: _____ 4.) Time blockage cleared: _____

5.) Time clean up complete/left site: _____

EXHIBIT "A-1"

**Attachment B
Spill Notification Contacts**

CONTACTS CONTAINED IN SPILL NOTIFICATION DISTRIBUTION LIST

Name	Division / Agency	Notified via E-mail or PNA Pager?
James Ruth	110	E-mail
Bob Ghirelli	150	E-mail
Bret Colson	152	E-mail
Jennifer Cabral	152	Both
Sonja (Wassgren) Morgan	152	Both
Wesley Bauer	153	Both
Jeff Reed	240	E-mail
Peggy Echavarria	870	E-mail
Chuck Winsor	870	Both
Peter Cheffs	870	E-mail
Donald Cleveland	870	Both
John Gonzalez	870	Both
Jeff Peterson	870	Both
Ed Torres	610	E-mail
ECRA Spill Response Cell	620	PNA
Dindo Carrillo ¹	620	Both
New ²	620	Both
New ³	620	Both
Jim Colston ⁴	620	Both
Michele Farmer	620	Both
Deirdre Bingman	620	Both
Charles McGee	630	Both
Kelly Christensen	640	E-mail
Darrell Ennis	640	Both
Tom Meregillano	640	E-mail
Jerry Evangelista	640	E-mail
Tom Gaworski	640	E-mail
Merrill Seiler	640	Both
Mike Zedek	640	E-mail
Jim Herberg	710	PNA
John Linder	740	E-mail
Hardat Khublall	750	E-mail
William Cassidy	760	Both
Tod Haynes	760	PNA
Terry Krie	760	E-mail
Nick Arhontes	810	Both
Sherrell Brown	830	Both
Kathy Dodderer	830	E-mail
Marc Larson	830	Both
Tony Lee	830	E-mail
Ted Mauter	830	Both
Peter McGrath	830	E-mail
Victoria Raymond	830	E-mail
Michael Vuong	830	Both
Frank Chavez	830	E-mail
Ron Wade	830	Both
Dave Heinz	830	E-mail

Superscript numbers indicate order of ECRA responders.

EXHIBIT "A-1"

**CONTACTS CONTAINED IN SPILL NOTIFICATION
DISTRIBUTION – EXTERNAL**

Name	Division / Agency	Notified via E-mail or PNA Pager?
Duc Nguyen	OC Public Works	E-mail
Chris Crompton	OC Public Works	E-mail
Larry Brennler	OCHCA	E-mail
Mike Fennessy	OCHCA	E-mail
Larry Honeybourne	OCHCA	E-mail
Dan Yokoyama	OCHCA	E-mail
Najah Amin	RWQCB	E-mail
Steve Mayville	RWQCB	E-mail
Ken Theisen	RWQCB	E-mail

ECRA CONTACT INFORMATION

Name	Back-Up Order	Internal	Pager/Cell	Home
Dindo Carrillo*	1-ECRA 620	x 7476	(714) 343-0333	NA
New	2-ECRA 620	x NA	NA	NA
New	3-ECRA 620	x NA	NA	NA
Jim Colston	4-ECRA 620	x 7458	(714) 803-1397	(949)766-0045

*ECRA Primary Spill Responders will carry ECRA Spill cell phone (714-343-0333).

NOTIFICATION CONTACTS

Normal Hours	After Hours
OCHCA (Please call down the list until someone has been contacted) (1) (714) 433-6419 (Office Support Staff) (2) Mike Fennessy (714) 433-6281 (3) Dan Yokoyama (714) 433-6288 (4) Larry Brennler (714) 433-6284 (5) Larry Honeybourne (714) 433-6015	Control 1: (714) 628-7008 (will contact OCHCA on-call staff)
RWQCB – Water Board Santa Ana Region (951) 782-4130 Najah Amin (951) 320-6362	24 hours: (951) 782-4130 OES: (800) 852-7550
OES (Office of Emergency Services) (800) 852-7550	24 hours
OC Public Works (714) 567-6363 (storm drain/flood channel facility owners)	Control 1: (714) 628-7008
Caltrans (949) 724-2607	24 hours
California Highway Patrol OC Communications Center (949) 559-7888 (traffic control / road way hazard on highways and unincorporated areas)	24 hours
Carl Warren & Company District's Third Party Administrator (public / private property damage) (800) 572-6900 Susan Garcia (714) 740-7999, x117	

EXHIBIT "A-1"

CITY, SEWER, AND WATER AGENCY CONTACTS

CITY	BUSINESS HOURS	OFF-HOURS	NOTIFICATION E-MAIL	COMMENTS
PUBLIC WORKS / CITIES				
Anaheim	(714) 765-6860 1(714) 765-3300	(714) 765-6840 (714) 765-6860	lvechione@anaheim.net	24-hr Emergency Dispatch Off-hrs.
Brea	(714) 990-7648 (714) 990-7691	(714) 990-7911	Jerrym@ci.brea.ca.us	Off-hours: Police Dept.
Buena Park	(714) 562-3655	(714) 562-3902	bjones@buenapark.com rhunt@buenapark.com	Off-hours: Police Dept.
Cypress	(949) 724-7502 (714) 229-6760	(562) 594-7232 (714) 229-6600	gvazquez@ci.cypress.ca.us , pdickson@ci.cypress.ca.us	Off-hours: Police Dept.
Fountain Valley	(714) 593-4493 (714) 593-4600	(714) 593-4483	Steve.hauerwaas@fountainvalley.org	Off-hours: Police Dept.
Fullerton	(714) 738-6897	(714) 738-6715 (714) 738-6700	dand@ci.fullerton.ca.us , PattyL@ci.fullerton.ca.us (sewer spills), BillR@ci.fullerton.ca.us (sewer spills) GeneV@ci.fullerton.ca.us (storm/hazmat), DougR@ci.fullerton.ca.us (storm/hazmat)	Off-hours: Police Dept.
Huntington Beach	(714) 960-8861 (714) 960-8830 (714) 536-5921	(714) 960-8825	cgray@surfcity-hb.org jjones@surfcity-hb.org	Off-hours: Police Dept.
Irvine	(949) 453-5300 (949) 724-7516 (949) 724-7600	(949) 724-7000 p.d.	kilani@irwd.com	Off-hours: Call IRWD or Police Dept.
La Habra	(562) 905-9708 (562) 905-9792	(562) 905-9750	carlo_nafarrete@lahabra-city.com	Off-hours: Police Dept.
La Palma	(714) 523-1140	(714) 690-3368	chafikm@cityoflapalma.org	Off-hours: Police Dept.
Laguna Beach	(949) 497-0765	(949) 497-0717		Off-hours: Police Dept. Hours: 7am-3:30pm
Newport Beach	(949) 644-3011	(949) 644-3717	eburt@city.newport-beach.ca.us	Off-hours: Police Dept.
Orange	(714) 744-5525 (714) 532-6480	(714) 538-1961	JLoertscher@cityoforange.org	
Placentia	(714) 993-8245	(714) 993-8164	N/A	Off-hours: Police Dept.
San Clemente	(949) 366-1553 (949) 361-8224	(949) 366-1553		
San Juan Capistrano	(949) 493-6363 (949) 443-1171	(949) 443-1174		Off-hours: Answering Service
Santa Ana	(714) 647-3380 / 3344	(714) 834-4211 p.d.		Rick Strenberg cell: (714) 402-7042 or Police Dept.
Seal Beach	(562) 431-2527	(562) 799-4100	N/A	Off-hours: Police Dept.
Stanton	(714) 379-9222, x205	(714) 288-6742 (Sheriff's)	t_soza@ci.stanton.ca.us b_doss@ci.stanton.ca.us	Off-hours: Sheriff's Dept.
Tustin	(714) 573-3150 (714) 573-3200, (Field Service)	(714) 573-3225 Police	ryee@tustinca.org agonzales@tustinca.org knguyen@tustinca.org	Off-hours: Police Dept.

EXHIBIT "A-1"

Villa Park	(714) 998-1500	Cell (714) 337-5214 (714) 497-7391	cityhall@villapark.org	Off-hours: Lead Maintenance Mike Knowles and Ken Domer
Westminster	(714) 898-3311 (0 for operator)	(714) 898-3315 x326 (police dispatcher) or 911		Off-hours: Jeff Howell, Public Works Manager, ext. 6290
Yorba Linda City	(714) 961-7170	(714) 990-7911		Off-hours: Police Dept.
SANITATION DISTRICTS				
Costa Mesa	(949) 631-1731 (714) 393-4433 (714) 337-3535	(714) 754-5250 (714) 393-4433 / (714) 754-5252	tomfauth@ci.costa-mesa.ca.us	Off-hours: Answering Service/Police Dept.
Dana Point (part of SCWD)	(949) 499-4555 (949) 496-9322	Ernie Garcia (949) 289-0137		Off-hours: Answering Service at (949) 499-4555
Garden Grove	(714) 741-5395	(714) 741-5704 p.d.	brenth@ci.garden-grove.ca.us	Off-hours: Police Dept.
L.A. Sanitation	(562) 699-7411			
Midway City and Westminster	(714) 893-3553	(714) 310-9004		Off-hours: Standby Cellular phone
O.C.S.D.	(714) 962-2411	(714) 593-7025		Off-hours: Control Center
Rossmoor Los Alamitos Sewering District	(562) 431-2223	(562) 708-1772 (562) 400-4022		Off-hours: Standby Pager OR General Manager Susan Bell OR Melody Hiller
Sunset Beach	(562) 493-9932 (714) 330-3728	(714) 330-3728		Off-hours: Answering Service
WATER DISTRICTS				
EOCWD	(714) 538-5815			
El Toro	(949) 837-0660	(949) 837-7050		Administration Center with Answering Service
Irvine Ranch	(949) 453-5300	(949) 453-5300	roberts@irwd.com	Off-hours: Answering Service
Los Alamitos	(562) 431-2223			Los Alamitos
Los Alisos (IRWD)	(949) 830-0580			After hour – answer service
Moulton Niguel ²	(949) 831-2500	(949) 831-2500		24-hour service
Orange County	(714) 288-2475 (714) 378-3200	(714) 538-1961		Off-hours: Answering Service
Santa Margarita	(949) 459-6400	² (949) 459-6581		
Santiago County (IRWD)	(714) 649-2630 (949) 453-5300			Off-hours: Answering Service
South Coast ³	(949) 499-4555			Off-hours: Answering Service
Trabuco Canyon	(949) 551-8580 (949) 858-0277	(949) 856-0277		Trash only Off-hours: Answering Service
Yorba Linda	(714) 701-3050			Off-hours: Answering Service
COUNTY OF ORANGE				
OC Public Works	(714) 955-0200	(714) 955-0200		Off-hours: Answering Service

¹Daytime Secondary Number/Off-hours Answering Service²Cities served – Laguna Niguel, Aliso Viejo, Laguna Hills, Sections of Mission Viejo and North Dana Point³Cities served – Dana Point, Capistrano Beach and South Laguna

EXHIBIT "A-1"

Phone numbers last updated: 1/16/09

EXHIBIT "A-1"

Attachment C
Spill Notification Decision Matrix and Contact List
Page 1 of 1

Checklist Guidance	If YES, Notify:
If a possible spill of any size is reported to the District	<ul style="list-style-type: none"> • Collection Facilities Supervisor, Designee, or Standby • Plant No. 1 Chief Operator or Designee
If a spill of any size is confirmed by Collection Facilities staff	<p>E-mail <i>brief</i> notification to internal staff, OCHCA, and RWQCB via the Spill Notification distribution list in Outlook.</p> <p>Include the following information, if known and available:</p> <ul style="list-style-type: none"> • Responsible city, agency, private property owner • Notified date and time • Incident location including address and city • Problem description • Response status • If it entered a storm drain • Estimated volume
If Collection Facilities staff confirm the spill to be a non-District's line	Call the responsible Agency or City. See Contact City List above. <i>(This includes private property spills where the spill is on City property.)</i> Fill out Collection System Problem Report.
If the spill is estimated to be <i>less than 1,000 gallons</i>	Call: OCHCA* (714) 433-6419 / 6015 RWQCB* (951) 782-4130
If the spill is estimated to be <i>equal to or greater than 1,000 gallons</i>	Call: OCHCA* (714) 433-6419 / 6015 RWQCB* (951) 782-4130 OES (800) 852-7550
If spill discharging to <i>storm drains / flood control</i>	Call OCHCA* (714) 433-6419 / 6015 RWQCB* (951) 782-4130 OC PUBLIC WORKS* (714) 567-6363
If the <i>private property owner is uncooperative</i> and public property and/or storm drains are impacted	Call OC PUBLIC WORKS* (714) 567-6363 OCHCA* (714) 433-6419 / 6015 (After Hours Control 1 , at (714) 628-7008 and request storm water ordinance enforcement).
If the spill possibly contains <i>industrial process water?</i>	Call: Source Control Division - Kelly Christensen at (714) 713-6172 OCHCA* (714) 433-6419, and RWQCB* (951) 782-4130
If <i>hazardous materials</i> are a possible concern?	Notify the local police, fire, or sheriff's department, Source Control - Kelly Christensen at (714) 713-6172, and Safety – Wesley Bauer at (714) 263-5304.
If <i>local oversight or enforcement</i> is needed	Contact the local/governing city, especially for gutter and storm drain response or if the spill is flowing to <i>city property</i> .
If command and control <i>authority</i> is needed	Notify the local police or sheriff's department. OCHCA and/or the local city may also be of assistance. OC PUBLIC WORKS/Control 1 can enforce against illegal discharges to storm drains throughout the

EXHIBIT "A-1"

Checklist Guidance	If YES, Notify:
	county.
If <i>traffic control</i> is a concern	Notify the local police or sheriff's department, California Highway Patrol, (949) 559-7888 or Caltrans (949) 724-2607 as necessary
If the spill has the potential to <i>damage public or private property</i>	As the District's management directs, notify the District's Third-Party Administrator, Carl Warren & Company, to determine whether their representative should respond to the scene at (800) 572-6900.

* If an SSO occurs after hours, notify OES/Control 1 and they will make the necessary contacts.

**ORANGE COUNTY SANITATION DISTRICT (OCSD)
RECLAMATION PLANT NO. 1**

PROCEDURE TITLE: **SEWER GRIT DISPOSAL PROCEDURE**

PROCEDURE NUMBER: **870-09-01**

APPROVALS

Simon Watson, Manager, Maintenance Division Date: _____

Patrick McNelly, Principal Staff Analyst, Planning Division Date: _____

Dave Heinz, Manager of Operations Date: _____

PROCEDURE REVISION BLOCK			
PRF NO.	REV	DATE	Comments
420-08-01	1	10-29-07	Updated to reflect temporary grit dumping area location
420-08-01	2	07-21-08	Updated to reflect opening of new permanent grit dumping area location
870-09-01	1	08-01-09	Updated to reflect new division numbers and to clarify Grit Disposal Form issues

1.0 PURPOSE and INTRODUCTION

The purpose of this procedure is to provide guidelines to assist member cities and agencies, their contractors and OCSD staff in the correct procedures for disposing sewer grit and decant water in the permanent grit disposal facility located at the Orange County Sanitation District (OCSD) Reclamation Plant No. 1 in Fountain Valley, California.

- 1.1. Regular removal of grit, solids and semisolid materials from sanitary sewers is a recommended best management maintenance practice to ensure continuous operation and reliability, and to prevent sanitary sewer overflows due to blockages from fats, oils and grease (FOG), grit and other debris.
- 1.2. This procedure applies only to the disposal of sewer grit solids removed from sanitary sewers; **no other materials or waste products (such as catch basin, street gutter and stormdrain debris) shall be accepted at this facility.**
- 1.3. The existing dumping sites at the temporary facility are clearly marked "**Solids Dump**" and "**Decant**", and caution is urged by all personnel using this facility.
- 1.4. OCSD does not currently charge a fee for this service.

2.0 DEFINITIONS

- 2.1. **Sewer Grit** – For the purposes of this procedure, sewer grit is defined as the solid and semisolid waste products and debris that are removed during the cleaning of sanitary sewer lines using combination sewer cleaning trucks or other similar methods. These solid waste products can include but are not limited to: FOG, tree roots, rocks, gravel, sand, silt, stones, grit and other solid and semisolid wastes commonly removed during the cleaning of sanitary sewers.
- 2.2. **Catch Basin, Street Gutter and Stormdrain Debris** – For the purpose of this procedure, catch basin, street gutter and stormdrain debris are those wastes consisting of leaves, paper, plastics, trash, etc. that have not been contaminated by sewage, and have been removed during the normal cleaning of stormdrains, catch basins or street gutters.

3.0 PREREQUISITES and PROHIBITIONS

- 3.1. All OCSD staff and city/sewering agency staff members or contractors using this facility shall be familiar with this procedure prior to scheduling, disposing, or assisting in the disposal of sewer grit.
- 3.2. All OCSD staff and city/sewering agency staff members or contractors shall follow this procedure whenever they are on site at OCSD Plant No. 1 to dispose of or are assisting in the disposal of sewer grit.

- 3.3. All trucks or vehicles using this facility must be in good mechanical condition, and must be maintained and equipped to be able to decant excess liquid prior to dumping grit.
- 3.4. Loads containing hazardous materials shall not be accepted. Hazardous materials include, but are not limited to: explosives, flammable liquids, flammable solids, oxidizers, poisons, radioactive materials, corrosives, reactive agents, solvents, or petroleum products.
- 3.4. No sewer grit originating outside of the OCSD service area shall be disposed of at this facility. Operations staff reserves the right to inspect and reject any load.
- 3.5. All persons using this procedure shall follow all OCSD plant safety rules while on site.
- 3.6. Failure to comply with this procedure may result in having your city or agency's privileges to use this facility suspended or revoked.

4.0 **PRECAUTIONS**

- 4.1. **Personal Protective Equipment:** The following personal protective equipment shall be worn when performing this procedure:
 - Hardhat
 - Safety glasses – or goggles and dust mask when working with sawdust
 - Hard-toed shoes and gloves are also recommended

5.0 **DIRECTIONS**

- 5.1 How to Get to Orange County Sanitation District – Reclamation Plant No. 1
 - Going South on the 405 freeway, exit at Euclid St. off ramp, go straight through signal at Ellis Ave, enter OCSD main gate and continue straight ahead (south).
 - Going North on the 405 freeway, exit at Euclid Ave., turn right on Euclid St. (which becomes Ellis Ave.), turn left at first signal immediately after 405 freeway underpass, enter OCSD property and continue straight ahead (south).

6.0. **BRIEFING**

- 6.1. If you are using this procedure for the first time, you must call one of the following staff members in OCSD Division 870 to be briefed on this procedure at least **48 hours** before you will be able to schedule a delivery.

All drivers and their supervisors must be briefed on this procedure. All phone numbers are in the 714 area code.

<u>NAME</u>	<u>Office Phone No. and Voice Mail</u>	<u>Pager No.</u>	<u>Cell Phone</u>
Jeff Peterson	593-7642	806-3315	269-8149
John Gonzalez	593-7644	354-2954	305-5940
Collections Shop	593-7645	N/A	N/A

7.0 LOAD SCHEDULING

- 7.1 Sewer grit deliveries will be accepted on the following days and times:
- Mondays from 10:00 a.m. to 3:00 p.m.
 - Tuesdays thru Fridays from 9:00 a.m. to 3:00 p.m.
- 7.2 You must call the OCSD Plant No. 1 Control Center (714-593-7025) **at least 24 hours prior to arriving** to schedule your delivery. Please contact the OCSD Control Center if you need to schedule a delivery at another time or need to make other special arrangements. Scheduling more than 24-hours in advance is preferred.
- 7.3 Contractors **shall not** schedule their own deliveries. All sewer grit deliveries from contractors **shall be scheduled by the contracting city or agency only.**
- 7.4 The driver must have a copy of the **Grit Dumping Authorization Form** upon arrival. A copy of this form is included as the last sheet of this procedure. Refer to section 8.3.5 for instructions on completing this form.

8.0 SEWER GRIT DUMPING PROTOCOL

- 8.1. Once you have entered the plant from Ellis Ave, drive south (straight ahead) toward the gated entrance and push the call box button for Control Center assistance to open the gate. **DO NOT** enter the plant by going to the right past the guard shack.
- 8.2. Control Center personnel will remotely open the gate and notify the Operations Supervisor of your arrival. After the gate has been opened, enter the plant, **pull to the right and park, and wait for an Operations staff member to meet you.** The operations staff member will escort you to the grit dumping disposal area. **Drivers may not enter the plant without an escort!**

Speed Limits and Safety

The **maximum** speed limit on OCSD property is **15 MPH** unless otherwise posted. Some construction zones are posted at **10 MPH**. You must always exercise caution when on OCSD property and obey all speed limits. The grit disposal area is located near a major construction zone.

8.3. The following contains step-by-step instructions once you arrive at the sewer grit disposal facility.

8.3.1. Follow the Operations staff member to the sewer grit disposal facility and ensure that decant water is disposed of properly and safely in the designated location. This entire area of Plant No. 1 is under construction so please use caution.

8.3.2. If you are unable to decant excess liquid due to mechanical or operational problems, you are responsible to mitigate any spill mess you create by either vacuuming it up or some other appropriate method approved by Operations staff at the site.

8.3.3. Please follow OCSD Operations staff instructions when disposing of sewer grit. The sewer grit must be disposed into the prepared sawdust berm inside the grit dumping area and must be thoroughly covered with sawdust after the truck has been unloaded. OCSD staff will assist in covering the grit as necessary to control odors.

Sawdust must be kept sufficiently moist to prevent any airborne particulate matter emissions. This facility is regulated and permitted by the South Coast Air Quality Management District (SCAQMD), and Operations' staff shall ensure that all permit conditions are followed. A copy of the SCAQMD permit is available in the Plant. No. 1 Control Center.

8.3.4. Prior to departure (as necessary), wash down your truck with the hose provided. **Note:** Wash-down water is reclaimed water and is not potable.

8.3.5. When you have completed dumping your load of sewer grit, you **must** stop at the Plant No. 1 Solids Loading facility and drop off a completed Sewer Grit Dumping Authorization form in the designated mail box. A copy of this form must be completed by the delivery driver and signed by the OCSD Operator for each load dumped at this facility. Check off all applicable boxes on the form. The AQMD Operating Permit for this facility requires that OCSD keep daily records for the amount of grit/sludge dewatered, the number of trucks washed, and the number of leaky or overfilled trucks. ALL entries on the **Sewer Grit Dumping Authorization Form** must be completely filled out!

Exit the plant using the same route you came in (unless otherwise instructed).

Warning!

Failure to follow these procedures may result in your city or agency's privileges to use this facility to be suspended or revoked!



ORANGE COUNTY SANITATION DISTRICT SEWER GRIT DUMPING AUTHORIZATION FORM

DATE: _____

CITY/AGENCY DUMPING GRIT:

- | | | |
|---|--|--|
| <input type="checkbox"/> Anaheim | <input type="checkbox"/> Brea | <input type="checkbox"/> Buena Park |
| <input type="checkbox"/> Costa Mesa San Dist | <input type="checkbox"/> Cypress | <input type="checkbox"/> Fountain Valley |
| <input type="checkbox"/> Fullerton | <input type="checkbox"/> Garden Grove San Dist | <input type="checkbox"/> Huntington Beach |
| <input type="checkbox"/> La Habra | <input type="checkbox"/> La Palma | <input type="checkbox"/> Rossmoor/Los Alamitos |
| <input type="checkbox"/> Midway City Sanitary Dist | <input type="checkbox"/> Newport Beach | <input type="checkbox"/> Orange |
| <input type="checkbox"/> Placentia | <input type="checkbox"/> Santa Ana | <input type="checkbox"/> Seal Beach |
| <input type="checkbox"/> Stanton | <input type="checkbox"/> Sunset Beach | <input type="checkbox"/> Tustin |
| <input type="checkbox"/> Villa Park | <input type="checkbox"/> Westminster | <input type="checkbox"/> Yorba Linda |
| <input type="checkbox"/> Yorba Linda Water District | <input type="checkbox"/> Other _____ | |

CONTRACTORS:

- | | | |
|---|-----------------------------------|--|
| <input type="checkbox"/> Sancon | <input type="checkbox"/> Pro-Pipe | <input type="checkbox"/> National Plant Services |
| <input type="checkbox"/> Houston Harris | <input type="checkbox"/> Empire | <input type="checkbox"/> Innerline Engineering |
| <input type="checkbox"/> Other: _____ | | |

APPROXIMATE VOLUME in CUBIC YARDS: _____

Truck-wash performed by Driver: Yes No

Truck License Number: _____

Hazardous Material Declaration: "I hereby declare, to the best of my knowledge, that there are no hazardous materials or anything other than sewer debris in this truck load, and that all material came from within the OCSD service area."

Driver Signature

Print Name/ Emp. #

OCSD Staff Approval Signature

Print Name/ Emp. #

- Sawdust pile condition (to be completed by OCSD Operator):** No action necessary
- Moistened per AQMD permit to prevent airborne particulate matter emissions
- Reorder sawdust

Exhibit "A-3"

TROUBLE SPOT	Feet	Dia	Upstream MH	EMB Pg #	Downstream MH
Newport & Sycamore (Both Sides of the Street)	300'	8"	RED0135-0045	4044	RED0135-0055
Sycamore To Red hill	2658'	8"	RED0135-0000	4145 / 4044	RED0135-0045
First Street & Centennial to Newport	1542'	8"	SUN0390-0070	3846 / 3946	SUN0390-0000
Tustin Meadows to Red hill (Easement)	230'	8"	RED0125-0000	4145	RED0125-0025
Hidden Hills to Royal Oak	261'	8"	HAT0080-0125	4246 / 4245	HAT0080-0095
Royal Oak to Browning Trunk	772'	8"	HAT0080-0095	4245 / 4246	HAT0080-0000
Fallen Leaf to Browning Trunk	265'	8"	HAT0080-0005	4246	HAT0080-0000
Vandenberg to Prospect	2357'	8"	RED0380-0000	3745 / 3645	RED0380-0065
Enderlee to Vnadenberg (From 17th Street)	565'	8"	RED0380-0075	3645 / 3745	RED0380-0030
Red hill & San Juan (Between Red hill & Tustin, E. DR.)	1066'	8"	SUN0315-0515	4047 / 4046	SUN0315-0450
Tustin East Drive to Sierra Vista to Browning	635'	8"	HAT0180-0045	4047 / 4147	HAT0180-0000
Nisson & Red hill	1335'	8"	SUN0315-0275	4046 / 3749	SUN0315-0215
Tustin Village Way to McFadden, West to Williams	2079'	8"	RED0145-0060	4044	RED0115-0085
Pasadena from McFadden to Altadena to Newport	2090'	8"	RED0115-0255	4044	RED0115-0075
Myrtle and Newport (Last section to Newport)	1095'	8"	RED0115-0080	4044	RED0115-0075
Camino Real from Orange to Red hill (by School)	4459'	8"	SUN0315-0345	4046	SUN0315-0305
Holt & Newport (by Cocos Restaurant)	70'	12"	SUN0400-0025	3846	SUN0400-0020
First & Prospect (in front of McDonalds)	592'	8"	RED0275-0025	3846 / 3845	RED0275-0005
Newport to Old Irvine to Elizabeth Way	398'	8"	SUN0315-1150	3847	SUN0315-1105
Newport to Irvine	1049'	15"	SUN0430-0010	3847 / 3846	SUN0430-0000
Newport & 1st. Street	421'	8"	SUN0400-0015	3846	SUN0400-0105
Newport & El Camino Real	1145'	8"	SUN0315-0420	3945 / 3946	SUN0315-0350
Marmon to Montgomery on Hewes	1126'	8"	SUN0480-0190	3347	SUN0480-0165
Park to Washington from Chapman	1005'	8"	SUN0480-1510	3347	SUN0480-1520
Esplanade to James on Chapman	1209'	12"	RED0575-0000	3346 / 3347	RED0585-0000
Easement to Malena to Anglin	675'	8"	RED0395-0040	3645	RED0395-0060
Grove Site to Easement	1275'	8"	RED0395-0055	3645	RED0395-0235
Laurinda to Malena (Easement)	312'	8"	RED0395-0020	3645	RED0395-0025
Laurinda to 17th Street (Every 6 Months)	983'	8"	RED0395-0020	3645	RED0395-0005
Manhole on Prospect in front of Loma Vista School	195'	8"	RED0410-0000	3646	RED0410-0005
Carrol Way to Yorba on 17th	1278'	8"	RED0390-0740	3645	RED0390-0025
Crawford Canyon between Chapman & Stroller	759'	8"	RED0625-0440	3348	RED0625-0030

Exhibit "A-3"

TROUBLE SPOT	Feet	Dia	Upstream MH	EMB Pg #	Downstream MH
McFadden and Walnut	1000'	8"	RED0145-0080	4044 / 4045	RED0145-0055
Fox Run Road (by Castle Gate)	480'	8"	SUN0430-0495	3351	SUN0430-0505
Overhill from Miralogo to (2) manholes upstream	230'	8"	HAT0000-0575	3551	HAT0000-0585
Park Loop the Barn	2100'	8"	RED0105-0000	4245	RED0105-0050

Memorandum

Date: April 15, 2010

From: Chuck Winsor

To: Rob Thompson

Subj: Sep. 2007 GHD Report, OCSD Service Area 7 Local Sewer Study, Cost
Projection of Rehabilitation and Replacement over 100 years

I believe that the current data in the GHD report regarding the infrastructure (manholes and pipe line segments) appears to be identified correctly. The executive summary talks about the formulas for calculating the rehabilitation and replacement costs. It also includes a discussion on the basis of revised costs as a result of a deficiency in the data from FY 2005/06 where a lot of the pipe segments were previously left out and the revised costs went from \$27 million to \$350 million.

I agree with the current infrastructure data accounting and I don't disagree with the formulas for calculating asset replacement costs as shown in table 1 on the second page of the executive summary, although these formulas may need to be reviewed to include rehabilitation rather than replacement.

However, I disagree with what appears to be one of the underlying assumptions that are built into the model regarding rehabilitation costs and methods followed by replacement costs and methods. Appendix C is titled Rehabilitation and Renewal by Year and Area. The next page (which I have numbered C-1) shows total costs, including both rehabilitation and replacement from 2009 through 2107, which represents approx. 100 years, costing approx. \$350 million.

The assumptions for the manhole assets (see page D-1) is that the manholes are first rehabilitated within approximately 57 years after initial installation and are replaced 55 years after that. Each row on the attached table (pages D-1 and subsequent pages) shows the asset ID number (single ID number represents one manhole) and gives the year assumed for rehab, followed by the next row showing the same asset ID number but showing the assumed year for replacement.

Starting on page D-94 and pages following, the table shows the two asset ID numbers which represent a pipe line segment (first ID number is the downstream MH and next ID number is the upstream MH). The assets represented here are nearly entirely 8-inch diameter Vitrified Clay Pipe (VCP) pipes. This is because the vast majority of the local sewer pipes in the City of Tustin (as well as in the unincorporated County portion of Service Area 7) are 8-inch VCP local sewers.

Pages D-94 and subsequent pages have different years or timeframes from initial sewer installation to when the first rehabilitation of sewer pipe line segments is assumed to begin. These pages show anywhere from 16 years from the initial installation of the sewer to the rehabilitation date, all the way to 48 years from the initial installation date to first rehabilitation date. This variation can be explained because GHD introduced condition assessment data from actual manhole and pipeline inspections into the model to determine the date (or year) of first rehabilitation. Then, the model shows an assumed time period of 61 years between first rehabilitation date and next replacement date.

Today (4-15-10), we completed a telephone conference discussion involving Chuck Winsor and Kevin Hadden from OCSD talking with Mathew Oakey from GHD to resolve some of these issues involving GHD's model assumptions. Mathew Oakey agrees that if OCSD thinks there are more current underlying model assumptions than what is presently programmed in the model, it would be good to introduce the new changed assumptions and rerun the model to arrive at some more accurate conclusions.

I do not agree with one of the primary assumptions in the GHD model. Specifically, I do not agree that in the assumed 100 year time period, there needs to be two separate repairs within the same line segment for every line segment, the first repair being called "Rehabilitation" and the second being called "Replacement." I believe that using a good quality lining product as a repair within the existing 8" VCP, we should be able to get another 100 years of life out of the pipe without having to replace the pipe within that overall 100 year period. VCP pipe does not corrode. It can only crack but if restrained by a good liner product applied correctly, I don't believe it will fall apart or significantly deteriorate even over 100 years.

I believe that except for a catastrophic event such as a severe earthquake (which is not built into the model anyway), there should only be one significant repair method in the 100 year life of the sewer and I would call that a rehabilitation.

The rehabilitation or repair should be done using a good quality lining method such as "Cured-in-Place Pipe" (CIPP), sliplining of a pipe within a pipe, spiral wound rehabilitation lining methods or possibly a few other acceptable methods.

Since VCP does not corrode even with a high concentration of chemicals and sewer gasses, it will last almost indefinitely. However, if the sewer is not installed and bedded well in the beginning, offset joints and other cracked pipe issues can occur which can be repaired by lining the pipe as discussed. If we standardize on a good quality repair method, I am convinced that they should last 50 to 100 years, therefore eliminating the need for two increments of repair in the 100 year cycle that the model assumes.

Another issue has been developing in the sewer pipe repair business in recent years that changes some of these equations and assumptions, especially in the small 8" to 12" pipe sizes. That is, there is no longer the need to mandatorily assume and budget for complete lining repair between two manhole segments in all cases. The average distance between the local OCSD manholes in Service Area 7 is in the range of 250 to 350 feet, say 300 feet. If the sewer is cracked and starting to fall apart in only one or two places in that 300 feet, there are now very good quality lining methods that can go for say 8 to 12 feet per liner segment and can be done robotically from the closest manhole without necessarily doing a pumped bypass of sewage flow above the surface of the street. This can reduce the total footage of repair compared to some of the older continuous lining methods used, thereby saving a large amount in unnecessary costs. This will vary depending upon the overall volume of flow and other condition factors in any particular line segment. But, substantial savings should be able to be made compared to the assumptions built into the model.

The only scenario where I feel it is realistic to assume complete replacement of the pipe line segment is either one of three of the following things occurring: (1) Catastrophic failure of the pipe such as in a severe earthquake (I believe that is beyond the scope of this model). (2) Sewer capacity within the pipe is used up because of high density development and sewer replacement is needed because of highly increased flows in the area (I believe that is also beyond the scope of this model). (3) Severe sags in the sewer because of either poorly installed or improperly bedded sewers or severely poor soil conditions causing portions of the sewer to sink. I believe we have a few of those sags now, but the percentage of pipe line segments needed to be replaced because of severe sags is probably less than 5%. The point is that except in a few cases, complete replacement of the pipe should not need to occur, only one cycle of rehabilitation within 100 years.

Using that assumption and the same rehabilitation cost numbers shown in the GHD report on page C-1, it brings the overall cost down to \$106.58 million from \$350 million by not assuming a complete replacement within 61 years of the initial rehabilitation which I believe is correct. If you want to assume a greater factor of safety because we know some line segments will need to be replaced after rehabilitation (and allowing for more inflation), then assume, say \$150 million.



February 13, 2013

Mr. Lorenzo Tyner
Finance and Human Resources Director
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708

Subject: ***Local Sewer Fee Increases***

Dear Mr. Tyner:

As part of the 2013 rate update process, Carollo recommended that the District increase the 2014 local sewer fees by 4.8% in order to continue to set aside money to fund identified future capital replacement needs. The proposed fee adjustment is commensurate to the increase to the District-wide service charge increases on a percentage basis.

The District retained GHD to perform an asset management update for its local sewer system. Based on this analysis, the District is projected to undertake significant capital replacements beginning in FY 2034/35. In anticipation of these improvements, the District currently collects replacement funding through the local sewer fees. This replacement set aside will be used to offset future capital expenditures and mitigate future rate spikes. This proactive approach also achieves intergenerational equity by requiring existing users to contribute to the future replacement of sewer assets.

If the District does not increase the local sewer fee in FY 2013/14, it will continue to collect adequate revenues to fund its ongoing operation and maintenance requirements, but lower the annual capital replacement set aside by approximately \$300,000. The District could increase future local sewer fees or issue debt in the future as necessary to fund replacement needs at the time of the capital improvements when actual project costs are known.

Sincerely,
CAROLLO ENGINEERS, INC.

Robert S. Grantham
Vice President

**ORANGE COUNTY SANITATION DISTRICT
WASTEWATER REVENUE AND RATE STUDY**

FINAL
January 2013

**ORANGE COUNTY SANITATION DISTRICT
WASTEWATER REVENUE AND RATE STUDY**

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Orange County Sanitation District

WASTEWATER REVENUE AND RATE STUDY**1.0 INTRODUCTION****1.1 Purpose and Scope****1.1.1 Purpose**

The purpose of this report is to present the findings of an independent review of the Orange County Sanitation District (District) user rate recommendations for FY 2013/14 through FY 2020/21. To develop this report, Carollo Engineers, Inc. (Carollo) evaluated the District's revenue needs, projected reserve balances, and user rate structure.

1.1.2 Scope of Work

The scope of work includes the following evaluations:

- Revenue needs forecast from FY 2013/14 through FY 2020/21.
- Cost-of-service allocation and equitable rate basis.
- Independent review of select customer class user rates based on estimated sewer discharge characteristics.

1.2 Background

The District is a public agency responsible for regional wastewater collection, treatment, and disposal. The District provides service to an area of approximately 479 square miles with a population of approximately 2.5 million people in the northern and central portion of the County, treating approximately 200 mgd of wastewater. This service area includes the Irvine Ranch Water District (IRWD), which is an independently operating revenue area within the District's service area. IRWD treats the majority of wastewater flows in their service area. The District owns sanitary sewerage facilities with a replacement value of approximately \$6.26 billion.

On July 17, 2002, the Board of Directors approved Resolution No. OCSD-14, "Establishing the Policy for Level of Treatment of Wastewater Discharged into the Ocean." This resolution established the District's policy to treat all wastewater discharges into the ocean to secondary treatment standards. Implementation of full secondary treatment standards has now been completed by the District. The completion was under budget and ahead of the December 31, 2012 schedule.

The wastewater system must also meet other demands, including service to a growing customer population, decreasing per capita flows, odor control improvements, and air quality protection needs. Over the next 17 years, the District's overall Capital Improvement

Plan (CIP) is projected to total approximately \$2.4 billion. All capital costs presented within this report are stated in 2012 dollars, unless otherwise denoted.

1.3 Project Findings and Recommendations

Based on the analyses performed for this rate study, Carollo has concluded that the staff recommendations are reasonable based on industry practice and our understanding of the District's costs. The confirmed recommendations are as follows:

- Increase the regional user rate 4.8 percent, from \$294 to \$308 per equivalent dwelling unit (EDU) in FY 2013/14.
- Following the FY 2013/14 adjustment, implement additional annual increases of 2.4 percent in subsequent years between FY 2014/15 and FY 2020/21.
- Increase the Local Sewer Service user rate concurrently with the regional user rate.
- Update the industrial rates based on unit costs developed through this revenue program update, using a 3-year transitional period.
- During the forecast period, the District is projected to reduce reserves to its policy target levels. In FY 2016/17, prior to reducing the reserve target, the District will fall approximately \$2.9 million below its target. In addition, the District is forecasted to fall short of the reserve policy in FY 2017/18 by roughly \$1 million. After FY 2017/18, the District is projected to exceed the revised target levels. Furthermore, the District is projected to replenish reserves in the latter years of the forecast period. Slightly higher, inflationary rate increases would mitigate the drawing down of reserves.
- As the District anticipates reducing reserve levels to fund major capital rehabilitative projects over the forecasted 8-year time period, all recommendations should be reviewed and updated periodically to confirm continued compliance with the District's Reserve Policy.
- Wastewater customers may request a rate adjustment by providing water consumption records that demonstrate lower sewer discharge levels than defined within the District's ordinance (Ordinance No. OCSD-35). The District should consider implementing a loadings criteria (sampling) for rate adjustments, rather than merely basing it on water meter information. This would require the customer to perform and pay for a discharge sampling and provide the District with the results prior to a rate charge adjustment. The current District ordinance allows sampling information to be required under Article II – Section 2.03B.

The basis for these recommendations is presented within the report herein. The project calculations are presented in Appendix A of this report.

1.4 Forward-Looking Statement

The projections and forecasts of this analysis are based on reasonable expectation of future events. Although there were minor differences in assumptions and escalators, Carollo's analysis closely mirrors the District's internal results. If cost escalation, operating expenditures, or capital needs exceed projected levels prior to FY 2020/21, the District will be required to begin a new Proposition 218 process to increase rates above currently projected levels. The District would similarly be required to begin a new Proposition 218 process if revenues do not materialize as projected.

2.0 ASSUMPTIONS AND DATA

2.1 Flow and Growth Assumptions

According to the latest District projections (Planning Department July 2012 projections), the population of the District's service area that currently sends flow to Plants 1 and 2 is projected to grow from approximately 2.2 million to 2.4 million by the year 2030 (IRWD, which is in the District's service area is not included in this estimate because they treat the majority of the flows in their portion of the service area.). The average yearly influent flow to the District has decreased steadily over the last 10 years from approximately 246 mgd in FY 2000/01 to 201 mgd in FY 2011/12. This is partially due to increased indoor water conservation and efficiency, industry leaving the service area, and, in recent years, because of tough economic conditions. However, based on projected service population growth, average flow rates at both treatment plants are projected to increase to a total combined flow of approximately 280 million gallons a day (mgd) by 2030.

2.1.1 Flows

Projected flows treated by the District are presented within Table 1.

Table 1 Summary of Total Projected Treatment Plant Flows Wastewater Rate and Revenue Study Orange County Sanitation District				
Flow Source	Flow (mgd)			
	2010	2015	2020	2030
District Flows	192.3	201.8	219.5	255.7
Irvine Ranch Water District (IRWD)	3.0	3.0	3.0	3.0
Santa Ana Watershed Protection Agency (SAWPA)	11.9	15.0	18.0	20.0
Total District Flows	207.2	219.8	240.5	278.7
Notes:				
(1) District flows include urban runoff and wet-weather infiltration and inflows.				

2.1.2 Equivalent Dwelling Units

As stated above, the District provided customer flow and population projections. The number of customers or connections to a sewer system is often expressed in EDUs. An EDU is a measurement of the demand on collection and treatment facilities in terms of flow and strength that is equivalent to that produced by a single-family home. Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) measure influent strength. Residential and commercial user rates are based on EDUs.

The projected number of customers served by the District from FY 2013/14 through FY 2020/21, identified in EDUs, is presented in Table 2.

Table 2 Projected Equivalent Dwelling Units (without industrial) Wastewater Rate and Revenue Study Orange County Sanitation District	
Fiscal Year	Projected EDUs
2013/14	929,430
2014/15	932,033
2015/16	934,736
2016/17	937,493
2017/18	940,306
2018/19	943,127
2019/20	945,956
2020/21	948,794

Notes:
 (1) EDU growth during the projection period assumes nominal growth. Growth rates were developed by District staff and confirmed as reasonable by Carollo.

The District calculates the number of EDUs based on the annual revenues divided by the current single-family residential (3-bedroom house) annual user rate charge. Based on projected user rate revenues for FY 2013/14 of \$285 million and a projected annual user rate of \$308 per EDU, the District is assumed to serve 929,430 EDUs (not including industrial EDUs). This EDU count is used as the basis for the analysis presented within this study. EDU growth is projected to increase slowly from 0.27 percent in FY 2013/14 to 0.30 percent in FY 2017/18, where growth is then held static.

2.2 Approach to Rate Analysis

Rate development consists of two steps. First, the annual revenue requirement is determined, defining the amount of revenue that must be collected through user rates each year in order to meet the District's cash and bond coverage obligations. Second, unit costs for flow, BOD, and TSS are developed based on this annual revenue requirement. This process is discussed later within this report.

2.3 User Rate Categories

Users are billed a flat wastewater service charge based on the property-use classification maintained by the County Assessor. The District maintains a listing of average flow and wastewater strength discharges for each property type, which is used to develop the user rates. The single-family residential (SFR) user rate is based on typical flow and loadings for an average 3-bedroom home and serves as the base rate to calculate rates for other users. Multi-family residential users are charged 70 percent per unit of the SFR rate. Commercial and the majority of industrial users are charged a percentage of the SFR rate as specified in the Fees and Charges Ordinance, Ordinance No. OCSD-35. These use factors are based on the average flow and strength characteristics for the type of property, charged on a 1,000-square-foot basis. Users with unusually high flows and/or strength of wastewater, known as "Permit Users," pay individually calculated charges, based on measured wastewater flows and strengths.

The District currently has 118 different residential and commercial use code rates. See Table B for a complete listing of user rate categories, contained in Ordinance No. OCSD-35.

2.4 Capital Improvement Plan

The District developed the current CIP in combination with the Interim Strategic Plan. This CIP is updated annually and runs through FY 2030/31. The District expects to meet future demands on the Wastewater System through the CIP. This program has been developed to satisfy anticipated regulatory requirements; increased population; additional treatment requirements; conservation, energy, and other resource-savings considerations; odor control improvements; and air-quality protection needs. Whereas the CIP in the 2008 rate analysis was significantly related to District's implementation of full secondary treatment, the future CIP is primarily intended to address the District's long-term rehabilitation and replacement (R&R) needs. With respect to costs and cost recovery, the change in projects result in a slight shift from loadings- to flow-related. Over the next 18 years, the District's CIP will accomplish:

- Major rehabilitation of the existing headworks, primary-treatment, outfall, and solids-handling facilities.
- Rehabilitate and replace many of the District's outlying pumping stations and trunk sewers.
- Fund cooperative projects to help cities upgrade their sewer systems.

In preparation of each year's budget, the District conducts an Annual CIP Validation Study to ensure that the scopes of the projects were necessary, and that the cost estimates were accurate. As a result of the completion of the CIP Validation Study, a revised CIP was

developed to continue the process of R&R of the existing facilities. The CIP values used in this rate evaluation are based on the District's most recent CIP.

The CIP, as included within this study, totals approximately \$1.63 billion in 2012 dollars between FY 2013/14 and FY 2020/21. Of this total, approximately \$1.44 billion will be undertaken for R&R and treatment upgrades, while \$0.19 billion will be undertaken to provide capacity for projected growth. As the exact R&R needs and timings are adaptable, the District has flexibility in the CIP plan to delay or adjust the improvements as deemed necessary and financially prudent.

2.5 Functional Allocation

The purpose of a cost-of-service analysis is to provide a rational basis for distributing the full costs of the District's utility service to each class or customer in proportion to the demands they place on the system. Detailed cost allocations help determine the degree of equity that can be achieved in the design of the resulting unit rates. This analysis yields an appropriate method for allocating costs, which could be sustained unless substantial changes in cost drivers or customer discharge patterns occur.

The Functional Cost Allocation apportions the annual revenue requirement for a select test year by major function of the utility. For the District, the primary functions are related to flow, BOD, and TSS. These function cost pools include the system's existing operations and maintenance (O&M) expenditures, debt service, and rate-funded capital costs.

It is necessary to allocate costs to billable constituents that can be both measured at the treatment facilities and estimated or measured for each user. O&M expenditures and the capital cost for each project were assigned to each associated billable constituents: flow and strength (BOD and TSS). The District applies separate allocations for O&M and capital costs in order to more accurately reflect appropriate cost relationships. This process allows the District to recover a proportionate share of capital and O&M costs from each user through the annual user rate based on flow and loading discharges.

Although, the wastewater system has undergone significant change, the unit process allocations presented in the 1998 Determination of Financial Rates and Charges Report are still applicable and provide a strong foundation for establishing cost-of-service based rates. At the time of this study, the District conducted an extensive review of the District's costs and respective relationship to flow, BOD, and TSS. For each cost category (e.g., collection and diversion), a defined percentage share of those costs are allocated to flow, BOD, and TSS. Over time, the expenditures associated with each cost category change, but the percentage allocations to billable constituents should remain consistent. The allocation percentages for O&M costs, by unit process, are presented in Table 3. An example of how these allocations are applied is shown later in the report in Table 12.

Table 3 Operations and Maintenance Cost Allocation to Billable Constituents Wastewater Rate and Revenue Study Orange County Sanitation District			
Treatment Process	Allocation Percentages (%)		
	Flow	BOD	TSS
Collection and Diversion	90	5	5
Interplant	90	5	5
Headworks	75	5	20
Primary Sedimentation	15	25	60
Activated Sludge Process	–	100	–
Oxygen Activated Sludge	–	100	–
Blower Equipment and Structures	–	100	–
Aeration Equipment and Structures	–	100	–
Trickling Filters	–	100	–
Secondary Sedimentation	–	100	–
Sludge Thickening ⁽¹⁾	–	25	75
Digestion	–	25	75
Solids Handling	–	25	75
Solids Disposal	–	45	55
Effluent Disposal	100	–	–
Non-Assignable Costs ⁽²⁾	25	31	44

Notes:
(1) Allocation of sludge thickening was changed to reflect co-thickening process.
(2) Percentage based on weighted average for all other allocated O&M costs.

For the capital-related costs, the allocation percentages, by unit process, are presented in Table 4.

Table 4 Capital Project Allocations to Billable Constituents Wastewater Rate and Revenue Study Orange County Sanitation District			
Unit Process	Allocation Percentages (%)		
	Flow	BOD	TSS
Collection and Diversion	90	10	–
Interplant	90	10	–
Headworks	75	5	20
Primary Sedimentation	–	30	70
Activated Sludge Process	–	100	–

Table 4 Capital Project Allocations to Billable Constituents Wastewater Rate and Revenue Study Orange County Sanitation District			
Unit Process	Allocation Percentages (%)		
	Flow	BOD	TSS
Oxygen Activated Sludge	–	100	–
Blower Equipment and Structures	–	100	–
Aeration Equipment and Structures	–	100	–
Trickling Filters	--	100	0
Secondary Sedimentation	–	70	30
Sludge Thickening ⁽¹⁾	–	25	75
Digestion	–	25	75
Solids Handling	–	25	75
Solids Disposal	–	45	55
Effluent Disposal	100	–	–
Non-Assignable Costs ⁽²⁾	45	21	34

Notes:
(1) Allocation of sludge thickening was changed to reflect co-thickening process.
(2) Percentage based on weighted average for all other capital project allocated costs.

Table 5 applies the information from Table 4 and presents the replacement and expansion CIP costs broken into the billable constituents from FY 2013/14 to FY 2020/21. These capital expenditures are stated in 2012 dollars.

Table 5 CIP Billable Constituents Cost Breakdown (Millions of Dollars) Wastewater Rate and Revenue Study Orange County Sanitation District				
	Flow	BOD	TSS	Total CIP Costs
Replacement	\$644.7	\$423.5	\$370.0	\$1,438.1
Expansion	\$90.8	\$30.52	\$67.7	\$189.1

Notes:
(1) Costs presented in 2012 dollars.

2.6 Operations and Maintenance Expenditures

The revenue requirement analysis uses the District's proposed FY 2012/13 budget as the baseline for forecasting future revenue needs. Carollo also met with District staff to validate future projections and highlight known variations between proposed and actual. Future expenditures are assumed to increase commensurate with cost inflation and projected cost increases associated with increases in wastewater flows due to growth and higher treatment standards.

Carollo verified the District's net O&M inflator of 5.0 percent. Revenues and expenses are projected for future fiscal years using the following annual escalation factors, as agreed upon with the District:

- General Cost Inflation: 4 – 5%.
- Variable O&M Inflation: 7%.
- Labor Inflation: 4.8 – 6.0%.
- Construction Cost Inflation: 5%.
- Customer Growth: 0.25 – 0.30%.
- Fund Earnings: 2 – 4%.

2.7 Existing Financial Information

The background financial information supplied by the District included: existing debt service and future payments, current reserve ending fund balance, other future non-treatment alternative-related expenses, other future revenues, future property taxes, and other miscellaneous financial information. The District also provided revenues and expenses associated with providing service to IRWD, Santa Ana Watershed Project Authority (SAWPA), and other miscellaneous items.

3.0 REVENUE REQUIREMENT ANALYSIS

3.1 Introduction

The revenue requirement analysis determines the amount of rate revenue needed in a given year to meet a utility's expected financial obligations. At least two separate tests must be met in order for rates to be sufficient:

1. Cash Flow Test: A utility must generate annual utility revenues adequate to meet general cash needs.
2. Bond Coverage Test: Annual rate revenues must satisfy debt coverage obligations on Certificates of Participation (COPs).

The cash-flow test identifies projected cash requirements in each given year. Cash requirements include O&M expenses, debt service payments, policy-driven additions to working capital, miscellaneous capital outlays, replacement funding, and rate-funded capital expenditures. These expenses are compared to total annual projected revenues. Shortfalls are then used to estimate needed rate increases.

The bond-coverage test measures the ability of a utility to meet legal and policy-driven revenue obligations. Given the District's existing debt obligations, it is required to collect

sufficient funds through rates to meet all ongoing O&M expenses, as well as 1.25 times the total debt-service requirements due in a year. The coverage factor is set by policy in order to maintain the District's current bond rating.

As the District is transitioning into a pay-as-you-go capital-replacement cycle, the bond coverage test will not be a driver of rate increases.

Revenues must be sufficient to satisfy both tests. If revenues are found to be deficient through one or both of the tests, then the greater deficiency (shortfall) drives the rate increase.

3.2 Funding Sources

Over the next 8 years, the District projects \$1.63 billion in future wastewater-treatment improvements and future collection-system capital improvements, as stated in 2012 dollars. The District expects to fund these improvements through a combination of user rate and Capital Facilities Capacity Charge (CFCC) revenues and reserves.

3.2.1 Current Revenues

3.2.1.1 *User Rates*

User rate revenue is the primary revenue source of the District. These rates were adjusted in previous years to generate sufficient cash flow for additional capital-improvements and debt-service obligations. As the District is entering an R&R phase, future rate revenue increases are less than previous years. Over the forecast period with proposed rate increases, the District's annual rate revenues are projected to increase from \$277 million in FY 2012/13 to \$356 million in FY 2020/21.

3.2.1.2 *Capital Facilities Capacity Charges*

CFCCs are a one-time charge imposed on new development or expansion of existing users that increase demand on the system. They provide for equitable cost recovery of growth-related costs. Based on the projected growth, CFCC revenue is expected to increase from \$7.6 million in FY 2012/13 to \$12 million in FY 2020/21.

3.2.1.3 *Tax Revenues*

The District currently receives nearly 17 percent of its total revenue, or \$64 million in property tax revenue, from the County. Given the current economic climate, this amount is held constant until FY 2014/15, at which point a 5-percent annual increase is assumed. By FY 2020/21, the District is projected to generate \$90 million in property-tax revenue. Should these revenues not materialize, the District would need to adjust future expenditures or possibly revisit the revenue analysis.

3.2.2 Debt Financing

As the District enters a time period in which the CIP is oriented toward R&R projects, the District intends to primarily fund these projects through a mixture of direct rate funding and use of reserves. Consequently, the District does not anticipate issuing additional debt during the 8-year forecast period. However, the District can issue COPs or short-term financing to fund capital-related projects. The District does have contractual covenants within the existing COP indenture agreements, which require minimum coverage ratios of 1.25 times. The coverage ratio is calculated as the ratio of net annual revenues available for debt service payments to total annual debt service requirements.

The District is projected to maintain a minimum bond coverage ratio of 2.52 times over the 8-year forecast period.

Table 6 describes the District's outstanding debt obligations as of December 2012.

Table 6 Outstanding Certificates of Participation Debt as of December 2012 Wastewater Rate and Revenue Study Orange County Sanitation District			
	Principal Amount	Outstanding Balance	Final Maturity
2007A COP	\$95,180,000	\$92,845,000	2/1/2030
2007B COP	\$300,000,000	\$279,250,000	2/1/2037
2008A COP	\$77,165,000	\$25,710,000	8/1/2013
2008B COP	\$27,800,000	\$26,550,000	8/1/2016
2009A COP	\$200,000,000	\$191,265,000	8/1/2038
2010A COP	\$80,000,000	\$80,000,000	2/1/2040
2010C COP	\$147,595,000	\$147,595,000	2/1/2044
2011A Refunding COP	\$100,645,000	\$100,645,000	2/1/2026
2012A Refunding COP	\$66,395,000	\$66,395,000	2/1/2033
2012B Refunding COP	\$140,151,132	\$140,151,132	2/1/2026

3.2.3 Reserves

The District maintains eight separate categories for its reserve funds. Table 7 delineates the various reserve requirements per the District Reserve Policy for FY 2013/14. Currently, the District's projected FY 2012/13 reserve balance of \$610 million is in excess of the reserve target. In order to mitigate revenue increases due to an increase in capital R&R expenditures, District staff plans to appropriately draw down existing reserves by \$140 million through the study period. It should be noted that, over the 8-year study period, the reserve policy level requirement naturally decreases by roughly \$36 million. While the District is projected to end the study period with nearly \$22 million in excess of the reserve

target, this is only possible with adjustments or reductions to the reserve policy level. Even with reserve target reductions, there are years when the District's projected reserve balances fall short of the policy target. The District is projected to have sufficient reserves, and, in case of future unknowns, maintains the ability to delay capital improvements and/or adjust rates in the future.

Table 7 FY 2013/14 Projected Reserve Requirements (Millions of Dollars)	
Wastewater Rate and Revenue Study	
Orange County Sanitation District	
Cash Flow Requirements Reserve	
Operating Expenses	\$74.4
Certificate of Participation Payments	98.5
Operating Contingencies Reserve	14.9
Capital Improvement Plan Reserve	93.6
Catastrophe and Self Insurance	57.0
Capital Rehabilitation and Replacement	60.9
Debt Service Required Reserves	130.2
Less: Adjustment to Reserves	0.0
Total	\$530.1
<u>Notes:</u>	
FY 2013/14 Projected Reserve Requirements	

- *The Cash Flow Requirements Reserve* was established to fund O&M and COPs debt-service expenses for the first half of the fiscal year, prior to the receipt of the first installment of the property-tax allocation and user rates, which are collected as a separate line item on the property tax bill. The level of this reserve is established as the sum of an amount equal to 6 months of O&M expense and the total of COPs debt-service expenses due in the subsequent fiscal year.
- *The Operating Contingency Reserve* was established to provide for non-recurring expenditures that were not anticipated when the annual budget and user rates were adopted. The level of this reserve is equal to 10 percent of the District's annual operating budget.
- *The Capital Improvement Reserve* was established to fund annual increments of the CIP with a target level at one-half of the average annual CIP through FY 2020/21. Levels higher and lower than the target can be expected while the long-term financing and CIPs are being finalized.
- *The Catastrophic Loss, or Self-Insurance Reserve*, is established for property damage including fire, flood and earthquake, general liability, and workers'

compensation. The level of reserve in this fund is maintained at a level to fund the District's non-reimbursed costs, which are estimated to be \$57 million.

- *The Capital Replacement/Renewal Reserve* was established to provide 30 percent of the funding to rehabilitate or replace the current collection, treatment, and disposal facilities. The current replacement value of these facilities is estimated to be approximately \$6.26 billion. The initial reserve level for this fund was established at \$50 million and is augmented by interest earnings and a portion of the annual user rate charges in order to meet projected needs through the year 2030.
- *Debt Service Reserves* are controlled by a trustee, pursuant to the provisions of COPs issues, and is not available for the general needs of the District.
- *The Rate Stabilization Reserve* accumulates all available funds that exceed the targets for all other reserves. The Rate Stabilization Reserve is a separate fund from the Rate Stabilization Account established under the Trust Agreement. These funds are applied to future years' needs and must be maintained at specified levels. There is currently no established target for this reserve.
- *Adjustments* to the total reserves reflect the ability of one reserve to support the requirements of other reserves. Not all reserves will be fully utilized at any given point.

3.3 Findings and Conclusions

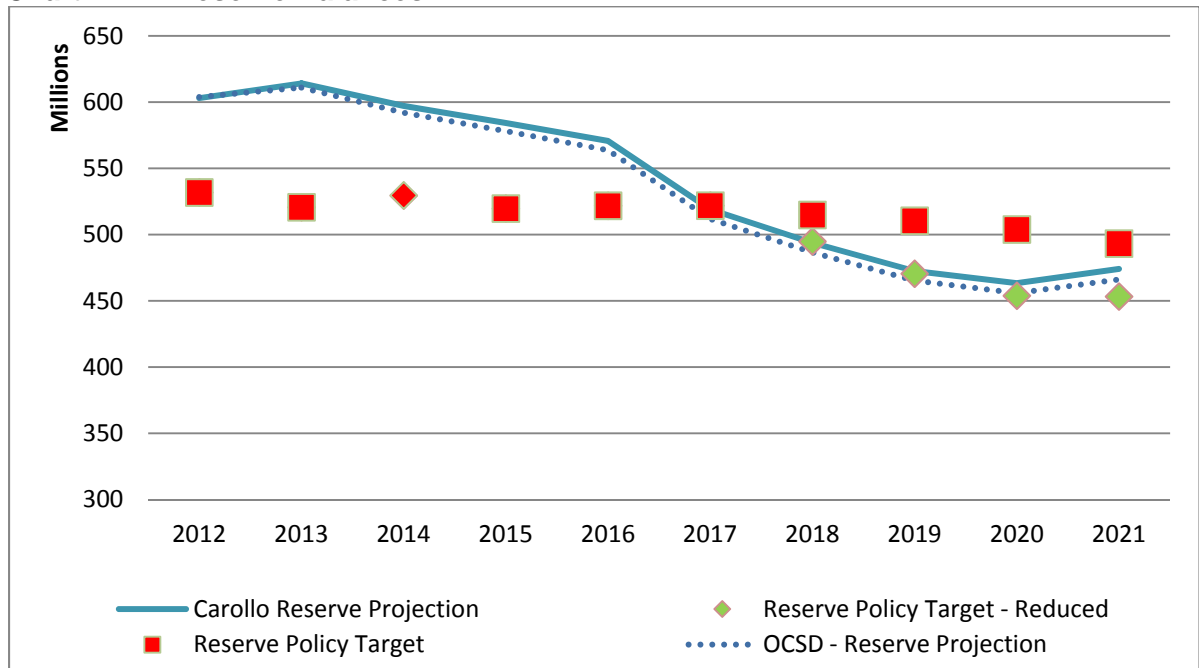
The results of the revenue requirements are summarized in Table 8. Annual rate increases are shown on a percentage basis. The surplus presented in Table 8 demonstrates the District's financial health as related to the Cash Flow and Bond Coverage Tests. Please note, however, the surplus is prior to CIP expenditures.

The District will utilize a combination of rate increases and a draw down of reserves over the next 8 years. As initially projected by District staff and confirmed by Carollo, rate increases are projected to be lower than previously implemented increases. With an initial increase of 4.8 percent in FY 2013/14, followed by annual 2.4-percent increases, the District will use nearly \$140 million of existing reserves to mitigate capital-related increases and draw reserves slightly below its reduced policy target levels. However, at the end of the projected 8-year rate period, the District is projected to have reserve levels above the targeted reserve policy. Additionally, as discussed above, the proposed rate adjustments are required to cash fund ongoing system R&R costs, rather than to meet operational cash flow or bond coverage requirements. Due to the nature of the forecasted CIP, the District maintains financial flexibility with the ability to modify or delay capital improvements.

Table 8 Cash Flow Summary (Millions of Dollars) Wastewater Rate and Revenue Study Orange County Sanitation District									
Ref	Description	FY 2013/ 2014	FY 2014/ 2015	FY 2015/ 2016	FY 2016/ 2017	FY 2017/ 2018	FY 2018/ 2019	FY 2019/ 2020	FY 2020/ 2021
Revenues									
1	General User Fees	284.8	292.6	300.7	309.0	317.5	326.3	335.3	344.5
2	Permitted User Fees	11.0	11.3	11.5	11.8	12.1	12.4	12.7	13.0
3	Property Taxes (5%/year)	64.0	67.2	70.6	74.1	77.8	81.7	85.8	90.1
4	New COP Issues	-	-	-	-	-	-	-	-
5	Interest Revenues (2%)	15.0	17.5	17.1	16.1	15.0	16.6	18.3	18.4
6	Connection Fees	7.8	8.7	9.5	10.1	10.9	10.8	11.4	12.0
7	Other Revenues	23.7	24.8	24.9	28.4	13.9	13.4	21.4	13.3
8	Revenues	406.3	422.0	434.3	449.6	447.2	461.3	485.0	491.4
(These values are post-rate increase)									
Requirements									
9	O&M Expenditures	148.8	157.3	165.0	169.6	173.9	182.3	191.0	200.2
10	Capital Improvement Plan	156.3	161.4	149.2	169.8	143.9	126.6	108.4	62.5
11	Rehabilitation and Replacement	18.1	28.2	45.3	68.8	65.3	86.0	107.1	130.3
12	COP Service (5.0%, 30 years)	98.5	85.8	86.1	90.9	87.0	85.4	85.5	85.3
	Coverage-Driven Requirements	-	-	-	-	-	-	-	-
13	Other Requirements	1.7	2.2	2.2	2.2	2.2	2.2	2.2	2.2
14	Requirements	423.4	434.9	447.8	501.3	472.4	482.5	494.2	480.6
15	Revenues - Requirements	(17.1)	(12.9)	(13.5)	(51.7)	(25.2)	(21.2)	(9.2)	10.8
Accumulated Funds									
16	Beginning of Year	614.2	597.1	584.3	570.7	519.0	493.8	472.5	463.3
17	End of Year	597.1	584.3	570.7	519.0	493.8	472.5	463.3	474.1
18	Reserve Policy	529.5	519.7	521.8	521.9	494.9	470.5	453.9	453.3
18a	Over (Under) Reserve Policy	67.6	64.5	48.9	(2.9)	(1.1)	2.0	9.4	20.8

The chart below illustrates the reserve balance projection over the 8-year forecast period, including the District's policy target balance and the adjusted policy target.

Chart 1 Reserve Balances



If cost escalation, operating expenditures, or capital needs exceed projected levels prior to FY 2020/21, the District may be required to begin a new Proposition 218 process to increase rates above currently projected levels or reduce CIP levels. The District would similarly be required to begin a new Proposition 218 process if revenues do not materialize as projected. These increased revenues include anticipated annual tax revenue increases based on improved economic conditions within western Orange County beginning FY 2014/15.

4.0 RATE STRUCTURE ANALYSIS

4.1 Introduction

User rates are developed to equitably allocate costs to users to operate, service debt, and perform rehabilitations and replacements for wastewater collection and treatment systems. There are two different approaches to the rate-structure analysis. The first option is to adjust rates on the same percentage basis across the board for all users. The second option is to develop unit costs for each billable constituent (flow, BOD, and TSS) and allocate the unit costs according to estimated customer usage. The overall procedure used to develop user rate charges for the second option is as follows:

- **Revenue Needs:** Define the annual revenue that must be recovered from user rates and permit users.

- **Functional Allocation:** Determine the percentage allocation of O&M and capital costs to the billable constituents (flow, BOD, and TSS), based upon the existing allocation methodology.
- **Unit Costs:** Develop unit costs for each billable constituent by dividing the total cost allocated to that constituent by the total wastewater flow or loadings of that constituent.
- **Customer Category Rates:** Develop rates for each customer category by applying unit costs to estimated flows and related loadings for each category.

The District collects user rates from property owners through the annual property tax bill distributed by the County throughout the District, except in Revenue Area No. 14. Pursuant to the IRWD Agreement, the District receives payments from the IRWD, which directly collects fees from customers through a monthly billing procedure in Revenue Area No. 14.

In February 2008, the Board adopted Ordinance No. OCSD-35, which increased the SFR rate annually for 5 years (2008-2012). These increases were necessary in order to meet the District's cash flow needs due to the addition of disinfection treatment and other operating requirements.

Table 9 provides a historical perspective of approved residential rate increases.

Table 9 Regional User Rate Charges Revenue Program and Rate Update Orange County Sanitation District		
Fiscal Year	Annual Single Family Residence Rate	Percentage Increase
2008/09	\$201.00	10.5%
2009/10	\$221.00	10.0%
2010/11	\$224.00	10.4%
2011/12	\$267.00	9.4%
2012/13	\$294.00	10.1%

Notes:
Source: Ordinance No. OCSD-35.

- *Commercial User Rates.* The user rates for commercial categories are based on a multiplier of the SFR charge, as shown in Appendix B.
- *Industrial User Rates.* The District charges industrial user rates to customers discharging high-strength or high-volume wastes into the sewer systems. Customers subject to industrial user rates are billed directly by the District. The fee charged to each customer is based on the customer's sewage volume, the concentration of BOD, and TSS.

4.2 Revenue Needs

The revenue needs are defined as the amount of revenues that must be recovered through user rates and permit user charges in order to cover annual expenditures, less any offsetting revenues. Offsetting revenues can include interest earnings, IRWD and SAWPA payments, and other non-operating revenues.

Expenditures and offsetting revenues for FY 2013/14 are as follows:

Table 10 Expenditures and Off-Setting Revenues (Millions of Dollars) Wastewater Rate and Revenue Study Orange County Sanitation District	
Expenditures	FY 2013/2014
<i>Ongoing Operating Expenses</i>	
Operating Expenses	148.8
<i>Other Operating Expenses</i>	
Self Insurance	1.7
Debt Service	98.5
Replacement Funding	0.0
Rate Funded Capital Improvements	143.7
Bond Coverage Requirements	0.0
Policy Driven Rate Increases	0.0
Less Off-Setting Revenues	
Revenues from other Districts	(17.9)
Other Operating Revenues	(15.0)
Non-Operating Revenues	(64.0)
Local Sewer Operating Revenue	(2.3)
Self-Insurance	(1.7)
Total Revenue Needs	291.6

In FY 2013/14, \$291.6 million must be recovered through user rates and permit user charges to cover the District's annual operating expenditures, debt service, and capital improvements funded through annual rate revenues. Additionally, \$17 million of reserves will be used to fund capital expenditures.

4.3 Functional Allocation

To develop user rates, unit rates per unit of flow, BOD, and TSS are applied to standard flow and loading factors developed for most customer categories. Users with unusually high flows and/or strength of wastewater, known as "Permit Users," are charged based on measured wastewater flows and strengths.

Table 11 presents a summary of the allocation percentage basis.

Table 11 Allocation Percentage Basis Wastewater Rate and Revenue Study Orange County Sanitation District			
Description	Flow	BOD	TSS
Treatment Expenditures	25%	31%	44%
Plant-in-Service	44%	42%	14%
Debt Service ⁽¹⁾	38%	41%	21%
CIP	44%	34%	22%
Future CIP (2013-2021)	45%	29%	26%
All Others ⁽²⁾	36%	33%	31%

Notes:

(1) Debt service is the weighted average of debt incurred prior to 2008 and debt incurred between 2009 and 2013. The debt factors reflect the types of projects via allocation factors that were funded with the specific debt.

(2) The weighted average of assignable cost factors are applied to non-assignable costs.

Table 12 illustrates how projected FY 2013/14 expenditures and offsetting revenues are allocated to flow, BOD, and TSS, based on the allocation percentages listed above.

Table 12 Functional Allocation of Costs Wastewater Rate and Revenue Study Orange County Sanitation District					
Expenditures		Functional Allocation			
		Flow	BOD	TSS	
Ongoing Operating Expenses (in million \$)					
Operating Expenses	\$148.8	25%	31%	44%	As Treatment Expenditures
Other Operating Expenses					
Self-Insurance	1.7	45%	29%	26%	As Future CIP (2013-2021)
New Debt Service	0.0	45%	29%	26%	As Future CIP (2013-2021)
Existing Debt Service	98.5	38%	41%	21%	As Debt Service
Replacement Funding	0.0	44%	34%	14%	As Plant-In-Service
Rate Funded Capital Improvements	143.7	45%	29%	26%	As Future CIP (2013-2021)
Bond Coverage Requirements	0.0	45%	29%	26%	As Future CIP (2013-2021)
Policy-Driven Rate Increases	0.0	36%	33%	31%	As All Others
Less Off-Setting Revenues					
Revenues from other Districts	(17.9)	36%	33%	31%	As All Others
Other Operating Revenues	(15.0)	36%	33%	31%	As All Others
Non-Operating Revenues	(64.0)	36%	33%	31%	As All Others
Local Sewer Fee	(2.3)	36%	33%	31%	As All Others
Self-Insurance	(1.7)	36%	33%	31%	As All Others
Subtotals	\$291.6	\$103.5	\$96.5	\$91.7	

The District's existing O&M expenditures are more heavily weighted toward BOD and TSS than flow. Costs allocated to flow only make up 25 percent of the total operating expenses, with the remaining 75 percent split between 31 percent for BOD and 44 percent for TSS. This is because the largest O&M expenses (aeration air for secondary treatment, solids handling, and chemical costs) are allocated more toward BOD and TSS than flow.

The District's existing debt-service costs are weighted 38 percent to flow, 41 percent to BOD, and 21 percent to TSS. The heavier weighting to BOD is because the debt service is more heavily weighted to the recently completed secondary treatment projects, which are allocated to BOD.

Although the District's O&M and debt service costs are more heavily weighted towards BOD and TSS, the majority of the rate-funded capital costs are related to flow. Based on the District's CIP for the next 8 years, 45 percent of costs will be related to flow, 29 percent to BOD, and 26 percent to TSS. This is because a large portion of the District's future projects are for the collection system costs, which are allocated to flow.

When the allocations to flow, BOD, and TSS for O&M, debt service, and rate-funded capital costs are combined, the District's total allocation is 35.5 percent to flow, 33.1 percent to BOD, and 31.4 percent to TSS. From the previous analysis of 31.7 percent (flow), 34.0 percent (BOD), and 34.4 percent (TSS), the updated allocations illustrate a shift in costs towards flow and away from BOD and TSS. This migration is expected as the District has shifted into an R&R cycle that emphasizes the District's investment in flow-related capital.

As the resulting allocation impact is less than +/-5 percent from the previous cost-of-service analysis, the existing allocation remains a reasonable cost-of-service basis; however, a continued cost allocation emphasis towards flow is expected, as the R&R cycle progresses, which may lead to a greater cost-of-service impact in the future.

4.4 Unit Costs

Based on the cost-of-service analysis and proposed 4.8-percent revenue increase, the District's unit rates are expected to be \$1,395.03 (flow), \$595.63 (BOD), and \$586.69 (TSS). These unit costs reflect the adjusted functional allocation of 35.5 percent (flow), 33.1 percent (BOD), and 31.4 percent (TSS).

Should the District remain with the existing functional allocation and apply the proposed 4.8 percent increase across the board to the existing unit costs, the proposed rates would be \$1,284.74 (flow), \$610.67 (BOD), and \$649.55 (TSS). These rates reflect the existing allocation of 31.7 percent (flow), 34.0 percent (BOD), and 34.4 percent (TSS).

4.4.1 Residential and Commercial User Rates Calculation

Residential and commercial user rates are calculated on an EDU base charge. Each residential and commercial category has a defined flow and strength (BOD and TSS) assumption. To develop user rates, unit rates per unit of flow, BOD, and TSS are applied to standard flow and loading factors developed for most customer categories.

a) *EDU Defined Equivalents Calculations*

The number of existing users was determined using a fee-based approach. The number of EDUs was determined by taking the total revenue and dividing by the SFR rate of the same year. The projected number of customers served by the District for the FY 2013/14, identified in EDUs, is 933,141.

Table 13 presents flow and load information from the District's plants for FY 2011/12.

Table 13 Total Flow and Load Information Wastewater Rate and Revenue Study Orange County Sanitation District			
Description	Flow (mgd)	BOD Load (ppd)	TSS Load (ppd)
OCSD Users	201	443,500	515,400

The flows and loadings per EDU estimated to be treated by the District in FY 2013/14 are shown in Table 14.

Table 14 Flow and Load per EDU (FY 2013/14) Wastewater Rate and Revenue Study Orange County Sanitation District			
Description	Flow (flow/EDU [gpd])	BOD Concentration (BOD/EDU [mg/L])	TSS Concentration (TSS/EDU [mg/L])
EDU Equivalent Calculations	210	254	256

b) *Total Annual Flow and Loads Calculation*

Based on these flows and loadings, the totals are shown in Table 15. The totals, based on the assumed EDU factors, vary from what is measured at the District's plants. This is not uncommon, as EDUs are an average and static representation of the District's user base. This could be a short-term anomaly or reflect a long-term trend in user behaviors (i.e., conservation). It is recommended that the District continue to monitor the total projection (based on EDUs) and realized flows and loadings at the plant. Should the spread persist, the District may want to implement a sampling program to update the existing EDU assumption.

Table 15 Total Annual Flow and Loads (FY 2013/14) Wastewater Rate and Revenue Study Orange County Sanitation District			
Description	Flow (1,000 gal)	BOD Load (lbs)	TSS Load (lbs)
Customer Information	74,500,000	162,600,000	157,000,000
Total Annual Flow and Loads			

c) *Unit Cost Calculation*

The unit cost was calculated by taking the cost allocations for flow, BOD, and TSS, and dividing it by the total annual flow and loads. Table 16 presents the unit cost per flow, BOD, and TSS.

Table 16 Unit Cost Calculation (FY 2013/14) Wastewater Rate and Revenue Study Orange County Sanitation District			
	Flow	BOD	TSS
Cost Allocation	\$103.5 million	\$96.5 million	\$91.7 million
÷	Total Flow (1,000 gal)	Total BOD (lbs)	Total TSS (lbs)
Total Annual Flow and Loads	74,500,000	162,600,000	157,000,000
=	\$/1,000 gals	\$/lb BOD	\$/lb TSS
Unit Costs	\$1.395	\$0.596	\$0.587

4.5 Customer Category Rates

The SFR user rate is based on typical flow and loadings for an average 3-bedroom home and serves as the base rate to calculate rates for other users. Users are charged a percentage of the SFR rate as specified in Ordinance No. OCSD-35. These use factors are based on the average flow and strength characteristics for the type of property, charged on a per-1,000-square-foot basis.

e.g., 1: Multi-family residential with factor 0.7
Annual cost: **\$308.00 X 0.7 = \$215.60**

e.g., 2: Neighborhood shopping center with factor 1.39
Annual cost: **\$308.00 X 1.39 = \$428.12**

e.g., 3: Take-out restaurant with factor 3.0
Annual cost: **\$308.00 X 3.0 = \$924.00**

As detailed earlier in the report, the District has realized a nearly 16-percent decline in discharge volume over the past decade, resulting in various cost-of-service implications. While across-the-board increases are appropriate for residential and commercial customers due to non-material impacts on rates, it is important to make specific adjustments for

industrial customers as their discharge characteristics vary greatly and, accordingly, may have a material impact.

Although the existing rate structure is reasonable, the District has not updated its flow and loading assumptions for residential or commercial customers in some time. In order to do so, the District would need an extensive sampling program. As no better data or existing standards are available, there is not a strong basis for changing the customer flow and loading assumptions at this time. However, this could create a continued or growing cost-of-service gap.

In addition to the possible change in customer flow and loading assumptions, the District's equivalency factors have not been recalibrated to reflect the new cost-of-service allocations. As the District's functional allocation ratios have changed between rate analyses, the unit cost allocated to flow, BOD, and TSS move independently rather than proportionately across the board.

4.5.1 Industrial User Rates

The District's industrial users are charged for wastewater services based on measured flow, BOD, and TSS. As with residential and commercial customers, industrial customers' user rates are derived from base unit costs. Unlike residential and commercial customers, for whom the usage is not individually metered, wastewater metering and samples are available for industrial customers.

Table 17 below presents the District's current FY 2012/13 and proposed FY 2013/14 industrial unit charges.

Table 17 Current and Proposed Industrial User Sewer Service Charges Wastewater Rate and Revenue Study Orange County Sanitation District			
	\$/1,000 gals	\$/lbs BOD	\$/lbs TSS
Unit Costs (FY 2013/14)	\$1.395	\$0.596	\$0.587
Unit Costs (FY 2012/13)	\$1.226	\$0.583	\$0.620
Notes:			
(1) Charges are based on "net cost-of-service" prior to individual tax credits.			

The FY 2013/14 unit costs above reflect the full impact of the cost-of-service analysis. When compared to the FY 2012/13 unit costs, the results of the functional cost allocation are noticeable. As the residential and commercial rates are blended and based on a static EDU factor, the impact on specific users is non-material; however, the impact to individual industrial users will depend on their specific metered flows and sampling data. Specifically, with the greater shift to flow, industrial users with higher flow volumes will see a larger increase, in excess of the proposed 4.8 percent increase in FY 2013/14.

To mitigate the potential impacts of the rate adjustment on some industrial users, the unit cost increases in the first year will be limited to 10 percent in FY 2013/14, the first year of the new rate schedule. A similar, but reduced, cap of 7 percent will be applied in FY 2014/15. Correspondingly, some users in the same industrial category will have their rates adjusted slightly to maintain revenue neutrality. In FY 2013/14, the impact of this strategy will be approximately \$60,000, or 0.44 percent, of the District's \$13 million total industrial fee revenue. This rate-smoothing policy ensures annual revenue neutrality to the District.

The proposed unit charges and increases are illustrated in Table 18.

Table 18 Projected Industrial User Sewer Service Charges Wastewater Rate and Revenue Study Orange County Sanitation District				
Fiscal Year	\$/1,000 gals	\$/lbs BOD	\$/lbs TSS	Percentage Increase
2013/14	\$1.395	\$0.596	\$0.587	4.8%
2014/15	\$1.429	\$0.610	\$0.601	2.4%
2015/16	\$1.463	\$0.625	\$0.615	2.4%
2016/17	\$1.498	\$0.640	\$0.630	2.4%
2017/18	\$1.534	\$0.655	\$0.645	2.4%
2018/19	\$1.571	\$0.671	\$0.661	2.4%
2019/20	\$1.608	\$0.687	\$0.676	2.4%
2020/21	\$1.647	\$0.703	\$0.693	2.4%

4.5.2 Local Sewer Service Fees

The District currently owns and operates local sewers in a few areas. The District provides maintenance service by contracting some tasks with private companies. In the remainder of the service area, local sewers are provided and maintained by cities or special districts and the costs of local sewers are borne by the residents being served.

In 2008, the District implemented a local sewer service fee in order to equitably recover the cost of maintaining the local sewers. The District currently provides local sewer service to over 27,000 EDUs. In FY 2012/13, O&M expenses accounted for \$2.3 million, or 35 percent, of the local sewer funds total expenses.

In addition to operations, the District implemented a local sewer capital replacement sinking fund approach in order to have sufficient monies on hand to fully fund the necessary capital projects. The original sinking fund was established to annually generate \$4.6 million based on the asset management needs identified by the 2008 GHD local sewer study. Because the District has ceded control of some of its local sewer service area to other jurisdictions,

reducing the number of served EDUs, deposits to the sinking fund were roughly \$3.8 million in FY 2011/12.

Since 2008, the District, through advances in the Asset Management Plan, has continued to refine the identified needs, timing, and costs for the local sewer service area. Most recently, a change in the replacement assumption for all pipes 8 inches or less (75 percent of the area) has increased the original costs and compressed the projected timing of the projects, resulting in a significant increase in funding. Given the change in the funding requirements, the District would be required to collect nearly \$12.8 million annually in order to fully fund the identified projects.

The updated asset management capital needs assessment is based largely on a desktop analysis, accounting for the age of the pipes rather than current known physical deficiencies. Moreover, significant capital investments are not projected to begin until 2035.

The District's local sewer services fees are among the highest in Orange County, because of the District's proactive approach to setting aside future capital funding to cash rather than debt-fund replacement needs. The updated asset management plan provides a strong foundation for the District to monitor and project overall system reinvestment needs. However, the expected replacement timeline and possible fluctuations in actual costs and technology are uncertain. Because of this uncertainty and the long-term nature of the capital needs, it is appropriate for the District to continue to collect annual sinking fund contributions and monitor the physical needs of the system over time. However, increasing local sewer fees threefold in FY 2013/14, based on the updated asset management plan it is conservative in nature, as this is a desktop analysis. Additionally, the District could also use debt financing to supplement cash set aside, if required. Consequently, it is recommended that the District continue with its proactive capital funding set-aside program, increasing the annual capital contribution and monitoring the actual physical condition of the local sewer system. During the next rate adjustment cycle beginning in FY 2021/22, it will be critical for the District to reexamine the funding requirements based on better-known information at that time.

It is recommended that the District increase local sewer service fees by 4.8 percent in FY 2013/14 and 2.4 percent thereafter through FY 2020/21, commensurate to the regional user-fee increases. The proposed rates and increases are illustrated in Table 19.

Table 19 Projected Local Sewer Service User Rate Wastewater Rate and Revenue Study Orange County Sanitation District		
Fiscal Year	Annual EDU Rate	Percentage Increase
2013/14	\$226.50	4.8%
2014/15	\$232.00	2.4%

Table 19 Projected Local Sewer Service User Rate Wastewater Rate and Revenue Study Orange County Sanitation District		
Fiscal Year	Annual EDU Rate	Percentage Increase
2015/16	\$237.75	2.4%
2016/17	\$243.50	2.4%
2017/18	\$249.50	2.4%
2018/19	\$255.50	2.4%
2019/20	\$261.75	2.4%
2020/21	\$268.25	2.4%

It should be noted that roughly 15 percent of the annual local sewer revenues are remitted to City of Tustin for the maintenance of the local sewers within the City's operational area.

4.6 Findings and Conclusions

Carollo has concluded that the staff rate recommendations are reasonable based on industry practice and our understanding of the District. Per Carollo's review of staff cash-flow models and user-rate recommendations, an adopted user rate of **\$308.00** per EDU per year for FY 2013/14, based upon a 4.8-percent across-the-board increase is appropriate. Also reasonable are the subsequent year adjustments of 2.4 percent annually.

The proposed rates and increases are illustrated in Table 20.

Table 20 Projected Regional User Rate Wastewater Rate and Revenue Study Orange County Sanitation District		
Fiscal Year	Annual Single Family Residence Rate	Percentage Increase
2013/14	\$308.00	4.8%
2014/15	\$315.50	2.4%
2015/16	\$323.00	2.4%
2016/17	\$330.75	2.4%
2017/18	\$338.75	2.4%
2018/19	\$347.00	2.4%
2019/20	\$355.25	2.4%
2020/21	\$363.75	2.4%

In addition to the rates presented above, the following recommendations are deemed appropriate and reasonable.

- Increase the Local Sewer Service User Rate concurrently with the regional user rate.
- Update the industrial rates based on unit costs developed through this revenue program, using a 3-year transition period.
- During the forecast period, the District is projected to reduce reserves to its policy target levels. In FY 2016/17, prior to reducing the reserve target, the District will fall approximately \$2.9 million below its target. In addition, the District is forecasted to fall short of the reserve policy in FY 2017/18 by roughly \$1 million. After FY 2017/18, the District is projected to exceed the revised target levels. Furthermore, the District is projected to replenish reserves in the latter years of the forecast period. Slightly higher, inflationary rate increases would mitigate the drawing down of reserves.
- As the District anticipates reducing reserve levels to fund major capital rehabilitative projects over the forecasted 8-year time period, all recommendations should be reviewed and updated periodically to confirm continued compliance with the District's Reserve Policy.
- We would recommend that the District consider implementing a loadings criteria (sampling) for rate adjustments, rather than merely basing it on water meter information. The current District ordinance allows sampling information to be required under Article II – Section 2.03B.

PROJECT CALCULATIONS



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Summary Cash Flow Projections

Ref	Description	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Revenues:										
1	General User Fees	267,584,659	284,816,552	292,634,021	300,694,456	308,984,950	317,518,127	326,279,443	335,280,963	344,529,064
2	Permitted User Fees	10,502,000	11,006,096	11,270,242	11,540,728	11,817,706	12,101,331	12,391,762	12,689,165	12,993,705
3	Property Taxes (5% yr)	64,025,000	64,025,000	67,226,250	70,587,563	74,116,941	77,822,788	81,713,927	85,799,623	90,089,605
4	New COP Issues	-	-	-	-	-	-	-	-	-
5	Interest Revenues (2%)	12,054,000	14,954,392	17,458,613	17,068,730	16,104,440	14,967,038	16,619,424	18,349,826	18,380,101
6	Connection Fees	7,703,000	7,768,000	8,677,000	9,463,000	10,137,000	10,856,000	10,845,000	11,421,000	12,028,000
7	Other Revenues	28,492,908	23,712,254	24,777,387	24,933,296	28,445,465	13,903,046	13,436,261	21,418,164	13,341,255
8	Revenues	390,361,566	406,282,294	422,043,513	434,287,772	449,606,501	447,168,329	461,285,818	484,958,740	491,361,729
(These values are post-rate increase)										
Requirements:										
9	Oper & Mtce Exp	155,856,620	148,756,416	157,250,448	165,011,571	169,574,316	173,948,395	182,296,826	191,045,925	200,214,922
10	Capital Improvement Program	133,884,000	156,317,000	161,406,000	149,169,000	169,789,000	143,905,600	126,551,856	108,356,043	62,513,544
11	Repl, Rehab & Refurb	3,371,000	18,104,000	28,238,000	45,267,000	68,819,000	65,328,000	86,033,000	107,109,000	130,317,000
12	COP Service (5.0%, 30 yrs)	85,183,002	98,450,106	85,802,517	86,144,867	90,945,792	87,004,925	85,430,300	85,457,317	85,338,680
Coverage Driven Requirements										
13	Other Requirements	1,729,100	1,728,900	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000
14	Requirements	380,023,722	423,356,422	434,908,965	447,804,439	501,340,109	472,398,920	482,523,982	494,180,285	480,596,146
15	Revenues-Requirements	10,337,844	(17,074,128)	(12,865,452)	(13,516,667)	(51,733,608)	(25,230,591)	(21,238,164)	(9,221,545)	10,765,583
Accumulated Funds:										
16	Beginning of Year	603,852,090	614,189,934	597,115,807	584,250,354	570,733,687	519,000,080	493,769,489	472,531,325	463,309,780
17	End of Year	614,189,934	597,115,807	584,250,354	570,733,687	519,000,080	493,769,489	472,531,325	463,309,780	474,075,363
18	Reserve Policy	520,681,000	529,518,000	519,709,000	521,829,000	521,937,000	494,878,000	470,527,000	453,910,000	453,265,000
18a	Over (Under) Reserve Policy	93,508,934	67,597,807	64,541,354	48,904,687	(2,936,920)	(1,108,511)	2,004,325	9,399,780	20,810,363
Excess (Shorfall) in Reserves		93,508,934	67,597,807	64,541,354	48,904,687	(2,936,920)	(1,108,511)	2,004,325	9,399,780	20,810,363



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Summary Cash Flow Projections

Sewer Service User Fees:

19	Avg SFR Annual User Fee	\$ 294.00	\$ 308.00	\$ 315.50	\$ 323.00	\$ 330.75	\$ 338.75	\$ 347.00	\$ 355.25	\$ 363.75
20	Percentage Change	10.11%	4.80%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
21	Equivalent Dwelling Units	966,728	969,231	971,833	974,536	977,294	980,106	982,927	985,756	988,594
22	SFR Connection Fee	\$3,595	\$3,775	\$3,964	\$4,162	\$4,370	\$4,589	\$4,818	\$5,059	\$5,312
23	Outstanding COPs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Reserve Policy

24	50% This Year Operating	77,928,310	74,378,208	78,625,224	82,505,786	84,787,158	86,974,197	91,148,413	95,522,963	100,107,461
25	10% This Year Operating	15,585,662	14,875,642	15,725,045	16,501,157	16,957,432	17,394,839	18,229,683	19,104,593	20,021,492
26	100% This Year AUG COP Svc.	85,183,002	98,450,106	85,802,517	86,144,867	90,945,792	87,004,925	85,430,300	85,457,317	85,338,680
27	50% average CIP bal to 2020	99,857,560	94,158,157	91,326,313	83,829,008	75,899,975	64,619,184	56,043,513	53,104,597	53,104,597
28	Short term CIP, GWRS	-	-	-	-	-	-	-	-	-
29	DSR @ 10% Outstanding COPs	133,851,448	130,228,848	126,044,344	123,020,065	119,830,948	116,012,399	112,421,298	108,859,991	105,120,795
30	SFI @ \$57mm INPUT	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000
31	Repl & Refurb @ 2%/yr Adjustment	59,800,000	60,996,000	62,215,920	63,460,238	64,729,443	66,024,032	67,344,513	68,691,403	70,065,231
32	Total	529,205,982	530,086,961	516,739,363	512,461,122	510,150,748	475,029,577	447,617,719	437,740,864	450,758,256

COP Ratios

33	Sr Lien Coverage, Min 1.25	2.64	2.52	2.96	2.99	2.94	2.99	3.11	3.28	3.24
34	Additional Bonds, 1.25	2.64	2.52	2.96	2.99	2.94	2.99	3.11	3.28	3.24



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
ASSUMPTIONS

ASSUMPTIONS

Beginning Year of Model	FYE 2012	(don't change this)
Debt Service Coverage Requirement - Senior	125%	of annual debt service on all senior debt. Per Bond Covenant.
Debt Service Coverage Requirement - Junior	100%	of annual debt service on all junior debt - pg. 21 2006 Official Statement
Residential and Commercial EDUs	613,365	66.5%
Commercial EDUs	308,762	33.5%
Disney Land EDUs		included in Commercial EDU Count
Industrial EDUs	39,800	62,831 - Previous EDU count
Current EDUs	961,927	(EDU values calculated further below)
Residential Percentage	63.76%	
Commercial Percentage	32.10%	
Industrial Percentage	4.14%	

Annual Connection Fee Escalation

1 Annual Cost Inflation Added

ECONOMIC ESCALATORS

	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
General Cost Inflation	-2.0%	5.0%	5.0%	5.0%	4.5%	4.5%	4.5%	4.5%
Construction Cost Inflation	-2.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Customer Demand Growth	0.27%	0.28%	0.29%	0.30%	0.30%	0.30%	0.30%	0.30%
Fund Earnings	2.5%	3.0%	3.0%	3.0%	3.0%	3.5%	4.0%	4.0%
Labor Cost Inflation	-2.0%	6.0%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Variable O&M Inflation	-2.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Cust. Growth + Variable O&M	-1.7%	5.3%	5.3%	5.3%	4.8%	4.8%	4.8%	4.8%
No Annual Increases	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
One Time Expenditure/Revenue	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
OCS D population growth	0.27%	0.28%	0.29%	0.30%	0.30%	0.30%	0.30%	0.30%
JO Revenues	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Property Tax Revenue Growth	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
3% Inflation + Growth + Rate increase	8.1%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
Urban Runoff growth	0.00%	0.00%	12.30%	12.30%	12.30%	12.30%	12.30%	9.86%



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Capital Funding & Fund Reserves

CAPITAL FUNDING

REPLACEMENT/SYSTEMWIDE IMPROVEMENTS

Capital Expenditures	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
R&R / System-Wide Improvements	\$ 119,972,243	\$ 130,755,708	\$ 143,494,371	\$ 173,493,260	\$ 207,021,870	\$ 185,647,034	\$ 200,945,716	\$ 208,145,598	\$ 188,626,207
Expansion Projects	17,282,757	43,665,292	46,149,629	20,942,740	31,586,130	23,586,566	11,639,140	7,319,445	4,204,337
Total CIP Expenditures	\$ 137,255,000	\$ 174,421,000	\$ 189,644,000	\$ 194,436,000	\$ 238,608,000	\$ 209,233,600	\$ 212,584,856	\$ 215,465,043	\$ 192,830,544
Local Sewer Capital Replacement	3,861,780	4,115,983	4,192,568	4,273,591	4,352,109	4,434,565	4,513,936	4,597,013	4,683,690
Total Capital Expenditures	\$ 141,116,780	\$ 178,536,983	\$ 193,836,568	\$ 198,709,591	\$ 242,960,109	\$ 213,668,165	\$ 217,098,792	\$ 220,062,056	\$ 197,514,234

(11/12 CIP total from Mikes Cash Flow Budget)

(12/13+ CIP total from Burror's Est)

(R&R and Expansion break downs are based on breakdown of current CIP)

Available Revenues (Capital)	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
IRWD Equity Payment	\$ 2,228,000	\$ 2,454,000	\$ 2,714,000	\$ 2,541,000	\$ 2,802,000	\$ 1,950,000	\$ 1,288,000	\$ 684,000	\$ 773,000
Local Sewer Capital Funding	\$ 3,861,780	\$ 4,115,983	\$ 4,192,568	\$ 4,273,591	\$ 4,352,109	\$ 4,434,565	\$ 4,513,936	\$ 4,597,013	\$ 4,683,690
CFCCs	7,703,000	7,768,000	8,677,000	9,463,000	10,137,000	10,856,000	10,845,000	7,319,445	4,204,337
Grants	-	-	-	8,381,000	-	-	8,381,000	-	-
Developer Contributions	-	-	-	-	-	-	-	-	-
Use of Non-Revenue Bond Debt Proceeds	-	-	-	-	-	-	-	-	-
Use of COP Proceeds	-	-	-	-	-	-	-	-	-
Use of Capital Reserves	127,324,000	164,199,000	178,253,000	174,051,000	208,917,228	150,456,935	121,847,285	103,687,394	80,799,392
Rate Funded Capital	-	-	-	-	16,751,772	45,970,665	70,223,571	103,774,203	107,053,815
Total Available Revenues	\$ 141,116,780	\$ 178,536,983	\$ 193,836,568	\$ 198,709,591	\$ 242,960,109	\$ 213,668,165	\$ 217,098,792	\$ 220,062,056	\$ 197,514,234

Reserves	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Use of Reserves									

Bond Issues	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
COPs									

Alternate Loans [Traditional Structure]									
- Debt Service Payments Begin (Fiscal Year Ending)									
Alternate Loans [Level Principal Payments]									

Available Revenues	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
- Grants/Annexation Fees/ GWRS Reimb	-	-	-	8,381,000	-	-	8,381,000	-	-
- Developer Contributions	-	-	-	-	-	-	-	-	-



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Capital Funding & Fund Reserves

RESERVE REQUIREMENT

	FY 2012 2013	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Operating Fund									
Cash Flow Reserve									
1 - 50% Operating Expenditures	\$ 77,928,310	\$ 74,378,208	\$ 78,625,224	\$ 82,505,786	\$ 84,787,158	\$ 86,974,197	\$ 91,148,413	\$ 95,522,963	\$ 100,107,461
1 - Annual Debt Service	85,183,002	98,450,106	85,802,517	86,144,867	90,945,792	87,004,925	85,430,300	85,457,317	85,338,680
Operating Contingency									
1 - 10% Operating Expenditures	15,585,662	14,875,642	15,725,045	16,501,157	16,957,432	17,394,839	18,229,683	19,104,593	20,021,492
Capital Improvement Reserve									
0 - 50% Annual Average CIP	99,857,560	94,158,157	91,326,313	83,829,008	75,899,975	64,619,184	56,043,513	53,104,597	53,104,597
Self-Insurance									
1 - 57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000
Debt Service Reserve									
1 - 10% of Outstanding COPs	133,851,448	130,228,848	126,044,344	123,020,065	119,830,948	116,012,399	112,421,298	108,859,991	105,120,795
- less: Reserve for Debt Retirement*									
0 Capital Replacement Reserve	59,800,000	60,996,000	62,215,920	63,460,238	64,729,443	66,024,032	67,344,513	68,691,403	70,065,231
1 Rate Stabilization Reserve	-	-	-	-	-	-	-	-	-
0 Adjustments	-	-	-	-	-	(20,000,000)	(40,000,000)	(50,000,000)	(40,000,000)
Ending Fund Balance	\$ 529,205,982	\$ 530,086,961	\$ 516,739,363	\$ 512,461,122	\$ 510,150,748	\$ 475,029,577	\$ 447,617,719	\$ 437,740,864	\$ 450,758,256



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Debt Service

TOTAL DEBT SERVICE

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
	2014	2015	2016	2017	2018	2019	2020	2021
Total Debt Service								
Principal Payments	\$ 41,845,037	\$ 30,242,789	\$ 31,891,179	\$ 38,185,488	\$ 35,911,012	\$ 35,613,062	\$ 37,391,966	\$ 39,178,064
Interest Payments	<u>56,605,069</u>	<u>55,559,728</u>	<u>54,253,689</u>	<u>52,760,305</u>	<u>51,093,913</u>	<u>49,817,238</u>	<u>48,065,352</u>	<u>46,160,616</u>
Total Annual Payments	\$ 98,450,106	\$ 85,802,517	\$ 86,144,867	\$ 90,945,792	\$ 87,004,925	\$ 85,430,300	\$ 85,457,317	\$ 85,338,680
Added Reserve Requirement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

COP Debt Service

Principal Payments	\$ 41,845,037	\$ 30,242,789	\$ 31,891,179	\$ 38,185,488	\$ 35,911,012	\$ 35,613,062	\$ 37,391,966	\$ 39,178,064
Interest Payments	<u>56,605,069</u>	<u>55,559,728</u>	<u>54,253,689</u>	<u>52,760,305</u>	<u>51,093,913</u>	<u>49,817,238</u>	<u>48,065,352</u>	<u>46,160,616</u>
Total Annual Payments	\$ 98,450,106	\$ 85,802,517	\$ 86,144,867	\$ 90,945,792	\$ 87,004,925	\$ 85,430,300	\$ 85,457,317	\$ 85,338,680

Outstanding COPs \$ 1,302,288,480 \$ 1,260,443,443 \$ 1,230,200,654 \$ 1,198,309,475 \$ 1,160,123,988 \$ 1,124,212,976 \$ 1,088,599,913 \$ 1,051,207,948

EXISTING DEBT SERVICE

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
	2014	2015	2016	2017	2018	2019	2020	2021
2012C CAN								
3 Principal Payments	\$ 2,255,037	\$ 2,367,789	\$ 2,486,179	\$ 2,610,488	\$ 2,741,012	\$ 2,878,062	\$ 3,021,966	\$ 3,173,064
4 Interest Payments	<u>6,585,000</u>	<u>6,472,248</u>	<u>6,353,859</u>	<u>6,229,550</u>	<u>6,099,025</u>	<u>5,961,975</u>	<u>5,818,072</u>	<u>5,666,973</u>
Total Annual Payments	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037	\$ 8,840,037
2007A Refunding								
5 Principal Payments	\$ 235,000	\$ 245,000	\$ 255,000	\$ 265,000	\$ 275,000	\$ 285,000	\$ 295,000	\$ 4,800,000
6 Interest Payments	<u>4,133,761</u>	<u>4,124,194</u>	<u>4,114,227</u>	<u>4,103,861</u>	<u>4,093,094</u>	<u>4,081,927</u>	<u>4,070,361</u>	<u>3,980,978</u>
Total Annual Payments	\$ 4,368,761	\$ 4,369,194	\$ 4,369,227	\$ 4,368,861	\$ 4,368,094	\$ 4,366,927	\$ 4,365,361	\$ 8,780,978
2007B								
7 Principal Payments	\$ 6,145,000	\$ 6,450,000	\$ 6,775,000	\$ 7,110,000	\$ 7,470,000	\$ 7,840,000	\$ 8,235,000	\$ 8,645,000
8 Interest Payments	<u>13,476,566</u>	<u>13,162,962</u>	<u>12,826,634</u>	<u>12,471,025</u>	<u>12,108,025</u>	<u>11,726,817</u>	<u>11,360,900</u>	<u>10,988,646</u>
Total Annual Payments	\$ 19,621,566	\$ 19,612,962	\$ 19,601,634	\$ 19,581,025	\$ 19,578,025	\$ 19,566,817	\$ 19,595,900	\$ 19,633,646
2008A Refunding								
9 Principal Payments	\$ 19,195,000	-	-	-	-	-	-	-
10 Interest Payments	<u>47,188</u>	-	-	-	-	-	-	-
Total Annual Payments	\$ 19,242,188	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



**ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS**

2008B Refunding																	
11	Principal Payments	\$	490,000	\$	8,270,000	\$	8,500,000	\$	8,815,000	-	-	-	-				
12	Interest Payments		<u>754,110</u>		<u>630,980</u>		<u>389,825</u>		<u>132,225</u>		-		-				
	Total Annual Payments	\$	1,244,110	\$	8,900,980	\$	8,889,825	\$	8,947,225	\$	-	\$	-				
2009A																	
13	Principal Payments	\$	3,675,000	\$	3,855,000	\$	4,050,000	\$	4,250,000	\$	4,465,000	\$	4,690,000	\$	4,925,000	\$	5,170,000
14	Interest Payments		<u>9,109,425</u>		<u>8,999,175</u>		<u>8,825,700</u>		<u>8,704,200</u>		<u>8,576,700</u>		<u>8,353,450</u>		<u>8,118,950</u>		<u>7,872,700</u>
	Total Annual Payments	\$	12,784,425	\$	12,854,175	\$	12,875,700	\$	12,954,200	\$	13,041,700	\$	13,043,450	\$	13,043,950	\$	13,042,700
2010A RO																	
15	Principal Payments	-	-	-	-	-	-	-	-	-	-	-	-				
16	Interest Payments		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>		<u>2,897,639</u>
	Total Annual Payments	\$	2,897,639	\$	2,897,639	\$	2,897,639	\$	2,897,639	\$	2,897,639	\$	2,897,639	\$	2,897,639	\$	2,897,639
2010C																	
17	Principal Payments	-	-	-	-	-	-	-	-	-	-	-	-				
18	Interest Payments		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>		<u>6,523,780</u>
	Total Annual Payments	\$	6,523,780	\$	6,523,780	\$	6,523,780	\$	6,523,780	\$	6,523,780	\$	6,523,780	\$	6,523,780	\$	6,523,780
2011A																	
19	Principal Payments	\$	9,850,000	\$	9,055,000	\$	9,825,000	\$	15,135,000	\$	20,960,000	-	-	-			
20	Interest Payments		<u>6,154,300</u>		<u>5,825,450</u>		<u>5,398,725</u>		<u>4,774,725</u>		<u>3,872,350</u>		<u>3,348,350</u>		<u>3,348,350</u>		<u>3,348,350</u>
	Total Annual Payments	\$	16,004,300	\$	14,880,450	\$	15,223,725	\$	19,909,725	\$	24,832,350	\$	3,348,350	\$	3,348,350	\$	3,348,350
2012B Refunding																	
21	Principal Payments	\$	-	\$	-	\$	-	\$	-	\$	-	\$	19,920,000	\$	20,915,000	\$	17,390,000
22	Interest Payments		<u>3,187,400</u>		<u>3,187,400</u>		<u>3,187,400</u>		<u>3,187,400</u>		<u>3,187,400</u>		<u>3,187,400</u>		<u>2,191,400</u>		<u>1,145,650</u>
	Total Annual Payments	\$	3,187,400	\$	3,187,400	\$	3,187,400	\$	3,187,400	\$	3,187,400	\$	23,107,400	\$	23,106,400	\$	18,535,650
2012A Refunding																	
23	Principal Payments	-	-	-	-	-	-	-	-	-	-	-	-				
24	Interest Payments		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>		<u>3,735,900</u>
	Total Annual Payments	\$	3,735,900	\$	3,735,900	\$	3,735,900	\$	3,735,900	\$	3,735,900	\$	3,735,900	\$	3,735,900	\$	3,735,900



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Revenues and O&M Expenditures

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
		2014	2015	2016	2017	2018	2019	2020	2021	2021
OPERATING REVENUES										
User Revenues										
Permitted User Fees	No Annual Increases	10,502,000	11,006,096	11,270,242	11,540,728	11,817,706	12,101,331	12,391,762	12,689,165	
General Sewer Service User Fees	OCSD population growth	273,247,019	287,164,692	294,909,409	302,878,097	311,077,613	319,499,106	328,148,586	337,032,225	
Local Sewer Service Fee Adjustment										
Revenue/Rate Adjustments	OCSD population growth	(7,000,000)	(7,019,600)	(7,039,957)	(7,060,725)	(7,081,907)	(7,103,153)	(7,124,462)	(7,145,835)	
IRWD Assessments	IRWD Flow growth + rate incre	12,428,160	13,179,400	13,500,600	8,491,000	3,306,020	3,496,660	3,696,760	3,906,810	
SAWPA Assessments	SAWPA Flow growth + rate incre	4,682,720	4,682,720	4,682,720	4,682,720	4,682,720	4,682,720	4,682,720	4,682,720	
Miscellaneous Receipts	No Annual Increases	1,524,000	1,524,000	1,524,000	1,524,000	1,524,000	1,524,000	1,524,000	1,524,000	
Interest	General Cost Inflation	14,954,392	17,458,613	17,068,730	16,104,440	14,967,038	16,619,424	18,349,826	18,380,101	
[Other]	Customer Demand Growth	-	-	-	-	-	-	-	-	
[Other]	Customer Demand Growth	-	-	-	-	-	-	-	-	
[Other]	Customer Demand Growth	-	-	-	-	-	-	-	-	
Urban Runoff Revenues	Customer Demand Growth	-	-	-	-	-	-	-	-	
O & M Assessment Service Fees (Sunse	Customer Demand Growth	-	-	-	-	-	-	-	-	
Operating Revenue Subtotal		\$ 310,338,291	\$ 327,995,922	\$ 335,915,744	\$ 338,160,261	\$ 340,293,190	\$ 350,820,089	\$ 361,669,192	\$ 371,069,185	
LOCAL SEWER SERVICE REVENUES										
Local Sewer Operating Revenues	General Cost Inflation	2,300,105	2,392,110	2,487,794	2,587,306	2,690,798	2,798,430	2,910,367	3,026,782	
Local Sewer Capital Replacement Fundi	[Calculated]	4,115,983	4,192,568	4,273,591	4,352,109	4,434,565	4,513,936	4,597,013	4,683,690	
Local Sewer Remittance (15%)	[Calculated]	(962,413)	(987,702)	(1,014,208)	(1,040,912)	(1,068,804)	(1,096,855)	(1,126,107)	(1,156,571)	
Local Sewer Service Subtotal		\$ 5,453,675	\$ 5,596,976	\$ 5,747,177	\$ 5,898,503	\$ 6,056,558	\$ 6,215,511	\$ 6,381,273	\$ 6,553,901	
NON-OPERATING REVENUES										
Property Tax Allocation	Property Tax Revenue Growth	\$ 64,025,000	\$ 67,226,250	\$ 70,587,563	\$ 74,116,941	\$ 77,822,788	\$ 81,713,927	\$ 85,799,623	\$ 90,089,605	
Redevelopment Agency Pass Thru	General Cost Inflation	-	-	-	-	-	-	-	-	
Non-Operating Revenue Subtotal	General Cost Inflation	\$ 64,025,000	\$ 67,226,250	\$ 70,587,563	\$ 74,116,941	\$ 77,822,788	\$ 81,713,927	\$ 85,799,623	\$ 90,089,605	
INTRADISTRICT REVENUES										
Annual Intradistrict Joint Equity Purchas	One Time Expenditure/Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Intradistrict Revenue Subtotal	Customer Demand Growth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
SELF INSURANCE REVENUES										
Workers' Comp SFI	No Annual Increases	\$ 796,000	\$ 1,018,423	\$ 1,018,423	\$ 1,018,423	\$ 1,018,423	\$ 1,018,423	\$ 1,018,423	\$ 1,018,423	
General Liability SFI	No Annual Increases	932,900	1,193,577	1,193,577	1,193,577	1,193,577	1,193,577	1,193,577	1,193,577	
Self Insurance Revenue Subtotal	General Cost Inflation	\$ 1,728,900	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	
CAPITAL REVENUES										
Capital Facilities Capacity Charge	[Calculated]	\$ 7,768,000	\$ 8,677,000	\$ 9,463,000	\$ 10,137,000	\$ 10,856,000	\$ 10,845,000	\$ 11,421,000	\$ 12,028,000	
Capital Assessment (IRWD)	[Calculated]	2,454,000	2,714,000	2,541,000	2,802,000	1,950,000	1,288,000	684,000	773,000	
Sale of Capacity Rights, SAWPA & SSB	One Time Expenditure/Revenue	-	-	-	8,381,000	-	-	8,381,000	-	
Other Revenue Subtotal	One Time Expenditure/Revenue	\$ 10,222,000	\$ 11,391,000	\$ 12,004,000	\$ 21,320,000	\$ 12,806,000	\$ 12,133,000	\$ 20,486,000	\$ 12,801,000	
TOTAL REVENUES		\$ 391,767,867	\$ 414,422,147	\$ 426,466,484	\$ 441,707,704	\$ 439,190,536	\$ 453,094,527	\$ 476,548,089	\$ 482,725,691	



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Revenues and O&M Expenditures

		FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
OPERATING REQUIREMENTS									
Salaries & Wages									
Salaries & Wages	Labor Cost Inflation	\$ 63,117,251	\$ 66,904,286	\$ 70,082,239	\$ 73,411,145	\$ 76,898,175	\$ 80,550,838	\$ 84,377,003	\$ 88,384,911
Total Salaries & Wages	Labor Cost Inflation	\$ 63,117,251	\$ 66,904,286	\$ 70,082,239	\$ 73,411,145	\$ 76,898,175	\$ 80,550,838	\$ 84,377,003	\$ 88,384,911
Employee Benefits									
OCERS Retirement	Labor Cost Inflation	\$ 19,009,799	\$ 20,150,387	\$ 21,107,531	\$ 22,110,138	\$ 23,160,370	\$ 24,260,487	\$ 25,412,861	\$ 26,619,971
Group Insurance	Labor Cost Inflation	8,886,658	9,419,857	9,867,301	10,335,997	10,826,957	11,341,238	11,879,947	12,444,244
Tuition Reimb & Educ Devel	Labor Cost Inflation	422,432	447,778	469,047	491,327	514,665	539,112	564,719	591,544
Uniform Rental	Labor Cost Inflation	41,273	43,749	45,827	48,004	50,284	52,673	55,174	57,795
Workers Compensation	Labor Cost Inflation	923,684	979,105	1,025,612	1,074,329	1,125,360	1,178,814	1,234,808	1,293,461
Unemployment Insurance	Labor Cost Inflation	22,744	24,109	25,254	26,453	27,710	29,026	30,405	31,849
EMT Supplemental	Labor Cost Inflation	28,038	29,720	31,132	32,611	34,160	35,782	37,482	39,262
Total Employee Benefits	Labor Cost Inflation	\$ 29,334,628	\$ 31,094,705	\$ 32,571,704	\$ 34,118,860	\$ 35,739,505	\$ 37,437,132	\$ 39,215,396	\$ 41,078,127
Administrative Expenses									
Memberships	General Cost Inflation	\$ 509,134	\$ 534,591	\$ 561,320	\$ 589,386	\$ 615,908	\$ 643,624	\$ 672,587	\$ 702,854
Office Exp - Supplies	General Cost Inflation	80,026	84,027	88,228	92,640	96,809	101,165	105,717	110,475
Postage	General Cost Inflation	233,597	245,277	257,541	270,418	282,587	295,303	308,592	322,479
Books & Publications	General Cost Inflation	42,871	45,014	47,265	49,628	51,861	54,195	56,634	59,182
Forms	General Cost Inflation	1,216	1,276	1,340	1,407	1,471	1,537	1,606	1,678
Small Computer Items	General Cost Inflation	441,157	463,214	486,375	510,694	533,675	557,690	582,787	609,012
Minor Furniture & Fixtures	General Cost Inflation	101,417	106,488	111,812	117,403	122,686	128,207	133,976	140,005
Total Administrative Expenses	General Cost Inflation	\$ 1,409,417	\$ 1,479,888	\$ 1,553,882	\$ 1,631,576	\$ 1,704,997	\$ 1,781,722	\$ 1,861,899	\$ 1,945,685
Printing & Publication									
Repro-In-House	General Cost Inflation	\$ 367,885	\$ 386,280	\$ 405,594	\$ 425,873	\$ 445,038	\$ 465,064	\$ 485,992	\$ 507,862
Printing-Outside	General Cost Inflation	104,289	109,504	114,979	120,728	126,161	131,838	137,771	143,970
Notices & Ads	General Cost Inflation	14,333	15,049	15,802	16,592	17,339	18,119	18,934	19,786
Photo Processing	General Cost Inflation	2,745	2,882	3,026	3,178	3,321	3,470	3,626	3,789
Total Printing & Publication	General Cost Inflation	\$ 489,252	\$ 513,715	\$ 539,401	\$ 566,371	\$ 591,858	\$ 618,491	\$ 646,323	\$ 675,408
Training & Meetings									
Meetings	General Cost Inflation	\$ 223,804	\$ 234,994	\$ 246,744	\$ 259,081	\$ 270,739	\$ 282,923	\$ 295,654	\$ 308,959
Training	General Cost Inflation	1,167,830	1,226,221	1,287,532	1,351,909	1,412,745	1,476,318	1,542,753	1,612,176
Total Training & Meetings	General Cost Inflation	\$ 1,391,633	\$ 1,461,215	\$ 1,534,276	\$ 1,610,989	\$ 1,683,484	\$ 1,759,241	\$ 1,838,407	\$ 1,921,135



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Revenues and O&M Expenditures

		FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
		2014	2015	2016	2017	2018	2019	2020	2021
Operating Materials & Supplies									
Chemical Coagulants	Cust. Growth + Variable O&M	\$ 6,793,844	\$ 7,152,559	\$ 7,530,930	\$ 7,929,692	\$ 8,310,318	\$ 8,709,213	\$ 9,127,255	\$ 9,565,363
Odor Control	Cust. Growth + Variable O&M	8,231,935	8,666,581	9,125,044	9,608,215	10,069,409	10,552,741	11,059,272	11,590,117
Disinfection	Cust. Growth + Variable O&M	1,175,725	1,237,804	1,303,283	1,372,292	1,438,162	1,507,194	1,579,539	1,655,357
Chemicals-Cogen. Ops.	Cust. Growth + Variable O&M	23,593	24,839	26,153	27,538	28,859	30,245	31,696	33,218
Miscellaneous Chemicals	Cust. Growth + Variable O&M	38,437	40,467	42,607	44,863	47,017	49,274	51,639	54,117
Gasoline, Diesel & Oil	Cust. Growth + Variable O&M	624,933	657,930	692,734	729,415	764,427	801,119	839,573	879,872
Tools	Cust. Growth + Variable O&M	371,877	391,512	412,223	434,051	454,885	476,719	499,602	523,583
Safety Equipment/tools	Cust. Growth + Variable O&M	775,409	816,350	859,535	905,047	948,490	994,017	1,041,730	1,091,733
Solv., Paints, & Jan. Supplies	Cust. Growth + Variable O&M	99,681	104,944	110,496	116,347	121,931	127,784	133,917	140,346
Lab Chemicals & Supplies	Cust. Growth + Variable O&M	610,119	642,333	676,313	712,123	746,305	782,128	819,670	859,014
Misc. Operating Supplies	Cust. Growth + Variable O&M	183,004	192,667	202,859	213,600	223,853	234,598	245,859	257,660
Property Tax Fees	Cust. Growth + Variable O&M	1,357	1,428	1,504	1,583	1,659	1,739	1,823	1,910
Total Operating Materials & Supplies	Cust. Growth + Variable O&M	\$ 18,929,915	\$ 19,929,414	\$ 20,983,681	\$ 22,094,766	\$ 23,155,315	\$ 24,266,770	\$ 25,431,575	\$ 26,652,291
Contractual Services									
Solids Removal	Cust. Growth + Variable O&M	\$ 20,024,686	\$ 21,081,990	\$ 22,197,227	\$ 23,372,570	\$ 24,494,454	\$ 25,670,187	\$ 26,902,356	\$ 28,193,669
Other Waste Disposal	Cust. Growth + Variable O&M	942,251	992,002	1,044,479	1,099,784	1,152,574	1,207,898	1,265,877	1,326,639
Groundskeeping	Cust. Growth + Variable O&M	198,576	209,060	220,120	231,775	242,900	254,560	266,778	279,584
Janitorial	Cust. Growth + Variable O&M	479,000	504,291	530,968	559,083	585,919	614,043	643,517	674,406
Outside Lab Services	General Cost Inflation	145,797	153,087	160,742	168,779	176,374	184,311	192,604	201,272
Oxygen Plant Oper	General Cost Inflation	561,739	589,826	619,318	650,284	679,546	710,126	742,082	775,475
County Service Fee	General Cost Inflation	548,789	576,228	605,040	635,292	663,880	693,755	724,974	757,597
Temporary Services	General Cost Inflation	302,633	317,765	333,653	350,336	366,101	382,576	399,792	417,782
Security Services	General Cost Inflation	372,532	391,159	410,717	431,253	450,659	470,939	492,131	514,277
Other	General Cost Inflation	2,061,378	2,164,446	2,272,669	2,386,302	2,493,686	2,605,902	2,723,167	2,845,710
Less IRWD Adjustment	General Cost Inflation	-	-	-	(3,585,000)	(7,500,000)	(7,837,500)	(8,190,188)	(8,558,746)
Total Contractual Services	General Cost Inflation	\$ 25,637,382	\$ 26,979,856	\$ 28,394,932	\$ 26,300,457	\$ 23,806,093	\$ 24,956,794	\$ 26,163,090	\$ 27,427,665
Professional Services									
Legal	General Cost Inflation	\$ 494,389	\$ 519,109	\$ 545,064	\$ 572,318	\$ 598,072	\$ 624,985	\$ 653,109	\$ 682,499
Audit & Accounting	General Cost Inflation	271,782	285,371	299,639	314,621	328,779	343,575	359,035	375,192
Engineering	General Cost Inflation	379,885	398,879	418,823	439,764	459,554	480,233	501,844	524,427
Enviro Scientific Consult	General Cost Inflation	117,642	123,524	129,700	136,185	142,313	148,717	155,410	162,403
ERP Support	General Cost Inflation	-	-	-	-	-	-	-	-
Software Prgrm Consult	General Cost Inflation	448,999	471,449	495,022	519,773	543,163	567,605	593,147	619,839
Advocacy Efforts	General Cost Inflation	211,755	222,343	233,460	245,133	256,164	267,691	279,738	292,326
Industrial Hygiene Svcs	General Cost Inflation	49,017	51,468	54,042	56,744	59,297	61,966	64,754	67,668
Labor Negotiation Svc	General Cost Inflation	112,250	117,862	123,755	129,943	135,791	141,901	148,287	154,960
Other	General Cost Inflation	908,969	954,417	1,002,138	1,052,245	1,099,596	1,149,078	1,200,786	1,254,822
	General Cost Inflation	-	-	-	-	-	-	-	-
Total Professional Services		\$ 2,994,688	\$ 3,144,423	\$ 3,301,644	\$ 3,466,726	\$ 3,622,729	\$ 3,785,752	\$ 3,956,110	\$ 4,134,135



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Revenues and O&M Expenditures

		FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Research & Monitoring									
Environmental Monitoring	General Cost Inflation	\$ 274,968	\$ 288,716	\$ 303,152	\$ 318,310	\$ 332,634	\$ 347,602	\$ 363,244	\$ 379,590
Air Quality Monitoring	General Cost Inflation	91,172	95,731	100,518	105,543	110,293	115,256	120,443	125,862
Research	General Cost Inflation	436,255	458,068	480,971	505,019	527,745	551,494	576,311	602,245
	General Cost Inflation	-	-	-	-	-	-	-	-
Total Research & Monitoring		\$ 802,395	\$ 842,515	\$ 884,641	\$ 928,873	\$ 970,672	\$ 1,014,352	\$ 1,059,998	\$ 1,107,698
Repairs & Maintenance									
Materials & Services	Construction Cost Inflation	\$ 8,883,648	\$ 9,327,831	\$ 9,794,222	\$ 10,283,933	\$ 10,798,130	\$ 11,338,036	\$ 11,904,938	\$ 12,500,185
Service Maint. Agreements	Construction Cost Inflation	2,068,858	2,172,301	2,280,916	2,394,961	2,514,709	2,640,445	2,772,467	2,911,090
	Construction Cost Inflation	-	-	-	-	-	-	-	-
Total Repairs & Maintenance		\$ 10,952,506	\$ 11,500,131	\$ 12,075,138	\$ 12,678,895	\$ 13,312,839	\$ 13,978,481	\$ 14,677,405	\$ 15,411,276
Utilities									
Telephone	General Cost Inflation	\$ 303,908	\$ 319,103	\$ 335,058	\$ 351,811	\$ 367,643	\$ 384,187	\$ 401,475	\$ 419,542
Diesel For Generators	General Cost Inflation	19,607	20,587	21,617	22,698	23,719	24,786	25,902	27,067
Natural Gas	Cust. Growth + Variable O&M	411,897	433,645	456,585	480,761	503,838	528,022	553,367	579,929
Electricity	Cust. Growth + Variable O&M	6,046,924	6,366,202	6,702,974	7,057,897	7,396,676	7,751,716	8,123,798	8,513,741
Water	General Cost Inflation	1,280,089	1,344,094	1,411,298	1,481,863	1,548,547	1,618,232	1,691,052	1,767,150
	General Cost Inflation	-	-	-	-	-	-	-	-
Total Utilities		\$ 8,062,426	\$ 8,483,632	\$ 8,927,533	\$ 9,395,030	\$ 9,840,422	\$ 10,306,943	\$ 10,795,595	\$ 11,307,428
Other Operating Costs									
Outside Equip Rental	General Cost Inflation	\$ 5,441	\$ 5,713	\$ 5,999	\$ 6,299	\$ 6,582	\$ 6,878	\$ 7,188	\$ 7,511
Insurance Premiums	General Cost Inflation	34,312	36,028	37,829	39,721	41,508	43,376	45,328	47,368
In-Lieu Insurance Premium	General Cost Inflation	1,274,452	1,338,175	1,405,084	1,475,338	1,541,728	1,611,106	1,683,606	1,759,368
Freight	General Cost Inflation	87,369	91,737	96,324	101,140	105,691	110,448	115,418	120,611
Misc. Operating Expense	General Cost Inflation	184,511	193,737	203,424	213,595	223,207	233,251	243,747	254,716
Uncollectible Accounts	General Cost Inflation	-	-	-	-	-	-	-	-
Regulatory Operating Fees	General Cost Inflation	683,303	717,468	753,341	791,008	826,603	863,801	902,672	943,292
	General Cost Inflation	-	-	-	-	-	-	-	-
Total Other Operating Costs		\$ 2,269,388	\$ 2,382,857	\$ 2,502,000	\$ 2,627,100	\$ 2,745,320	\$ 2,868,859	\$ 2,997,958	\$ 3,132,866
General Manager									
Contingency	General Cost Inflation	\$ 364,493	\$ 382,718	\$ 401,854	\$ 421,947	\$ 440,934	\$ 460,776	\$ 481,511	\$ 503,179
Prior year reappropriation	General Cost Inflation	364,493	382,718	401,854	421,947	440,934	460,776	481,511	503,179
	General Cost Inflation	-	-	-	-	-	-	-	-
Total General Manager		\$ 728,987	\$ 765,436	\$ 803,708	\$ 843,893	\$ 881,868	\$ 921,553	\$ 963,022	\$ 1,006,358



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Revenues and O&M Expenditures

		FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Other Non-Operating									
Other Interest Expense	General Cost Inflation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Loss on obsolete inventory	General Cost Inflation	2,461	2,584	2,713	2,849	2,977	3,111	3,251	3,397
Other Non-Oper Expense	General Cost Inflation	90,947	95,494	100,269	105,282	110,020	114,971	120,145	125,551
Capital Grants-Member Agencies	General Cost Inflation	-	-	-	-	-	-	-	-
Eq Sale to 7 or 14	One Time Expenditure/Revenue	-	-	-	-	-	-	-	-
Total Other Non-Operating		\$ 93,408	\$ 98,078	\$ 102,982	\$ 108,131	\$ 112,997	\$ 118,082	\$ 123,395	\$ 128,948
Cost Allocation:									
Cost Allocation	General Cost Inflation	\$ (17,456,859)	\$ (18,329,702)	\$ (19,246,188)	\$ (20,208,497)	\$ (21,117,879)	\$ (22,068,184)	\$ (23,061,252)	\$ (24,099,009)
	General Cost Inflation	-	-	-	-	-	-	-	-
Total Cost Allocation:		\$ (17,456,859)	\$ (18,329,702)	\$ (19,246,188)	\$ (20,208,497)	\$ (21,117,879)	\$ (22,068,184)	\$ (23,061,252)	\$ (24,099,009)
Adjustments:									
Local Sewer Maintenance	[From Local Sewer]	\$ 2,300,105	\$ 2,392,110	\$ 2,487,794	\$ 2,587,306	\$ 2,690,798	\$ 2,798,430	\$ 2,910,367	\$ 3,026,782
Local Sewer Capital Replacement	[From Local Sewer]	4,115,983	4,192,568	4,273,591	4,352,109	4,434,565	4,513,936	4,597,013	4,683,690
Total Adjustments:		\$ 2,300,105	\$ 5,988,357	\$ 6,761,385	\$ 6,939,415	\$ 7,125,363	\$ 7,312,366	\$ 7,507,380	\$ 7,710,472
Replacement Funding:									
[Other]	[INPUT]	-	-	-	-	-	-	-	-
[Other]	[INPUT]	-	-	-	-	-	-	-	-
Total Replacement Funding:		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Self Insurance									
District's Share	No Annual Increases	\$ 1,728,900	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000
Other	General Cost Inflation	-	-	-	-	-	-	-	-
Total Self Insurance		\$ 1,728,900	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000	\$ 2,212,000
Operating Expenditures									
Operating Expenses		\$ 148,756,416	\$ 157,250,448	\$ 165,011,571	\$ 169,574,316	\$ 173,948,395	\$ 182,296,826	\$ 191,045,925	\$ 200,214,922
Miscellaneous Capital		-	-	-	-	-	-	-	-
Replacement Funding		-	-	-	-	-	-	-	-
Local Sewer Capital Replacement		6,416,089	6,584,678	6,761,385	6,939,415	7,125,363	7,312,366	7,507,380	7,710,472
Self Insurance		1,728,900	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000
Total Operating Expenditures		\$ 156,901,404	\$ 166,047,126	\$ 173,984,957	\$ 178,725,731	\$ 183,285,758	\$ 191,821,192	\$ 200,765,305	\$ 210,137,394



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
REVENUE REQUIREMENTS

CASH FLOW SUFFICIENCY TEST

	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Revenues								
User Charges	\$ 295,383,899	\$ 310,537,308	\$ 318,847,015	\$ 322,055,821	\$ 325,326,152	\$ 334,200,664	\$ 343,319,367	\$ 352,689,084
Other Operating Revenues	14,954,392	17,458,613	17,068,730	16,104,440	14,967,038	16,619,424	18,349,826	18,380,101
Non-Operating Revenues	64,025,000	67,226,250	70,587,563	74,116,941	77,822,788	81,713,927	85,799,623	90,089,605
Intra-District Revenues	-	-	-	-	-	-	-	-
Local Sewer Service Operating Revenues	2,300,105	2,126,577	2,487,794	2,587,306	2,690,798	2,798,430	2,910,367	3,026,782
Self-Insurance	1,728,900	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000
Total Revenues	\$ 378,392,297	\$ 399,560,748	\$ 411,203,101	\$ 417,076,507	\$ 423,018,776	\$ 437,544,446	\$ 452,591,183	\$ 466,397,571
Expenditures								
<i>Ongoing Operating Expenses</i>								
Operating Expenses	\$ 148,756,416	\$ 157,250,448	\$ 165,011,571	\$ 169,574,316	\$ 173,948,395	\$ 182,296,826	\$ 191,045,925	\$ 200,214,922
<i>Other Operating Expenses</i>								
Self-Insurance	1,728,900	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000
Debt Service	98,450,106	85,802,517	86,144,867	90,945,792	87,004,925	85,430,300	85,457,317	85,338,680
Miscellaneous Capital	-	-	-	-	-	-	-	-
Replacement Funding	-	-	-	-	-	-	-	-
Rate Funded Capital Improvements	-	-	-	16,751,772	45,970,665	70,223,571	103,774,203	107,053,815
Subtotal Expenditures	\$ 248,935,422	\$ 245,264,965	\$ 253,368,439	\$ 279,483,880	\$ 309,135,985	\$ 340,162,697	\$ 382,489,446	\$ 394,819,417
Total Expenditures	\$ 248,935,422	\$ 245,264,965	\$ 253,368,439	\$ 279,483,880	\$ 309,135,985	\$ 340,162,697	\$ 382,489,446	\$ 394,819,417
Operating Expenditure Surplus (Deficiency)	\$ 129,456,875	\$ 154,295,783	\$ 157,834,662	\$ 137,592,627	\$ 113,882,790	\$ 97,381,749	\$ 70,101,737	\$ 71,578,155



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
REVENUE REQUIREMENTS

BOND COVERAGE TEST

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Allowable Revenues	2014	2015	2016	2017	2018	2019	2020	2021
Operating Revenues	\$ 295,383,899	\$ 310,537,308	\$ 318,847,015	\$ 322,055,821	\$ 325,326,152	\$ 334,200,664	\$ 343,319,367	\$ 352,689,084
Other Operating Revenues	14,954,392	17,328,811	16,927,174	15,952,806	14,804,646	16,419,897	18,109,675	18,127,186
Non-Operating Revenues	64,025,000	67,226,250	70,587,563	74,116,941	77,822,788	81,713,927	85,799,623	90,089,605
Intra-District Revenues	-	-	-	-	-	-	-	-
Local Sewer Service Revenues	2,300,105	2,126,577	2,487,794	2,587,306	2,690,798	2,798,430	2,910,367	3,026,782
Self-Insurance	1,728,900	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000	2,212,000
Capital Revenues	2,454,000	2,714,000	2,541,000	11,183,000	1,950,000	1,288,000	9,065,000	773,000
SCFCC Revenues	(157,684)	23,510	25,979	28,055	29,859	(556,550)	(586,543)	(617,744)
Total Revenues	\$ 380,688,613	\$ 402,168,456	\$ 413,628,525	\$ 428,135,928	\$ 424,836,243	\$ 438,076,368	\$ 460,829,489	\$ 466,299,913
Expenditures	2014	2015	2016	2017	2018	2019	2020	2021
Ongoing Operating Expenses	\$ 150,485,316	\$ 159,462,448	\$ 167,223,571	\$ 171,786,316	\$ 176,160,395	\$ 184,508,826	\$ 193,257,925	\$ 202,426,922
COP Debt Coverage Requirement ¹	123,062,632	107,253,147	107,681,084	113,682,240	108,756,157	106,787,875	106,821,647	106,673,350
Junior Lien Debt Coverage Requirement ²	-	-	-	-	-	-	-	-
Total Expenditures	\$ 273,547,948	\$ 266,715,595	\$ 274,904,655	\$ 285,468,557	\$ 284,916,551	\$ 291,296,701	\$ 300,079,572	\$ 309,100,272
Bond Coverage Surplus (Deficiency)	\$ 107,140,665	\$ 135,452,861	\$ 138,723,870	\$ 142,667,371	\$ 139,919,691	\$ 146,779,667	\$ 160,749,917	\$ 157,199,641

(1) Debt coverage requirement must equal "at least the sum of 125% of the Maximum Annual Debt Service on all Bonds, Parity Obligations and Contracts outstanding after the issuance of such Parity Obligations..."

(2) Policy driven coverage objective of 2.0x.



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
REVENUE REQUIREMENTS

REVENUE REQUIREMENT & RATE IMPACTS

REVENUE REQUIREMENT	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Total Revenue Deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reserve Deficiency								
Rate Increases (Fiscal Year Basis)	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Calculated Rate Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Increase to Preserve Policy Reserve Target	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Manual Rate Increase - Input	4.80%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
	-	-	-	-	-	-	-	-
RATE INCREASES (Fiscal Year Basis)	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
	Inputed Increase	Inputed Increase	Inputed Increase	Inputed Increase	Inputed Increase	Inputed Increase	Inputed Increase	Inputed Increase
Total Annual Rate Increase	4.80%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%
Cumulative Rate Increase	4.80%	7.32%	9.89%	12.53%	15.23%	17.99%	20.83%	23.73%
	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
	3	4	5	6	7	8	9	10
USER RATE	\$ 308.11	\$ 315.51	\$ 323.08	\$ 330.83	\$ 338.77	\$ 346.90	\$ 355.23	\$ 363.75
USER RATE (TO THE NEAREST QUARTER)	\$ 308.00	\$ 315.50	\$ 323.00	\$ 330.75	\$ 338.75	\$ 347.00	\$ 355.25	\$ 363.75
	FY 2013 2014	FY 2014 2015	FY 2015 2016	FY 2016 2017	FY 2017 2018	FY 2018 2019	FY 2019 2020	FY 2020 2021
Net Cash Flow After Rate Increase	\$ 143,635,302	\$ 161,748,678	\$ 165,486,991	\$ 145,321,966	\$ 121,690,618	\$ 105,402,565	\$ 78,341,402	\$ 80,042,693



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Functional Allocation & Rate Calculation

Input Year

2014

PLANT-IN EXPENDITURES

Allocation of Plant-in-Service	Original Cost	Functional Cost Allocation			As All Others ¹	Notes:
		Flow	BOD	TSS		
Land	\$ 19,217,000				100%	As All Others
Construction in Progress	1,258,267,000	34.9%	52.9%	12.2%	0%	As CIP - Cost to Date
Sewage Collection System	346,959,000	90%	10%	0%	0%	As Collection
Sewage Treatment System	639,790,000	33%	41%	26%	0%	As CIP - Treatment Projects
Effluent Disposal	44,136,000	100%	0%	0%	0%	As Effluent Disposal
Solids Disposal	356,000	0%	45%	55%	0%	As Solids Disposal
General and Administrative Facilities	88,660,000				100%	As All Others
Assets Acquired in Excess of Book Value	3,537,000				100%	As All Others
Subtotals:	\$ 2,400,922,000	\$ 1,005,912,804	\$ 962,360,889	\$ 321,234,307	\$ 111,414,000	*As of June 30, 2011
Re-Allocation of "As All Others":		48,950,591	46,831,230	15,632,179		
Total Allocation:		\$ 1,054,863,394	\$ 1,009,192,119	\$ 336,866,486		
Percentage Allocation:		44%	42%	14%		



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Functional Allocation & Rate Calculation

Unit Process Expenditures
 \$ 135,941,826

Allocation of Operating Expenses	% of Costs	Year of Costs		Functional Cost Allocation			As All Others ¹	Notes:
		2014		Flow	BOD	TSS		
ONGOING O&M EXPENDITURES								
Preliminary Treatment - Plant #1	2.6%	\$ 3,485,087	75%	5%	20%	0%	as headworks allocation 95/96	
Primary Treatment - Plant #1	3.1%	4,195,026	15%	25%	60%	0%	as primary sedimentation allocation 95/96	
Secondary Treatment - Plant #1	1.7%	2,370,871	0%	100%	0%	0%	as secondary sedimentation 95/96	
Effluent Disposal - Plant #1	0.0%	44,786	100%	0%	0%	0%	as effluent disposal 95/96	
Solids Handling - Plant #1								
- Solids Handling	2.7%	3,734,380	0%	25%	75%	0%	as solids handling 95/96	
- Solids Disposals	6.8%	9,194,394	0%	45%	55%	0%	as solids disposal 95/96	
Co-Generation Facilities - Plant #1	3.0%	4,011,074	0%	25%	75%	0%	as digestion eq & op 95/96	
Utility Units - Plant #1	0.6%	813,867				100%	as all others	
Electrical Distribution - Plant #1	0.5%	660,805				100%	as all others	
Miscellaneous Buildings - Plant #1	2.2%	2,991,611				100%	as all others	
Preliminary Treatment - Plant #2	1.1%	1,471,736	75%	5%	20%	0%	as headworks allocation 95/96	
Primary Treatment - Plant #2	2.6%	3,573,061	15%	25%	60%	0%	as primary sedimentation allocation 95/96	
Secondary Treatment - Plant #2	1.2%	1,617,406	0%	100%	0%	0%	as secondary sedimentation 95/96	
Oxygen Generation Facility (Air Product)	0.3%	356,681	0%	100%	0%	0%	as assumed for BOD	
Effluent Disposal - Plant #2	0.3%	408,258	100%	0%	0%	0%	as effluent disposal 95/96	
Solids - Plant #2								
- Solids Handling	3.4%	4,593,651	0%	20%	80%	0%	as solids handling 95/96	
- Solids Disposals	6.6%	8,947,569	0%	45%	55%	0%	as solids disposal 95/96	
Central Generation Facility - Plant #2	3.3%	4,452,178				100%	as all others	
Utility Units - Plant #2	1.2%	1,680,569				100%	as all others	
Electrical Distribution - Plant #2	0.2%	330,050				100%	as all others	
Miscellaneous Buildings - Plant #2	0.5%	627,152				100%	as all others	
External Location	0.0%	136				100%	as all others	
Nerissa	0.1%	153,762				100%	as all others	
North County Yard	0.1%	116,248				100%	as all others	
Revenue Area 13	0.0%	9,349	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 1	0.0%	66,783	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 2	0.4%	539,822	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 3	2.7%	3,665,919	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 14	0.8%	1,040,261	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 5	1.3%	1,742,427	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 6	0.1%	108,815	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 7	1.0%	1,351,152	90%	5%	5%	0%	as collection & diversion 95/96	
Revenue Area 11	1.1%	1,552,210	90%	5%	5%	0%	as collection & diversion 95/96	
Joint Revenue Areas	39.5%	53,691,722				100%	as collection & diversion 95/96	
Non Area Specific	9.1%	12,343,009				100%	as collection & diversion 95/96	
subtotals:	100%	\$ 135,941,826						
			\$ 14,404,938	\$ 18,057,634	\$ 25,618,144	\$ 77,861,109		
Re-Allocation of "As All Others":			19,310,789	24,207,474	34,342,846			
Total Allocation:			\$ 33,715,727	\$ 42,265,109	\$ 59,960,991			
Percentage Allocation:			25%	31%	44%			

(1) "As All Others" costs are re-allocated based on functional cost allocation to billable constituents



ORANGE COUNTY SANITATION DISTRICT
RATE STUDY ANALYSIS
Functional Allocation & Rate Calculation

Expenditures	FY 2013 2014	Functional Allocation				
		Flow	BOD	TSS		
<i>Ongoing Operating Expenses</i>						
Operating Expenses	\$ 148,756,416	25%	31%	44%	0%	As Treatment Expenditures
<i>Other Operating Expenses</i>						
Self-Insurance	1,728,900	45%	29%	26%	0%	Future CIP (2013-2021)
New Debt Service	-	45%	29%	26%	0%	Future CIP (2013-2021)
Existing Debt Service (1)	98,450,106	38%	41%	21%	0%	Debt Service Weighted Average
Miscellaneous Capital	-	44%	34%	22%	0%	As CIP
Replacement Funding	-	44%	42%	14%	0%	As Plant-in-Service
Rate Funded Capital Improvements	-	45%	29%	26%	0%	Future CIP (2013-2021)
Bond Coverage (above Cash Flow Needs)	-	44%	34%	22%	0%	As CIP
Policy Driven Rate Increases (Decreases)	143,635,302	45%	29%	26%	0%	Future CIP (2013-2021)
Less Off-Setting Revenues						
Revenues from other Districts and Urban Runoff	(17,932,202)				100%	As all others
Other Operating Revenues	(14,954,392)				100%	As all others
Non-Operating Revenues	(64,025,000)				100%	As all others
Intra-District Revenues	-				100%	As all others
Local Sewer Operating Revenue	(2,300,105)				100%	As all others
Self-Insurance	(1,728,900)				100%	As all others
Subtotals:	\$ 291,630,124	\$ 139,255,917.5	\$ 129,872,610	\$ 123,442,197	\$ (100,940,600)	
Re-Allocation of "As All Others":		(35,806,480)	(33,393,777)	(31,740,343)		
Total Allocation:	\$ 291,630,124	\$ 103,449,437	\$ 96,478,833	\$ 91,701,854		
Percentage Allocation:		35.5%	33.1%	31.4%		

(1) Existing debt service allocation is the weighted average of debt service payments related to existing versus newly incurred debt.

RATE CALCULATION

	Flow	BOD	TSS
Cost Allocation	\$ 103,449,437	\$ 96,478,833	\$ 91,701,854
Customer Information	Total Flow (1,000 gal) 74,155,945	Total B.O.D. (lbs) 161,978,049	Total T.S.S. (lbs) 156,303,931
Unit Costs	\$ / 1,000 gals \$1.3950	\$ / lbs B.O.D \$0.5956	\$ / lbs TSS \$0.5867
Equivalent Dwelling Unit	Gal/Day 210	B.O.D. (mg/l) 254	T.S.S. (mg/l) 256
	1,000 Gal/Yr. 77	B.O.D. (lbs) / Yr. 162	T.S.S. (lbs) / Yr. 163
Total	Flow	BOD	TSS
Annual Charge per EDU	\$ 299.40	\$ 106.73	\$ 96.78
		\$ 95.89	

USER CATEGORIES



ORANGE COUNTY SANITATION DISTRICT

RATE STUDY ANALYSIS

USER RATE CATEGORIES

FY 2013/2014

EDU Annual Rate \$308.00

Use Codes	Description	Percentage of SFR	
		Per 1,000 SF or Unit	User Rates
1	VACANT LAND	0%	\$0.00
5	COMMON AREA PARCEL	0%	\$0.00
6	"HOLD" PARCEL	0%	\$0.00
8	EQUIV TO VACANT	0%	\$0.00
121	PARCEL OF MINIMAL OR NO VALUE	0%	\$0.00
122	SUBSURFACE PARCELS	0%	\$0.00
124	OIL/MINERAL RIGHTS	0%	\$0.00
125	MINERAL RIGHTS EQUIPMENT	0%	\$0.00
126	VACANT COMMON AREA-IMP ALLOC	0%	\$0.00
201	HOME OWNERS EXEMPTION ADD'N	0%	\$0.00
666	UNASSIGNED VACANT	0%	\$0.00
222	OFFICE CONDOS W/OUT INDIVIDUAL BTHRMS	0%	\$0.00
444	LA MIRADA TRACT (INCLUDES LOCAL FEE)	0%	\$0.00
777	SEPTIC TANK PROPERTY	0%	\$0.00
112	STEEL BUILDING	7%	\$21.56
113	MINI-WAREHOUSE	7%	\$21.56
58	NURSERIES (PLANTS)	10%	\$30.80
100	DRIVE-IN THEATER	10%	\$30.80
44	LUMBER/CONSTR MATL YARD	17%	\$52.36
71	PARKING GARAGE	17%	\$52.36
72	PAVED PARKING LOT	17%	\$52.36
110	WAREHOUSE - SINGLE TENANT	17%	\$52.36
111	WAREHOUSE - MULTI TENANT	17%	\$52.36
115	RECREATIONAL VEHICLE STORAGE	17%	\$52.36
116	TRUCK TERMINAL	17%	\$52.36
33	CHURCH BUILDINGS	20%	\$61.60
94	DEPARTMENT STORE	23%	\$70.84
95	DISCOUNT STORE	23%	\$70.84
96	UNATTACHED SINGLE STORE	23%	\$70.84
97	STRIP STORE	23%	\$70.84
36	FINANCIAL BUILDINGS	27%	\$83.16
74	RECREATION VEHICLE PARK	27%	\$83.16
40	HEALTH CLUB	29%	\$89.32
68	HIGH RISE OFFICE	30%	\$92.40
21	AUTOMOBILE DEALERSHIP	41%	\$126.28
22	AUTO REPAIR SHOP	41%	\$126.28
23	AUTOMOTIVE SERVICE	41%	\$126.28
24	USED CAR LOT	41%	\$126.28
39	GOLF COURSE	41%	\$126.28
57	MOTORCYCLE/SMALL VEHICLE BLDG	41%	\$126.28
65	SINGLE OFFICE BLDGS TO 3 STORIES	41%	\$126.28
66	SMALL OFFICE CENTER	41%	\$126.28
67	OFFICE COMPLEX	41%	\$126.28
69	CONVERTED RESIDENCE TO OFFICE	41%	\$126.28
83	AUTOMOTIVE SERVICE STATION	41%	\$126.28
84	MARINE SERVICE STATION	41%	\$126.28
86	COMBIN:SERVICE STN/CONVIENCE MKT	41%	\$126.28



ORANGE COUNTY SANITATION DISTRICT

RATE STUDY ANALYSIS

USER RATE CATEGORIES

FY 2013/2014

EDU Annual Rate \$308.00

Use Codes	Description	Percentage of SFR	
		Per 1,000 SF or Unit	User Rates
7	MOBILEHOME	50%	\$154.00
55	MOBILE HOME PARK	50%	\$154.00
107	LIGHT INDUSTRIAL - SINGLE TENANT	50%	\$154.00
108	LIGHT INDUSTRIAL - MULTI TENANT	50%	\$154.00
109	RESEARCH AND DEVELOPMENT	50%	\$154.00
114	INDUSTRIAL PARK	50%	\$154.00
37	FRATERNAL BUILDINGS	51%	\$157.08
101	UNATTACHED THEATER	51%	\$157.08
26	AIRPORT AND RELATED	53%	\$163.24
45	MARINAS	53%	\$163.24
88	CONVENIENCE SHOPPING CENTER	53%	\$163.24
3	TWO OR MORE SFR	70%	\$215.60
10	DUPLEX ONLY	70%	\$215.60
11	TRIPLEX ONLY	70%	\$215.60
12	04-UNITS ONLY	70%	\$215.60
13	5 TO 16 UNITS	70%	\$215.60
14	17 TO 25 UNITS	70%	\$215.60
15	26-40 UNITS ONLY	70%	\$215.60
16	41-99 UNITS ONLY	70%	\$215.60
17	100 OR MORE UNITS	70%	\$215.60
18	A MIX OF FORMS	70%	\$215.60
56	MOTELS AND MOTOR HOTELS	70%	\$215.60
63	LOW RISE RETIREMENT BUILDING	70%	\$215.60
64	HIGH RISE RETIREMENT BUILDING	70%	\$215.60
81	PRE-SCHOOLS, NURSERY OR CARE	82%	\$252.56
82	PRIVATE SCHOOLS	82%	\$252.56
98	STORE WITH OFFICES OR LIV QTR	82%	\$252.56
99	STORE W/ OFFICE UPSTAIRS	82%	\$252.56
118	GOVERNMENTAL USE	82%	\$252.56
19	SFR WITH 1 OR 2 RENTALS	85%	\$261.80
34	DORMITORY	97%	\$298.76
42	HOSPITAL	97%	\$298.76
43	HOTEL	97%	\$298.76
000	CONVERSION-RURAL	100%	\$308.00
2	ONE RESIDENCE	100%	\$308.00
4	MISC IMPROVEMENT	100%	\$308.00
85	COMBIN: SERV STN/RESTAURANT	100%	\$308.00
103	CHEMICAL TANK AND BULK STORAGE	100%	\$308.00
104	FOOD PROCESSING PLANT	100%	\$308.00
105	COLD STORAGE PLANT	100%	\$308.00
106	FACTORY	100%	\$308.00



ORANGE COUNTY SANITATION DISTRICT

RATE STUDY ANALYSIS

USER RATE CATEGORIES

FY 2013/2014

EDU Annual Rate \$308.00

Use Codes	Description	Percentage of SFR	
		Per 1,000 SF or Unit	User Rates
119	PUBLIC UTILITY	100%	\$308.00
120	WATER MUTUAL OR COMPANY	100%	\$308.00
888	CONVERSION-COMPOSITE PROP	100%	\$308.00
32	CEMETERY & RELATED	101%	\$311.08
38	FUNERAL HOME	101%	\$311.08
60	NURSING HOME	102%	\$314.16
61	CONVALESCENT HOSPITALS	102%	\$314.16
62	CONVERTED RES USED AS NURSING	102%	\$314.16
28	BOWLING ALLEYS	112%	\$344.96
92	SKATING RINKS	112%	\$344.96
50	SINGLE MEDICAL BLDGS TO 3 STORIES	124%	\$381.92
51	SMALL MEDICAL CENTER	124%	\$381.92
52	MEDICAL CENTER COMPLEX	124%	\$381.92
53	HIGH RISE MEDICAL	124%	\$381.92
54	CONVERTED RESIDENCE TO MEDICAL	124%	\$381.92
89	NEIGHBORHOOD SHOPPING CENTER	139%	\$428.12
20	AMUSEMENT PARKS	144%	\$443.52
35	ENTERTAINMENT CENTER	144%	\$443.52
73	RECREATION	144%	\$443.52
30	COIN OPERATED CAR WASH	151%	\$465.08
47	SUPERMARKET	151%	\$465.08
48	CONVENIENCE MARKET	151%	\$465.08
224	NIGHTCLUB	200%	\$616.00
90	COMMUNITY SHOPPING CENTER	226%	\$696.08
76	RESTAURANT - TAKE OUT	300%	\$924.00
77	RESTAURANT - COFFEE SHOP	600%	\$1,848.00
78	RESTAURANT - DINNER HOUSE	600%	\$1,848.00
79	RESTAURANT - CONVERSION FROM SFR	600%	\$1,848.00
29	CONVENTIONAL CAR WASH	796%	\$2,451.68
223	LAUNDROMAT	1800%	\$5,544.00

ORDINANCE NO. OCSD-38

AN ORDINANCE OF THE BOARD OF DIRECTORS OF ORANGE COUNTY SANITATION DISTRICT ESTABLISHING LOCAL SANITARY SEWER SERVICE CHARGES FOR CUSTOMERS RECEIVING LOCAL SANITARY SEWER SERVICE IN FORMER REVENUE AREA 7

ADOPTING TABLE A RE RESIDENTIAL LOCAL SEWER SERVICE FEES AND TABLE B RE PROPERTY USE CLASSIFICATIONS FOR LOCAL SEWER SERVICE CHARGES FOR COMMERCIAL OR INDUSTRIAL USERS

WHEREAS, for purposes of improved efficiency and effectiveness of the District's operations, it is the intent, by the adoption of this Ordinance, to establish local sanitary sewer service charges for customers receiving local sanitary sewer service in former Revenue Area 7.

NOW, THEREFORE, the Board of Directors of the Orange County Sanitation District does hereby ORDAIN:

Section I. Fees and Charges Ordinance – Adopted

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ARTICLE I

RECITAL OF FINDINGS

Section 1.01. Findings – Declaration of Intent. The Board of Directors of the District hereby adopts the following Findings supporting the amounts of charges and fees adopted pursuant to this Ordinance.

A. That the District previously was organized into nine “Revenue Areas” representing distinct geographic regions within the District’s jurisdiction. Revenue Area 7 included unincorporated areas of Orange County and a portion of the City of Tustin.

B. That since the mid-1960s, the District has maintained the local sewers of approximately 18,000 parcels located in former Revenue Area 7 and that the District charges an annual regional sewer user fee to its customers, which appears as a special assessment on the annual property tax bill, but does not currently bill its customers in former Revenue Area 7 for the local sewer service it provides.

C. That, currently, dedicated ad valorem taxes are insufficient to meet the total expenditure needs to maintain the local collection system in former Revenue Area 7 and regional user fee revenues have been used to meet shortfalls.

D. That the District has completed a study to determine a fair and equitable local sewer use fee that will support the cost of operating and maintaining the local sewers in former Revenue Area 7.

E. That the revenues derived under the provisions of this Ordinance will be used for the acquisition, construction, reconstruction, maintenance, and operation of the local sewer system facilities of the District; together with costs of administration.

F. That the owners or occupants of properties upon which all fees and charges established by this Ordinance are levied, discharge wastewater to the local sewer system operated and maintained by OCSD.

G. That the Local Sanitary Sewer Service Charges established and levied by this Ordinance are to allow the District to recover the reasonable costs to provide a service to individual properties which have been improved for any of numerous types of uses. The basis for the respective charge is the request of the owner of property or a

structure thereon, for the benefit of him/her/itself, or the occupants of the property, to receive a service based upon the connection to the local sewer line maintained by the District.

H. That the Local Sanitary Sewer Service Charges established by this Ordinance are not imposed as a condition of approval of a development project, as defined in California Government Code Section 66001, and do not exceed the estimated reasonable cost to provide the sewer service for which the fee is levied, as provided in Government Code Sections 66013 and 66016 and California Constitution Article XIID.

I. That the Local Sanitary Sewer Service Charges adopted herein will not foreseeably result in an expansion of facilities to provide for growth outside the existing service area. The adoption of these Local Sanitary Sewer Service Charges will not result in any specific project, nor result in a direct physical change in the environment.

J. That the Local Sanitary Sewer Service Charges adopted herein are established upon a rational basis between the fees charged each customer and the service and facilities provided to each customer of the local sewer service area of the District.

K. That all fees and charges established herein have been approved by the District's Board of Directors at a noticed public meeting, all in accordance with applicable provisions of law.

L. That the adoption of this Ordinance is statutorily exempt under the California Environmental Quality Act pursuant to the provisions of Public Resources Code Section 21080(b)(8) and California Code of Regulations Section 15273(a).

ARTICLE II

LOCAL SEWER SERVICE CHARGES

Section 2.01. Purpose and Scope. The purpose of this Ordinance is to establish Local Sanitary Sewer Service Charges required to be paid by property owners for the services and facilities furnished by the District in connection with the local sewage collection system. Revenues derived under the provisions of this Ordinance shall be used for the acquisition, construction, reconstruction, maintenance, and operation of the local sewer system together with costs of administration.

Section 2.02. Annual Local Sewer Service Charge.
Commencing with the effective date of this Ordinance, the owner of each parcel of real property located within the local sewer service area operated and maintained by the District which is improved with structures designed for residential, commercial, or industrial use and which, at the request of the owner or the owner's predecessor-in-interest, is connected to the District's system, shall pay an annual Local Sewer Service Charge based on the respective class of users, in the sum or sums, as set forth in Tables A and B of this Ordinance, below. The annual Local Sewer Service Charges for residential users are set forth in Table A. The applicable single family residential rate shown in Table A is multiplied by the applicable percentage figure shown on Table B with respect to the particular use classification to arrive at the annual Local Sewer Service Charge rate per 1,000 square feet for the commercial or industrial user. The annual Local Sewer Service Charges for commercial or industrial users are dependent upon the respective classifications of property use, determined by reference to Table B.

Section 2.03.

A. Exemptions. It is the intent of the District that the legal owner(s) of parcels of real property, otherwise subject to the levy and payment of the Local Sewer Service Charges, as prescribed herein, be relieved, in whole or in part, from the payment of said charges, in certain circumstances and under conditions prescribed herein, and be entitled to either a rebate or a refund with respect to charges paid, as more specifically set forth in Subparagraphs 2.03B and 2.03C below, provided an inequity is established or a billing error is proven, as specified in Subparagraphs B or C.

B. Application for Rebate. Any property owner may apply to the District for a rebate of Local Sewer Service Charges paid to the District by establishing that an unfair valuation of the property has been made by the District. An applicant for a rebate must establish, by proof satisfactory to the General Manager of the District, or his designee, that an inequity exists between the amount of the charge paid and the amount of wastewater discharged to the District's system, resulting in an unfair valuation. Satisfactory proof shall establish that either:

- (1) The principal water use is agricultural or horticultural; or

(2) The property is devoted to any other use wherein the amount of wastewater discharged to the District's system is significantly less on a regular basis than the amount that would normally be expected to be discharged by the class of property in question.

Satisfactory proof shall include, but not be limited to, documentation showing actual water usage for each billing cycle during the entire period for which the rebate is sought.

The amount of any rebate shall not reduce the charge payable by any property owner, whose property is connected to the District's system, to less than the single family residential charge shown on the applicable Table attached hereto.

C. Application for Refund. Any property owner may apply to the District for a refund of Local Sewer Service Charges paid to the District by establishing that the amount paid was pursuant to an error in the amount billed or the amount paid. The applicant for a refund must submit proof satisfactory to the General Manager of the District, or his designee, that a billing error has been made by the District, or the County Tax Collector. Such proof shall include, but not be limited to, proof that:

- (1) The owner's parcel of property is not connected to the District's system; or
- (2) The property has not been classified in the proper property use classification code; or
- (3) A clerical error has been made.

D. Limitations Period. Applications for refunds shall be deemed to be governed by the provisions of California Revenue & Taxation Code Sections 5096 and 5097. Applications for rebates shall be deemed a claim and be governed by the provisions of California Government Code Sections 935 et seq., and shall be presented to the District as provided in the Government Tort Claims Act, Government Code Sections 915 et seq., not later than four (4) years after the submission of the roll to the County Auditor/Controller, and the claim for rebate may only be made with respect to amounts paid or payable under such property tax bill. A claim for rebate is not deemed a claim for refund, and California Revenue & Taxation Code Sections 5096 and 5097 are not applicable.

E. Determination. All applications for rebates or refunds of the Local Sewer Service Charge will be determined by the General Manager of the District, or his designee, who, based on the submitted proof, may grant a full or partial rebate or refund.

F. Administrative Fee. At the time of filing the application for rebate or refund, the property owner shall pay District an administrative fee for the processing of

such application. The amount of the fee shall be equal to the total of all fees and charges imposed on the District by any other public entity, such as the Orange County Tax Collector, the Orange County Auditor, or the Orange County Recorder, in connection with the rebate or refund.

Section 2.04. Annual Charge. The Local Sewer Service Charges established by this Ordinance shall be as set forth in Tables A and B, attached hereto, and shall remain in effect until such time as the rates adopted herein are changed by District Ordinance. There shall be no proration of such charges in any fiscal year.

Section 2.05. Method of Collection.

A. Pursuant to the authority granted by California Health & Safety Code Section 5473, and except as otherwise provided in Subparagraph 2.05B below, all local sewer service charges established herein shall be collected on the County Tax Roll in the same manner, by the same persons, and at the same time as, together with, and not separately from, its general taxes. The County Tax Collector is authorized and hereby ordered to make said collections in accordance with the terms and conditions of agreements between the County of Orange and the District.

B. In the event District determines that, due to billing or payment error, or to inequity in the amount billed, a property owner has underpaid annual Local Sewer Service Charges payable to District, District, within four (4) years after the date of mailing of the tax bill, may:

(1) collect the amount of any deficiency directly on the County Tax Roll;

(2) off-set the amount of any deficiency against any amounts that District determines is owing, by District, to the property owner, as a rebate or refund under this Ordinance; or

(3) submit, directly to the property owner, a bill for the amount of any deficiency, which shall be due and payable within thirty (30) days of the invoice date and which, if not paid, shall become a lien on said property.

TABLE A

ANNUAL LOCAL SEWER SERVICE FEES
RESIDENTIAL USERS

YEAR	2008-09	2009-10	2010-11	2011-12	2012-13
SFR*	\$199.00	\$204.00	\$208.00	\$212.00	\$216.00
MFR	\$139.30	\$142.80	\$145.60	\$148.40	\$151.20

SFR = SINGLE FAMILY RESIDENTIAL

MFR = MULTI FAMILY RESIDENTIAL

* The SFR fee is the minimum local sewer service charge any user must pay.

TABLE B

ANNUAL LOCAL SEWER SERVICE CHARGES

PROPERTY USE CLASSIFICATIONS FOR
COMMERCIAL OR INDUSTRIAL USERS

<u>Assessor Use Code</u>	<u>Description</u>	<u>Percentage of SFR Per 1,000 SF or Unit</u>
1	VACANT LAND PARCEL	0%
5	COMMON AREA PARCEL	0%
6	"HOLD" PARCEL	0%
8	EQUIV TO VACANT	0%
121	PARCEL OF MINIMAL OR NO VALUE	0%
122	SUBSURFACE PARCELS	0%
124	OIL/MINERAL RIGHTS	0%
125	MINERAL RIGHTS EQUIPMENT	0%
126	VACANT COMMON AREA-IMP ALLOC	0%
201	HOME OWNERS EXEMPTION ADD'N	0%
666	UNASSIGNED VACANT	0%
777	SEPTIC TANK PROPERTY	0%
112	STEEL BUILDING	5%
113	MINI-WAREHOUSE	5%
58	NURSERIES (PLANTS)	9%
100	DRIVE-IN THEATER	9%
110	WAREHOUSE - SINGLE TENANT	11%
111	WAREHOUSE - MULTI TENANT	11%
115	RECREATIONAL VEHICLE STORAGE	11%
116	TRUCK TERMINAL	11%
44	LUMBER/CONSTR MATL YARD	18%
71	PARKING GARAGE	18%
72	PAVED PARKING LOT	18%
33	CHURCH BUILDINGS	20%
94	DEPARTMENT STORE	22%
95	DISCOUNT STORE	22%
96	UNATTACHED SINGLE STORE	22%
97	STRIP STORE	22%
74	RECREATION VEHICLE PARK	23%
225	UNITED STATES POST OFFICE	28%
107	LIGHT INDUSTRIAL SINGLE TENANT	30%

TABLE B (CONTINUED)

**ANNUAL LOCAL SEWER SERVICE
CHARGES****PROPERTY USE CLASSIFICATIONS FOR
COMMERCIAL OR INDUSTRIAL USERS**

108	LIGHT INDUSTRIAL - MULTI TENANT	30%
109	RESEARCH AND DEVELOPMENT	30%
114	INDUSTRIAL PARK	30%
40	HEALTH CLUB	33%
88	CONVENIENCE SHOPPING CENTER	36%
36	FINANCIAL BUILDINGS	39%
68	HIGH RISE OFFICE	39%
21	AUTOMOBILE DEALERSHIP	39%
22	AUTO REPAIR SHOP	39%
23	AUTOMOTIVE SERVICE	39%
24	USED CAR LOT	39%
39	GOLF COURSE	39%
57	MOTORCYCLE/SMALL VEHICLE BLDG	39%
83	AUTOMOTIVE SERVICE STATION	39%
84	MARINE SERVICE STATION	39%
86	COMBIN:SERVICE STN/CONVIENCE MKT	39%
65	SINGLE OFFICE BLDGS TO 3 STORIES	40%
66	SMALL OFFICE CENTER	40%
67	OFFICE COMPLEX	40%
69	CONVERTED RESIDENCE TO OFFICE	40%
85	COMBIN: SERV STN/RESTAURANT	42%
48	CONVENIENCE MARKET	44%
37	FRATERNAL BUILDINGS	49%
101	UNATTACHED THEATER	49%
7	MOBILEHOME	50%
55	MOBILE HOME PARK	52%
26	AIRPORT AND RELATED	56%
45	MARINAS	56%
32	CEMETERY & RELATED	56%

TABLE B (CONTINUED)**ANNUAL LOCAL SEWER SERVICE CHARGES****PROPERTY USE CLASSIFICATIONS FOR COMMERCIAL OR INDUSTRIAL USERS**

38	FUNERAL HOME	56%
3	TWO OR MORE SFR	70%
10	DUPLEX ONLY	70%
11	TRIPLEX ONLY	70%
12	04-UNITS ONLY	70%
13	5 TO 16 UNITS	70%
14	17 TO 25 UNITS	70%
15	26-40 UNITS ONLY	70%
16	41-99 UNITS ONLY	70%
17	100 OR MORE UNITS	70%
18	A MIX OF FORMS	70%
19	SFR WITH 1 OR 2 RENTALS	71%
4	MISC IMPROVEMENT	71%
28	BOWLING ALLEYS	71%
92	SKATING RINKS	71%
118	GOVERNMENTAL USE	79%
81	PRE-SCHOOLS, NURSERY OR CARE	80%
82	PRIVATE SCHOOLS	80%
98	STORE WITH OFFICES OR LIV QTR	80%
99	STORE W/ OFFICE UPSTAIRS	80%
47	SUPERMARKET	84%
89	NEIGHBORHOOD SHOPPING CENTER	92%
34	DORMITORY	99%
61	CONVALESCENT HOSPITALS	99%
42	HOSPITAL	100%
2	ONE RESIDENCE	100%
103	CHEMICAL TANK AND BULK STORAGE	100%
104	FOOD PROCESSING PLANT	100%
105	COLD STORAGE PLANT	100%

TABLE B (CONTINUED)

ANNUAL LOCAL SEWER SERVICE
CHARGESPROPERTY USE CLASSIFICATIONS FOR
COMMERCIAL OR INDUSTRIAL USERS

106	FACTORY	100%
119	PUBLIC UTILITY	100%
120	WATER MUTUAL OR COMPANY	100%
888	CONVERSION-COMPOSITE PROP	100%
60	NURSING HOME	103%
62	CONVERTED RES USED AS NURSING	103%
63	LOW RISE RETIREMENT BUILDING	108%
64	HIGH RISE RETIREMENT BUILDING	108%
43	HOTEL	109%
56	MOTELS AND MOTOR HOTELS	109%
50	SINGLE MEDICAL BLDGS TO 3 STORIES	118%
51	SMALL MEDICAL CENTER	118%
52	MEDICAL CENTER COMPLEX	118%
53	HIGH RISE MEDICAL	118%
54	CONVERTED RESIDENCE TO MEDICAL	118%
20	AMUSEMENT PARKS	138%
35	ENTERTAINMENT CENTER	138%
73	RECREATION	138%
224	NIGHTCLUB	146%
90	COMMUNITY SHOPPING CENTER	149%
76	RESTAURANT - TAKE OUT	212%
30	COIN OPERATED CAR WASH	252%
77	RESTAURANT - COFFEE SHOP	424%
78	RESTAURANT - DINNER HOUSE	424%
79	RESTAURANT - CONVERSION FROM SFR	424%
29	CONVENTIONAL CAR WASH	1425%
223	LAUNDROMAT	1563%

NOTE: Multiply the Table A Single Family Residential Rate by the percentage figure above in order to determine the rate per 1,000 square feet for the commercial or industrial user.

MISCELLANEOUS

Section 3.01. Application of Ordinance. The provisions of this Ordinance shall be in addition to the provisions of the District's Wastewater Discharge Regulations for use of District's sewage facilities, including provisions for payment of charges or fees related thereto; District's ordinance establishing Sanitary Sewer Service Charges; District's ordinance establishing Fees Concerning Annexations of Territory to the District; and any other District Ordinances and Resolutions not in conflict herewith.

Section 3.02. Exceptions. The provisions of this Ordinance shall apply to all owners of properties within the local sewer service area maintained by the District, including those properties otherwise deemed exempt from payment of taxes or assessments by provisions of the State Constitution or statute, including properties owned by other public agencies or tax-exempt organizations, except as expressly provided herein.


The Board of Directors of the Orange County Sanitation District does further hereby ORDAIN:

Section II. Severability. If any provision of this Ordinance, or the application to any person or circumstances is held invalid by order of Court, the remainder of the Ordinance, or the application of such provision to other persons or other circumstances, shall not be affected.

Section III. Effective Date. This Ordinance shall take effect July 25, 2008.

Section IV. Certification and Publication. The Clerk of the Board shall certify to the adoption of this Ordinance, and shall cause a summary to be published in a newspaper of general circulation as required by law.

PASSED AND ADOPTED by a vote of not less than two-thirds of the Board of Directors of the Orange County Sanitation District at a Regular Meeting held June 25, 2008.

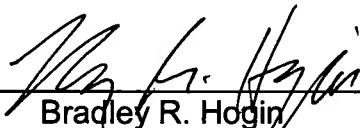


 Chair, Board of Directors
 Orange County Sanitation District

ATTEST:



 Clerk of the Board



 Bradley R. Hogan
 General Counsel

STATE OF CALIFORNIA)
)SS.
COUNTY OF ORANGE)

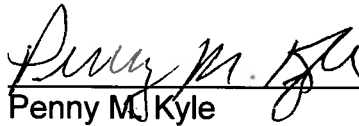
I, PENNY M. KYLE, Clerk of the Board of Orange County Sanitation District, do hereby certify that the above and foregoing Ordinance No. OCSD-38 was passed and adopted at a regular meeting of said Board on the 25th day of June, 2008, by the following vote, to wit:

AYES: Jim Ferryman, Chair; Charles Antos; Don Bankhead; David Benavides; Larry Crandall; Bill Dalton; Catherine Driscoll; Rose Espinoza; Rich Freschi; Don Hansen; Patsy Marshall; Darryl Miller; Roy Moore; Joy Neugebauer; Dave Shawver; Christina Shea; Constance Underhill; Mark Waldman; Don Webb; Jim Winder

NOES: Doug Davert; Jon Dumitru; Phil Luebben; Janet Nguyen; Harry Sidhu

ABSENT: None

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of June, 2008.



Penny M. Kyle
Clerk of the Board
Orange County Sanitation District

SEWER SYSTEM MANAGEMENT PLAN
for
East Orange County Water District

Volume I

January 2015

Prepared by:

EAST ORANGE COUNTY WATER DISTRICT
185 N. MCPHERSON ROAD
ORANGE, CALIFORNIA 92869

**EAST
ORANGE
COUNTY**

DISTRICT

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NOTE: APPENDICES ARE LOCATED IN VOLUME II OF THIS PLAN.

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ABBREVIATIONS / ACRONYMS

BMP	Best Management Practice
BREA	Business Risk Exposure Analysis
CASC	Countywide Area Spill Control
CCTV	Closed-Circuit Television
CIP	Capital Improvement Plan or Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CWEA	California Water Environment Association
EOCWD	East Orange County Water District
ECAP	Environmental Compliance Awareness Program
EDAC	Engineering Department Advisory Council
EDMS	Electronic Document Management System
EMB	Electronic Map Book
EOMM	Electronic Operations and Maintenance Manual
ERP	Emergency Response Plan
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
FTP	File Transfer Protocol
GIS	Geographical Information Systems
GRD	Grease Removal Device
I/I	Inflow / Infiltration
IERP	Integrated Emergency Response Plan
LRO	Legally Responsible Official
MRP	Monitoring and Reporting Program
NASSCO	National Association of Sewer Service Companies
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
OCHCA	Orange County Health Care Agency
OCSD	Orange County Sanitation District
OMaP	Operations Manuals and Procedures
Order	SWRCB Order No. 2006-0003-DWQ adopted May 2, 2006
PMP	Preventive Maintenance Program
R&R	Rehabilitation and Replacement
RWQCB	Regional Water Quality Control Board
SAWPA	Santa Ana Watershed Project Authority
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflow and any sewer spill or overflow of sewage
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board
WDR	Waste Discharge Requirements also referred to as the General Waste Discharge Requirements of the State of California

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EXECUTIVE SUMMARY

The East Orange County Water District is required to comply with the State Water Resources Control Board Order No. 2006-0003-DWQ adopted May 2, 2006, entitled Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.” Information on the State’s SSO Reduction Program can be found at: http://www.waterboards.ca.gov/water_issues/programs/sso/index.shtml.

The purpose of the Order is to prevent SSOs or sewer spills by establishing a statewide Monitoring and Reporting Program and requiring each local or regional sewer agency to create and implement their own Sewer System Management Plan based on the mandatory requirements of the Order.

The MRP requires each local or regional sewer agency to appoint a legally responsible official and establish a monitoring and reporting organization to monitor and report all SSOs in accordance with the requirements of the Order and to have the LRO certify the SSO report using the California Integrated Water Quality System website in the timeframe required by the Order. If no SSOs occur during the course of any given month, the LRO is required to fill out, certify and send via the CIWQS website a “No Spill Certification” documenting that there were no SSOs for the month reported.

To comply with the essence of this Order:

- EOCWD has enrolled and applied for coverage and agrees to comply with all conditions and provisions of this Order.
- EOCWD shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, EOCWD shall take all feasible steps to contain and mitigate the impacts of an SSO.
- In the event of an SSO, EOCWD shall take all feasible 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.
- EOCWD shall report all SSOs in accordance with Section G of the WDR.
- EOCWD shall properly, manage, operate, and maintain all parts of its sanitary sewer system, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
- EOCWD shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, and a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures are in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.
- EOCWD shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events.

This SSMP is organized similarly to paragraph D (Provisions) of the Order. Each section begins with a summary of the Order requirements, followed by these subsections:

- Compliance Summary – A description of how compliance was achieved;
- Compliance Documents – A listing of source documents that support compliance and the location of these documents; and,
- Roles and Responsibilities – A listing of relevant staff roles and responsibilities.

The SSMP has 11 mandatory elements in chapters 2 through 12. Chapter 1 discusses the prohibitions and provisions of the WDR.

- **Chapter 1 – Prohibitions and Provisions:** This chapter describes the sewage discharge prohibitions and provisions as stated in the “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.”
- **Chapter 2 – Goal:** The goal is to prevent and/or reduce SSOs and mitigate the effect of any SSOs that do occur. The goal requires a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer collection system.
- **Chapter 3 – Organization:** The SSMP must identify the LRO or authorized representative as described in the Order. It must list and identify the organization responsible for operating and maintaining the sanitary sewer collection system including names and telephone numbers for management, administrative and maintenance positions and the chain of communication for reporting SSOs.
- **Chapter 4 – Legal Authority:** Each Enrollee must demonstrate through legally binding procedures such as ordinances, agreements, etc. that it possesses the necessary legal authority to do what is required by the Order.
- **Chapter 5 – Operation and Maintenance Program:** The SSMP must include those elements that are required by the Order that are appropriate and applicable to the sewer agency’s system.
- **Chapter 6 – Design and Performance Provisions:** The SSMP must demonstrate that the sewer agency has and appropriately uses design and construction standards and specifications for the installation of new sewer systems, rehabilitation and repair of existing sewer systems and has procedures and standards for inspecting and testing the installation of new sewers, pumps, etc. and for rehabilitation and repair projects.
- **Chapter 7 – Overflow Emergency Response Plan:** Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment and meets the minimum requirements of the Order.
- **Chapter 8 – FOG Control Program:** Each Enrollee shall evaluate its sewer system and determine if a Fats, Oils and Grease control program is needed. The FOG control plan, if needed, must meet all the requirements of the Order.

- **Chapter 9 – System Evaluation and Capacity Assurance Plan:** The Enrollee shall prepare and implement a Capital Improvement Plan that will provide adequate hydraulic capacity for the sewer collection system required by the Order.
- **Chapter 10 – Monitoring, Measurement, and Program Modifications:** The Enrollee shall maintain relevant information to establish and prioritize SSMP activities, monitor the implementation and measure the effectiveness of the SSMP activities, and provide assessment of the performance and/or modification of the SSMP activities as required by the Order.
- **Chapter 11 – SSMP Program Audits:** The Enrollee shall conduct periodic internal audits appropriate to the size of the sewer system and the number of SSOs. At a minimum, these audits must occur every two years as required by the Order.
- **Chapter 12 – Communication Program:** The Enrollee 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 sewer agency and shall also create a plan of communication with other local sewer agencies that may be tributary or satellite to the sewer agency's sewer collection system.

This revision, which follows an SSMP audit (October 17, 2010), addresses many of the audit findings and recommended changes, as well as modifications to reflect EOCWD's current organizational practices and structure. Some of the more significant changes include:

- Expanded description of the Renewal and Replacement Process (Chapter 5 and Appendix J),
- Revised Asset Management Improvement Program (Appendix H)
- Presentation of a concise program organization (Chapter 3 and Appendix C),
- Further explanation of the Fats, Oil, and Grease Program, and the relationship with member cities and agencies (Chapter 8 and Appendices G2 and G3),
- Addition of procedures related to sewer maps and data maintenance (Appendices K1, K2, and K3),
- The addition of several methods to calculate SSOs (Appendix R),
- Added language on program monitoring and measurement (Chapter 10),
- Clarification of the requirements of the auditor and timing of the next audit (Chapter 11 and Appendices X1 and X2),
- Updates to the Communication process due to changes in EOCWD's website (Chapter 12 and Appendix V), and
- Inclusion of audit closeout memo (Appendix Y).

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CHAPTER 1 – PROHIBITIONS AND PROVISIONS

This chapter describes the sewage discharge prohibitions and provisions as stated in the “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.”

1.1 Prohibitions

To meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, EOCWD is required to comply with the following prohibitions:

- Any SSO that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited, and
- Any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

1.2 Provisions

As stated in the Order, EOCWD agrees to meet the following provisions:

1. EOCWD must comply with all conditions in the Order. Any noncompliance with the Order constitutes a violation of the California Water Code and is grounds for enforcement action.
2. Nothing in the general WDR shall be:
 - (i) Interpreted or applied in a manner inconsistent with the Federal Clean Water Act, or supersede a more specific or more stringent state or federal requirement in an existing permit, regulation, or administrative/judicial order or Consent Decree;
 - (ii) Interpreted or applied to authorize a SSO that is illegal under either the Clean Water Act, an applicable Basin Plan prohibition or water quality standard, or the California Water Code;
 - (iii) Interpreted or applied to prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System permit or WDR, superseding this general WDR, for a sanitary sewer system, authorized under the Clean Water Act or California Water Code; or
 - (iv) Interpreted or applied to supersede any more specific or more stringent WDR or enforcement order issued by a Regional Water Board.

3. EOCWD shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, EOCWD shall take all feasible steps to contain and mitigate the impacts of an SSO.
4. In the event of an SSO, EOCWD shall take all feasible 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.
5. EOCWD shall report SSOs in accordance with Section G of the general WDR.
6. When an SSO occurs, EOCWD shall take all feasible steps and necessary remedial actions to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.
EOCWD shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:
 - (i) Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure.
 - (ii) Vacuum truck recovery of sanitary sewer overflows and washdown water.
 - (iii) Cleanup of SSO-related debris at the overflow site.
 - (iv) System modifications to prevent another SSO at the same location.
 - (v) Adequate sampling to determine the nature and impact of the release.
 - (vi) Adequate public notification to protect the public from exposure to the SSO.
7. EOCWD shall properly manage, operate, and maintain all parts of the sanitary sewer it owns and operates, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.
8. EOCWD shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing a proper rate structure, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally accepted accounting practices.
9. EOCWD shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in EOCWD's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the EOCWD.

10. The Enrollee shall develop and implement a written SSMP and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publically available at the Enrollee’s office and/or available on the internet. This SSMP must be approved by the Enrollee’s governing board at a public meeting.

11. In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, all engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals, and shall bear the professional(s)’ signature and stamp.

EOCWD has met all the mandatory elements of the SSMP as specified in the SSMP Time Schedule below.

<u>SSMP Task</u>	<u>Milestone Due/Completion Date</u>
Application for Permit Coverage	March 1, 2015
Reporting Program	March 1, 2015
SSMP Development Plan and Schedule	March 1, 2015
Goal and Organization Structure	March 1, 2015
Overflow Emergency Response Program	March 1, 2015
Legal Authority	March 1, 2015
Operation and Maintenance Program	March 1, 2015
Grease Control Program	March 1, 2015
Design and Performance	March 1, 2015
System Evaluation and Capacity Assurance Plan	March 1, 2015
Final SSMP, incorporating all of the SSMP requirements	March 1, 2015
Audit of EOCWD’s SSMP	April 1, 2016

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CHAPTER 2 – GOAL

This chapter describes the goal of the SSMP.

2.1 Purpose

The purpose of the Order is to prevent SSOs. EOCWD has prepared and will maintain the SSMP to support this purpose.

2.2 Goal

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the EOCWD sanitary sewer system to prevent SSOs and mitigate any SSOs that do occur.

A copy of the Order and the certified SSMP is available to personnel operating and maintaining the EOCWD sanitary sewer system. A copy of the Order is also included as **Appendix A** in Volume II of this SSMP. Pursuant to California Water Code Section 13267(b), EOCWD will also comply with the SSO “Monitoring and Reporting Program No. 2006-0003 DWQ” and all future revisions, included by reference in the Order. A copy of the MRP is included in **Appendix B** of Volume II.

2.3 About This Document

Volume I provides a general description of how EOCWD complies with the various provisions of the Order and provides references to supporting documents. Volume II contains specific information and supporting documents. Some supporting materials, such as the EOCWD Electronic Map Book, the electronic EOCWD Sewer Atlas, the EOCWD electronic Hydraulic Model, the EOCWD Design Guidelines, EOCWD Master Specifications and Standard Drawings, large format drawings, relational databases, and voluminous documents may not be physically included in the SSMP. In these cases, a reference is provided that indicates the type, owner, and location of these supporting materials.

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CHAPTER 3 – DESCRIPTION OF ORGANIZATION

This chapter describes the EOCWD organization and chain of communication.

3.1 Administrative and Maintenance Positions

The Order requires that the SSMP include the administrative and maintenance positions responsible for implementing measures in the SSMP program, including lines of authority by organization charge or similar document.

The manager of the EOCWD Collection Facilities O&M Division is the EOCWD authorized representative or legally responsible official listed on the Notice of Intent and is responsible for the certification of SSO reports involving the EOCWD sewer collection system.

3.1.1 Compliance Summary. EOCWD has provided sufficient staffing to operate the sewer system on a sustainable basis, and to comply with all requirements of this Order.

3.1.2 Compliance Documents. EOCWD has developed a Program Organizational Chart (**Appendix C**). Names with titles, SSMP responsibility, and phone numbers are included in the chart. On a routine basis, the chart is reviewed by EOCWD stakeholders and updated.

3.1.3 Roles and Responsibilities. Job descriptions for the positions listed in the organizational charts are available from Administration. Primary responsibility for the day-to-day management and O&M of the collection facility assets resides within the Operations Department, and the daily field activities are managed by the Collection Facilities O&M Division. In addition, specific SSMP roles and document responsibilities are described in **Appendix C**.

3.2 Chain of Communication.

The Order requires the SSMP to contain a chain of communication for SSO reporting, from receipt of a complaint or other information through reporting to the regulatory agencies.

3.2.1 Compliance Summary

EOCWD has a flow chart that shows the chain of communication for reporting SSOs. It starts with the receipt of a complaint or other information, and includes the name and title of the person responsible for reporting SSOs from receipt at EOCWD to the State of California CIWQS website, the Santa Ana Regional Water Quality Control Board, Orange County Health Care Agency, and if required, California Emergency Management Agency (Cal EMA).

The response flowchart is part of the SSO Reporting Guidelines developed to manage the reporting process, and exists as a supplemental guide to be used with the current EOCWD SSO Emergency Response Plan. This flow chart is also known as the EOCWD SSO Response Flow Chart.

3.2.2 Compliance Documents

The organizational/procedural flow charts can be found in the following appendices for contacts and information provided in the chain of communication flow chart for reporting SSOs.

Appendix P of the SSMP Volume II includes the EOCWD SSO Response Flow Chart. This flow chart contains the chain of communication for reporting SSOs in compliance with the Order.

Appendix Q of the SSMP Volume II includes the EOCWD SSO ERP. This plan is also required in compliance with Section D, paragraph 13 (vi) the Order.

3.2.3 Roles and Responsibilities

The roles and responsibilities of each position are described in detail in the documents listed above as well as in the appendices.

CHAPTER 4 – LEGAL AUTHORITY

This chapter describes the legal authority to implement the SSMP.

EOCWD must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- (a) Prevent illicit discharges into its sanitary sewer system (examples may include infiltration and inflow), stormwater, chemical dumping, unauthorized debris and cut roots, etc.).

The inflow sources may include items such as sump pumps, roof leaders, yard and stairwell drains, satellite systems, or any other materials that adversely affect the performance of the collection system and/or the Waste Water Treatment Plant.
- (b) Require that sewers and connections be properly designed and constructed. EOCWD's Engineering Department develops and maintains construction standards for EOCWD pumping stations and collection system. These legally binding documents will also ensure that testing is conducted and baseline condition assessment completed for sewer system construction projects (air test, CCTV, pump station performance, etc.), and that procedures are in place to transfer the resulting test data to the end user. These should also require development and implementation of technical requirements and training standards for construction inspectors.
- (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency.
- (d) Limit the discharge of FOG and other debris that may cause blockages.

The FOG control program will be for commercial, industrial, and institutional users and will combine source and field control to reduce SSOs caused by the discharge of FOG to the collection system.
- (e) Enforce its sewer ordinances.

4.1 Compliance Summary

This SSMP complies with the Order requirements for legal authority under the following enacted ordinances/resolutions or agency policies.

- (a) **Ordinance No. EOCWD-15-1** "Establishing EOCWD Wastewater Discharge Regulations" effective July 1, 2015. Article 2 of Ordinance No. EOCWD-15-1 has general prohibitions, limits and requirements for discharge which apply to all users of the EOCWD sewer collection facilities. This Ordinance complies with and meets the minimum legal authority for EOCWD required by the General WDR.
- (b) **The WDR requires that EOCWD sewers and connections** be properly designed and constructed. The design and construction requirements for EOCWD sewers are kept and managed by the EOCWD Engineering Department. These include the

Engineering Design Guidelines, the CAD manual, the Master Specifications, Process Control Software Standards, Standard Drawings, and Instrumentation & Equipment Tagging Information. The construction, inspection and testing of new lateral connections and bypass piping facilities is governed by the permit and related construction standards, and legally enforced through EOCWD's connection permit program through the Engineering Department, as authorized by EOCWD's Charter. Documentation for these requirements is located at the permit counter in the Engineering Department at EOCWD Reclamation Plant No. 1.

- (c) **To ensure access for maintenance**, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency EOCWD adopted Resolution No. EOCWD 15-170 "Adopting a Policy Regarding Maintenance of Unobstructed Access to District Easements" on July 1, 2015. While EOCWD does not permit direct lateral connection to its regional sewers, it has been EOCWD practice to accept responsibility for maintaining the first four feet of local satellite agency pipelines connecting to EOCWD sewers. EOCWD issues permits to property owners and contract for work according to EOCWD standards. Approved design and construction standards are situated in electronic files, and are also available on compact disc. A special standard derived from the master specifications is issued for property owner contractors and is available at the permit counter at EOCWD.
- (d) **To limit the discharge of FOG** and other debris that may cause blockages; EOCWD established two comprehensive policies regarding limitation of the discharge of FOG into the EOCWD sewer collection facilities. These are: (1) Ordinance No. EOCWD-15-2 "Adopting Fats, Oils, and Grease (FOG) Control Regulations applicable to Food Service Establishments", effective July 1, 2015; and (2) Ordinance No. EOCWD 15-171 "Establishing Fats, Oils, and Grease (FOG) Control Program Fees applicable to Food Service Establishments", effective July 1, 2015 necessary to limit FOG and debris entering into the EOCWD sewer collection system.
- (e) **In accordance with the enforcement provisions of its discharge ordinances, including EOCWD-15-2 and EOCWD-15-1**, EOCWD established and actively manages the source control function within the Environmental Compliance Division. This division of the EOCWD Engineering Department also enforces applicable sections of the State of California and United States of America state and federal laws relating to source control and violation of its sewer ordinances and resolutions.

4.2 Compliance Documents

The legal authority for enacting the SSMP programs and policies are included in the following documents:

- FOG Ordinance No. EOCWD-15-2 (**Appendix E1**)
- Wastewater Discharge Regulations Ordinance No. EOCWD-15-1 (**Appendix E2**)

- FOG Fee Resolution No. EOCWD 15-171 (**Appendix E3**)
- Legal authority, as outlined in EOCWD's Charter, is on file in the EOCWD Board Secretary's Office
- Construction contracts, standard testing and inspection requirements, Master Specifications section 02627 Manhole and Precast Vault Construction, other sections

4.3 Roles and Responsibilities

The roles and responsibilities for enforcement of the legal authority to enact the SSMP programs and policies is derived from acts of EOCWD's governing Board. Legal interpretation of the enabling state legislation giving authority to EOCWD is provided by EOCWD General Counsel.

During the course of implementing the FOG Source Control Program, programmatic changes are anticipated which may necessitate revision of FOG Ordinance No. EOCWD-15-2 and FOG Fee Resolution No. EOCWD 15-171. The EOCWD Environmental Compliance Division is responsible for periodically reviewing and updating these documents, as the need arises, to ensure that the legal authority is comprehensive and covers all aspects of the FOG Source Control Program.

Wastewater Discharge Regulations Ordinance No. EOCWD-15-1 is EOCWD's main ordinance for regulating sewer use and wastewater discharges in the satellite cities and sewerage agencies that drain to EOCWD's system. These include agreements with SAWPA and LA County Sanitation Districts, and controlling inflow and infiltration and illegal connections to the system. The EOCWD Environmental Compliance Division is responsible for maintaining and updating, or amending this ordinance.

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CHAPTER 5 – OPERATION AND MAINTENANCE PROGRAM

This chapter describes the EOCWD activities regarding management of engineering data, maps of the sanitary sewer system, operations and preventive maintenance, rehabilitation and replacement program, training programs, and equipment and replacement part inventories.

5.1 Mapping

EOCWD maintains electronic models of facilities and assets. The concept with roles and responsibilities is described in Facility Model Maintenance Management Plan (**Appendix K1**).

- EOCWD Sewer Atlas – This is an electronic facility model that includes all of the sewer lines, manholes, diversion structures, force mains, siphons, force main valves, and pump stations of the EOCWD collection system. The Sewer Atlas can be viewed with either a plain background or a photographic background with the streets and sewer lines superimposed over the background. Maintenance procedures for the Sewer Atlas are described in **Appendix K2**.
- Map Books and Electronic Map Book – Map Books are composed of a set of printed maps from the Sewer Atlas. The EMB is an on-line form of the Map Books and allows the user to link to adjacent maps and drawings.
- Electronic Document Management System – allows access to scanned image file of drawings generated from capital projects from the collection system.
- Enterprise-wide Geographical Information System – an on-going program linking various heretofore independent database functions and related information graphically, to more easily find and correlate such things as easement documents with the electronic mapping information and cataloging of useful and connected information.

When discrepancies are identified between the field conditions and electronic records, staff completes the Field Discrepancy Form (**Appendix K3**), and updates are made by the responsible party.

5.1.1 Compliance Summary. The asset inventory of all collection system assets is contained in EOCWD's GIS, which is maintained as a part of EOCWD's GIS program. A subset of the asset register is contained in the SEDARU program. The SEDARU resident assets are those assets that have or may have scheduled maintenance activities associated with them to ensure their performance level is maintained, and that they reach their expected useful lives. The assets contained in the GIS, SEDARU, and other asset-based data repositories (such as the Supervisory Control and Data Acquisition) are all connected by the use of unique identifiers known as structure ID's, which are associated with fixed process locations and equipment numbers. The collection system assets contained in SEDARU have various types of scheduled maintenance activities assigned to them; these activities may include any combination of investigation of problem, condition assessment, and preventive maintenance activities necessary to properly maintain the assets.

Every two years EOCWD issues an updated new Asset Management Plan that details asset management activities, and identifies asset management improvement strategies and projects being considered by EOCWD. The current Asset Management Plan is contained in **Appendix H**.

5.1.2 Compliance Documents. The documents supporting compliance with the requirements for mapping are as follows:

- Integrated Emergency Response Plan (copies located in the EOCWD Office,
- Electronic Map Book and EOCWD Sewer Atlas

Copies of drawings are available for staff use in the EDMS, and on physical stick files located in the Engineering Department. The Information Technology Department is responsible for maintaining the electronic version of all record drawings, EMB, and the Sewer Atlas.

5.1.3 Roles and Responsibilities. The annual budget document contains the chart that identifies the positions in general, and also those positions specifically responsible for EOCWD's collection system assets. ID Modeling is responsible for maintaining the EOCWD mapping systems. The Engineering Department is responsible for acquiring drawings during capital projects. The Operations Department identifies the management, supervision, and field positions that are responsible for identifying the various tasks required to support the proactive maintenance program for EOCWD assets. Program responsibilities are also presented in **Appendix C**.

5.2 Preventive Maintenance Program

EOCWD has an on-going preventive and corrective maintenance program, and is in the process of developing a comprehensive life-cycle asset management program. EOCWD has an ERP that includes procurement procedures and inventories for critical equipment under various scenarios. EOCWD's current reliability shows that the availability and stock levels of spare parts has been sufficient, and no changes are recommended at this time.

EOCWD has prepared the PMP document, which covers the assets managed in the sanitary sewer system, and is based on an approach that combines predictive, preventive, and corrective maintenance strategies and established BMPs. Copies of the PMP and Collection Facilities O&M Vehicle Inventory are included in Volume II **Appendices I1** and **I2**, respectively.

One component of the PMP development process is the resource gap analysis. EOCWD continually reviews resource needs through the annual budget process, the asset management program, rehabilitation and replacement program, and capacity evaluations. The PMP also contains a review of existing business and work practices; this review is on-going. The work is focused on validating existing or making improvements to the current data management, data analysis, and supporting decision-making processes. This will ensure that the maintenance divisions provide consistent, effective, and efficient maintenance support for EOCWD assets. In light of the expanded maintenance program requirements, the current performance management processes will be reviewed to determine continued alignment; maintenance reports will be modified as needed.

The criticality assessment of collection system assets is included in the PMP Project Plan. This assessment is in progress and will be integrated into the plan with the results being entered into SEDARU. The second phase is currently underway and will rate the criticality/condition of the collection system gravity pipes, and the final phase will be the rating of the criticality/condition of the gravity system manholes and other structures. The data from the second and third phases will be stored in SEDARU for gravity pipes and manholes.

5.2.1 Compliance Summary. The Collection Facilities O&M Division conducts various maintenance activities to maintain collection system assets. As part of the work order closeout process, all operational and structural condition information is recorded. This work history documentation is analyzed to identify potential operational failures which could result in spills. Maintenance tasks might be added, deleted, or altered based on the analysis findings. Tasks might be altered by modifying the task work content, adjusting task intervals and/or adjusting task times to compensate for the adverse conditions found. Work order closeout procedures are in place to ensure that all work history is memorialized. As part of the preventive maintenance program analysis process, observations related to grease build-up within the sewer collection facilities pipelines are reported to the Operations Department. The Operations Department is then responsible for further investigations to determine the cause of the identified grease build-ups, as further addressed in Chapter 8 (Fats, Oils, and Grease Control Program).

5.2.2 Compliance Documents. Documents that support compliance of this section include the following:

- Preventive Maintenance Program (**Appendix I1**)
- Collection Facilities O&M Vehicle Inventory (**Appendix I2**)
- CCTV and condition assessment records

5.2.3 Roles and Responsibilities. The annual budget contains the chart that identifies the positions responsible for the Collection Facilities O&M Division program in place to support EOCWD's collection system assets. The charts for the Collection Facilities O&M Division are updated and published each year as a part of the budget process. The charts for Collection O&M identify the management, supervision, and field positions that are responsible for identifying the various tasks required to support the proactive maintenance program for EOCWD assets. The budget information is posted on the EOCWD website and can be accessed at www.eocwd.com.

5.3 Rehabilitation and Replacement Plan

EOCWD has identified and prioritized structural deficiencies in the collection system and is in the process of implementing short-term and long-term rehabilitation actions to address each deficiency. This program will include regular CCTV inspection of sewer pipes and a system for assessing and ranking the condition of the line segments and other sewer nodes contained in the system. The rehabilitation and replacement plan will include a financial plan that properly funds the R&R of infrastructure assets. A memorandum on the R&R process is included in **Appendix J**.

5.3.1 Compliance Summary. The proactive maintenance task descriptions for all preventive maintenance, fault-finding inspections and condition monitoring tasks are contained in SEDARU as

part of the planned maintenance activity documentation, and they are printed with the activity work order documentation.

5.3.2 Compliance Documents. Documents that support compliance of this section include the following:

- Rehabilitation and Replacement Plan (**Appendix J**)

5.3.3 Roles and Responsibilities. The chart that identifies those positions responsible for the Collection Facilities O&M Division program to support EOCWD's Collection System Rehabilitation and Replacement program is contained in **Appendix J**.

5.4 Training Program

EOCWD regularly provides training for staff in collection system operations, maintenance, and monitoring, and requires that contractors' staffs are appropriately trained. This training is divided into two general parts: (1) Safety Training and (2) Technical Training.

5.4.1 Compliance Summary. EOCWD's staff currently participates in the CWEA certification program for collection workers, Grades I through IV. EOCWD also participates in NASSCO certification program for pipeline and manhole assessment. EOCWD provides on-going in-house technical, job skills, and safety training for its staff.

EOCWD has an SSO Response Training procedure for all collection system maintenance technologists. This training and the OCSD SSO response training facility at Reclamation Plant No. 1 is also available for use by their satellite agencies. EOCWD uses training programs and SOPs developed for line cleaning, vector truck operation, sewer grit removal and dumping, valve repair and replacement, pump station operation and maintenance, and other related tasks. SOP development and training are ongoing.

5.4.2 Compliance Documents. Technical training and supporting resources are centralized and managed by the Administration Department for EOCWD. All records and documentation are available for review in the Administration Department.

The Administration Department maintains and updates all internal procedures for tracking training needs for CWEA Technical Certification certificate holders for Collection Facilities employees. The Collection Facilities Maintenance Business Unit maintains its SOPs.

5.4.3 Roles and Responsibilities. The EOCWD Administration Department is responsible for maintaining and updating all EOCWD employee training records.

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CHAPTER 6 – DESIGN AND PERFORMANCE PROVISIONS

This chapter references the EOCWD Engineering Design Standards (Guidelines, Master Specifications, Standard Drawings, etc.) for new sanitary sewer systems, pump stations, and other appurtenances, and for the rehabilitation and repair of existing sewer systems.

6.1 Compliance Summary

Requirements for design, construction, inspection, quality assurance, and commissioning of new and rehabilitated facilities are available for viewing by downloading from the EOCWD FTP server on the internet. The sanitary sewer requirements are also available as an excerpt from the EOCWD Engineering Design Standards upon request at the EOCWD administrative office in Orange. The Standards are updated annually.

6.2 Compliance Documents

Documents used for design and performance evaluations include the following:

- EOCWD Master Specifications, Design Guidelines, and other EOCWD Design Standards;
- Standard Specifications for Public Works Construction (Greenbook);
- Codes and Standards of trade organizations (NFPA, ASTM, IEEE, etc.);
- Applicable federal, state and local laws and regulations, e.g.: CA Code of Regulations, Title 8 (Cal/OSHA), Title 24 (California Building Codes);
- Inspection reports, test reports, and contractor certifications

6.3 Roles and Responsibilities

The District Engineer manages the standards update and implementation processes. Proposed updates to the Standards can be based on recommendations made by EOCWD Project Managers who submit “lessons learned” during each project and/or are developed by designated editors to reflect the latest technology improvements, industry practices, and federal, state and local laws and regulations. In addition, any EOCWD employee may propose a change at any time.

Significant proposed changes to the Standards (e.g., new standards, significant philosophy changes, global updates, etc.) are submitted to the Engineering Committee for review / comment / approval.

CHAPTER 7 – OVERFLOW EMERGENCY RESPONSE PLAN

EOCWD has developed an overflow Emergency Response Plan that identifies measures to protect public health and the environment. In addition, EOCWD is part of the Countywide Area Spill Control (CASC) Program for additional support on containment and cleanup in the flood control channels.

7.1 Compliance Summary

EOCWD also maintains an SSO ERP which is updated as needed by the Operations Superintendent and reviewed and approved by the General Manager. SOPs are also updated by the Operations Superintendent for Emergency Response for SSOs and Spill Containment. SOPs for notification are updated as needed by the Operations staff and approved by the Operations Superintendent. The SSO ERP includes, but is not limited to the following items:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure appropriate response to all overflows;
- (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g., health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State. All SSOs are reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the ERP and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

Note: SSO sampling, if conducted, is performed by the OCHCA. In some instances, OCHCA may request that EOCWD conduct sampling. The first responders from the Environmental Compliance Division carry equipment to collect samples if necessary.

OCSO maintains an SSO response training facility that safely simulates (by using potable water) an SSO on a typical city street and allows staff to prepare for the real event, from initial notification to SSO report documentation; this facility is open to EOCWD for training. **Appendix R** of Volume II contains guidance for calculating SSO volumes and training for the SSO simulation. Ongoing

training (first responders and shop tailgate meetings) occur monthly, and staff is trained in traffic control every two years.

7.2 Compliance Documents

The compliance documents are as follows:

- SSO Emergency Response Flow Chart (**Appendix P1**);
- Environmental Compliance SSO Response Procedure (**Appendix P2**);
- SSO Notification Procedures (**Appendix P3**);
- SSO Emergency Response Plan (**Appendix Q**);
- SOPs for SSO Emergency Response and Spill Containment;
- Risk Management Program (**Appendix S**)

7.3 Roles and Responsibilities

Information on the positions, roles, and responsibilities is included in the documents listed above and **Appendix C**.

CHAPTER 8 – FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

Prior to implementation of the FOG Control Program, OCSD contracted the services of a consultant to conduct a study to establish the building blocks for an effective FOG source control program. The study, known as the Phase I Report (available from OCSD's Environmental Compliance Division) was completed in July 2003 per the Regional Board 8 WDR Order. The report presented twelve potential building blocks along with a draft ordinance which eventually served as the blueprint for OCSD's FOG Control Program as well as the countywide FOG control effort executed through OCSD's satellite cities and sewer agencies.

In order to limit the discharge of FOG and other debris that may cause sewer collection system blockages or SSOs, and in compliance with the SWRCB Order No. 2006-0003-DWQ Order, adopted May 2, 2006, EOCWD has prepared and implemented the following elements into their FOG Control Program effort:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- (b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- (d) Requirements to install GRD (such as traps or interceptors) design standards for the GRDs, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether EOCWD has sufficient staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section (EOCWD's Collection Facilities O&M Division of the Facilities Support Services Department is responsible for maintenance scheduling); and
- (g) Development and implementation of source control measures, for all sources of FOG discharged to the sanitary sewer system, for each section identified in (f) above.

8.1 Compliance Summary

To address the WDR Order, EOCWD passed a FOG Ordinance (**Appendix E1**) to establish the legal authority to prohibit Food Service Establishments from discharging FOG to the sewer system. The Ordinance for Wastewater Discharge Regulations (**Appendix E2**) provides the uniform requirements for users of EOCWD's facilities. The resolution to establish fees for the FOG Program is included in **Appendix E3**. In addition, EOCWD assembled a model FOG source

control program using the building block components identified in the Phase I Report, and developed an enforcement management system to resolve noncompliance issues in a fair and consistent manner. For a detailed discussion of the program and its development see “Fats, Oils, and Grease Source Control Program and Enforcement Management System,” **Appendix F** and “Basis for Program Development, Program Components, and Policies,” **Appendix G1** in SSMP Volume II.

Based on recommendations from the Phase I report, OCSD also retained a contractor to conduct an additional study to field test three newer FOG control technologies (additives, nonconventional grease traps, and interceptor monitoring devices) to determine whether these technologies are effective and should be used in FOG control programs. The Phase II Report, published in March 2006, concluded that these technologies might be useful in instances where a below ground interceptor was not practical. However, all of the studied control technologies had their limitations and would require extensive maintenance and/or follow-up to remain effective over the long haul. To date, none have been incorporated into OCSD’s or EOCWD’s FOG control strategy.

EOCWD shares overlapping operational jurisdiction with the cities of Tustin and Orange and the County of Orange. In general, EOCWD owns and maintains the smaller laterals. Subsequently, EOCWD has focused its commercial and residential FOG control efforts in the Tustin area where it assumes principal responsibility.

As of May 2006, each satellite city or sewer agency was required to comply with the statewide Order. As a consequence, each satellite developed and implemented a FOG control program that suited its individual conditions and needs. Though the specifics vary, the programs generally follow the basic approach of prohibiting FOG discharges and mandating the use of kitchen BMPs at the FSEs in their jurisdictions. **Appendix G3** summarizes the program elements implemented by the various satellite cities and sewer agencies and provides a contact list for each agency and city.

EOCWD participates along with 13 other satellite cities and agencies in an agreement with OCHCA, to expand the normal FSE health inspection protocols to include FOG control elements. These inspections consist of providing FOG control literature to the FSEs as well as generating a list of noncompliance observations on a number of program elements including the presence of a garbage disposal, missing drain screens, grease disposal records, missing signage, improper FOG disposal, missing grease recycling container, and lack of BMP training records. OCHCA efforts on behalf of the participants do not include enforcement or follow-up for noncompliance, or grease trap monitoring.

The following cities and sewer agencies participate, along with EOCWD, in the OCHCA FSE inspection program as part of their FOG control strategy. The OCHCA inspection agreement is included in SSMP Volume II, **Appendix G2**.

Satellite cities and agencies not shown on this list manage their own FOG programs and are also subject to EOCWD’s Legal Authority provisions.

Anaheim	Orange	Villa Park
Buena Park	Placentia	Yorba Linda
East Orange County Water District	Santa Ana	Yorba Linda Water District**
Costa Mesa Sanitary District	Sunset Beach Sanitary District*	** (now owns all sewer assets in the city of Yorba Linda)
Fountain Valley	*(now part of Huntington Beach)	
La Habra		
Midway City Sanitary District		

8.2 Compliance Documents

- FOG Ordinance (**Appendix E1**)
- The Ordinance for Wastewater Discharge Regulations (**Appendix E2**)
- The resolution to establish fees for the FOG Program (**Appendix E3**)
- FOG Source Control Program and Enforcement Management System (**Appendix F**)
- FOG Source Control Program, Basis for Program Development, Program Components and Policies (**Appendix G1**)
- FOG Control Study, Phase I and Phase II Report (located in the Environmental Compliance Division)
- Agreement for Provision of Environmental Health Services Between County of Orange and Orange County Sanitation District (**Appendix G2**)

8.3 Roles and Responsibilities

EOCWD’s Collection Facilities Division has a program to identify sections of the collection system subject to blockages, and a schedule for trouble-spot cleaning as part of the preventive maintenance program. The review of existing FOG trouble-spot conditions is a continuous process conducted as part of the cleaning program. Trouble-spots that can be attributed to FOG are reported to the Operations Superintendent for assignment for investigation and mitigation. Procedures were collaboratively developed by the Collection Facilities and Environmental Compliance staff to ensure the timely reporting of trouble-spot modifications such as the discovery of a new FOG trouble-spot or a change in the maintenance frequency of an existing site. In turn, the Environmental Compliance Division forwards information related to the investigation and mitigation of FOG-related trouble-spots back to the Collections Facilities O&M Division so the appropriate adjustments can be made to the cleaning activities at that location.

EOCWD’s Environmental Compliance Division is responsible for reviewing and updating the FOG Source Control Program and Enforcement Management System as the program evolves.

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CHAPTER 9 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

EOCWD has prepared and implemented a CIP that provides hydraulic capacity of key sewer system elements under peak flow conditions, as well as the appropriate design for storm or wet weather events. At a minimum, the plan includes the following:

- (a) **Evaluation:** The portions of the collection system that could experience or contribute to an SSO discharge caused by hydraulic deficiency have been identified by the OCSD Engineering Department's 2009 Facilities Master Plan, which was produced and adopted in December 2009 using the OCSD "Hydraulic Model" program. Included in the evaluation are estimates of peak flows (including from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity), and the major sources that contribute to the peak flows associated with overflow events.;
- (b) **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in "a" above to establish appropriate design criteria;
- (c) **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules;
- (d) **Schedule:** EOCWD shall develop a schedule of completion dates for all portions of the CIP 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.

9.1 Compliance Summary

EOCWD has an established CIP that includes the following:

- **Evaluation:** The portions of the collection system that could experience or contribute to an SSO discharge caused by hydraulic deficiency have been identified by the Engineering Department's 2009 Facilities Master Plan, which was produced and adopted in December 2009 using the EOCWD "Hydraulic Model" program. Included in the evaluation are estimates of peak flows (including from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity), and the major sources that contribute to the peak flows associated with overflow events.
- **Capacity Enhancement Measures:** EOCWD has established a short- and long-term CIP to address identified hydraulic deficiencies. The CIP includes project cost estimates, project prioritization, alternatives analysis, and construction schedules.

- **Plan Updates:** This CIP plan is updated annually by the Engineering Planning Division. The updates describe any significant changes in proposed actions and/or implementation schedules, and will include information on the performance of measures that have been implemented.

EOCWD has design standards and guidelines to ensure adequate capacity. EOCWD's CIP assures that older facilities are upgraded as needed to ensure adequate capacity through the system. These programs are formally addressed and described more extensively in the Capacity Evaluation Plan, which was submitted on April 24, 2009, and is included as **Appendix M**.

EOCWD works under annual and long-range plans that have proven effective. Indications of possible capacity problems seen by the Collections Facilities Division are brought to the attention of the District Engineer for further evaluation.

9.2 Compliance Documents

The documents used for system evaluation and capacity assurance are as follows:

- Monthly SSO Reports
- Source Control Annual Report
- Flow Data
- Annual Asset Management Plan
- System Evaluation and Capacity Assurance Plan (**Appendix M**)
- FY 2010 - 2012 Budget, adopted June 2010 (This document contains the sewer system's Capital Improvement Program.);
- EOCWD Facilities Master Plan, adopted December 2009 (This document contains the latest capacity evaluation for the sewer system.);
- Capital Improvements Plans (updated annually since 1948; these are contained in EOCWD's annual Budget Book, Section 8, Capital Improvement Program.)
- Computerized Maintenance Management System Database

9.3 Roles and Responsibilities

The CIP development, including capacity assurance, implementation, and update, are the responsibility of District Engineer. Information on the CIP budget process and the roles and responsibilities of each department are included in **Appendix U**.

CHAPTER 10 – MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This chapter describes EOCWD measures and activities.

- (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 preventive maintenance program;
- (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
- (e) Identify and illustrate SSO trends, including: frequency, location, and volume.

10.1 Compliance Summary

OCSD has been reporting and keeping statistics on all SSOs for over a decade, and has been monitoring some nationwide statistics. Although some elements of the measurement portion of the program have not yet been developed, they will likely include an SSO-trending metric in the future.

EOCWD utilizes the State of California's CIWQS database and mapping to track and illustrate trends of SSOs. EOCWD identifies the root cause of an SSO, such as structural problems, capacity, type of debris, pumping facility component failure as these and other indicators are of value in monitoring the effectiveness of the program and making improvements. If necessary, projects will be developed to rehabilitate or replace system components based on sound asset management decisions.

EOCWD has identified desired levels of service in our Board-adopted Strategic Plan related to sewer spills, when they do occur:

- < 2.1 Sanitary sewer spills per 100 miles
- Contain sanitary sewer spills within 5 hours
- Respond to collection system spills within ½ hour

In addition, Safety goals are established for each employee and include required training, documentation of safety incidences in a timely manner, inspections of work areas on a quarterly basis, and regular reporting of near-miss incidents. All EOCWD staff are part of this program. In the event the safety metrics or EOCWD levels of service are altered, the Collection Facilities Division will utilize the most current goals.

EOCWD monitors the implementation effectiveness of the SSMP elements through review at EOCWD stakeholder meetings. EOCWD will also work to ensure that EOCWD remains in

compliance with the WDR and make changes and updates to its SSMP, as necessary, based on audit evaluations.

10.2 Compliance Documents

The documents used for monitoring, measurement, and program modification requirements are as follows:

- Sewer System Management Plan
- Flow Data
- EOCWD Asset Management Plan
- Monthly SSO Reports and Maps of Spills
- Current SEDARU database showing work planned, completed and findings
- EOCWD GIS

10.3 Roles and Responsibilities

The Environmental Compliance Division has responsibility for the SSO reporting process, record keeping, internal audits, and updating the reporting procedures. Other roles are as follows:

- Sewer Level of Service – Collection Facilities Division
- WDR Stakeholder Team
- WDR and SSMP Internal Audit Oversight
- EOCWD Asset Management Team

CHAPTER 11 – PROGRAM AUDITS

As part of the SSMP, the EOCWD shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the EOCWD's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

Further clarification by the State Water Board about audit frequency includes:

The SSMP requires that each enrollee conduct an internal audit of their SSMP every two years due by the anniversary date that the enrollee's governing body approved the SSMP. It is permissible for an enrollee to conduct their internal audit earlier than their anniversary date. If an audit is conducted early the date that the audit is due is still based upon the anniversary date and not the date the last audit was completed.

Although the internal audit does not have to be submitted to the state it is recommended that it be placed in the enrollee's SSMP and may be requested by the SWRCB or the Regional Board at any time. In fact, the SWRCB is routinely requesting a copy of the internal audit to assist them in selecting possible enrollees for inspection and audit.

11.1 Compliance Summary

EOCWD has an internal audit program that covers the WDR and its elements. EOCWD's General Manager hires a third party auditor to conduct repeating agency-wide audits. Strategies to correct deficiencies, if identified, will be developed by EOCWD's WDR stakeholders.

EOCWD meets with their satellite cities and agencies and discusses collaborative auditing approaches, training, and lessons-learned, pending the availability of resources.

11.2 Compliance Documents

The documents used for audit evaluations include the following:

- EOCWD Environmental Auditing Program Procedures Manual (**Appendix X1**)
- EOCWD Internal Audit Finding Forms(**Appendix X2**)

11.3 Roles and Responsibilities

The positions, roles, and responsibilities of the audit staff are as follows:

EOCWD internal environmental audits are conducted following guidelines established in the "Environmental Audit Program Guidance Manual." Audits are conducted by 1) a certified environmental auditor or 2) an individual who can demonstrate sufficient expertise in the field being audited. The General Manager has the responsibility of hiring a third party to conduct the audits. Deficiencies identified as a result of the audit are brought to the attention of each responsible EOCWD stakeholder. Deficiencies and suggested corrective actions are identified, verified, and

documented by the third party auditor using the Audit Finding Form and posted on the EOCWD internal website under Environmental Compliance, ECAP, and Environmental Auditing. The WDR Subject Matter Expert is responsible for following up with WDR stakeholders to close the findings and document in the EOCWD internal website.

CHAPTER 12 – COMMUNICATION PROGRAM

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

EOCWD shall also regularly communicate with agencies that are tributary and/or satellite to EOCWD's sanitary sewer collection system.

12.1 Compliance Summary

EOCWD will communicate on a regular basis with interested parties on the implementation and performance of this SSMP. The communication program allows interested parties to provide input as the program is developed and implemented.

EOCWD has complied with this requirement through hosting numerous meetings, presentations, workshops, utilizing EOCWD's website and social media tools as a resource for disseminating information. EOCWD staff and local city/agency staff meet routinely as part of the OCSD WDR Steering Committee and the OCSD WDR General Group.

12.2 Compliance Documents

Information regarding the WDR/SSMP can be found on EOCWD's website at the following address <http://www.eocwd.com>. Moreover, the website offers reports on documents available as viewable and/or downloadable documents: the entire site is searchable and reports can be accessed by utilizing the key word "WDR." A sample screen from the website is included as **Appendix V**.

12.3 Roles and Responsibilities

EOCWD's Public Affairs Division will continue with its commitment to communicate regularly with and allow input from interested parties on the development, implementation, and performance of its SSMP. EOCWD communicates with its constituents by continually updating and improving the information on the EOCWD website.

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SUMMARY OF WATER ASSETS & TRAINING SUPPORTING SEWER OPERATIONS

1. FIELD EQUIPMENT

- Backhoes (2)
- Dump Truck (1)
- Service Truck w/500 lb. winch
- Trailer mounted vacuum (assist with small spills/narrow streets – also used for potholing and small excavations)
- Jackhammers (2) – 90 lb.
- Pneumatic Compaction Tool (1)
- Portable Compressor (1) – 75 HP
- Clay Spade (1) – 40 lb
- Gas Powered Cut-Off Saw (1)
- Confined Space Ventilation Fan (1)
- Portable Generators (5 – (1) 3000W, (1) 6500W, (2) 150 KVA, (1) 125 KVA)
- Locating Equipment (Acoustic and Metallic)
- Sand, Base, Coldmix – stored on site

2. SAFETY EQUIPMENT

- Gas Detectors (2)
- Tripod w/winch (2)
- Safety Harness (3)
- 2-Way Radios (6)
- Ham (Amateur) Radios (5) (All field employees, Superintendent and General Manager have Ham Licenses)
- Traffic Control Signs/Paddles/Cones/Candlesticks (numerous)
- Arrow Board (Trailer Mounted with solar power and battery backup)
- Road Plates (3)
- Personal Protective Equipment (carried on every vehicle)

3. TRAINING

- Confined Space (scheduled for Confined Space Rescue Training)
- Shoring
- Backhoe Operation
- Traffic Control
- Field Ergonomics & Workplace Safety for Water & Wastewater
- Underground Service Alert
- Defensive Driver
- Cross Connection Control
- CPR/First Aid
- Alert OC (Emergency Preparedness/NIMS/SIMS)



September 3, 2013

Ms. Lisa Ohlund
 General Manager
 East Orange County Water District
 185 N McPherson Rd
 Orange, CA 92869

Subject: Orange County Sanitation District (OCWD) Collection Area 7

Dear Lisa,

This letter is written in reference to the investigation and evaluation of the subject mentioned sewer service area which includes lands within the City of Tustin, unincorporated areas of Orange County and portions of El Modena. Richard Brady & Associates (BRADY) performed a review the existing infrastructure, trouble areas, easement issues, and projected capital improvement program to detect “fatal flaws” if any within the system. We have reviewed all records provided by OCSD and offer the following:

The service area in question has been well maintained and is well documented. OCSD has maintained Collection Area 7 in a manner that meets or exceeds recognized industry standards. The system is well documented with current sewer service mapping, GIS and GPS layers for pipeline, manhole location, easements, syphon etc. The 170 mile collection system is gravity fed with pipelines ranging from 6” – 12” with the vast majority being 8” in diameter, as presented in Table 1 below.

Table 1: Pipeline Lengths and Diameters

Pipeline Diameter	Total Length (in feet)
6-inch	2,500
8-inch	850,000
10-inch	31,000
12-inch	26,000

The approximant breakdown of the collection system pipeline (per location) is as follows (please see attached map):

- 114 miles of pipe within Unincorporated Orange County
- 52 miles within the City of Tustin
- 4 miles within El Modena

The system is currently cleaned by outside contract service every 12 months which may be too frequent considering only one spill has been reported each of the past two years. Trouble areas, such as restaurants, strip-malls, and large housing areas are cleaned more frequently ranging from 5 weeks at one location but on an average quarterly which appears appropriate. Closed Circuit Cameras have been used to document the

BRADY

entire service area. OCSD staff has repaired all locations that were discovered during CCTV inspection with no outstanding repairs noted.

Upon review of OCSD's annual CIP request, no projects were requested within this service district. We interviewed key OCSD staff and questioned why no projects were listed or requested; the clear answer was that "there is nothing needed at this time".

We also inquired as to whether there were any major construction projects, planned developments, or freeway projects that would cause any relocation or expansion of the system within the near future, staff was not aware of any. As a precaution, we also reviewed the Urban Water Management Plan for the City of Tustin and found no large projects or redevelopment planned that would affect this service area.

We have also conducted site visits via Google Earth of all documented trouble spots and find the majority of the locations where they would be expected, in high-density housing, restaurants, strip-malls or schools. One "trouble spot/location" merits further investigation, TS63, Crawford Cyn Rd. and Daniger Rd. This location requires cleaning every five weeks and is located within a residential community, mostly large single family homes with ranch size lots. This trouble location should be cleaned and CCTV'd with results of the inspection given to your agency before the collection system is considered for annexation. Our site visit shows a large amount of trees within this area that may be the reason for this trouble spot.

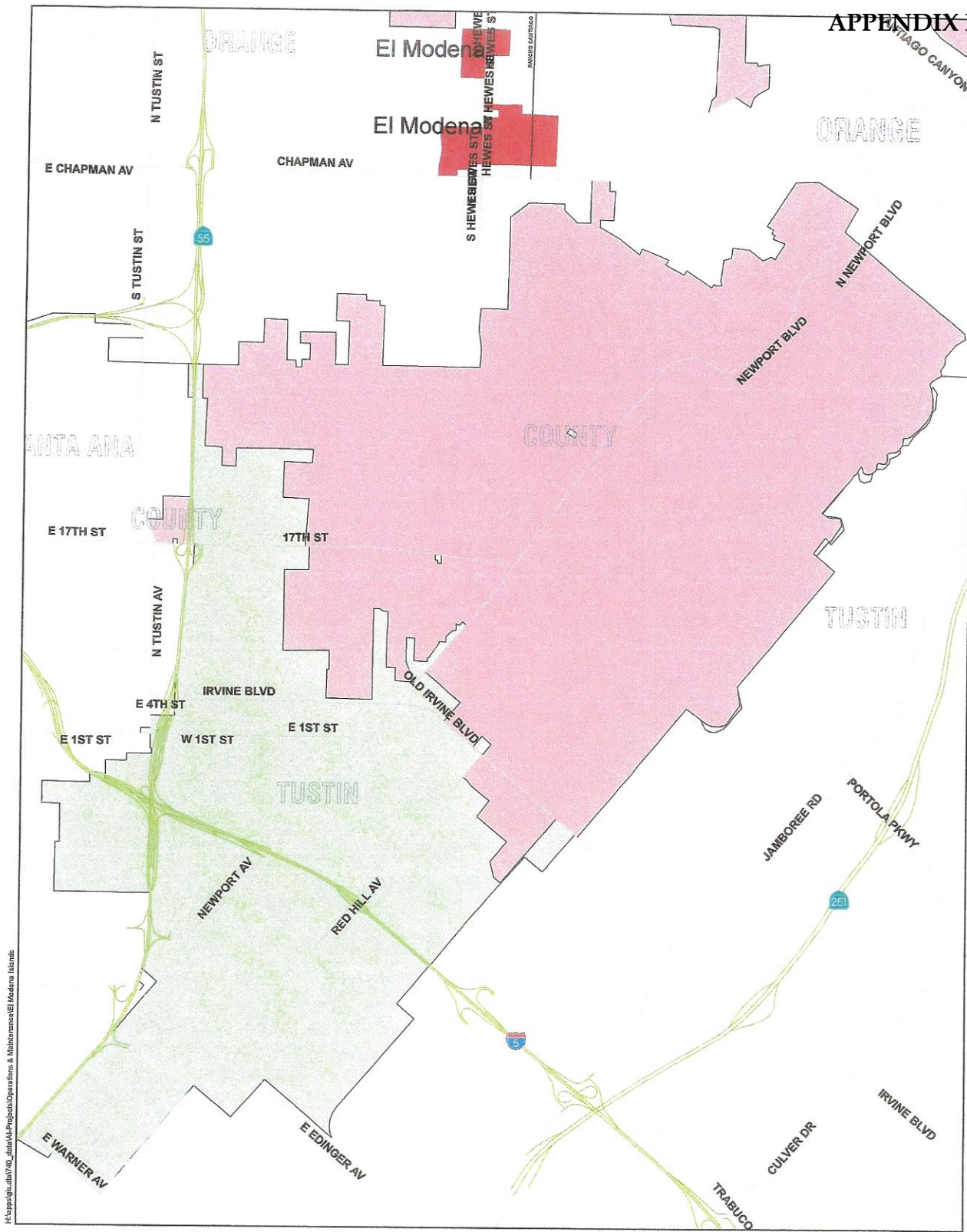
In closing, the collection system in question appears to be well constructed and maintained. If you have any questions or concerns, please do not hesitate to call me at (714) 375-6642.

Sincerely,



Howard Johnson
Vice President

Attachment(s):
Service Area Map
OCSD listing of Trouble Spots/Locations



Mapping: jia1700_data\GIS\Projects\Operations & Maintenance\El Modena.bimns

TUSTIN AND UNINCORPORATED AREAS IN SERVICE AREA 7



Disclaimer: Map prepared by Orange County Sanitation District. This map is intended for graphical representation only. No level of accuracy is claimed for the base mapping shown hereon and graphics should not be used to obtain coordinate values, bearings or distances. Portions of this derived product contain geographical information copyrighted by Thomas Brothers. All Rights Reserved.

Source: OCSD GIS Data, Thomas Brothers 2002.
 Updated: 09/16/2009

	El Modena
	UnIncorporated
	City of Tustin



TROUBLE SPOTS
Sign Book With Completed Date & Initial

TROUBLE SPOTS / LOCATION		Maint Code	Station	Map Page	Station	Freq (Wks)	Package	Size
CITY OF TUSTIN								
1	TS05) OLWYN TO REDHILL	CSUNT20T	SUN0315-0960	3847	SUN0315-0095	52	1222	8
2	TS07) MYRTLE TO NEWPORT SYCAMORE (Both Sides Of The Street)	CREDIT01T	REDD0145-0060	4044	REDD0115-0085	10	4680	8, 10
3	TS08) SYCAMORE REDHILL	CREDIT03T	REDD0135-0045	4044	REDD0135-0000	12	2633	8
4	TS09) CENTENNIAL TO NEWPORT	CSUNT701T	REDD0267-0065	3845	REDD0267-0000	12	2610	8
5	TS10) REDHILL EDINGER (Easement)	CREDIT04T	REDD0125-0030	4245	REDD0125-0000	8	282	8
6	TS11) HIDDEN HILLS / ROYAL OAK / FALLENLEAF	CHAT700T	HAT0080-0125	4246	HAT0080-0000	8	1249	8
7	TS12) REDHILL OCFCD	CREDIT20T	REDD0125-0020	4145	REDD0125-0000	52	912	8
8	TS14) ENDERLE YORBA TO PROSPECT	CREDIT00T	REDD0380-0075	3645	REDD0380-0000	7	3367	8
9	TS16) SAN JUAN REDHILL (Between Redhill & Tustin, E. Dr.)	CSUNT05T	SUN0315-0515	4047	SUN0315-0480	8	1620	8
10	TS17) TUSTIN EAST TO BROWNING	CHATU01T	HAT0180-0045	4047	HAT0180-0000	12	2154	8
11	TS18) REDHILL NISSON (Easement)	CSUNT06T	SUN0315-0270	4046	SUN0315-0015	8	969	8
12	TS19) TUSTIN VILLAGE WAY	CREDIT07T	REDD0120-0705	3944	REDD0120-0385	12	3338	8
13	TS22) EL CAMINO REAL TO REDHILL (By School)	CSUNT08T	SUN0315-0385	3946	SUN0315-3995	13	5297	8
14	TS24) FIRST PROSPECT	CREDIT10T	REDD0275-0020	3846	REDD0275-0000	13	600	8
15	TS25) OLD IRVINE TO REDHILL	CSUNT11T	SUN0315-1155	3847	SUN0315-0110	8	3076	8

TROUBLE SPOTS
Sign Book With Completed Date & Initial

Trouble Spots / Location	Maint Code	Station	Map Page	Station	Freq (MHz)	Footage	Size
TS27) NEWPORT FIRST	CSUNT13T	SUN0400-0105	3846	SUN0400-0015	8	477	8
TS28) NEWPORT EL CAMINO REAL	CSUNT14T	SUN0315-0425	3945	SUN0315-0350	8	1411	8
TS34) LARINDA MALENA, ANGLIN AND GROVESTE ESMNT <i>(Last Section Night Job)</i>	CREDIT02T	RED0395-0245	3645	RED0395-0020	8	1931	8
TS35) LAURINDA 17 TH ST <i>(Every 6 Months)</i>	CREDIT15T	RED0395-0020	3645	RED0395-0000	26	998	8
TS36) PROSPECT LOMA VISTA SCHOOL	CREDU02T	RED0410-0005	3646	RED0410-0000	15	182	8
TS38) 17 TH CARROL WAY <i>(Needs Traffic Control or Night Job)</i>	CREDIT17T	RED0390-0740	3645	RED0390-0025	8	684	8
TS41) WALNUT MC FADDEN	CREDU03T	RED0145-0155	4045	RED0145-0045	8	1442	8, 10
TS47) PARKWAY LOOP	CREDIT19T	RED0105-0060	4245	RED0105-0000	30	1712	8, 10
TS54) MAIN AND C ST	CRED707T	RED0240-0025	3945	RED0240-0015	26	621	8
TS56) FIRST AND CHARLOMA	CSUNT708T	SUN0315-0845	3846	SUN0315-0080	16	2532	8
DISTRICT NO. 7							
TS39) CRAWFORD CANYON <i>(OC MINING Co.) (Needs Traffic Control or Night Job)</i>	CREDIT18T	RED0625-0440	3348	RED0625-0030	8	755	8
TS42) FOX RUN	CSUNNU04T	SUN0430-0500	3351	SUN0430-0490	13	616	8
TS44) OVERHILL MIRALARGO	CHATU05T	HAT0000-0585	3551	HAT0000-0575	13	256	8
TS63) CRAWFORD CYN RD. AND DANIGER RD.	CSUNNU07T	SUN0430-0275	3449	SUN0430-0230	5	450	8

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**FIRST AMENDMENT TO
LOCAL SEWER FACILITIES
TRANSFER AGREEMENT**

THIS FIRST AMENDMENT TO LOCAL SEWER FACILITIES TRANSFER AGREEMENT ("Agreement") is made this 22nd day of April, 2015 ("Effective Date") by and between the ORANGE COUNTY SANITATION DISTRICT ("OCSD"), a duly organized County Sanitation District existing pursuant to California Health and Safety Code section 47000 *et seq.*, and the EAST ORANGE COUNTY WATER DISTRICT ("EOCWD"), a duly organized County Water District existing pursuant to California Water Code section 30000 *et seq.* OCSD and EOCWD are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as "Parties".

RECITALS

WHEREAS, OCSD and EOCWD are Parties to that certain "Local Sewer Facilities Transfer Agreement," dated February 27, 2014 ("the Agreement"), in which the Parties set forth their intent to cooperate in the transfer of ownership in and the assumption of responsibility for certain local sewer facilities from OCSD to EOCWD; and

WHEREAS, the transfer process requires the approval of the Orange County Local Agency Formation Commission ("LAFCO"), and, although that process commenced in a timely manner, the LAFCO process has taken longer than the Parties anticipated; and

WHEREAS, the Parties therefore desire to amend the Agreement to extend the timelines and termination date to reflect the current status of the LAFCO process; and

WHEREAS, the Agreement provides for two disbursements of Annual Sewer Service User Fee reserves from OCSD to EOCWD, totaling \$25 million; and

WHEREAS, the Parties desire to amend the Agreement to provide for a single disbursement of the \$25 million Annual Service User Fee reserves from OCSD to EOCWD; and

WHEREAS, the Agreement does not address the diversion of wastewater from Service Area 7; and

WHEREAS, the Parties desire to amend the Agreement to prohibit the diversion of wastewater by EOCWD from Service Area 7.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties agree as follows:

1. Extension of Timelines. In order to reflect the changed circumstances with regard to the timeline for completion of the transfer, "December 1, 2014" in subsections 2.a. and 3.d. shall be amended to read "December 31, 2015"; and "July 1, 2015" and "2014-2015 Fiscal Year" in subsection 3.f.i. shall be amended to read, respectively, "July 1, 2016" and "2015-2016 Fiscal Year."

2. Amendment to Section 4.

i. Subsection 4.d. shall be amended to read as follows:

d. Within five (5) business days following the Date of Reorganization, OCSD shall transfer to EOCWD \$25,000,000.00 (twenty-five million dollars) via wire transfer of the Annual Sewer Service User Fee reserves attributable to the Local Sewer Facilities ("Disbursement").

ii. Subsections 4.e., 4.f., 4.g., 4.h. and 4.i. shall be deleted in entirety.

iii. New subsection 4.e. shall be added to read as follows:

e. If, prior to the Date of Reorganization, OCSD identifies the need for a major repair or replacement of the Local Sewer Facilities, and after notifying EOCWD of the identified need, OCSD conducts such major repair or replacement, the amount of reserves transferred with the Disbursement shall be reduced by the amount of costs incurred by OCSD in connection with the required work.

iv. New subsection 4.f. shall be added to read as follows:

f. Within six (6) months following the date of Disbursement, OCSD shall reconcile its records and transfer to EOCWD the remainder of the Annual Sewer Service User Fee reserves in its possession, if any, attributable to the Local Sewer Facilities.

v. Subsections 4.j. and 4.k. shall be renumbered as 4.g. and 4.h. respectively.

3. Amendment to Section 6. Section 6 shall be amended to read as follows:

6. Term. This Agreement shall commence on the Effective Date and continue in full force and effect through December 31, 2015. The Parties may mutually agree in writing to extend the term of this Agreement. The Agreement shall automatically terminate if LAFCO disapproves the Proposal.

4. New Section 20. New Section 20 shall be added to read as follows:

20. Prohibition on Diversion of Wastewater. OCSD has planned and constructed regional conveyance and treatment facilities to serve Service Area 7. OCSD is contractually obligated to provide treated wastewater effluent from its entire service area, inclusive of Service Area 7, to Orange County Water District. EOCWD agrees that all parcels in Service Area 7 shall continue to be customers of OCSD, and that all wastewater flows from these parcels will continue to flow to OCSD for treatment. EOCWD shall not divert wastewater away from OCSD for any purpose, including but not limited to scalping wastewater for reuse.

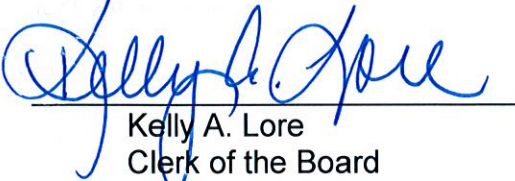
IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the dates set forth below.

ORANGE COUNTY SANITATION DISTRICT

By 
James D. Herberg
General Manager

Date 04/23/2015

ATTEST:


Kelly A. Lore
Clerk of the Board

APPROVED AS TO FORM:


Brad Rogin
General Counsel

EAST ORANGE COUNTY WATER DISTRICT

By 
Lisa Ohlund
General Manager

Date 4/30/15

ATTEST:

APPROVED AS TO FORM:


John Bakker
Special Counsel

**LOCAL SEWER FACILITIES
TRANSFER AGREEMENT**

THIS LOCAL SEWER FACILITIES TRANSFER AGREEMENT ("Agreement") is made this 21st day of February, 2014 ("Effective Date") by and between the ORANGE COUNTY SANITATION DISTRICT ("OCSD"), a duly organized County Sanitation District existing pursuant to California Health and Safety Code section 47000 *et seq.*, and the EAST ORANGE COUNTY WATER DISTRICT ("EOCWD"), a duly organized County Water District existing pursuant to California Water Code section 30000 *et seq.* OCSD and EOCWD are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as "Parties".

RECITALS

WHEREAS, OCSD owns and operates regional wastewater collection, conveyance, treatment, and disposal facilities within its 471 square mile service area;

WHEREAS, OCSD owns and operates the local wastewater collection and conveyance system, encompassing approximately 174 linear miles of sewer lines and serving more than 18,000 connections, within the area known as Service Area 7, which area is more particularly identified in Exhibit "A" attached hereto and incorporated herein by reference;

WHEREAS, OCSD desires to transfer to EOCWD: (a) its ownership of certain local sanitary sewer lines and appurtenant facilities located in Service Area 7 ("Local Sewer Facilities"), which are more particularly described and delineated in attachments 1 and 2 of Exhibit "B" attached hereto and incorporated herein by reference, and (b) the responsibility for providing local sewer service to Service Area 7;

WHEREAS, EOCWD desires to acquire ownership and assume responsibility for the Local Sewer Facilities and to accept responsibility for providing local sewer service to Service Area 7;

WHEREAS, the transfer of ownership in and the assumption of responsibility for the Local Sewer Facilities to EOCWD will require the approval of the Orange County Local Agency Formation Commission ("LAFCO"); and

WHEREAS, following the transfer to EOCWD of the Local Sewer Facilities, OCSD shall retain its power to provide regional sewer service within the entirety of Service Area 7.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the Parties agree as follows:

1. Recitals. The recitals set forth above are true and correct and are incorporated into this Agreement.

2. Cooperation.

a. OCSD and EOCWD shall work cooperatively to complete the successful transfer from OCSD to EOCWD of the Local Sewer Facilities and the assumption of responsibility for ongoing operation and maintenance of the Local Sewer Facilities by EOCWD by no later than December 1, 2014. Both Parties shall execute any further documents consistent with the terms of this Agreement, including documents in recordable form, necessary or appropriate to fulfill the obligations imposed by this Agreement.

3. LAFCO Proposal.

a. *Initiation of Proceedings*. EOCWD shall, within one month (30 days) from the Effective Date, initiate proceedings under the Cortese-Knox-Herzberg Local Government Reorganization Act of 2000, as amended, Government Code section 56000, *et seq.*, requesting LAFCO approval of a reorganization proposal (the "Proposal"). The resolution of application enacted by EOCWD and submitted to LAFCO shall propose that LAFCO's approval of the Proposal shall be subject to the terms and conditions of this Agreement. EOCWD shall be solely responsible for the direct costs incurred in connection with the initiation and processing of the Proposal, and LAFCO approval thereof, including without limitation any LAFCO deposits, application or processing fees, and the cost of preparing any legal descriptions, boundary surveys or maps. The Proposal shall consist of the following:

i. The annexation of certain territory within Service Area 7 that is not within the current boundaries of EOCWD; and

ii. A proposal by EOCWD to provide a new or different service – "local" sewer service – within the entirety of Service Area 7.

b. *Public Outreach*. EOCWD desires to proactively inform the ratepayers within Service Area 7, and the general public, of the Proposal and the process for implementing it, including opportunities for public involvement. In furtherance of that desire, OCSD agrees to provide EOCWD with a mailing list of the property owners in Service Area 7 (consistent with the format used for Proposition 218 notifications) in an Excel spreadsheet or an Access compatible (SQL) database format within 30 days of EOCWD's submittal of an application to LAFCO. In the written materials, EOCWD shall accurately and fairly describe the

proposal and may indicate that the Proposal is jointly proposed and supported by EOCWD and OCSD. EOCWD shall provide OCSD an opportunity to review and approve the written material it intends to mail to the property owners in Service Area 7 prior to such mailing. OCSD shall approve, or request changes to, the written materials within ten days of receipt. If OCSD fails to approve or request revisions within 10 days, it shall be deemed to have approved the materials. OCSD shall approve, or request changes to, revised written materials that incorporate or respond to OCSD's requests for changes within 5 days of receipt, or the materials shall be deemed approved. All costs of producing such material and mailing it will be paid by EOCWD.

c. *Letter of Support.* OCSD shall cooperate with EOCWD and use its best efforts to support the Proposal in accordance with the terms of this Agreement. OCSD shall, within 45 days of EOCWD's filing of the Proposal with LAFCO, file with LAFCO a formal Letter of Support in favor of the Proposal executed by the General Manager ("Letter of Support"). The Letter of Support shall propose that LAFCO's approval of the Proposal shall be subject to the terms and conditions of this Agreement. OCSD shall execute such documents and take such other actions to support and facilitate the processing of the Proposal as may be reasonably requested by EOCWD, provided such actions shall not result in any cost or expense to OCSD (other than overhead and employee staff time).

d. *Continuing Support for Proposal.* The Parties agree to support and not oppose the Proposal before and after it is initiated. Specifically, OCSD and EOCWD will cooperate and consult with one another in responding to questions and inquiries from LAFCO, the public and the press, appear in support of the Proposal at LAFCO hearings, and cooperate on a joint response in the event that LAFCO or LAFCO staff propose to alter the Proposal. Furthermore, OCSD agrees that, prior to December 1, 2014, or such earlier time as the LAFCO proceedings have been completed or disapproved, it will not engage in negotiations with other entities regarding the transfer of the Local Sewer Facilities. Both Parties shall support the conditioning of LAFCO's approval of the Proposal on the performance of the terms and conditions of this Agreement. If LAFCO or LAFCO staff propose an alteration to the Proposal that materially diverges from the terms and conditions of this Agreement, either Party may, after consultation with the other Party, oppose the alteration, and if necessary, withdraw its support, and actively oppose LAFCO's approval of the Proposal.

e. *Tax Exchange Negotiations and Consultations.* The Parties shall cooperate in seeking to have the Board of Supervisors adopt a property tax exchange resolution pursuant to Revenue and Taxation Code section 99 exchanging property tax from OCSD to EOCWD. The Parties agree that in the tax exchange negotiation and consultation process they will jointly support and advocate for having all of the property tax associated with the Local Sewer Facilities be exchanged from OCSD to EOCWD. In Fiscal Year 2012-2013, the

estimated property tax collected for the local sewers was \$287,000.00 (two hundred eighty seven thousand dollars).

f. *Local Sewer Service User Fee.*

i. OCSD's Annual Local Sewer Service User Fee ("the Fee") shall be continued and following the effective date, to the extent feasible, shall be collected by EOCWD rather than by OCSD. OCSD collects the Fee by reporting it to the County of Orange, which collects it on the property tax roll, and EOCWD intends to do the same. Should it not be feasible, due to statutory or County requirements, for responsibility for collection of the Fee for the 2014-2015 Fiscal Year to be transferred to EOCWD, OCSD shall account for and transmit, within 5 business days of receipt, any such revenues it receives from the County that are attributable to the Fee imposed in Service Area 7. OCSD shall rescind the Fee, as it pertains to the Local Sewer Facilities, by no later than July 1, 2015, or at such earlier time as EOCWD may enact its own local sewer service user fees.

ii. EOCWD shall indemnify, defend and hold harmless, OCSD, its officers, directors, employees and agents from and against any and all claims, actions, damages, liabilities, and expenses (including attorney's fees and reasonable expenses for litigation or settlement) in connection with or arising out of OCSD's assessment, distribution, and collection of the Fee, including without limitation any such claims asserting that the collection by OCSD and transfer of the Fee to EOCWD violates Proposition 218.

4. Transfer of Local Sewer Facilities.

a. Upon the effective date of LAFCO's approval of the Proposal and the requested reorganization ("Date of Reorganization"), EOCWD shall accept ownership of the Local Sewer Facilities and all maintenance responsibilities, as well as the responsibility for all sewer spill notification, reporting, and related regulatory activities. Furthermore, EOCWD shall negotiate, execute and maintain its own contracts with third-party contractors for line-cleaning, CCTV, rehabilitation, repairs and replacement, engineering consultants, and similar services, and directly pay all costs for such contracts.

b. Prior to the Date of Reorganization, EOCWD shall fully execute and deliver to OCSD the Quitclaim Deed, attached hereto as Exhibit "B", transferring ownership of the Local Sewer Facilities from OCSD to EOCWD.

c. Within five (5) business days following the Date of Reorganization, OCSD shall submit the Quitclaim Deed for recordation in the Official Records, Orange County California. Upon recordation, OCSD shall transmit a conformed copy of the Quitclaim Deed to EOCWD.

d. Within five (5) business days following the Date of Reorganization, OCSD shall transfer to EOCWD \$15,000,000.00 (fifteen million

dollars) via wire transfer of the Annual Sewer Service User Fee reserves attributable to the Local Sewer Facilities ("First Disbursement").

e. On July 1, 2018, OCSD shall transfer to EOCWD \$10,000,000.00 (ten million dollars) via wire transfer of the Annual Sewer Service User Fee reserves attributable to the Local Sewer Facilities ("Second Disbursement").

f. If, after the Date of Reorganization and prior to July 1, 2018, EOCWD identifies the need for a major repair or replacement of the Local Sewer Facilities, OCSD shall release to EOCWD a mutually agreed upon portion of the Second Disbursement, as necessary to complete the required work in a timely manner. Any such release will result in a proportionate reduction of reserves transferred with the Second Disbursement.

g. If, prior to the Date of Reorganization, OCSD identifies the need for a major repair or replacement of the Local Sewer Facilities, and after notifying EOCWD of the identified need, OCSD conducts such major repair or replacement, the amount of reserves transferred with the First Disbursement, and if necessary, the Second Disbursement shall be reduced by the amount of costs incurred by OCSD in connection with the required work.

h. After closing its books for the 2017-2018 Fiscal Year, and by no later than November 1, 2018, OCSD shall transfer to EOCWD the remainder of the Annual Sewer Service User Fee reserves, if any, attributable to the Local Sewer Facilities.

i. OCSD shall pay to EOCWD annual interest at the OCSD average rate of return on the amount of Annual Sewer Service User Fee reserves attributable to the Local Sewer Facilities retained by OCSD between the date of the First Disbursement and the Second Disbursement. OCSD shall make the annual interest payments after it has closed its books for each respective fiscal year, but by no later than November 1.

j. Upon the Date of Reorganization, OCSD shall transfer ownership of the following vehicles to EOCWD: (a) a 2000 Sterling Vactor (OCSD vehicle 470, California license number 1067492, vehicle identification number (VIN) 2FZ6BJBB81AH61833), and (b) a 1995 FE42 Volvo Hydroflusher truck (OCSD vehicle 396, California license number 356619, vehicle identification number (VIN) 4V52AFHD0SR474402). These vehicles shall be provided to EOCWD "as is" and with no warranties or representations whatsoever as to the condition of the vehicle, or the suitability of the vehicle for any purpose. EOCWD hereby acknowledges that it has/will be granted the opportunity to inspect the vehicles and their maintenance records and has/will do so prior to the Date of Reorganization.

k. On or prior to the Date of Reorganization, OCSD shall allow EOCWD to review, reference and utilize OCSD established specifications for line-cleaning, CCTV, rehabilitation, repairs and replacement, and similar services, as mutually agreed by the Parties.

5. Environmental Review. EOCWD shall act as lead agency for purposes of the Proposal, and shall be solely responsible for the preparation of all environmental documentation required pursuant to the California Environmental Quality Act ("CEQA").

6. Term. This Agreement shall commence on the Effective Date and continue in full force and effect through December 1, 2014. The Parties may mutually agree in writing to extend the term of this Agreement. The Agreement shall automatically terminate if LAFCO disapproves the Proposal.

7. Notices. All notices or other communications required or permitted hereunder shall be in writing and shall be personally delivered, sent by registered or certified mail, postage prepaid, return receipt requested, or delivered or sent by electronic transmission, and shall be deemed received upon the earlier of: (i) the date of delivery to the address of the person to receive such notice if delivered personally or by messenger or overnight courier; (ii) three (3) business days after the date of posting by the United States Post Office if by mail; or (iii) when sent if given by electronic transmission. Any notice, request, demand, direction, or other communication sent by electronic transmission must be confirmed within forty-eight (48) hours by letter mailed or delivered. Notices or other communications shall be addressed as follows:

To OCSD:	Orange County Sanitation District 10844 Ellis Avenue Post Office Box 8127 Fountain Valley, CA 92708-7018 Attn: General Manager
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To EOCWD:	East Orange County Water District 185 North McPherson Road Orange, CA 92869-3720 Attn: General Manager
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Either Party may from time to time, by written notice to the other, designate a different address and/or person which shall be substituted for the one above specified, and/or specify additional parties to be notified.

8. Jurisdiction. In the event of a dispute regarding performance or interpretation of this Agreement, the venue for any action to enforce or interpret this Agreement shall lie in the Superior Court of California for Orange County.

9. Governing Law. This Agreement shall be governed by the laws of the State of California.

10. Entire Agreement. This Agreement constitutes the entire understanding and agreement between the Parties and supersedes all previous negotiations between the Parties pertaining to the subject matter thereof.

11. Waiver. A waiver of a breach of the covenants, conditions or obligations under this Agreement by either Party shall not be construed as a waiver of any succeeding breach of the same or other covenants, conditions or obligations of this Agreement.

12. Modification. Alteration, change or modification of this Agreement shall be in the form of a written amendment, which shall be signed by each Party.

13. Severability. Whenever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be invalid under the applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of that provision, or the remaining provisions of this Agreement.

14. No Obligation to Third Parties. Execution and delivery of this Agreement shall not be deemed to confer any rights upon others, directly, indirectly or by way of subrogation, and shall not obligate either of the Parties hereto to any person or entity other than each other and their respective affiliates.

15. Successors. This Agreement and the provisions contained herein shall be binding upon and inure to the benefit of OCSD, EOCWD, and their respective heirs, executors, administrators, personal representatives, successors and assigns.

16. Indemnification.

a. EOCWD shall indemnify, defend and hold harmless OCSD, its officers, directors, employees and agents from and against any and all claims, actions, damages, liabilities and expenses (including attorney's fees and reasonable expenses for litigation or settlement) for any loss or damage, including death, bodily injury or damage to or loss of use of property, caused by negligent acts or omissions or willful misconduct by the EOCWD, its officers, directors, employees and agents in connection with or arising out of the performance of this Agreement.

b. OCSD shall indemnify, defend and hold harmless EOCWD, its officers, directors, employees and agents from and against any and all claims, actions, damages, liabilities and expenses (including attorney's fees and

reasonable expenses for litigation or settlement) for any loss or damage, including death, bodily injury or damage to or loss of use of property, caused by negligent acts or omissions or willful misconduct by OCSD, its officers, directors, employees and agents in connection with or arising out of the performance of this Agreement.

c. The Parties acknowledge that LAFCO policy requires applicants to defend, indemnify, hold harmless, and release LAFCO, its agents, officers, attorneys, and employees from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of the application or the environmental document that accompanies it. The parties further acknowledge that this indemnification obligation will include, but not be limited to, damages, costs, expenses, attorney fees, or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the approval of the application. As the applicant, EOCWD will be required to execute such an indemnification agreement with LAFCO, and, as a result, EOCWD may incur substantial costs paying for LAFCO's defense and indemnifying any liability. Notwithstanding anything to the contrary in the foregoing, If LAFCO does not approve the EOCWD Proposal, OCSD agrees to pay one-half of EOCWD's actual costs, associated with indemnifying LAFCO pursuant to the indemnification agreement it will be obligated to sign, as those costs are incurred; however, OCSD's payment hereunder shall not exceed \$100,000.00 (one hundred thousand dollars) in total. Furthermore, if LAFCO approves the EOCWD Proposal, OCSD shall have no obligation to pay any of EOCWD's actual costs associated with indemnifying LAFCO. EOCWD shall promptly advise OCSD if the indemnification agreement it is obligated to sign as the applicant is materially different than described in this paragraph, and it shall notify OCSD if LAFCO notifies EOCWD of a legal challenge covered by the indemnification agreement.

17. OCSD Board of Directors. The Parties acknowledge that nothing contained herein shall entitle EOCWD to a seat on the OCSD Board of Directors, and that any such change would require an amendment to Health and Safety Code section 4730.65, which governs the composition of the OCSD Board of Directors.

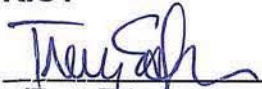
18. No Warranty of Title or Condition. OCSD makes not warranty or representation of any kind regarding its title to the Local Sewer Facilities, the condition of the Local Sewer Facilities, or the suitability of the Local Sewer Facilities for any purpose. EOCWD has been granted an opportunity to fully inspect the Local Sewer Facilities and has done so as of the Effective Date. EOCWD accepts the Local Sewer Facilities "as is".

19. Authorization. Each of the undersigned represents and warrants that he or she is duly authorized to execute and deliver this Agreement and that such execution is binding upon the entity for which he or she is executing this document.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the dates set forth below.

ORANGE COUNTY SANITATION DISTRICT


By 
Troy Edgar,
Chairman of the Board

Date 2/26/14

ATTEST:


Maria Ayala
Clerk of the Board

APPROVED AS TO FORM:


Brad Hogin
General Counsel



EAST ORANGE COUNTY WATER DISTRICT

By 
William VanderWerff
President of the Board of Directors

Date 2/27/14

ATTEST:

APPROVED AS TO FORM:

 
Joan Arneson John Bakker
General Counsel Special Counsel



MEMO

TO: BOARD OF DIRECTORS
FROM: GENERAL MANAGER
SUBJECT: DISTRICT RESERVE POLICY UPDATE
DATE: FEBRUARY 27, 2014

Background

As noted in the California Special District Association's *2013 Reserve Fund Guidelines*, "Reserves are the foundation of the sustainable delivery of core services. Through prudent reserves, special districts offer taxpayers and ratepayers significant benefits including:

1. Savings to balance budgets
2. Emergency preparedness
3. Stable rates
4. Well-maintained infrastructure
5. Investment in the future"

The District adopted its current reserve fund policies, Resolution 595, Reserve & Contingency Fund Policy and Resolution 596, Capital Projects Fund in 2001. Staff recently reviewed these policies and recommended to the Finance Committee that they be consolidated into one policy, and then reviewed and updated based upon best practice information from the water industry. The proposed updated and Reserve Fund Policy (Reserve Policy) is attached.

The proposed Reserve Policy incorporates Resolutions 595 and 596 by reference, as well as Resolution 669 that established the Wholesale Zone and Retail Zone as separate enterprise funds. The proposed policy defines restricted, unrestricted and designated reserves and establishes, operating reserves, capital reserves and self-insurance and litigation reserves. The policy also establishes how these reserves can be used and restates the annual requirements to examine the reserve levels during the budget process.

The Finance Committee reviewed the proposed policy at the November, January and February meetings and recommends approval.

Recommendation

The Board approve Resolution No. 14-___ approving a Reserve Funds Policy.

RESOLUTION NO. ____

**RESOLUTION OF THE BOARD OF DIRECTORS OF
THE EAST ORANGE COUNTY WATER DISTRICT
APPROVING RESERVE FUNDS POLICY**

WHEREAS, key elements of prudent financial planning and fiscal responsibility are to ensure that sufficient funding is available for current operating, capital and debt service cost needs and to anticipate and prepare for future funding requirements as well as for unforeseen disasters and other unforeseen events; and

WHEREAS, the East Orange County Water District desires to set forth a policy for maintaining reserve funds within each of the District’s separate enterprise funds (including the Wholesale System and Retail Zone operating funds and replacements and capital improvements funds and the wholesale emergency/contingency/reserve fund maintained within such enterprise funds) and within such other enterprise funds as the District may establish and maintain from time to time;

NOW, THEREFORE, the Board of Directors of the East Orange County Water District DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. The Reserve Funds Policy of the East Orange County Water District is hereby approved in the form presented to the Board of Directors by the Treasurer. This policy shall remain in effect until it is amended or superseded by a subsequently adopted policy.

Section 2. The District’s Accountant and other staff of the District are hereby authorized and directed to take steps to implement the directives as set forth in the Policy and make reports to the Board of Directors as described therein.

ADOPTED, SIGNED AND APPROVED this 27th day of February, 2014.

President
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof

Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof

STATE OF CALIFORNIA)
) ss
COUNTY OF ORANGE)

I, JOAN C. ARNESON, Secretary of the Board of Directors of the EAST ORANGE COUNTY WATER DISTRICT, do hereby certify that the foregoing Resolution No. ____ was duly adopted by the Board of Directors of said District at an adjourned Regular Meeting of said District held on February 27, 2014, and that it was so adopted by the following vote:

AYES: BELL, DAVERT, DULEBOHN, VANDERWERFF, _____

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors
thereof

East Orange County Water District Reserve Funds Policy

PURPOSE

A key element of prudent financial planning is to ensure that sufficient funding is available for current operating, capital and debt service cost needs. An additional critical element of fiscal responsibility is to anticipate and prepare for future funding requirements as well as for unforeseen disasters and other unforeseen events. The East Orange County Water District (District) will at all times strive to have sufficient funding available to meet its operating, capital, and debt service cost obligations. Reserve funds will be accumulated and maintained in a manner, which allows the District to fund costs consistent with long range financial and capital planning, avoiding significant rate fluctuations due to changes in cash flow requirements. Reserve funds will also include an emergency reserve position that may be utilized to fund unexpected disasters or unanticipated major failures. The Board of Directors will annually review the level of reserve funds maintained, including as provided in Resolution No. **595** (restating policy concerning maintenance and use of emergency/contingency/reserve (“ECR”) fund and establishing replacements and capital improvements (“RCI”) fund – wholesale system) and Resolution No. **596** (designating capital projects fund as replacements and capital improvements (“RCI”) fund – retail zone, and restating policy concerning maintenance and use thereof) (the “Reserve Fund Resolutions”).

The District shall maintain reserve funds within each of the separate enterprise funds (including the Wholesale System and Retail Zone operating funds and RCI funds and the Wholesale ECR Fund maintained within such enterprise funds) and within such other enterprise funds as the District may establish and maintain from time to time (ref. Resolution No. 669). This policy establishes the level of reserves necessary for maintaining the District's credit worthiness and for adequately providing for:

- Funding infrastructure replacement.
- Economic uncertainties and other financial hardships.
- Loss of significant revenue sources such as property tax receipts or connection fees.
- Local disasters or catastrophic events.
- Future debt or capital obligations.
- Cash flow requirements.
- Unfunded mandates including costly regulatory requirements.
- Projects or programs, including litigation, that the Board has determined to be of significant benefit to the majority of the customers of the District.

DEFINITIONS:

Restricted Reserves: Restrictions on their use are imposed by an outside source such as creditors, grantors, contributors, or laws or regulations of other governments.

Unrestricted Reserves: Have no externally imposed use restriction. The use of Unrestricted Reserve funds is at the discretion of the Board of Directors. There are two categories of Unrestricted Reserves - Designated and Undesignated. At the District, all Unrestricted Reserves are Designated Reserves. [Lisa: I think a legal argument can be made, from a constitutional perspective, that a special district's funds are never “unrestricted” (but I’ve never been able to convince an auditor of this....)]

Designated Reserves: Set-aside for a specific purpose, which is, determined by the Board of Directors. The Board of Directors also has the authority to redirect the use of these reserve funds as needs of the District change. These reserves have various names (e.g., Operating Reserve, Capital Reserve, etc.) to indicate the subgroup use for the specific reserve fund.

Capital Reserve Fund Charge (Wholesale): a fee or charge, which may from time to time be levied by the Board of Directors relative to wholesale water sales, connections, or otherwise in the wholesale system pursuant to Resolution No. 595, to provide funds necessary to contribute such amounts to the wholesale RCI, ECR or reserves within the wholesale enterprise funds as the Board may deem reasonable and proper.

Capital Projects Fee (Retail): The monthly fee, referred to in the schedule of rates as the "Monthly Fee for Existing Water System Capital Projects" or similar term, levied for the cost of repairing, rehabilitating, replacing and/or improving capital facilities in the Retail Zone water system.

POLICY

Operating Reserves

Operating reserves are used to fund ongoing cash flow needs of the agency. Due to the large variability in the month-to-month cash flow needs due to the seasonal demand for water, the minimum amount of operating reserves will equal ten (10) months of budgeted operating expenses. The maximum amount of operating reserves will equal twelve (12) months of operating expenses.

Capital Reserves

Capital reserves will be accumulated to fund infrastructure projects and will be an integral part of the District's capital plan documented in its Five-Year Capital Improvement Program, Ten-Year Forecast and Reserve Fund Resolutions. A key objective for accumulating capital reserves is to minimize external borrowing and interest expense. The minimum amount of capital reserves will equal one year's capital spending. The maximum amount of capital reserves will equal two times the accumulated depreciation balance.

It is the practice of the District, in regards to capital expenditures, to follow a "pay as you go (PAYGO)" philosophy. That is, capital expenditures are funded out of the current year collections of the Capital Reserve Fund Charge and/or Capital Projects Fee for all funds ?]. To the extent that the current year's Capital Replacement/Reserve Fees plus capital reserves in a fund are insufficient to cover the District's Five-Year Capital Improvement Program, then the District will investigate alternative funding or rate adjustments.

The appropriate Capital Reserve Fund balances will be determined as follows:

1. Funds available from Capital Replacement Fees will be projected for five- and ten-year periods.
2. Capital expenditures will be projected for five- and ten-year periods.
3. The Capital Reserve will be the difference between the funds available (Item 1) and the funds required (Item 2), but no less than two times the accumulated depreciation balance.

Advances from any enterprise funds Capital Reserves may be made to meet expenses in another enterprise funds upon the determination of the Board of Directors of the need for the advance and satisfactory assurance of repayment, and upon such terms for repayment as the

Board shall establish.

Self-Insurance and Litigation Reserves

The District is self-insured up to \$25,000 for each claim and maintains pooled property and liability insurance through the Association of California Water Agencies for claims up to \$2,000,000. Additionally, periodically the District may have extraordinary litigation expenses that exceed annual operating budget expenses. The minimum self-insurance and litigation reserve will equal \$500,000; the maximum self-insurance and litigation reserve will total \$5,000,000.

DRAFT

PROCEDURE FOR USING RESERVE FUNDS

Operating and Self-Insurance and Litigation Reserves

Operating and self-insurance reserves can be used at any time to meet cash flow requirements of District operations. Authority to use the funds will be consistent with the District's Purchasing Policy.

Capital Reserves

The Board of Directors will authorize use of capital reserves during the budget process. Capital reserves are also available for unplanned (unbudgeted) capital replacement. Authorization for the use of capital reserves for unplanned capital replacement will be consistent with the District's Purchasing Policy.

PROCEDURE FOR MONITORING RESERVE LEVELS

The Accountant shall perform a reserve analysis to be submitted to the Board of Directors upon the occurrence of the following events:

- Board of Directors' deliberation of the annual budget;
- Board of Directors' deliberation of a service charge rate increase;
- Upon renewal of the self-insurance excess insurance coverage; or,
- When a major change in conditions threatens the reserve levels established within this policy.

If the analysis indicates projected or actual reserve levels falling 10% below or above the levels outlined in this policy, at least one of the following actions shall be included with the analysis:

- An explanation of why the reserve levels are not at the targeted level, and/ or
- An identified course of action to bring reserve levels within the minimum and maximum levels prescribed.

East Orange County Water District Reserve Funds Policy

PURPOSE

A key element of prudent financial planning is to ensure that sufficient funding is available for current operating, capital and debt service cost needs. An additional critical element of fiscal responsibility is to anticipate and prepare for future funding requirements as well as for unforeseen disasters and other unforeseen events. The East Orange County Water District (District) will at all times strive to have sufficient funding available to meet its operating, capital, and debt service cost obligations. Reserve funds will be accumulated and maintained in a manner, which allows the District to fund costs consistent with long range financial and capital planning, avoiding significant rate fluctuations due to changes in cash flow requirements. Reserve funds will also include an emergency reserve position that may be utilized to fund unexpected disasters or unanticipated major failures. The Board of Directors will annually review the level of reserve funds maintained, including as provided in Resolution No. 595 (restating policy concerning maintenance and use of emergency/contingency/reserve (“ECR”) fund and establishing replacements and capital improvements (“RCI”) fund – wholesale system) and Resolution No. 596 (designating capital projects fund as replacements and capital improvements (“RCI”) fund – retail zone, and restating policy concerning maintenance and use thereof) (the “Reserve Fund Resolutions”).

The District shall maintain reserve funds within each of the separate enterprise funds (including the Wholesale System and Retail Zone operating funds and RCI funds and the Wholesale ECR Fund maintained within such enterprise funds) and within such other enterprise funds as the District may establish and maintain from time to time (ref. Resolution No. 669). This policy establishes the level of reserves necessary for maintaining the District's credit worthiness and for adequately providing for:

- Funding infrastructure replacement.
- Economic uncertainties and other financial hardships.
- Loss of significant revenue sources such as property tax receipts or connection fees.
- Local disasters or catastrophic events.
- Future debt or capital obligations.
- Cash flow requirements.
- Unfunded mandates including costly regulatory requirements.
- Projects or programs, including litigation, that the Board has determined to be of significant benefit to the majority of the customers of the District.

DEFINITIONS:

Restricted Reserves: Restrictions on their use are imposed by an outside source such as creditors, grantors, contributors, or laws or regulations of other governments.

Unrestricted Reserves: Have no externally imposed use restriction. The use of Unrestricted Reserve funds is at the discretion of the Board of Directors. There are two categories of Unrestricted Reserves - Designated and Undesignated. At the District, all Unrestricted Reserves are Designated Reserves.

Designated Reserves: Set-aside for a specific purpose, which is, determined by the Board of Directors. The Board of Directors also has the authority to redirect the use of these reserve funds as needs of the District change. These reserves have various names (e.g., Operating Reserve, Capital Reserve, etc.) to indicate the subgroup use for the specific reserve fund.

Capital Reserve Fund Charge (Wholesale): a fee or charge, which may from time to time be levied by the Board of Directors relative to wholesale water sales, connections, or otherwise in the wholesale system pursuant to Resolution No. 595, to provide funds necessary to contribute such amounts to the wholesale RCI, ECR or reserves within the wholesale enterprise funds as the Board may deem reasonable and proper.

Capital Projects Fee (Retail): The monthly fee, referred to in the schedule of rates as the “Monthly Fee for Existing Water System Capital Projects” or similar term, levied for the cost of repairing, rehabilitating, replacing and/or improving capital facilities in the Retail Zone water system.

POLICY

Operating Reserves

Operating reserves are used to fund ongoing cash flow needs of the agency. Due to the large variability in the month-to-month cash flow needs due to the seasonal demand for water, the minimum amount of operating reserves will equal ten (10) months of budgeted operating expenses. The maximum amount of operating reserves will equal twelve (12) months of operating expenses.

Capital Reserves

Capital reserves will be accumulated to fund infrastructure projects and will be an integral part of the District's capital plan documented in its Five-Year Capital Improvement Program, Ten-Year Forecast and Reserve Fund Resolutions. A key objective for accumulating capital reserves is to minimize external borrowing and interest expense. The minimum amount of capital reserves will equal one year's capital spending. The maximum amount of capital reserves will equal two times the accumulated depreciation balance.

It is the practice of the District, in regards to capital expenditures, to follow a “pay as you go (PAYGO)” philosophy. That is, capital expenditures are funded out of the current year collections of the Capital Reserve Fund Charge and/or Capital Projects Fee for all funds. To the extent that the current year's Capital Replacement/Reserve Fees plus capital reserves in a fund are insufficient to cover the District's Five-Year Capital Improvement Program, then the District will investigate alternative funding or rate adjustments.

The appropriate Capital Reserve Fund balances will be determined as follows:

1. Funds available from Capital Replacement Fees will be projected for five- and ten-year periods.
2. Capital expenditures will be projected for five- and ten-year periods.
3. The Capital Reserve will be the difference between the funds available (Item 1) and the funds required (Item 2), but no less than two times the accumulated depreciation balance.

Advances from any enterprise funds Capital Reserves may be made to meet expenses in another enterprise funds upon the determination of the Board of Directors of the need for the advance and satisfactory assurance of repayment, and upon such terms for repayment as the Board shall establish.

Self-Insurance and Litigation Reserves

The District is self-insured up to \$25,000 for each claim and maintains pooled property and liability insurance through the Association of California Water Agencies for claims up to \$2,000,000. Additionally, periodically the District may have extraordinary litigation expenses that exceed annual operating budget expenses. The minimum self-insurance and litigation reserve will equal \$500,000; the maximum self-insurance and litigation reserve will total \$5,000,000.

PROCEDURE FOR USING RESERVE FUNDS

Operating and Self-Insurance and Litigation Reserves

Operating and self-insurance reserves can be used at any time to meet cash flow requirements of District operations. Authority to use the funds will be consistent with the District's Purchasing Policy.

Capital Reserves

The Board of Directors will authorize use of capital reserves during the budget process. Capital reserves are also available for unplanned (unbudgeted) capital replacement. Authorization for the use of capital reserves for unplanned capital replacement will be consistent with the District's Purchasing Policy.

PROCEDURE FOR MONITORING RESERVE LEVELS

The Accountant shall perform a reserve analysis to be submitted to the Board of Directors upon the occurrence of the following events:

- Board of Directors' deliberation of the annual budget;
- Board of Directors' deliberation of a service charge rate increase;
- Upon renewal of the self-insurance excess insurance coverage; or,
- When a major change in conditions threatens the reserve levels established within this policy.

If the analysis indicates projected or actual reserve levels falling 10% below or above the levels outlined in this policy, at least one of the following actions shall be included with the analysis:

- An explanation of why the reserve levels are not at the targeted level, and/ or
- An identified course of action to bring reserve levels within the minimum and maximum levels prescribed.

IRWD Emergency Response Equipment

The following list of emergency response equipment owned and operated by IRWD and available for sewer operations and emergency response was provided in the District's application to LAFCO.

- 4 Hydro / Combination vacuum trucks
- 3 Hydro/Jetter trucks
- 1 trailer-mounted Hydro/Jetter Unit
- 2 CCTV inspection units (one additional budgeted for FY 2015-16)
- 5 construction crew trucks
- 5 fully equipped maintenance and repair crew trucks
- 5 large dump trucks
- 4 full size backhoes
- 5 medium dump trucks
- 1 large front end loader
- 1 extended reach backhoe
- 2 Bobcat skip loaders
- 2 Bobcat excavator/backhoes
- Trainer mounted 6-inch, 10-inch and 12-inch sewage bypass pumps
- 1,8000 feet of 6-inch bypass hose
- 3,300 feet of 8-inch bypass hose
- 1,980 feet of 12-inch bypass hose
- Mobile Spill Containment Unit (a trailer pre-loaded with miscellaneous containment supplies, pumps disinfectant, and other materials)

Chapter 8 Overflow Emergency Response Plan

The purpose of the Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). This plan provides guidelines for District personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the District's service area.

8.1 Regulatory Requirements

IRWD 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 regulatory agencies are informed of all SSOs in a timely manner;*
- (b) *A program to ensure appropriate response to all overflows;*
- (c) *Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program. All SSOs 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 (NPDES) permit requirements. The SSMP 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; and*
- (f) *A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.*

8.2 Goals of the Overflow Emergency Response Plan

The District's goals with respect to responding to SSOs are:

- Work safely;
- Minimize public contact with the spilled wastewater;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Contain the spilled wastewater to the extent feasible;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Mitigate the impact of the SSO; and
- Meet the regulatory reporting requirements.

8.3 SSO Detection

The processes that are employed to notify the District of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by District staff during the normal course of their work.

8.3.1 Public Observation and Emergency Communications

Public observation is the most common way that the District is notified of blockages and spills. Contact information for reporting sewer spills is located on monthly water bills and on the District's website at www.irwd.com/about-us/contact.

8.3.1.1 Normal Work Hours

The normal working hours for District office staff, including Customer Service staff responsible for answering emergency calls, is from 7:30 a.m. to 5:00 p.m. Monday through Thursday. The office is open every other Friday from 7:30 a.m. to 4:00 p.m. Customer service staff are available to answer calls every Friday from 7:30 a.m. to 4:00 p.m. The normal working hours for District's Collection System Maintenance field crews are Monday through Thursday from 6:30 a.m. to 4:00 p.m. and every Friday from 6:30 a.m. to 3:00 p.m., except holidays. When a report of a sewer spill or backup is made, the Customer Service representative receives the call, takes the information from the caller and communicates this information to the Collection System Manager or Supervisors who dispatch a field crew to the site. Emergency calls received by the City of Irvine or County of Orange are routed to the IRWD Customer Service main line.

8.3.1.2 After Hours

After hours emergency calls go to the District's after hours answering service. The District's after hours answering service staff are trained to gather basic information regarding a customer complaint and relay this information to the District Primary Responder. The District Primary Responder is trained to investigate any emergency issue and is responsible for either addressing the issue or contacting an appropriate standby response crews. The Preventive Maintenance Manager in Department 40 is responsible for maintaining the Standby List for all departments containing the names, phone numbers, and responsibilities for standby employees and distributing an updated list weekly via e-mail.

The District's after hours approach to sewer overflow response is to include employees with different skill sets on the Standby List enabling the District to respond quickly and effectively to a variety of emergencies involving sewer pipelines or sewer pump stations. The Standby List includes the following designations for standby employees:

Table 8-1: Standby List Positions and Roles

Standby Position	Roles
Primary Responder	Investigate service calls and either address issue or request support from specialized standby personnel as needed.
First Backup	Provide backup support to primary responder as requested.
Second Backup	Provide backup support to primary responder as requested.
Collection System (1 st)	Respond to sewer-related service calls when requested by Primary Responder.
Collection System (2 nd)	Respond to sewer-related service calls when requested by Primary Responder.
Electrical Services	Respond to service calls requiring expertise in electrical systems. This includes electrical systems for sewer pump station issues.
Water System Operator	Responds to service calls requiring water system operational expertise.
Water Quality	Responds to service calls involving water quality issues.
Standby Manager	A list is provided to standby staff for all IRWD managers. All managers are available to respond during off-hours.
LAWRP Plant Operator	Respond to after hours issues related to, or requiring coordination with, LAWRP operations.
MWRP Treatment Plant Operator	Respond to after hours issues related to, or requiring coordination with, MWRP operations.

Information from the emergency call is recorded on the Spill Response Field Report Form included in **Appendix H**.

8.3.1.3 Routing of Calls

Any calls answered by the District's answering service are routed to the Primary Responder on the Standby List. District customer service staff are trained to send sewer overflow calls to the Collection System Maintenance Supervisor during normal business hours and to the Collection System First Responder after 4:00 p.m. on Monday thru Thursday and after 3:00 p.m. on Friday.

8.4 SSO Response Procedures

Sewer service calls are high priority events that demand a prompt response to the location of the problem. Upon notification of a potential sewer overflow, a District Primary Responder shall be dispatched onsite within 30 minutes during normal working hours and during standby. During normal working hours, the District's Primary Responder will be a Department 570 Collection System maintenance crew. During after hours, the District's Primary Responder will be assigned personnel from Department 420, 425, or 430 who will investigate the service call to determine the appropriate response.

The response procedures for SSOs caused by District-owned sewers, private laterals within the District service area, and surrounding Agency sewers are depicted in **Figures 8-1, 8-2, and 8-3**.

Figure 8-1: SSO Response Procedure Flow Chart

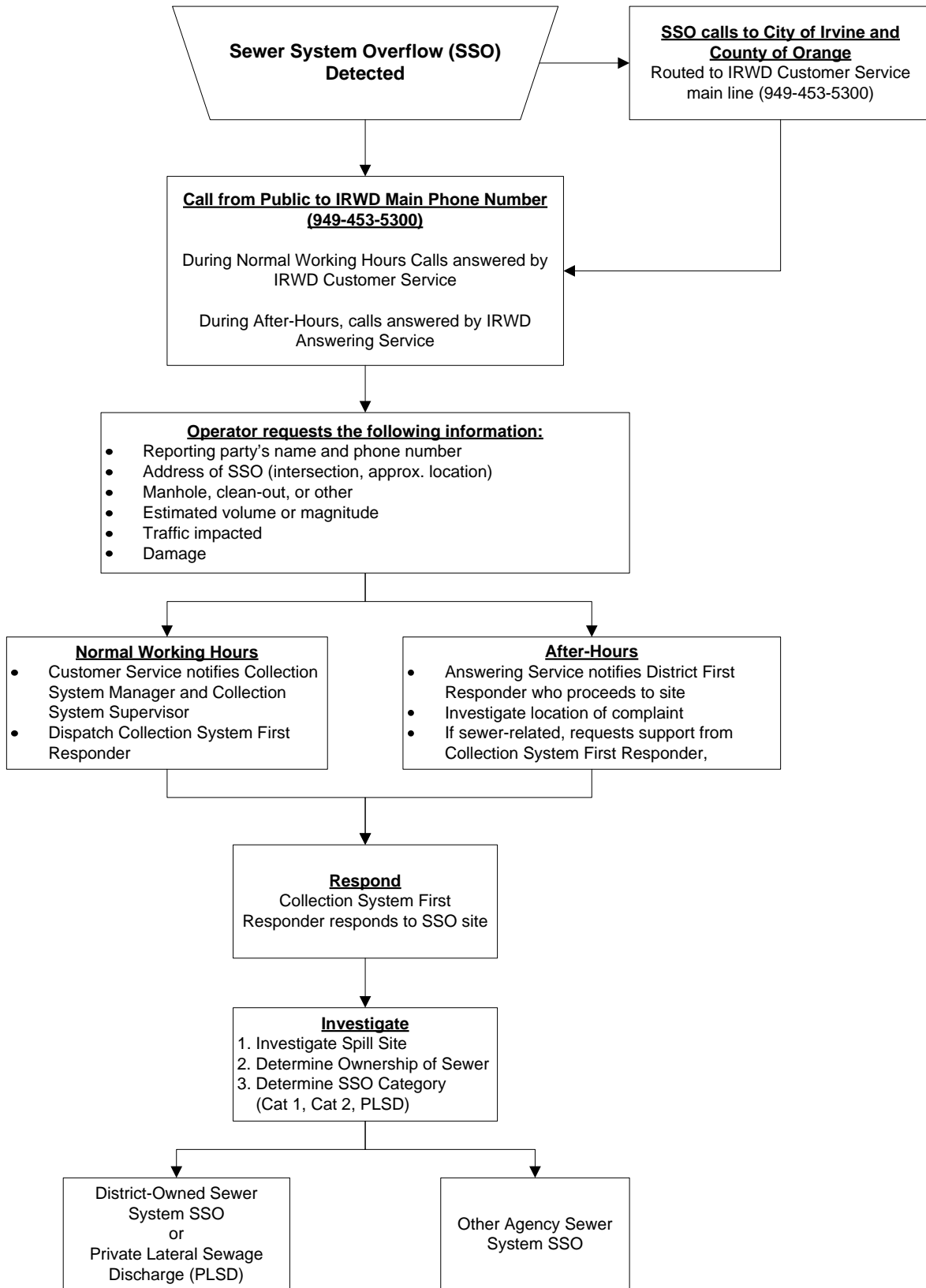


Figure 8-2: SSO Response Flow Chart for District-Owned Sewer SSOs

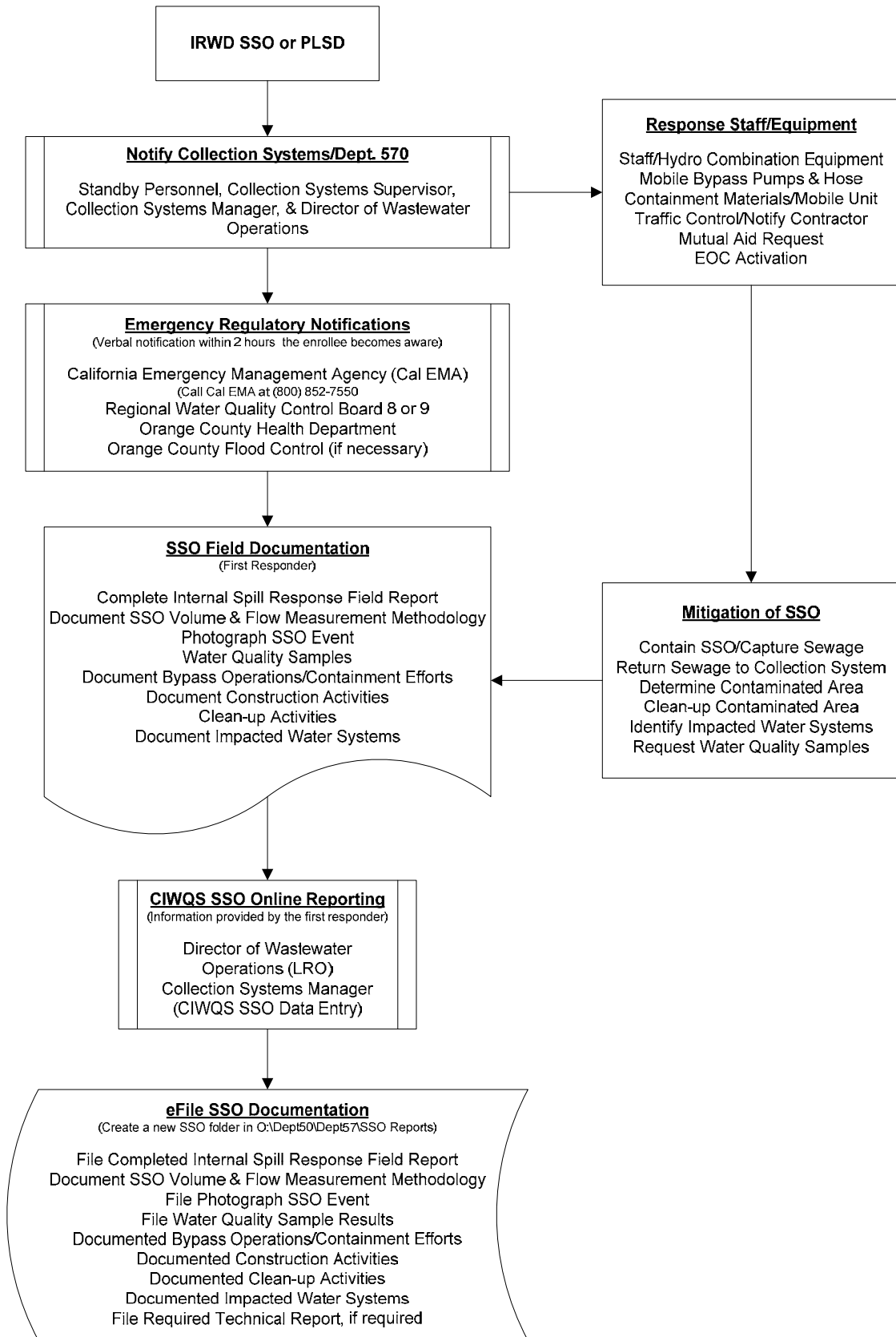
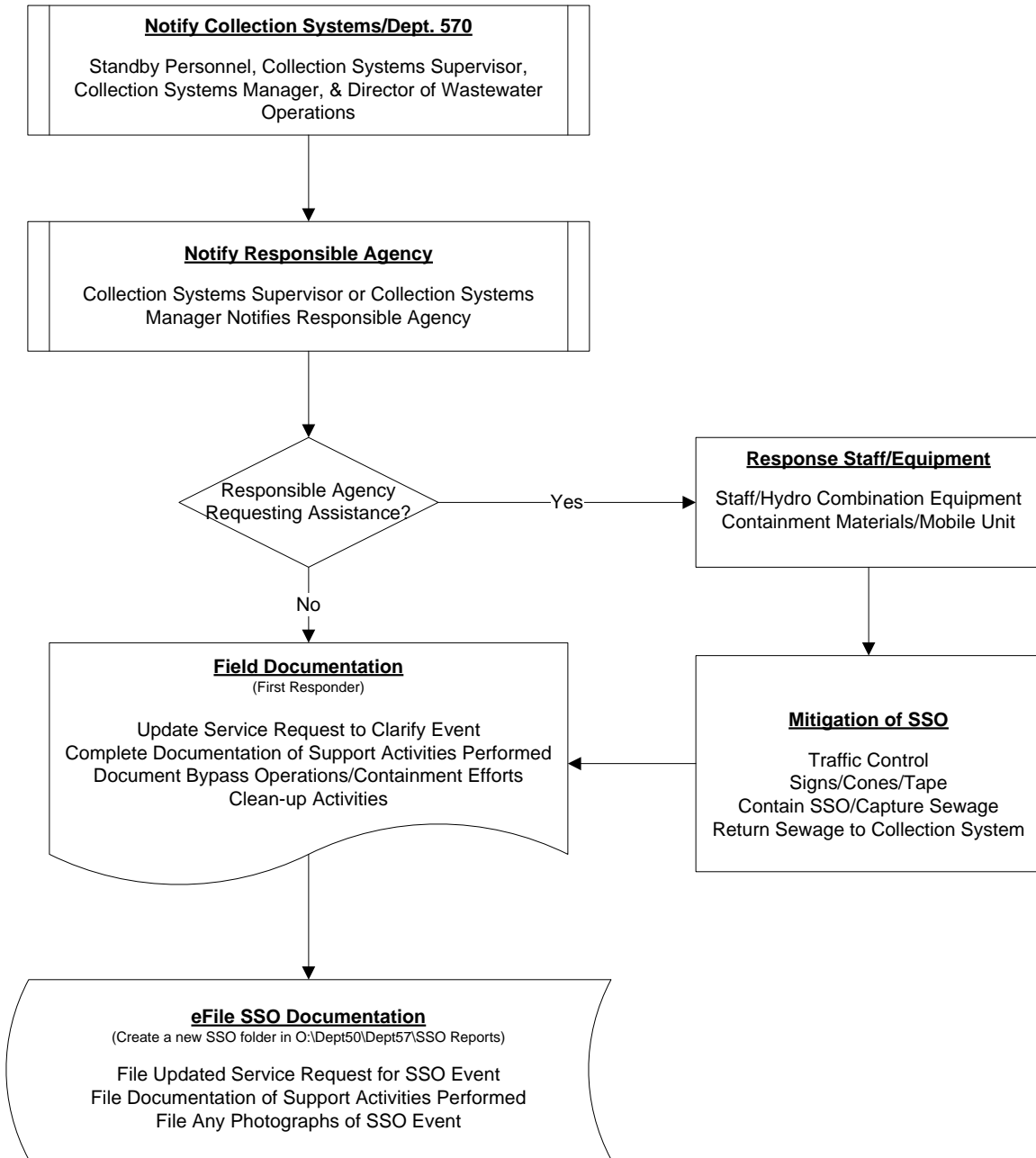


Figure 8-3: SSO Response Flow Chart for SSOs in Sewers Not Owned by District



8.4.1 Safety

The District's Primary Responder, as first responder, is responsible for following District safety procedures at all times.

8.4.1.1 Traffic Control

Traffic control requirements vary depending on the location and the risk to operating personnel and the public. CalTrans standards are the minimum for congested and/or high-speed streets and highways. The minimum traffic controls for low-speed/low-traffic-density streets should conform to the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD), the California Department of Transportation MUTCD, and the Watch Book Manual standards. In the case where there are no local standards, the minimum traffic control should be:

- Warning signs (signs with the symbol for person working are preferred);
- Directional arrow signs on rear of the truck;
- Traffic cones clearly delineating traffic lanes and directions; and
- One or more flaggers utilized to control and direct traffic where visibility is limited or the possibility of collision exists.

8.4.2 Primary Responder Priorities

The Primary Responder's priorities, as the first person to respond to the call, are:

- To follow safe work practices;
- To respond promptly with appropriate equipment;
- To contain the spill wherever feasible;
- To restore the flow as soon as practicable;
- To minimize public access to and/or contact with the spilled sewage;
- To return the spilled sewage to the wastewater collection system; and
- To restore the area to its original condition (or as close as possible).

8.4.3 Initial Response

Clarify that the Primary Responder during standby will perform initial assessment either through phone call interview or initial site assessment. Once the Primary Responder determines it is a sewer-related event, they will transfer the call to Collection Systems Maintenance.

The Primary Responder is responsible for contacting the reporting party to clarify the situation and collect any additional information that may allow District personnel to respond in an efficient manner. If the Primary Responder determines the event is sewer-related, immediately contact the Collection Systems Maintenance standby staff. Whichever person arrives to the site first will:

- Field verify the address and nearest cross street to determine whether the spill or backup is located in the District's service area.
 - If the location of the spill is not in the District's service area or not caused by the District's sewer system, call the responsible agency, provide them with the service call information, and notify the caller that the responsible agency has been notified. The District's Emergency Directory contains contact information for surrounding agencies.
 - If the spill/backup is caused by another agency sewer system, the responding crew will standby until representatives of the responsible party arrive and are fully operational

unless an emergency on one of the District's sewers requires the team to respond to another location.

- Notify the Collection Systems Manager and Collection System Supervisor when an SSO is verified. The Collections System Manager will work with crew to determine if additional resources are needed and level of response.
- Respond with the appropriate spill response equipment that has spill containment tools, materials and any additional equipment that may be needed based on the details provided by the caller.
 - Note arrival time at spill site.
- If the spill/backup is caused by a private lateral, the responding crew should contain/mitigate the spilled sewage to prevent sewage from entering the public right of way without District staff going on private property.
- Set up traffic and pedestrian control as necessary for safety of the public and the response crew.
- Identify and assess the affected area and extent of spill. If possible, take photographs to document the extent of the spill.
 - If the spill appears to be too large for the response crew to handle or is in an area that may cause danger to human health (e.g. impacting a school, hospital, park, etc.), then document conditions upon arrival with photographs.
- Use best judgment to determine whether to proceed immediately with blockage removal versus containment. The guidance for this decision is:
 - Small spills – proceed with immediate containment measures near the appearance point followed by blockage removal.
 - Moderate or large spill where containment is anticipated to be simple – proceed with immediate containment measures near the appearance point followed by blockage removal.
 - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, call for additional assistance immediately to focus on implementing containment measures.

8.4.4 Restore Flow

Using the appropriate cleaning tools, set up downstream of the blockage and hydro clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not recur downstream.

- If the blockage cannot be cleared within a reasonable time (15 minutes), or the sewer requires construction repairs to restore flow, then initiate additional containment measures and/or bypass pumping.
- If assistance is required, contact other employees, contractors, and equipment suppliers.

8.4.5 Initiate Spill Containment Measures

The responding crew should attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.
- Implement immediate containment measures consisting of plugging storm drains using sandbags, plastic sheeting, and/or other dam construction material to contain the spill, whenever appropriate.
- Additional containment measures include containing/directing the spilled sewage using dike/dam, sandbags, or earthen berms in landscaped or undeveloped areas.

- Pump around the blockage/pipe failure to convey the wastewater to the nearest downstream manhole or facility.
- If the spill is caused by a sewer lateral, District staff may shut off the water supply to that property when the wastewater endangers the public health.

8.4.6 Water Quality Sampling and Testing

Water quality testing is performed to determine the extent and impact of an SSO when sewage enters a water body. The Collection Systems Manager or Collection Systems Supervisor will coordinate with the Orange County Health Care Agency or the Orange County Flood Control District to determine whether water quality is required. If required, the water quality sampling procedures are:

- The Collection Systems Manager, Collection System Supervisor, or Collection System First Responder will contact Dept. 64 Regulatory Compliance water quality personnel during normal hours, or the Water Quality standby personnel during after-hours, to collect samples. Dept. 64 Regulatory Compliance water quality personnel or the Water Quality standby will collect samples as soon as possible after the discovery of the SSO event.
- The water quality samples should be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. rivers). The water quality samples should be collected near the point of entry of the spilled sewage and every 100 feet along the shoreline of the stationary water body (e.g., bay or lake).
- The District has a state-certified laboratory to analyze the samples to determine the nature and impact of the discharge. The basic analyses include total coliform, fecal coliform, and *Enterococcus*.

8.4.7 Recovery and Clean Up

The recovery and clean up phase begins when the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and clean up procedures include the steps below.

8.4.7.1 Estimate the Volume of Spilled Sewage

Use the methods outlined in **Appendix H**, or other methods as deemed necessary, to estimate the volume of the spilled sewage. If possible, utilize available information such as pump station run times and Supervisory Control and Data Acquisition (SCADA) data to support or validate volume estimates. Wherever possible, document the estimate using photos of the SSO site before and during the recovery operation.

8.4.7.2 Recovery of Spilled Sewage

Vacuum up spilled sewage using the hydro/combo unit or pump the spilled sewage and any water used to flush the area and discharge it back into the wastewater collection system.

8.4.7.3 Clean Up and Disinfection

Implement clean up and disinfection procedures to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and should be modified as required for wet weather conditions. Where clean up is beyond the resources or capabilities of District staff, the District may use a contractor to support clean-up operations.

8.4.7.3.1 Hard Surface Areas

Take reasonable steps to contain and vacuum up the wastewater and return it to the wastewater collection system. Collect all signs of sewage solids and sewage-related material either by hand or with the use of

rakes and brooms. Wash down the affected area with high pressure water using nozzles on provided on the hydro/combo unit and vacuum the wash water utilizing the hydro/combo unit. Allow area to dry. Repeat the process if additional cleaning is required.

8.4.7.3.2 Landscaped and Unimproved Natural Vegetation

Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms.

Wash down the affected area with clean water until the water runs clear. The flushing volume should be approximately three times the estimated volume of the spill.

Either contain or vacuum up the wash water so that none is released. Return the wastewater to the wastewater collection system to the extent possible.

Allow the area to dry. Repeat the process if additional cleaning is required.

8.4.7.3.3 Natural and Man-Made Waterways

Notify Orange County Public Works in the event an SSO impacts any waterways. Contain contaminated creeks where feasible. Remove all contaminated water by pumping to the collection system or vacuuming by means of vacuum truck and return all collected water to the sewer system. Introduce additional wash water as needed to flush contaminated areas towards the containment area.

8.4.7.4 Wet Weather Modifications

Omit flushing and sampling during heavy storm events with heavy runoff where flushing is not required and sampling would not provide meaningful results.

8.4.8 Follow Up Activities

If sewage has reached the storm drain system, the hydro/combo unit should be used to vacuum/pump out the catch basin. Flush the storm drain system with wash water and capture all residual wash water at a point of containment downstream.

In the event that an overflow occurs at night, inspect the location early on the following morning. The operator should look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

If the District sewer causes an overflow on a private property, restore flow and notify the Collection Systems Manager. The Collection Systems Manager will notify the Director of Wastewater Operations and the Manager of Contracts Administration and Risk to determine if any immediate steps to rectify the issue are required. Provide the customer with the contact information for the Manager of Contracts Administration and Risk to make a claim, pending investigation.

8.5 Traffic and Crowd Control

Place barricades, cones, traffic arrow board, and caution tape as needed to keep vehicles and pedestrians away from contact with spilled sewage.

8.6 Public Notification

If an SSO affects a waterway or ocean requiring posting of signage, contact Orange County Public Works. Orange County Public Works will post and remove signage for waterways and beach closures as required and will not remove the signs until the effects of the spill have been mitigated. A sample warning sign utilized by Orange County Public Works is included in **Appendix H**.

Major spills may warrant broader public notice. The Collection Systems Manager and/or Director of Wastewater Operations will contact the Director of Public Affairs or the Public Affairs Manager. Public Affairs will create and execute the outreach plan for media. If media crews show up at a job site the crews will ask media personnel to wait and will contact Public Affairs immediately. Do not respond to questions from the media or interview requests unless the Director of Public Affairs or the Public Affairs Manager provides direction and permission. The approval of the Public Affairs is required prior to contacting local media when significant areas may have been contaminated by sewage.

8.7 SSO Event Investigation

The objective of the SSO event investigation is to determine the cause of the SSO and to identify corrective action(s) needed that will reduce or eliminate potential for the SSO to recur.

The investigation includes reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will be conducted by the Collection Systems Manager and/or Collection Systems Supervisor and reported to the Director of Wastewater Operations or his/her designee. The investigation should include:

- Reviewing and completing/correcting the Sanitary Sewer Overflow Report Form;
- Reviewing available photographs;
- Reviewing historical maintenance activities
- Conducting a CCTV inspection to determine the condition a portion of the line segment immediately following the SSO and reviewing the video and logs; and
- If FOG-related, reviewing the results of a FOG source control investigation
- Debrief with staff who responded to the spill.

The goal of the SSO event investigation is to determine the cause of the SSO event and to identify appropriate corrective actions. The District's standard practice is, at a minimum, to perform additional cleaning of the pipe containing the blockage that caused the SSO event along with the pipes immediately upstream and downstream.

8.8 SSO Categories

The California State Water Resources Control Board (SRWCB) has established guidelines for classifying and reporting SSOs. Reporting and documentation requirements vary based on the type of SSO.

Currently, there are two categories of SSOs as defined by the SWRCB¹:

- **Category 1** – All discharges of sewage resulting from a failure in the sanitary sewer system that:
 - Equals or exceeds 1,000 gallons, or;
 - Results in a discharge to a drainage channel and/or surface water; or
 - Discharges to a storm drainpipe not fully captured and returned to the sanitary sewer system.
- **Category 2** – All other discharges of untreated or partially treated wastewater resulting from a failure in the Enrollee's sanitary sewer system.
- **Private Lateral Sewage Discharges** – Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

¹ State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2008-0002.EXEC) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

8.9 SSO Documentation and Reporting

All SSOs should be thoroughly investigated and documented for use in managing the wastewater collection system and meeting established reporting requirements. The procedures for investigating and documenting SSOs are:

8.9.1 Internal SSO Reporting Procedures

The Collection Systems Primary Responder will fill out the Sanitary Sewer Overflow Field Report Form and turn it in to the Collection Systems Supervisor. The Collection Systems Supervisor reviews and completes a draft of the report and will send a copy to necessary IRWD staff documenting all field activities. Necessary staff includes all operations management and executive management as shown on SSO Field Report Form. The Collection Systems Manager is required to enter all required information into the State Water Resources Control Board (SWRCB) California Integrated Water Quality System (CIWQS) Online SSO Reporting System. The Director of Wastewater Operations certifies the SSO Report in CIWQS.

8.10 External SSO Reporting Procedures²

CIWQS is used for reporting SSO information to the SWRCB whenever possible. A summary of external reporting requirements and contact information is included as **Figure 8-5**.

8.10.1.1 Category 1 SSOs

If a Category 1 SSO results in a discharge to a drainage channel or surface waters, the following notification/reporting requirements apply:

- **Within two hours** of notification of the spill event the Collection Systems Manager or Collection Systems Supervisor will:
 - Notify California Emergency Management Agency (Cal EMA) and obtain spill number for use in other reports;
 - Notify the appropriate Regional Water Quality Control Board by phone:
 - Santa Ana RWQCB (Region 8);
 - San Diego RWQCB (Region 9);
 - Notify Orange County Health Care Agency (OCHCA);
 - Notify Orange County Public Works; and ;
- **Within 24 hours** of notification of the spill event, the Legally Responsible Official, or his/her designee, will certify to the appropriate RWQCB, by phone or with a follow up fax, that Cal EMA and OCHCA were notified.
- **Within 3 business days** of being notified of the spill event, the Legally Responsible Official or his/her designee will certify the initial report using the CIWQS Online SSO Reporting System.
- **Within 15 calendar days** of the conclusion of SSO response and remediation, the Legally Responsible Official or his/her designee will certify the final report using the CIWQS Online SSO Reporting System.
- The Legally Responsible Official or his/her designee will update the CIWQS and re-certify the SSO report as new or changed information becomes available. The updates should be submitted as soon as new information is verified. The LRO must certify all SSO report updates.

² State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2008-0002.EXEC) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

8.10.1.2 Category 2 SSOs

Within 30 calendar days after the end of the calendar month in which the SSO occurs, the Legally Responsible Official or his/her designee will submit a certified report using the Online SSO Reporting System. The report will include the information to meet the GWDR requirements.

Figure 8-4: External Reporting Requirement Checklist and Contact Information

Reporting & Certification Checklist											
Category 1 SSO that reach Drainage Channel or Surface Waters											
2-Hour Notification: Regulatory Agencies (CalEMA, Orange County Health Department, RWQCB) must be notified within two hours of ANY discharge of sewage (untreated/partially treated) to a surface water or drainage channel (that is not fully captured and returned to sewer).											
24-Hour Certification: Any SSO requiring notification based on the two-hour rule must be followed up with a certification submitted to the RWQCB within 24 hours.											
Within 3 Business Days of Notification: Report to SWRCB using CIWQS.											
Within 15 Calendar Days of Conclusion of Response/Remediation: Must be certified by LRO using CIWQS.											
Category 1 SSO that did not reach a Drainage Channel or Surface Waters											
Within 3 Business Days of Notification (SWRCB/CIWQS): Report to SWRCB using CIWQS.											
Within 15 calendar Days of Conclusion of Response/Remediation: Must be certified by LRO using CIWQS.											
Category 2 SSO (<1,000, Did not reach Surface Waters)											
Within 30-Days After End of Calendar Month with SSO Event: Must be reported to SWRCB using CIWQS; Must be certified by LRO using CIWQS.											
Negative Reporting (No SSOs in Month)											
Within 30 days past the end of the month The LRO or designee must report using CIWQS.											
Private Lateral Sewage Discharge (Reporting is Optional) If reporting, enter into CIWQS as a "Private Lateral Sewage Discharge" and identify responsible party, if known (not the District). Must be certified by LRO using CIWQS.											
California Integrated Water Quality Systems (CIWQS)											
SWRCB Reporting Timeframes Depend on the Size and Final Destination of the SSO.											
<ul style="list-style-type: none"> • CIWQS must be used for reporting if the website is available (http://ciwqs.waterboards.ca.gov) <ul style="list-style-type: none"> ○ User Name: xxxx Password: xxxx ○ Waste Discharge Identification Number (WDID) #xxxxx ○ The SSO database will automatically generate an email notification with customized information about the SSO upon initial reporting and final certification for all Category I SSOs. ○ Emails will be sent to the Orange County Health Department and the appropriate RWQCB • Fax RWQCB (only if website is down) 											
Two-Hour Notification / 24-Hour Certification											
<ol style="list-style-type: none"> 1. California Emergency Management Agency Phone: (800) 852-7550; (916) 845-8911 Make sure you ask for an "OES Control Number" (for RWQCB) 2. Orange County Health Department Phone: (714) 433-6000 Fax: (714) 433-6481 After Hours: (714) 628-7008 Email: mfennessy@ocha.com; lbrenner@ochca.com 3. RWQCB (Region 8 – Santa Ana; Region 9 – San Diego) Option of phoning in the 2-hour notification and follow up within 24 hours using the online certification or utilize the online feature for both. <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;"><u>RWQCB, Region 8</u></td> <td style="width: 50%; text-align: center;"><u>RWQCB, Region 9</u></td> </tr> <tr> <td>Region 8-Najah Amin (951) 320-6362</td> <td>Region 9-Chris Means (858) 637-5581</td> </tr> <tr> <td>Region 8, Main Number (951) 782-4130</td> <td>Region 9, After hours (858) 822-8344</td> </tr> <tr> <td>Region 8, Fax (951) 781-6288</td> <td>Region 9, Fax (858) 571-6972</td> </tr> <tr> <td>Region 8: namin@waterboards.ca.gov</td> <td>Region 9: cmeans@waterboard.ca.gov</td> </tr> </table> 		<u>RWQCB, Region 8</u>	<u>RWQCB, Region 9</u>	Region 8-Najah Amin (951) 320-6362	Region 9-Chris Means (858) 637-5581	Region 8, Main Number (951) 782-4130	Region 9, After hours (858) 822-8344	Region 8, Fax (951) 781-6288	Region 9, Fax (858) 571-6972	Region 8: namin@waterboards.ca.gov	Region 9: cmeans@waterboard.ca.gov
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Region 8, Fax (951) 781-6288	Region 9, Fax (858) 571-6972										
Region 8: namin@waterboards.ca.gov	Region 9: cmeans@waterboard.ca.gov										
Sanitary Sewer Overflow (SSO)											
Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system that: <ol style="list-style-type: none"> (i) Reach waters of the United States (including storm drains, unless fully captured and returned to sewer); (ii) Do not reach waters of the United States; and (iii) Backs up into buildings and on private property that are caused by District owned lines. 											

8.10.1.3 Private Lateral Sewage Discharges

The Legally Responsible Official or his/her designee may report private lateral sewage discharges using the CIWQS Online SSO Reporting System **at the District's discretion**, specifying that the sewage discharge occurred and was caused by a private lateral and identifying the responsible party (other than the District), if known.

8.10.1.4 No Spill Certification (Monthly)

If there are no SSOs during the calendar month, the Legally Responsible Official will submit and certify an electronic report that the District did not have any SSOs, **within 30 days after the end of each calendar month**.

8.10.1.5 Online SSO Reporting System (CIWQS) Not Available

In the event that the CIWQS Online SSO Reporting System is not available, the Legally Responsible Official or his/her designee will fax all required information to the appropriate RWQCB office in accordance with the time schedules identified above. In such event, the District will submit the appropriate reports using the CIWQS Online SSO Reporting System as soon as practical.

8.10.2 Internal SSO Documentation

8.10.2.1 Category 1, 2, and 3 SSOs

The Collection Systems Primary Responder will complete the Spill Response Field Report Form and provide a draft report to the Collection Systems Supervisor or his/her designee. The Collection Systems Supervisor will assemble all available documentation and review, complete, and submit an internal report of all available information to appropriate District staff via e-mail.

The Legally Responsible Official or his/her designee will prepare an electronic file for each individual SSO. The electronic file should include the following information as available:

- Initial service call information;
- Spill Response Field Report;
- Online SSO Reporting System form;
- Volume estimate;
- Map showing the spill location;
- Photographs of spill location;
- CCTV inspection data, if applicable;
- Water quality sampling and test results, if applicable;
- SSO event investigation results; and
- Any other forms related to the SSO.

8.10.2.2 Private Lateral Sewage Discharges

The Collection Systems Primary Responder will complete the Spill Response Field Report Form and provide a draft report to the Collection Systems Supervisor or his/her designee. The Collection Systems Supervisor will assemble all available documentation and review, complete, and submit an internal report of all available information to appropriate District staff via e-mail.

A separate electronic file will be prepared for each individual PLSD, at the discretion of the Legally Responsible Official. The file will include any relevant information from the above list.

8.10.3 External SSO Record Keeping Requirements³

The WDR requires that individual SSO records be maintained for a minimum of **five years** from the date of the SSO. This period may be extended when requested by a Regional Water Quality Control Board Executive Officer.

All records shall be made available for review upon State or Regional Water Board staff's request.

Records shall be retained for all SSOs, including but not limited to the following when applicable:

- Copy of Certified Online SSO Reporting System report(s);
- Any photos (if taken);
- Spill Response Field Report Form;
- Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.

If water quality samples are required by an environmental or health regulatory agency, or if voluntary monitoring is conducted by the District, as a result of any SSO, records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical technique or method used; and
- The results of such analyses.

8.10.4 Post SSO Event Debriefing

As soon as possible after major SSO events, all of the participants, from the person who received the call to the last person to leave the site, should meet to review the procedures used and to discuss what worked and where improvements could be made in responding to and mitigating future SSO events.

8.11 Equipment

This section provides a list of specialized equipment that should be used to support this Sanitary Sewer Overflow Emergency Response Plan.

Camera -- A digital or disposable camera to record the conditions upon arrival, during clean up, and upon departure.

Closed Circuit Television (CCTV) Inspection Unit – A CCTV Inspection Unit to determine the cause for all SSOs from gravity sewers. This equipment can be provided by a contractor.

Combination Sewer Cleaning Truck -- A combination high velocity sewer cleaning truck with vacuum tank to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.

Emergency Response Trailer -- A trailer to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools should include containment and clean up materials: sandbags, barricades, cones, caution tape, signs, rakes, drop-inlet mats, and plastic sheeting.

³ State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2008-0002.EXEC) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

Portable Generators, Portable Pumps, Piping, and Hoses -- Portable equipment used to support this plan is available at the Operations Facility.

8.12 SSO Response Training

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

8.12.1 Initial and Annual Refresher Training

All District personnel who may have a role in responding to, reporting, and/or mitigating a wastewater collection system overflow receive annual training on the contents of this OERP. All new employees receive training before they are placed in a position where they may have to respond.

8.12.2 SSO Training Record Keeping

The District maintains records for all OERP training provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event include date, time, place, content, name of trainer(s), and names of attendees.

8.13 Contractors Working on District Sewer Facilities

All contractors working on District sewer facilities are required to develop an overflow response plan, which identifies who the contractor will contact at the District and any actions a contractor is required to perform in the event of an SSO.

***IRVINE RANCH WATER DISTRICT
SCHEDULE OF RATES AND CHARGES***



EFFECTIVE

JULY 1, 2014

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Section

1

Water System Charges

Monthly Water Service Charge

Customer Description					
Irvine Ranch and Los Alisos Rate Areas					
Residential detached, attached and apartments					See chart (a)
Residential apartments and condominiums (master metered)					See chart (b)
Commercial, Industrial, Public Authority and Landscape					See chart (b)
Landscape recycled user					See chart (b)
Temporary water service connections					See chart (c)
Orange Park Acres					
Residential and Non-Residential customers					See chart (d)
Meter Size	Flow in Gallons	Chart (a)	Chart (b)	Chart (c)	Chart (d)
5/8" by 3/4" Disc	0-22	\$10.50	\$10.50	\$83.11	\$19.00
5/8" Disc	0-22				
3/4" Disc	0-22	\$15.55			
1" Disc	23-37	\$18.00	\$26.25	\$117.72	\$19.00
1 1/2" Disc	38-75	\$38.05	\$52.50	\$118.87	\$19.00
2" Disc	76-120	\$58.30	\$84.00	\$148.49	\$19.00
3" Compound	161-280		\$168.00	\$222.10	\$19.00
4" Compound	361-450		\$315.00	\$427.25	\$19.00
6" Compound	451-750		\$525.00	\$589.70	
8" Compound	1001-1450		\$1,010.65	\$921.35	
10" Compound	1451-1600		\$1,155.00	\$1,212.35	
14" Compound	2001-3500		\$1,837.50	\$1,830.20	
2" Turbo	120-160		\$110.25	\$173.30	
3" Turbo	281-360		\$252.00	\$314.50	
4" Turbo	751-1000		\$525.00	\$568.70	
6" Turbo	1601-2000		\$1,050.00	\$1,099.45	
8" Turbo	2001-3500		\$1,837.50	\$1,896.45	
10" Turbine	3500-5500		\$2,205.00	\$2,272.90	
2" Magnetic Meter	161-280		\$163.30	\$215.85	
4" Magnetic Meter	751-1000		\$652.60	\$706.90	
6" Magnetic Meter	1601-2000		\$1,468.45	\$1,537.60	
8" Magnetic Meter	2001-3500		\$2,611.35	\$2,695.10	
6" Propeller	1001-1450		\$708.75		
8" Propeller	1451-1600		\$945.00		
10" Propeller	1601-2000		\$1,260.00		
12" or 14" Propeller	2001-3500		\$1,771.90		
16", 18", or 20" Propeller	3501-5500		\$2,992.50		
Construction Meters			\$951.15		\$309.05
3 Main Line			\$133.05		
4 Main Line			\$266.45		
6 Main Line			\$499.40		
8 Main Line			\$599.40		
10 Main Line			\$798.85		

Service Charges – Private Fire Protection Service

1. Service-Line Charge

FIRELINE CHARGES BY SERVICE AREA		
Rate Area	Monthly Service Charge	Commodity Charge
All Else	\$13.60/per diameter inch	NA
Former Los Alisos	\$9.50/per diameter inch	\$2.31/ccf
Former Santiago County Water District Rate Area	1"-1½" \$9.40	NA
	Others \$13.60/per diameter inch	

2. Fire Hydrant Charge

The monthly charge for private fire hydrant service shall be \$23.70 per hydrant. This charge includes water used for fire extinguishing purposes.

3. Fire Flow Testing

The District will charge a one-time fee of \$250.00 to administer fire flow tests.

Commodity Charges: Potable Water

Irvine Ranch Rate Area

1. Commodity Charge for Residential Detached Dwelling Units

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.88	0-40
Base Rate	\$1.34	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

2. Commodity Charge for Residential Attached Dwelling Units

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.88	0-40
Base Rate	\$1.34	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

3. Commodity Charge for Apartments (Base allocation x number of dwelling units)

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.88	0-40
Base Rate	\$1.34	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

4. Commodity Charge for Commercial, Industrial, Public Authority and Non-residential Mixed Usage

Tier	Rate/ccf	Percent of Allocation
Base Rate	\$1.34	0-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

Irvine Ranch Rate Area (Continued)

5. Commodity Charge for Potable Landscape Irrigation

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.88	0-40
Base Rate	\$1.34	41-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

6. Charge for Non-Conforming Uses

*Non-Conforming Use	Rate/ccf
Base Rate	\$ 6.22

* The non-conforming use charge shall be applied, as defined in IRWD's "Rules and Regulations", in addition to the applicable commodity charge.

Los Alisos Rate Area

7. Commodity Charge for Residential Detached Dwelling Units

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$1.51	0-40
Base Rate	\$2.31	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

8. Commodity Charge for Residential Attached Dwelling Units

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$1.51	0-40
Base Rate	\$2.31	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

9. Commodity Charge for Apartments
(Base allocation x number of dwelling units)

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$1.51	0-40
Base Rate	\$2.31	41-100
Inefficient	\$3.91	101-130
Excessive	\$6.22	131-160
Wasteful	\$12.60	161+

Los Alisos Rate Area (Continued)

10. Commodity Charge for Commercial, Industrial, Public Authority and Non-residential Mixed Usage

Tier	Rate/ccf	Percent of Allocation
Base Rate	\$2.31	0-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

11. Commodity Charge for Potable Landscape Irrigation

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$1.51	0-40
Base Rate	\$2.31	41-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

12. Charge for Non-Conforming Uses

*Non-Conforming Use	Rate/ccf
Base Rate	\$6.22

* The non-conforming use charge shall be applied, as defined in IRWD's "Rules and Regulations", in addition to the applicable commodity charge.

Orange Park Rate Area

13. Commodity Charge

3/4" Meter Size	Rate/ccf	Allocation/Tier
Standard Tier I	\$1.86	0-10 ccf
Excess Tier II	\$2.20	11-40 ccf
Excess Tier III	\$2.75	41+ ccf

Commodity Charges: Potable Water System - Agricultural

Water supplied under this section shall be used only for the growing or raising, in conformity with recognized practices of husbandry, for the purposes of commerce, trade, or industry, of agricultural, or floricultural products, and produced (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, such products to be grown or raised on parcels of land having an area of not less than five acres utilized exclusively there for.

1. Commodity Charge:

Area	Rate/ccf	Per Acre Foot
Irvine Ranch Rate Area	\$1.62	\$705.70
Los Alisos Rate Area	\$2.68	\$1,167.40

Commodity Charges: Nonpotable Water System - Agricultural

1. Commodity Charge

The commodity charge for nonpotable water used for agricultural purposes shall be:

Area	Rate/ccf	Per Acre Foot
IRWD rate area	\$ 1.21	\$ 527.10

Non-potable water used for lake filler:

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.79	0-40
Base Rate	\$1.19	41-100
Inefficient	\$2.56	101-110
Excessive	\$5.17	111-120
Wasteful	\$11.47	121+

Source	Rate/ccf	Per Acre Foot
Recycled	\$ 1.19	\$ 518.40

2. Santiago aqueduct Commission (SAC) Water

The commodity charge for nonpotable SAC water used for agricultural and non-agricultural (landscape irrigation, commercial and grading) purposes shall be:

Area	Rate/ccf	Per Acre Foot
Agricultural	\$1.66	\$ 723.10
Non-Agricultural	\$1.58	\$ 688.25

3. Surcharge

The District reserves the right to impose, based upon relevant factors, a surcharge to the basic commodity rate for nonpotable agricultural irrigation water.

Commodity Charges: Nonpotable (Untreated) Water System- Landscape Irrigation

1. Commodity Charge

The commodity charge for nonpotable water used for landscape irrigation (other than SAC water):

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.79	0-40
Base Rate	\$1.19	41-100
Inefficient	\$2.56	101-110
Excessive	\$5.17	111-120
Wasteful	\$11.47	121+

Commodity Charges: Recycled Water System Non-Agricultural Landscape Irrigation

1. Commodity Charge

Commodity charge for recycled water used for landscape irrigation:

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.79	0-40
Base Rate	\$1.19	41-100
Inefficient	\$2.56	101-110
Excessive	\$5.17	111-120
Wasteful	\$11.47	121+

2. Recycled Loan Customers

The commodity charge for recycled loan customers:

Tier	Rate/ccf	Percent of Allocation
Low Volume	\$0.88	0-40
Base Rate	\$1.34	41-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

Commodity Charges: Recycled Water System - Commercial/Industrial

1. Commodity Charge for Commercial and Industrial

Tier	Rate/ccf	Percent of Allocation
Base Rate	\$0.80	0-100
Inefficient	\$2.35	101-110
Excessive	\$3.73	111-120
Wasteful	\$7.56	121+

2. Commodity Charge for Commercial and Industrial Loan Customers

Tier	Rate/ccf	Percent of Allocation
Base Rate	\$1.34	0-100
Inefficient	\$3.91	101-110
Excessive	\$6.22	111-120
Wasteful	\$12.60	121+

Allocations and Variances

1. Base Allocations for Commodity Charges

Monthly allocation includes a fixed component for indoor usage and a variable component based on evapotranspiration (ET) rate for landscape irrigation.

Account Type	Base Allocation Number of Residents	Landscape Area (LA)	Base Allocation Indoor	Base Allocation Outdoor	Total Allocation
Residential Detached	4	1300 sq. ft (0.03 acres)	# Residents x 50 gpd	ET x Kc x 1.40 x LA	(Indoor x # days in bill service period) + Outdoor
Residential Attached*	3	435 sq. ft (0.01 acres)	# Residents x 50 gpd	ET x Kc x 1.40 x LA	(Indoor x # days in bill service period) + Outdoor
Apartments*	2	N/A	# Residents x 50 gpd		Indoor x # days in bill service period
Irrigation		Site specific based on irrigated acreage	N/A	ET x Kc x 1.40 x LA	Outdoor based on bill service period
Commercial, Industrial, Institutional			Site specific, based on productivity, employees, water use efficiency practices etc.	Site specific, based on irrigation needs	Site specific, adjusted for # days in bill service period

*For master-metered apartments and condominiums, the base allocation is multiplied by the number of dwelling units.

gpd = gallons per day

CCF = 100 cubic feet. 1 CCF = 1 billing unit = 748 gallons

ET (evapotranspiration) – from IRWD weather stations located in coastal, central or foothill zones

Kc (crop co-efficient) – relative amount of water warm-season turf needs at various times of the year

1.40 irrigation system efficiency – extra water to make up for inefficiencies in the irrigation system

LA = landscape acreage. Assumes that 100% of the landscape is warm-season turf-grass

2. Variances from Ascending Tiered Rate Allocations

Water allocations are based on the number of residents, landscape square footage and actual daily weather and evapotranspiration (ET) data for each of three microclimates within the District rate area. Variances are available for larger than normal landscaped areas, more people living in the home or special medical needs.

Procedure

See IRWD Rules and Regulations, Section 12.6

3. Grounds for Variance

Proof acceptable to the District will be required for each ground(s) of variance.

a. Number of people residing in a residential dwelling unit.

Each additional person increases the base by 1.6 ccf/month (indoor usage factor x 0.8)

b. Landscape

Increased allocations shall be given for residential lot size beyond the standard base allocation lot size. It is the obligation of the customer to provide to the District acceptable documentation of the actual irrigated landscape area served.

c. Medical Needs

- Approval is contingent upon medical documentation.
- Increased allocation will be determined on a case by case basis and based on the type of medical need.

d. Licensed Care Facilities (in a residential dwelling unit)

- A current license from appropriate regulatory agency will be required.
- A licensed 24-hour care facility will be allocated increases based on the additional people per dwelling unit formula at 1.6 ccf per month per additional person.
- A licensed day care facility (not 24-hour) will be granted one ccf per additional person of the licensed 24-hour care facility.
- Additional allocation for medical reasons will be determined on a case by case basis.

e. Fire Control Zones

- Adjustments to allocations will be determined by the District based upon relevant factors such as area, slope, planting material, etc.

f. Commercial/Industrial/Public Authority

- Adjustments to the base allocation will be determined on a case by case basis. Relevant factors will include expansion of productive capacity, existing conservation practices that can be shown to have reduced water usage, severe economic hardship, etc.

g. New Account Establishment Variance

Landscape Accounts - will be placed on conservation base rate for the first six months.

Commercial and Industrial Accounts - will be placed on conservation base rate for the first six months.

4. Limitations

a. An approved variance will become effective on the date the request for variance is submitted to the District, but must be submitted within thirty (30) days of receipt of the bill.

b. Approvals are valid for a period specified by the District (one year or less), and must be resubmitted on or before the expiration date to remain in effect.

5. Effect of Increased Allocations**a. Residential:**

Approved variances will extend each tier of the residential structure by a percentage.

b. Non-Residential:

Approved variances will extend each tier of the non-residential structure by a given percentage (or other method) determined on a case by case basis.

Pumping Surcharges

1. Potable Water Pumping Surcharges

A surcharge will be added to the commodity rate of those users who reside at higher elevations and cause the District to incur additional pumping costs to supply their water. The surcharge is based upon prevailing energy costs.

Zone Name	Surcharge/ccf
Zone 4	\$ 0.17
Coast Zone 4	\$ 0.16
Zone 6	\$ 0.18
Zone 6A	\$ 0.25
Coast Zone 6	\$ 0.29
Zone 7	\$ 0.42
Zone 8	\$ 0.28
Zone 9	\$ 0.32
Los Alisos Zone 3	\$ 0.18

2. Recycled Water Pumping Surcharges

A surcharge will be added to the commodity rate of those users who reside at higher elevations and cause the District to incur additional pumping costs to supply their water. The surcharge is based upon prevailing energy costs.

Zone Name	Surcharge/ccf
Zone D	\$ 0.16
Zone D (Quail Hill Zone B)	\$ 0.16
Zone G	\$ 0.29
Zone H	\$ 0.42

Temporary Water Service Connection

1. Monthly Service Charge

See Chart C on page 4.

2. Commodity Charge

Wherever feasible, recycled water shall be used for temporary construction uses. The Commodity Charge shall be as follows:

Irvine Ranch Rate Area – Potable	\$ 1.88/ccf
Recycled – All rate areas	\$ 1.69/ccf
Former Orange Park Acres Rate Area – Potable	\$ 1.95/ccf
Los Alisos Rate Area– Potable	\$ 2.71/ccf

3. Meter Deposit

A deposit equal to the replacement cost of the construction meter shall be collected at the time of service application. For FY 2014-15, this is estimated to be \$1,025.00. The deposit will be applied to the closing bill and any remaining amount refunded to the customer. Lost meters will result in forfeiture of deposit.

4. Materials for Repairing Damaged Construction Meters

	Cost
Eddy Valve (2")	\$ 200.00
Eddy Valve (3")	\$ 380.00
Meter, complete	\$ 1,012.00
Swivel Adapter	\$ 158.00
Register	\$ 113.00
Male Fitting	\$ 95.00
Female Attachment	\$ 158.00
Lock & Chain	\$ 30.00
Chain (per five-foot length)	\$ 11.00
Lock	\$ 15.00
Handle (main case)	\$ 323.00
Hydrant Collar	\$ 100.00
Rotor	\$ 94.00
Rotor Cap	\$ 27.00
Collar (with barrel lock)	\$ 106.00
Barrel Lock	\$ 6.00
Stores Clearing	40% of total parts billed
Labor & Overhead	\$ 120.00
Meter Body only	\$ 323.00
Meters	At cost

(1) Santiago rates migrating to IRWD rates

New Account Fees for Water Service

This section is applicable to all requests for new or transferred service.

1. Charges

A fee of \$20.00 shall be collected to establish a new account for water and sewer service, or to transfer an existing account to a new location.

2. Residential Deposit

For residential customers, a deposit of \$50.00 may be required until a one year payment history is established.

3. Non-Residential Deposit

A deposit of \$100.00 is required until a one year payment history is established.

Delinquency and Service Restoration Charges

All bills and charges for water and sewer service shall be due and payable upon presentation and shall become delinquent twenty-five (25) calendar days thereafter.

1. Delinquency Charges

If payment is not made within twenty-five (25) days after presentation, a late charge will be levied upon the unpaid balance as follows:

For residential and non-residential accounts with an unpaid balance of \$10 or more, a one-time charge of 10% of the unpaid balance plus 1.5% interest will be assessed, and each month thereafter the unpaid balance will be subject to an interest charge of 1.5%.

2. Trip Charges

When service is discontinued because of delinquency in payment of a water, sewer, or recycled water bill, the service shall not be restored until all charges, including a trip charge, have been paid.

- (a) **Trip Charge During Normal Working Hours:** The trip charge applicable for work requested to be performed during normal working hours of the District will be \$70.00.
- (b) **Trip Charge After Normal Working Hours:** The trip charge applicable for work requested to be performed after normal working hours of the District will be \$95.00.

3. Non-Sufficient Funds Checks

A \$20.00 service fee will be charged for each check returned from the bank for non-sufficient funds.

Section

2

Wastewater System Charges

Monthly Wastewater Service Charges

Residential	
(a) Single Family and Multi-family Dwelling Units	
<u>AVERAGE MONTHLY WATER USE</u>	<u>SERVICE CHARGE PER MONTH</u>
Over 1000 cubic feet (10 ccf)	<ul style="list-style-type: none"> 100% rate = \$ 20.50 per unit
501-1000 cubic feet (5.01-10.0 ccf)	<ul style="list-style-type: none"> 90% rate = \$ 18.45 per unit
0-500 cubic feet (0-5.0 ccf)	<ul style="list-style-type: none"> 75% rate = \$ 15.40 per unit
<p>(1) Monthly service charge based upon actual water meter readings during the twelve month period ending December 31. (2) To qualify for the reduced rates a customer must have usage history for a full calendar year.</p>	
<u>SERVICE CHARGE PER MONTH</u>	
(b) Multiple Family Dwelling Units	<ul style="list-style-type: none"> \$ 15.40 per unit
<p>(1) No credit will be granted for vacancies resulting from the normal turnover of occupants in an existing multiple dwelling unit. The price structure contained herein includes considerations of average vacancy rates. (2) A newly constructed multiple dwelling unit may be billed at the non-residential metered rate, with appropriate allowance for landscape irrigation, until the structure is substantially occupied.</p>	
(c) Single or Multiple Family Dwelling Units	
<u>SERVICE CHARGE PER MONTH</u>	
(1) Portola Hills	<ul style="list-style-type: none"> \$ 20.50 per unit
(2) Collection charge in Newport Coast (assumes 10.0 ccf)	<ul style="list-style-type: none"> \$ 7.20 per unit
NON-RESIDENTIAL – CLASS II	
Quantity charges are based on the supposition that 90 percent (90%) of non-residential water consumption returns to the sewer. Because of landscape irrigation or consumptive usage, some non-residential users may discharge substantially less of their metered water into the wastewater system. Those users may, upon request to the District, be permitted to have the amount of water being discharged into the sewer determined by means acceptable to the District.	
(a) Shall apply to all commercial, industrial and institutional users whose consumption is equal to or less than an average of 10 ccf per month.	
	<u>SERVICE AND QUANTITY CHARGE PER MONTH</u>
	<ul style="list-style-type: none"> Service charge - \$ 20.50 Quantity charge beyond 10 ccf - \$ 2.35/ccf
(1) To qualify for this rate, a customer usage history based upon actual water meter readings is not greater than 120 ccf in a full calendar year.	
(b) Shall apply to all commercial, industrial and institutional users whose consumption is in excess of 10 ccf per month.	
	<u>SERVICE /QUANTITY/COMMODITY CHARGE PER MONTH</u>
	<ul style="list-style-type: none"> Service charge - \$20.50 Quantity charge beyond 10 ccf - \$2.35/ccf Industrial Waste Charge - \$0.115/ccf
	} = \$2.465
(c) Portola Hills customers	
	<u>SERVICE AND QUANTITY CHARGE PER MONTH</u>
	<ul style="list-style-type: none"> Service charge - \$20.50 Quantity charge beyond 10 ccf - \$2.35/ccf

Non-Residential Class I Wastewater

This section shall be applicable to non-residential and Class I customers who discharge extra-strength wastewater into the wastewater system, or discharge or have the potential to discharge constituents subject to federal or state standards and local discharge limitations.

1. Discharge Limits

The limits in this table are local limits. Customers subject to federal categorical pretreatment standards may be required to meet more stringent limits.

Constituent	Concentration Limit in mg/L
Arsenic	2.00
Cadmium	1.00
Chromium	2.00
Copper	3.00
Lead	2.00
Mercury	0.03
Nickel	10.00
Silver	5.00
Zinc	10.00
Cyanide (Total)	5.00
Cyanide (Amenable)	1.00
Polychlorinated Biphenyls	0.01
Pesticides	0.01
Total Toxic Organics	0.58
Sulfide (Total)	5.00
Sulfide (Dissolved)	0.50
Oil and grease of mineral or petroleum origin	100.00

2. Appeals to the Board of Directors

Appeal fee - \$500

3. Charges and Fees

Basic Service and Quality Charge

The Class I charge for use shall be computed by the following formula:

$$\text{Charge for use} = VR_v + BR_b + SR_s$$

Where V = Total volume of flow in hundred cubic feet.

B = Total discharge of biochemical oxygen demand (BOD) in pounds.

S = Total discharge of suspended solids (SS) in pounds

R_v = \$ 1.359 per hundred cubic feet

R_b = \$ 0.379 per pound of BOD

R_s = \$ 0.330 per pound of SS

4. Fees for Noncompliance with Permit Conditions

a. Minor Violation

Condition where the limitation is less than the violation and the violation is less than the technical review criterion.

Fee per violation - \$350

b. Significant Noncompliance or Significant Violation

Condition where the violation is greater than the technical review criterion or qualifies under the definition of significant noncompliance.

Fee per violation - \$550

c. Batch Dump or Slug Load

Fee per violation - \$550

d. Probation Orders

Enforcement Compliance Schedule Agreements and subsequent two year probation, and Regulatory Compliance Schedule Agreements.

Fee per violation - \$550

e. Fats, Oils, and Grease (FOG) Control Programs Fees

FOG Binder:

The FOG Program Binder must be available during an inspection. Failure to locate the binder during an inspection, whether misplaced or lost, will trigger the issuance of a new FOG Binder. The \$50.00 replacement cost will be billed to the Food Service Establishment (FSE) at the time of replacement.

Permitting Fees:

A FOG Wastewater Discharge Permit of two-year duration is \$200.00.

Service Call and Follow Up Inspection Fees:

The General Non-Compliance Fee for District follow-up activities due to permit, ordinance, or regulatory non-compliance is \$100.00 per event.

Significant Non-Compliance Fees:

A condition where the violation continues after 45 days of notification to the FSE, the fee is \$550.00 per violation and \$550.00 every 45 days thereafter.

Section 3 Developer Services

Water Connection Fees

Residential

	<u>IMPROVEMENT DISTRICT</u>	<u>0-5.8 DUs/acre</u>	<u>5.9-10.8 DUs/acre</u>	<u>10.9-25.8 DUs/acre</u>	<u>25.9-40.0 DUs/acre</u>
Connection Fees Per Dwelling Unit	101*	\$3,505	\$3,092	\$2,618	\$2,212
	112	\$1,000	\$1,000	\$1,000	\$1,000
	113	\$2,435	\$2,435	\$2,435	\$2,435
development shall be gross	125	\$2,500	\$2,500	\$2,500	\$2,500
acres excluding private parks.	153	\$1,836	\$1,836	\$1,836	\$1,836
	153 PA 30	\$3,431	\$3,431	\$3,431	\$3,431
	185	\$2,468	\$2,468	\$2,468	\$2,468
	188	\$1,400	\$1,400	\$1,400	\$1,400
	All others*				

Commercial, Industrial and Public Authority – Office Building

	<u>IMPROVEMENT DISTRICT</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Public Authority</u>
Connection Fees Per Gross Acre	101*	\$19,446	\$29,618	\$19,446
	112	\$6,500	\$6,500	\$6,500
	113	\$17,785	\$0	\$8,892
	125	\$12,400	\$17,603	\$12,400
	153	\$9,648	\$13,696	\$9,648
	PA 30	\$17,025	\$24,167	\$17,025
	185	\$11,533	\$11,533	\$11,533
	188	\$5,526	\$5,526	\$5,526
	All others*			

Parks, Churches and Commercial Recreational Facilities

	<u>IMPROVEMENT DISTRICT</u>	<u>Indoor Water Use</u>	<u>Outdoor⁽¹⁾ Water Use</u>
Connection Fees Per Fixture Unit	101*	\$60.90	\$214.31
(1) As calculated per UPC as revised.	125	\$41.22	\$144.45
	153	\$32.11	\$112.54
	PA 30	\$56.62	\$198.46
	185	\$66.34	\$233.01
	188	\$27.61	\$97.13
	All others*		

*Connection fees will be set by the Board of Directors upon request for initial service for each such improvement

Schools (Public and Private)

	<u>IMPROVEMENT DISTRICT</u>	<u>Primary & Intermediate</u>	<u>Secondary</u>	<u>Primary Intermediate & Secondary</u>
Connection Fees Per	101*	\$4,799.18	\$6,436.40	\$206.17
100 Students Average Daily Attendance	125	\$3,241.25	\$4,352.01	\$145.07
	153	\$2,525.16	\$3,390.52	\$113.02
⁽²⁾ Minimum required	PA 30	\$4,453.08	\$5,979.12	\$199.30
	185	\$5,005.35	\$7,015.21	\$224.91
	188	\$2,524.95	\$3,378.72	\$107.82

Service Installations by District

1. The District may install individual domestic or fire services upon request. The cost for each service will be based on an estimate prepared by District personnel. The requestor will provide a written request accompanied by a drawing to show the location of the proposed service. The District will provide an estimate to the requestor and when the check is received from the requestor the work order will be forwarded to the District crews for installation and coordination.

Meter installation charges are as follows: (customer provides the service and the meter box)

<u>Meter size</u>	<u>Cost</u>
5/8" x 3/4"	\$130.00*
3/4"	\$200.00
1"	\$250.00
1-1/2"	\$450.00
2" Disc	\$750.00
2" Turbo	\$1,300.00
3" Turbo	\$1,500.00
4" Turbo	\$2,800.00

*(Developer installed-Residential only)

Costs for larger meters will have to be determined at the time of request from Purchasing Dept. Cost of meter includes the strainer if not already built-in to the meter.

2. If a meter is downsized on a 2" or smaller service lateral there will be no additional charge or refund. If the meter is downsized from a 3" or larger meter, the charge will be based on the service installation charge less the salvage value of the materials recovered from the larger service. Customer will be responsible for any plumbing modifications downstream of the water meter.
3. If a meter is to be upsized from 5/8" X 3/4" to 1", the angle stop will need to be replaced. The cost for District staff to do this work is \$2,000.00 and will be collected along with the standard 1" meter cost. Customer will be responsible for any plumbing modifications downstream of the water meter.

Plan Check and Inspection Fees

Plan check and inspection fees for water systems shall be calculated as 8% of the bondable cost for the off-site, public, potable or recycled water system or a fixed fee as described below:

1. Installation of a 1" or 2" service	\$400.00
2. Removal of a 1" or 2" service	\$400.00
3. Installation of a 4" or larger service	\$700.00
4. Installation or replacement of Fire DDCA	\$500.00

A non-refundable deposit of 5% of the estimated cost of the public potable or recycled water system is required with the submittal of the first plan check to cover the costs of plan checking. The total fee is due and payable prior to final plan approval.

Non-Digital Submittal Surcharge

A surcharge fee, calculated as 2% of the bondable cost for the potable or recycled water system will be charged for any plans not submitted with a digital format. The fee is due and payable prior to final approval of the plans.

Interim Water Service Charge – New Developments

A one-time charge of \$35.10 per connection to each pad in a new tract and/or development will be made to builders and developers for unmetered water service available for that period of time after in-tract lines have been connected to the District's water system until the new customer begins metered water service.

Unmetered water service is not permitted for custom lots. Developers for custom lots will be required to apply for a domestic water construction meter prior to starting construction.

Sewer Connection Fees

Residential

	<u>IMPROVEMENT DISTRICT</u>	<u>0-5.8 DUs/acre</u>	<u>5.9-10.8 Dus/acre</u>	<u>10.9-25.8 Dus/acre</u>	<u>25.9-40.0 Dus/acre</u>
Connection Fees Per Dwelling Unit	1 (201)*	\$6,223	\$5,538	\$4,558	\$3,596
	212	\$4,725	\$4,725	\$4,725	\$4,725
	213	\$4,260	\$4,260	\$4,260	\$4,260
Total acreage for any given development shall be gross acres excluding private parks.	240	\$3,433	\$3,433	\$3,433	\$3,433
	225	\$2,700	\$2,700	\$2,700	\$2,700
	253	\$2,134	\$2,134	\$2,134	\$2,134
Parks.	253 PA 30	\$3,581	\$3,581	\$3,581	\$3,581
	256	\$24,500	\$24,500	\$24,500	\$24,500
	285	\$4,410	\$4,410	\$4,410	\$4,410
	288	\$2,400	\$2,400	\$2,400	\$2,400
	OPA1 (Ridgeline)	\$4,200	\$4,200	\$4,200	\$4,200
	All others*				

Commercial, Industrial and Public Authority – Office Building

	<u>IMPROVEMENT DISTRICT</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Public Authority</u>
Connection Fees Per Gross Acre	1 (201)*	\$34,874	\$60,845	\$34,874
	212	\$28,240	\$28,240	\$28,240
	213	\$25,380	\$0	\$12,597
	240	\$15,678	\$0	\$15,678
	225	\$13,200	\$21,904	\$13,200
	253	\$9,794	\$16,252	\$9,794
	253 PA 30	\$15,966	\$26,493	\$15,966
	285	\$8,831	\$8,831	\$8,831
	288	\$9,474	\$9,474	\$9,474
	All others*			

Parks, Churches and Commercial Recreational Facilities

	<u>IMPROVEMENT DISTRICT</u>	<u>Fee</u>
Connection Fees Per Fixture Unit	1 (201)*	\$385.84
	240	\$233.24
	225	\$206.89
	253	\$153.50
	253 PA 30	\$250.23
	288	\$62.86
	All others*	

*Connection fees will be set by the Board of Directors upon request for initial service for each such improvement district.

Schools (Public and Private)

	<u>IMPROVEMENT DISTRICT</u>	<u>Primary & Intermediate</u>	<u>Secondary</u>
Connection Fees Per 100 Students Average Daily Attendance	1 (201)*	\$18,283	\$24,381
	240	\$11,024	\$14,701
	225	\$9,720	\$12,960
	253	\$7,212	\$9,616
	253 PA 30	\$11,757	\$15,676
	288	\$3,026	\$4,033
	All Others*		

*Connection fees will be set by the Board of Directors upon request for initial service for each such improvement district.

Former OCSD Irvine Business Complex – Non-Residential

	-----Commercial/Industrial-----		
	(1) <u>Low Demand</u>	(2) <u>Average Demand</u>	(3) <u>High Demand</u>
Connection Fees Per 1,000 Square Feet	\$240	\$1,483	\$3,515

- (1) Low Demand connections are the following categories of users: Nurseries, Warehouses, Parking Structures, RV Storage, Churches, Truck Terminals, RV Parks, Lumber/Construction Yards, and other discharge whose flow is similar in volume to these listed categories.
- (2) Average Demand connections other than listed in Low or High Demand categories.
- (3) High Demand connections are the following categories of users: Restaurants, Supermarkets, Car Washes, Coin Laundries, Amusement Parks, Shopping Centers with Restaurants, Food Processing Facilities, Textile Manufacturers, and other discharges whose flow is similar in volume to these listed categories.

High Volume User – Commercial and Industrial

This section shall apply to all non-residential applicants for 2" and larger meters in addition to standard connection fees in all improvement districts.

Connection Fee Formula	Additional High Volume Sewer User Connection Fee =
* Sewer GPD = 90% of water GPD	<u>[Est. GPD use * – (no. acres x use factor**)] x \$15.92/Gal. of Sewer Flow</u>

**Non-Residential Sewage Flow Generators (Use Factors)	<u>Land Use Category</u>	<u>Average Flows</u>
	Commercial	1,300.00
	Industrial	2,600.00
	UCI	Special Contract

Definitions	<u>Commercial</u> : Commercial development including retail and offices
	<u>Industrial</u> : Industrial development including manufacturing, research and development and distributorships

Sewer Installation Charges

1. A \$100 inspection fee will be charged for sewer laterals installed by the applicant, at no cost to the District, in accordance with District approved plans. The fee is to be paid prior to the approval of the plan for the sewer lateral.
2. The plan check and inspection fee for public sewer systems will be calculated as 10% of the bondable cost for the public sewer system or a fixed fee as described above. A non-refundable deposit of 5% of the estimated cost of the sewer system is required with the submittal of the first plan check. The total fee will be due and payable prior to final approval of the plans.

Non-Digital Submittal Surcharge

A surcharge fee, calculated as 2% of the bondable cost for the public sewer system will be charged for any plans not submitted with a digital format. The fee is due and payable prior to final approval of the plans.

District Closed Circuit Television Inspection Charges

Initial TV Inspection Fee

A fee of \$.60 per linear foot as measured from the center line of manholes will be charged for all 6-inch and larger sewer lines to be inspected by a closed circuit television camera. The District will furnish the special camera equipment and manpower to fulfill this inspection requirement. This fee is to be paid along with the other connection, meter, and inspection fees prior to the District signing developer's tract utility plans.

Reinspection

Fees for Reinspection by District TV Crew after corrective work is completed. Those portions of the pipeline system that have been corrected must be retelevised.

1. District fees for retelevising corrective work will be a flat set-up fee of two hundred fifty dollars (\$250.00) plus \$.60 per foot of sewer line reinspected measured centerline to centerline of manholes.
2. Payment for retelevising estimated inspection fees must be received by the District Engineering Inspection Division prior to scheduling the reinspection. Retelevising will not be done until the fees are paid.

Cancellation of District's TV Inspection

If it is determined by either the Contractor or Developer that the job site will not be ready or accessible for the television inspection on the scheduled date, as notified, the Contractor shall notify the District Inspection Division of the necessary cancellation at least 24 hours in advance of the scheduled inspection to avoid being charged a cancellation fee.

1. If the District's television crew arrives at the job site and the work is not ready or accessible, the Contractor and owner will be billed for the cancellation fee of two hundred fifty dollars (\$250.00), payable to the District prior to the date of the rescheduled television inspection.
2. A rescheduled inspection is to be made through the District's project inspection division.

Optional Developer TV Inspection

If the Contractor or Owner desires to have a portion of, or the entire job, TV inspected for his convenience, he will be charged a fee of one hundred fifty dollars (\$150.00) plus \$.60 per foot of sewer line inspected measured centerline to centerline of manholes.

Exhibit B: History of Revisions to Schedule of Rates and Charges

DATE ADOPTED	RESOLUTION	REVISION	EFFECTIVE DATE
05-23-77	1977-49	Rescind 1973-48 & 1977-42	
08-29-77	1977-71	Change in Connection Charges	09-01-77
02-27-78	1978-31	Rescind 1977-71	Discontinue Water & Sewer Service
			03-01-78
07-10-78	1978-135	Rescind 1978-31	Increase
			07-10-78
08-28-78	1978-154	Rescind 1978-135	Increase Connection Fees
			08-28-78
01-08-79	1979-02	Rescind 1978-154	Increase Water Commodity Charges
			01-08-79
06-25-79	1979-25	Rescind 1979-02	Increase Water & Sewer Charges
			07-01-79
07-30-79	1979-41	Rescind 1979-25	Increase Connection Fees
			07-30-79
06-23-80	1980-28	Rescind 1979-41	Increase
			07-01-80
08-25-80	1980-49	Rescind 1980-28	Increase Connection Fees
			08-25-80
12-22-80	1980-77	Rescind 1980-49	Increase Wastewater System Charges
			01-01-81
06-15-81	1981-103	Rescind 1980-77	Increase
			07-13-81
07-13-81	1981-132	Rescind 1981-103	Increase Connection Fees
			07-13-81
06-28-82	1982-48	Rescind 1981-132	Increase Connection Fees & Water & Sewer Rates
			07-01-82
09-27-82	1982-61	Rescind 1982-48	Delinquency Charges
			10-01-82
11-22-82	1982-67	Rescind 1981-61	High-rise Connection Fees
			12-01-82
06-27-83	1983-116	Rescind 1982-67	Increase
			07-01-83
11-21-83	1983-137	Rescind 1983-116	Increase Dom. Water Rates & Imply. Mod. Sewer Rates
			01-01-84
12-12-83	1983-132	Rescind 1983-131	High-rise Connection Fees (Sewer)
			01-01-84
04-23-84	1984-13	Rescind 1983-132	Untreated & Recycled Water For Ag Use Commodity Charges Increase
			06-01-84
06-25-84	1984-22	Rescind 1984-13	Decrease Water & Sewer Charges, Increase Connection Fees
			07-01-84
09-10-84	1984-43	Rescind 1984-22	Change Delinquency Charge
			10-01-84
01-28-85	1985-2	Rescind 1984-43	Lower Sewer Rates
			02-01-85
02-25-85	1985-7	Rescind 1985-2	High Volume Connection Fee
			02-25-85
03-25-85	1985-31	Rescind 1985-7	Reduce Connection Fees
			03-25-85
06-24-85	1985-37	Rescind 1985-31	I.D. 103 & 3(203) Decrease Water & Sewer Chgs. Change Recycled Landscape Charge
			07-01-85
12-16-85	1985-115	Rescind 1985-37	Decrease Sewer Charges
			01-01-86
06-23-86	1986-28	Rescind 1985-115	Decrease Sewer Charges
			07-01-86
03-23-87	1987-11	Rescind 1986-28	High Volume Connection Fees
			04-01-87

Continued

DATE ADOPTED	RESOLUTION	REVISION	EFFECTIVE DATE
06-22-87	1987-27	Rescind 1987-11	Increase R-W; Nonpotable Ag
08-10-87	1987-44	Rescind 1987-27	Reduce Connection Fees I.D.'s 103,3(203), 102(120)121 & 106(160)161
09-28-87	1987-49	Rescind 1987-44	Industrial Waste Program
01-25-88	1988-18	Rescind 1987-49	Add Portola Hills Sewer Serf. Add Water Pumping Surcharge
06-27-88	1988-61	Rescind 1988-18	Reduce Monthly Sewer Charge
08-22-88	1988-66	Rescind 1988-61	Adjust Connection Fees
06-26-89	1989-38	Rescind 1988-66	Reduce Monthly Sewer Charge Reduce Recycled Landscape Increase Untreated and Recycled Ag Rates
08-28-89	1989-58	Rescind 1989-38	Adjust Connection Fees
06-26-90	1990-20	Rescind 1989-58	Reduce Monthly Sewer Charge Reduce Untreated and Recycled Ag Rates
07-23-90	1990-24	Rescind 1990-20	Adjust Connection Fees
01-28-91	1991-05	Rescind 1990-24	Eliminate High Rise and Adjust Connection Fees Add Excessive Use Surcharge
04-22-91	1991-09	Rescind 1991-05	Ascending Block Rate Structure and Request for Variance
05-28-91	1991-13	Rescind 1991-9	Commodity Rates for Landscape Customers
06-10-91	1991-19	Rescind 1991-13	Commodity Rates for Ag., Untreated Landscape, Portola Hills Sewer Rates and Coastal Recycled Rates
07-12-91	1991-37	Rescind 1991-19	Adjust Connection Fees
10-28-91	1991-46	Rescind 1991-37	Increase Ag Water Rate
04-30-92	1992-12	Rescind 1991-46	Modify Ascending Block Rate Structure
06-22-92	1992-22	Rescind 1991-13	Modify Ascending Block Rate Structure
09-28-92	1992-40	Rescind 1992-22	Adjust Connection Fees
01-25-93	1993-3	Rescind 1992-40	Landscape Irrigation Rates
03-04-93	1993-8	Rescind 1993-3	Modify Ascending Block Rate Structure
06-28-93	1993-22	Rescind 1993-8	Increase Water Rate and Reduce Monthly Sewer Charge
07-28-93	1993-26	Rescind 1993-22	Decrease Water Rates
09-13-93	1993-29	Rescind 1993-26	Adjust Connection Fees

Continued

DATE				APPENDIX R
ADOPTED RESOLUTION		REVISION		EFFECTIVE DATE
06-13-94	1994-10	Rescind 1993-29	Increase Water Rate	07-01-94
08-08-94	1994-18	Rescind 1993-10	Adjust Connection Fees	08-08-94
08-14-95	1995-20	Rescind 1994-18	Adjust Connection Fees	08-14-95
08-28-95	1995-24	Rescind 1995-20	Adjust Pumping Surcharges	10-01-95
09-25-95	1995-27	Rescind 1995-20	Adjust Connection Fees and	09-25-95
09-25-95	1995-27	Rescind 1995-24	Adjust Pumping Surcharges	11-01-95
10-23-95	1995-31	Rescind 1995-27	Adjust Pumping Surcharges	11-01-95
11-27-95	1995-35	Rescind 1995-31	Add Monthly Sewer Service Charge - Newport Coast	12-01-95
01-08-96	1996-3	Rescind 1995-35	Adjust Connection Fees to I.D. 240	01-08-96
06-10-96	1996-19	Rescind 1996-3	Adjust Pumping Surcharges Increase Nonpotable Water Charges and Modify Ascending Block Rate Allocations	07-01-96
08-12-96	1996-27	Rescind 1996-19	Adjust Connection Fees	08-12-96
08-27-96	1996-28	Rescind 1996-27	Adjust Connection Fees to I.D.'s 140 & 240	08-27-96
09-23-96	1996-32	Rescind 1996-28	Adjust Water and Sewer Fixed Charges	09-23-96
10-14-96	1996-33	Rescind 1996-32	Adjust Sewer Service Charges for Non- Residential & Portola Hills	10-14-96
06-30-97	1997-17	Rescind 1996-33	Modify Rates and Charges and Connection Fees	06-30-97
10-01-97	1997-29	Rescind 1997-17	Modify Ascending Block Rate Structure Terminology	10-01-97
06-08-98	1998-21	Rescind 1997-29	Miscellaneous Adjustments to Schedule of Rates and Charges	07-01-98
08-24-98	1998-33	Rescind 1998-21	Adjust Connection Fees	08-24-98
06-28-99	1999-25	Rescind 1998-33	Adjustments to Schedule of Rates and Charges	07-01-99
06-26-00	2000-18	Rescind 1999-25	Adjustments to Schedule of Rates and Charges	07-01-00
07-24-00	2000-24	Rescind 2000-18	Adjustments to Schedule of Rates and Charges	07-25-00
06-25-01	2001-24	Rescind 2000-24	Adjustments to Schedule of Rates and Charges	07-01-01
06-24-02	2002-22	Rescind 2001-24	Adjustments to Schedule of Rates and Charges	07-01-02
12-09-02	2002-47	Rescind 2002-22	Adjustments to Schedule of Rates and Charges	12-09-02
03-10-03	2003-7	Rescind 2002-47	Adjustments to Schedule of Rates and Charges	03-10-03
06-23-03	2003-20	Rescind 2003-7	Adjustments to Schedule of Rates and Charges	07-01-03
09-08-03	2003-35	Rescind 2003-20	Adjustments to Schedule of Rates and Charges	09-08-03
06-28-04	2004-25	Rescind 2003-35	Adjustments to Schedule of Rates and Charges	07-01-04
07-12-04	2004-32	Rescind 2004-25	Adjustments to Schedule of Rates and Charges	07-12-04
10-11-04	2004-51	Rescind 2004-32	Adjustments to Schedule of Rates and Charges	10-11-04
06-27-05	2005-20	Rescind 2004-51	Adjustments to Schedule of Rates and Charges	07-01-05

DATE				APPENDIX R
ADOPTED	RESOLUTION	REVISION		EFFECTIVE
				DATE
09-26-05	2005-31	Rescind 2005-20	Adjustments to Schedule of Rates and Charges	10-10-05
10-10-05	2005-35	Rescind 2005-31	Adjustments to Schedule of Rates and Charges	10-10-05
06-26-06	2006-20	Rescind 2005-35	Adjustments to Schedule of Rates and Charges	06-27-06
07-24-06	2006-27	Rescind 2006-20	Changes to Water & Sewer Connection Fees	07-24-06
06-25-07	2007-16	Partially Modifies 2006-27	Adjustments to Schedule of Rates and Charges	06-26-07
07-16-07	2007-21	Partially Modifies 2006-27	Changes to Water & Sewer Connection Fees	07-17-07
06-23-08	2008-36	Rescind 2007-21	Adjustments to Schedule of Rates and Charges	07-01-08
07-28-08	2008-45	Partially Modifies 2008-36	Changes to Water & Sewer Connection Fees	07-29-08
06-22-09	2009-20		Adjustments to Schedule of Rates and Charges	06-23-09
07/27/09	2009-24	Partially Modifies 2009-20	Changes to Water & Sewer Connection Fees	07/28/09
06/28/10	2010-19		Adjustments to Schedule of Rates and Charges	07/01/10
07/26/10	2010-22	Partially Modifies 2010-19	Changes to Water & Sewer Connection Fees	07/27/10
02/28/11	2011-3	Partially Modifies 2010-22	Changes to Sewer Connection Fees	03/01/11
06/27/11	2011-25	Rescind 2010-19	Adjustments to Schedule of Rates and Charges	07/01/11
07/25/11	2011-33	Rescind 2011-25	Changes to Water & Sewer Connection Fees	07/26/11
06/25/12	2012-26	Rescind 2011-25	Adjustments to Schedule of Rates and Charges	07/01/12
10/08/12	2012-41	Partially Modifies 2012-26	Changes to Water & Sewer Connection Fees	10/09/12
12/10/12	2012-57		Adjust Connection Fees to IDs 112 & 212	12/11/12
06/24/13	2013-21	Rescind 2012-26	Adjustments to Schedule of Rates and Charges	07/01/13
12/16/13	2013-60	Partially Modifies 2013-21	Changes to Water & Sewer Connection Fees	01/01/14
06/23/14	2014-32		Adjustments to Schedule of Rates and Charges	07/01/14