

## DOCKETED

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<b>Project Title:</b>	Huntington Beach Energy Project
<b>TN #:</b>	202850
<b>Document Title:</b>	Orange County Sanitation District Budget
<b>Description:</b>	OCSD Budget which has a map of the service area and treatment plants and which says that determining parameters and opportunities for recycling treated effluent from plant number 2 is an upcoming focus area.
<b>Filer:</b>	Monica Rudman
<b>Organization:</b>	Monica Rudman
<b>Submitter Role:</b>	Intervenor
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<b>Docketed Date:</b>	7/30/2014



# EXECUTIVE SUMMARY

Fiscal Years 2014-15 and 2015-16

## Proposed Budget

**ADOPTED  
JUNE 25, 2014**

*Orange County Sanitation District, California*





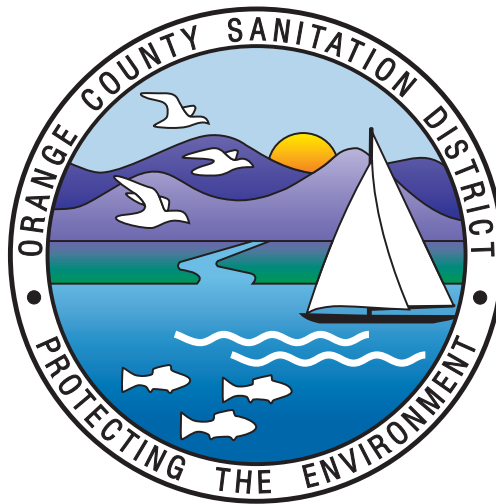
Orange County Sanitation District, California

# BUDGET EXECUTIVE SUMMARY

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**Fiscal Years 2014-15 and 2015-16**

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*“To protect public health and the environment by providing effective wastewater collection, treatment, and recycling.”*





# GFOA BUDGET PRESENTATION AWARD



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
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California**

For the Biennium Beginning

**July 1, 2012**

*Christopher P. Moivell*

President

*Jeffrey R. Egan*

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the Orange County Sanitation District, California, for its biennial budget for the biennium beginning July 1, 2012.

In order to receive this award, a government unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

The award is valid for a period of two years only. We believe our current budget continues to conform to the program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

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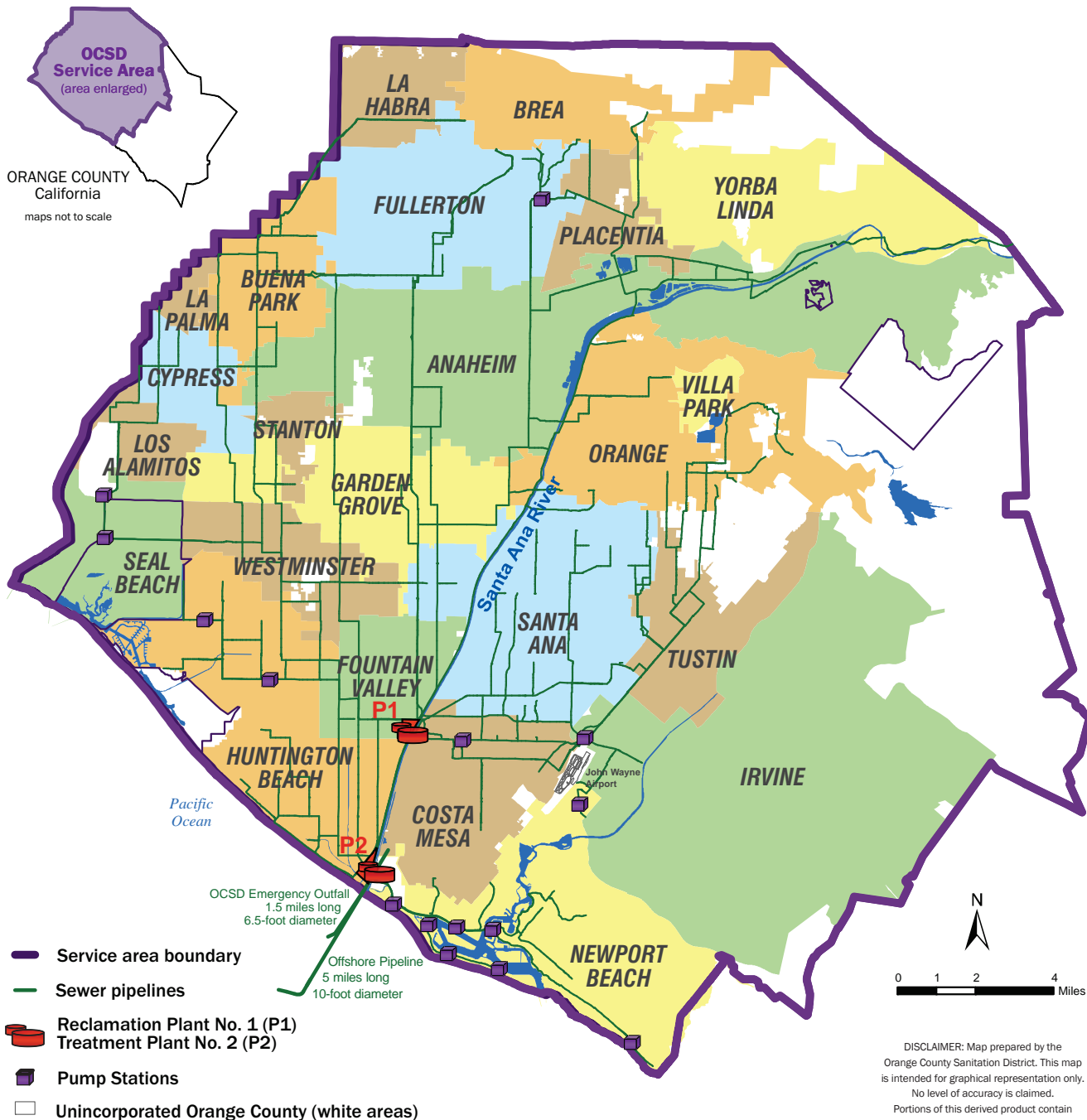
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# OCSD SERVICE AREA



# BOARD OF DIRECTORS

## Agency/Cities

Anaheim  
Brea  
Buena Park  
Cypress  
Fountain Valley  
Fullerton  
Garden Grove  
Huntington Beach  
Irvine  
La Habra  
La Palma  
Los Alamitos  
Newport Beach  
Orange  
Placentia  
Santa Ana  
Seal Beach  
Stanton  
Tustin  
Villa Park  
Yorba Linda

## Active Director

Lucille Kring  
Brett Murdock  
Fred Smith  
Prakash Narain  
Steve Nagel  
Greg Sebourn  
Steve Jones  
Joe Carchio  
Steven Choi  
Tom Beamish  
Peter Kim  
Troy Edgar  
Keith Curry  
Teresa Smith  
Scott Nelson  
David Benavides  
Michael Levitt  
David Shawver  
John Nielsen  
Brad Reese  
Gene Hernandez

## Alternate Director

Jordan Brandman  
Roy Moore  
Steve Berry  
Doug Bailey  
Michael Vo  
Jan Flory  
Kris Beard  
Dave Sullivan  
Christina Shea  
Rose Espinoza  
Gerard Goedhart  
Richard Murphy  
Rush Hill  
Mark Murphy  
Constance Underhill  
Sal Tinajero  
Gordon Shanks  
Carol Warren  
Allan Bernstein  
Greg Mills  
John Anderson

## Sanitary/Water Districts

Costa Mesa Sanitary District  
Midway City Sanitary District  
Irvine Ranch Water District

James Ferryman  
Tyler Diep  
John Withers

Bob Ooten  
Al Krippner  
Douglas Reinhart

## County Areas

Member of the Board of Supervisors

Janet Nguyen

Shawn Nelson

# BOARD COMMITTEES

## **Steering Committee**

Troy Edgar, Board Chair  
Tom Beamish, Board Vice Chair  
John Nielsen, Chair, Operations Committee  
Brad Reese, Chair, Administration Committee  
Keith Curry, Member-At-Large  
Brett Murdock, Member-At-Large  
John Withers, Member-At-Large

## **Administration Committee**

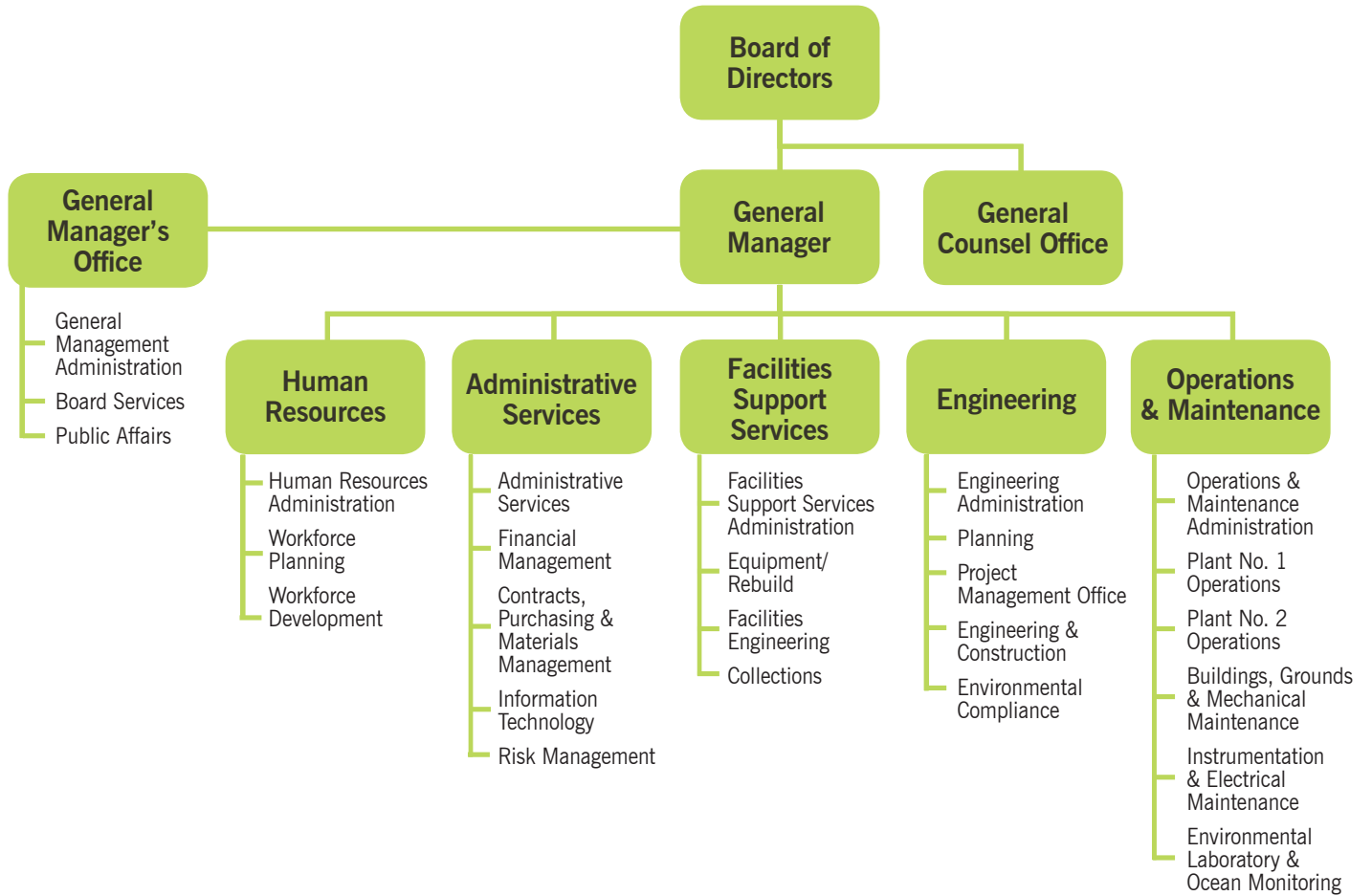
Brad Reese, Chair  
John Withers, Vice Chair  
David Benavides  
Joe Carchio  
Steven Choi  
Tyler Diep  
James Ferryman  
Gene Hernandez  
Peter Kim  
Prakash Narain  
Janet Nguyen  
Teresa Smith  
Troy Edgar, Board Chair  
Tom Beamish, Board Vice Chair

## **Operations Committee**

John Nielsen, Chair  
Brett Murdock, Vice Chair  
Keith Curry  
Steve Jones  
Lucille Kring  
Michael Levitt  
Steve Nagel  
Scott Nelson  
Greg Sebourn  
David Shawver  
Fred Smith  
Troy Edgar, Board Chair  
Tom Beamish, Board Vice Chair



# ORGANIZATION CHART





# ADMINISTRATIVE OFFICIALS

## Management Team

General Manager .....	James Herberg
Assistant General Manager .....	Robert Ghirelli
Director of Engineering .....	Robert Thompson
Director of Finance and Administrative Services .....	Lorenzo Tyner
Director of Facilities Support Services .....	Nicholas Arhontes
Director of Operations & Maintenance .....	Edward Torres
Director of Human Resources.....	Jeffrey Reed
General Counsel .....	Bradley Hogin





# MESSAGE FROM THE GENERAL MANAGER



June 4, 2014

Honorable Chair and Board of Directors:

I am pleased to submit the Orange County Sanitation District Fiscal Year 2014-15 and 2015-16 Operating and Capital Improvement Program Budget. This document provides a framework for District activities during these two fiscal years and serves as a source of information for ratepayers, the District's Board of Directors, and our employees.

In presenting this budget, it is an exciting time for our agency as we celebrate the 60th anniversary of the Orange County Sanitation District.

The Clean Water Act of 1972 and the importance of clean beaches drove improvements such as our first secondary treatment facilities, our industrial source control program and our five-mile ocean outfall.

Today we serve 2.5 million people, more than eight times the population that we served in 1954. Over the past 60 years, we have expanded our systems to handle the population growth and urbanization and to manage steadily increasing wastewater flows. We treat more than 200 million gallons of wastewater each day and have a budget of approximately \$554 million. This budget addresses rising treatment and chemical costs, aging infrastructure, increased regulatory requirements, and long-term debt obligations.

Our agency recycles more than one-third of the water produced by our treatment plants in partnership with Orange County Water District.

The solids produced as a byproduct of the treatment process – known as biosolids – are turned into organic fertilizer and compost for use on agricultural lands. Solids that 30 years ago were viewed as a waste are now providing valuable nutrients to farm lands in Arizona and California.

Gas produced in our solids processing digesters is utilized as a biofuel to operate the engines in the Central Generation facilities. These facilities produce about two-thirds of the electrical needs of our treatment plants.

In addition, we are using our facilities to manage up to 10 million gallons per day of urban runoff during dry weather that would otherwise flow untreated in our coastal waters.

OCSD has transformed since 1954. We are no longer a sanitation district treating, collecting and disposing of wastewater. We are a water resource recovery facility looking to capture, recycle and reuse the products resulting from the wastewater treatment.

I would like to take this opportunity to highlight some of the areas of focus for the coming years:

- Future Water Recycling – Determine partnerships, needs, strategies, benefits and costs associated with recycling of the treated effluent from Plant No. 2.

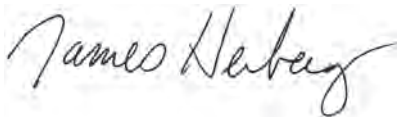
## 2014-15 AND 2015-16 BUDGET

- Infrastructure Stability – Continue the transition of the Sanitation District’s capital improvement program from increasing capacity and level of service to rehabilitation and replacement.
- Cost Containment – Despite inflationary increases on many external costs (chemicals, biosolids hauling, utilities) OCSD will continue its efforts to minimize the impact on ratepayers by aggressively negotiating our contracts, ensuring a competitive bidding environment, responsibly managing debt and implementing efficiencies wherever possible.
- Safety and Security – We will continue to evaluate our vulnerabilities and make improvements to provide a safe workplace for our employees and protect our regional infrastructure.
- Workforce Planning and Workforce Development – This initiative is ongoing and part of a comprehensive workforce planning and development effort to ensure we have the right people with the right skills and abilities, in the right place, at the right time.

We continue our focus on efficiency while delivering on our mission.

This budget demonstrates our commitment to efficiency and does not include any increases in overall staffing levels with minor adjustments for operating expenditures. I also take pride in our safe, efficient and compliant operation of our entire system.

I believe this budget fully supports the goals included in the District’s Strategic Plan and positions us well to address the challenges ahead. I look forward to a dynamic and productive year of leading the organization.



James D. Herberg  
General Manager  
Orange County Sanitation District





# FINANCE SUMMARY



# FINANCIAL SUMMARY/OVERVIEW & BUDGETARY ISSUES

## Budget Overview

OCSD's Fiscal Year 2014-15 and 2015-16 operating and capital improvement budgets are proposed at \$554 million and \$451 million, respectively. The decrease in the 2015-16 budget is primarily due to a non-recurring long-term liability reduction of \$125 million planned for Fiscal Year 2014-15.

The budget continues to reflect the agency's ongoing efforts to streamline operations. Staffing levels are proposed to remain constant at 626 full-time equivalent (FTE) positions while service levels have increased in order to meet secondary treatment standards.

Additionally, service level increases in ocean monitoring, discharge and treatment, water reclamation and conservation, urban runoff diversions, biosolids management, and CIP expansion have resulted in a corresponding increase in cash flow requirements.

OCSD's CIP budgets for Fiscal Years 2014-15 and 2015-16 are \$186 million and \$206 million, respectively. This CIP budget supports collection system, joint works treatment and disposal system improvement projects. The increase in the second year is due to the timing of construction cash outlays as we meet our infrastructure needs.

## Financing

The District uses long-term Certificates of Participation (COP) for financing capital improvements that cannot be completely funded from current revenue. Before any new debt is issued, the impact of debt service payments on total annual fixed costs is analyzed. Total COP indebtedness is currently at \$1.2 billion. No new money debt financings are currently forecasted to assist in the funding of the \$2.3 billion in capital improvements required over the next 10 years.

## Staffing

Reflecting the organization's commitment to providing service at the lowest costs, the budget includes no change in authorized full time positions for Fiscal Years 2014-15 and 2015-16 as staffing is proposed at 626 FTE positions in both years.

This staffing level continues to reflect a significant reduction from the Fiscal Year 1995-96 approved staffing level of 678 positions. Personnel costs will increase primarily due to increases in retirement premiums. The District will continue to effectively manage these expenses with approximately 20 percent of the budget allocated to employee costs, much less than most other government agencies.

## Level of Treatment

The agency's two treatment plants, located in Fountain Valley and Huntington Beach, process about 200 million gallons of wastewater each day generated by approximately 2.5 million people residing within central and northwest Orange County and the businesses that operate within this service area. The proposed budget to operate, maintain and manage our sewage collection, treatment and disposal system, including self-insurance requirements, for the next two years is \$155 million and \$157 million. Increases are primarily a result of repairs and maintenance, and personnel costs.

The cost per million gallons of wastewater treated (an industry-wide performance measurement) is expected to increase in Fiscal Year 2014-15 to \$2,089. This is a \$118, or 6.0 percent, increase over the prior year projection of \$1,971.

To eliminate most bacteria from being released from the ocean outfall, in Fiscal Year 2002-03 the District began using chlorine bleach to disinfect the effluent and then applying sodium bisulfite to remove remaining chlorine prior to releasing the treated wastewater to the ocean.

To protect the animal life living in the ocean, the District continues to take great measures to limit the chlorine residual to essentially non-detectable levels. Since full secondary treatment has greatly reduced the need for disinfection, the District is investigating means to reduce or eliminate the use of chlorine bleach. The cost for outfall disinfection has decreased significantly due to full secondary treatment and optimization.

The budget for disinfection, including process disinfection, is \$425,000 for Fiscal Year 2014-15.

# 2014-15 AND 2015-16 BUDGET

## Sewer Service Fees

The 2014-15 and 2015-16 single family residential rates are \$316 and \$323, respectively. OCSD's rates are well below the statewide average sewer rate of \$484, according to a 2013 survey of 759 agencies in California.

## Capital Improvement Program (CIP)

In preparation of this two-year budget, the District completed the FY 2014-15 CIP Validation Update. Highlights of this Validation Update are as follows:

- Overall total projected outlays over the 20 year life of the CIP program increased \$120.6 million from the Fiscal Year 2013-14 CIP estimate.
- Active and future project budgets increased by an estimated \$151.3 million.
- Three new CIP projects were added with projected outlays of \$57.5 million.

## Projects Driving the CIP

Over the next 24 months, the largest capital cash outlays are:

1. Sludge Dewatering and Odor Control at Plant No. 1 - \$100.9 million (\$172 million total budget)
2. Newport Force Main Rehabilitation - \$40.1 million (\$52.2 million total budget)
3. CenGen Emissions Control Project - \$17.7 million (\$25 million total budget)
4. Solids Thickening and Processing Upgrades - \$12.7 million (\$48.3 million total budget)

5. Gisler - Red Hill Trunk Improvements - Reach B - \$6 million (\$23.1 million total budget)

6. District 6 Trunk Sewer Relief - \$5.3 million (\$7 million total budget)

These six projects represent 57 percent of the total Fiscal Year 2014-15 proposed CIP cash flow budget of \$169.2 million.

## Groundwater Replenishment System (GWRS)

The OCSD Strategic Plan includes water reclamation. With the Orange County Water District (OCWD), OCSD began operating the GWRS, the nation's largest water reclamation project, in January 2008.

The GWRS currently reclaims 70 million gallons of water a day, delaying the need to build a second outfall which could cost more than \$200 million. OCSD and OCWD equally shared the expenses of Phase I of the project and approximately \$44 million in Federal and State grants that were received to offset part of the total costs.

Phase II will increase the production of reclaimed water to 100 million gallons a day. The project, which will be funded entirely by the OCWD, is anticipated to be completed in early 2015. OCSD is directing all reclaimable flows to Plant No. 1 in support of providing maximum amounts of specification water for reclamation.



# FINANCIAL SUMMARY/OVERVIEW & BUDGETARY ISSUES

## Operating Budget Increase

The operations budget for the collection, treatment, and disposal of wastewater is proposed at \$154.7 million, a \$9.8 million (seven percent) increase above 2013-14 projected expenditures. It is projected to increase by an additional \$2.7 million (two percent) in 2015-16.

Although some expenses will increase or decrease slightly, the overall increase to the operating budget in 2014-15 over the 2013-14 projected is primarily attributable to seven specific areas:

### Salaries and Benefits – \$5.5M Increase

Authorized staffing levels are proposed to remain constant at the FY 2013-14 authorized level of 626 FTE positions over the next two fiscal years. However, salaries and wages will increase \$2.2 million primarily due to anticipated step increases.

In addition, employee benefits will increase \$3.3 million primarily due to an increase of \$2.5 million (12 percent) in retirement premiums, an increase of \$0.5 million (six percent) in group insurance costs and an increase of \$0.3 million (66 percent) in self-insurance premiums for workers compensation. These increases reflect the impacts from existing collective bargaining agreements and revised actuarial assumptions on retirement premiums. The increases in retirement premiums reflect the rising costs occurring throughout California.

### Repairs and Maintenance – \$3.5M Increase

This expense category includes parts and services for repairing aging treatment plant and collection facilities, and reflects base budgets for equipment maintenance, as well as, out-sourced annual service contracts and maintenance agreements. The Fiscal Year 2014-15 budget increase of \$3.5 million (36 percent) is mostly attributable to increases in basic repairs and maintenance costs, digester cleaning (\$1M), and Central Generation (GenGen) engine overhaul (\$893K).

## Contractual Services – \$1.4M Increase

Biosolids removal and transportation costs continue to increase as acceptable alternatives for disposal become less available. Biosolids production will be approximately 765 tons per day with the secondary treatment processes fully operational.

## Utilities – \$0.4M Increase

The proposed electric power budget reflects an increase of \$430,000 over the prior year projected due to anticipated consumption and unit cost increases.

## Professional Services – \$0.4M Increase

The increase in professional services in Fiscal Year 2014-15 is to fund the facility rehabilitation projects, OSHA required safety study, and development of a comprehensive civil assets maintenance program.

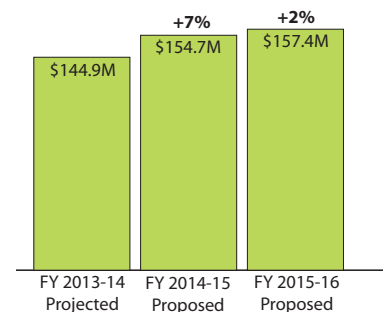
## Other Materials, Supplies, Services – \$0.5M Increase

The increase is primarily due to an increase in the General Manager's contingency and the restoration of the contingency for prior year reappropriations.

## Cost Allocation – \$2.8M Decrease

Total salary and overhead costs charged to capital projects are expected to increase based on the updated cost allocation plan and overhead rates. The increased charges to capital projects will reduce the net operating budget.

### Operating Expenses



In 2014-15, total operating and maintenance expenses will increase \$9.8 million (7%) from FY 2013-14 and another 2.7 million (2%) in FY 2015-16.



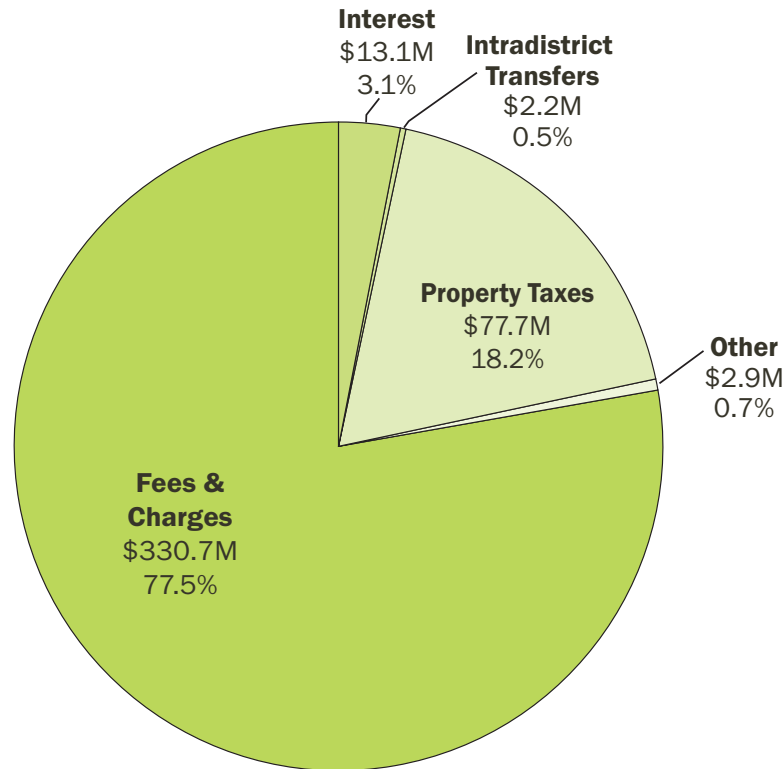
# 2014-15 AND 2015-16 BUDGET





# FINANCIAL SUMMARY/FUNDING SOURCES BY CATEGORY

## WHERE THE MONEY COMES FROM



### Funding Sources by Category (in millions)

Category	2012-13 Actual	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Service Fees	\$280.5	\$290.2	\$305.6	\$312.4
Property Taxes	79.2	74.0	77.7	81.6
User Fees	11.3	13.3	13.7	14.0
Interest	3.3	3.8	13.1	14.7
Capital Facilities Capacity Charges	12.9	10.9	11.4	11.9
Intradistrict Transfers	26.6	7.5	2.2	1.1
Debt Proceeds	0.0	0.0	0.0	0.0
Other Revenue	5.9	3.7	2.9	3.2
<b>Total Funding Sources</b>	<b>\$419.7</b>	<b>\$403.4</b>	<b>\$426.6</b>	<b>\$438.9</b>

# FINANCIAL SUMMARY/FUNDING SOURCES BY CATEGORY

The District has a variety of revenue sources available for operating and capital expenses. The major revenue sources are:

## **Beginning Balances – \$727.6M**

As a result of its Reserve and Investment Policies, the District will begin the year with a balance carried forward from the previous year.

## **General Service Fees – \$305.6M**

User fees are ongoing fees for service paid by customers connected to the sewer system. A property owner, or user, does not pay user fees until connected to the sewer system and receiving services. Once connected, users are responsible for their share of the system's costs, both fixed and variable, in proportion to their demand on the system. These fees are for both Single Family Residences (SFR) and Multiple Family Residences (MFR).

## **Property Taxes – \$77.7M**

The County of Orange is permitted by State law (Proposition 13) to levy taxes at one percent of full market value (at time of purchase) and can increase the assessed value no more than two percent per year. The District receives a share of the basic levy proportionate to what was received in the 1976 to 1978 period, less \$3.5 million, the amount that represents the State's permanent annual diversion from special districts to school districts that began in 1992-93. OCSD's share of this revenue is dedicated for the payment of debt service.

## **Permit User Fees – \$13.7M**

Permit user fees are paid by large industrial and commercial properties owners connected to the sewer system. These fees are for the owner's share of the system's costs, both fixed and variable, in proportion to the user's demand on the system.

Since the inception of the Permit User Fee Program in 1970, users of OCSD's system that discharge high volumes or high strength wastewater have been required to obtain a discharge permit and pay extra fees for the costs of service.

## **Interest Earnings – \$13.1M**

Interest earnings are generated from the investment of accumulated reserves consisting of a cash flow/contingency, a capital improvement, a renewal/replacement, and a self-insurance reserve.

## **Capital Facilities Capacity Charges (CFCC) – \$11.4M**

The Capital Facilities Capacity Charge is a one-time, non-discriminatory charge imposed at the time a building or structure is newly connected to OCSD's system, directly or indirectly, or an existing structure or category of use is expanded or increased. This charge pays for OCSD facilities that exist at the time the charge is imposed, or to pay for new facilities to be constructed in the future that will benefit the property being charged.

## **Intradistrict Transfers – \$2.2M**

In accordance with Amendment No. 2 to the Agreement for Purchase and Sale of Capacity Rights in Treatment, Disposal and Sewer Facilities between Irvine Ranch Water District and Orange County Sanitation District dated November 15, 1995, ownership is adjusted annually to reflect the current equity percentage ownership based on sewage flows.

## **Other Revenue – \$2.9M**

Other revenue includes self-insurance assessments for workers' compensation and general liability coverage as well as miscellaneous revenue such as rents and leases.

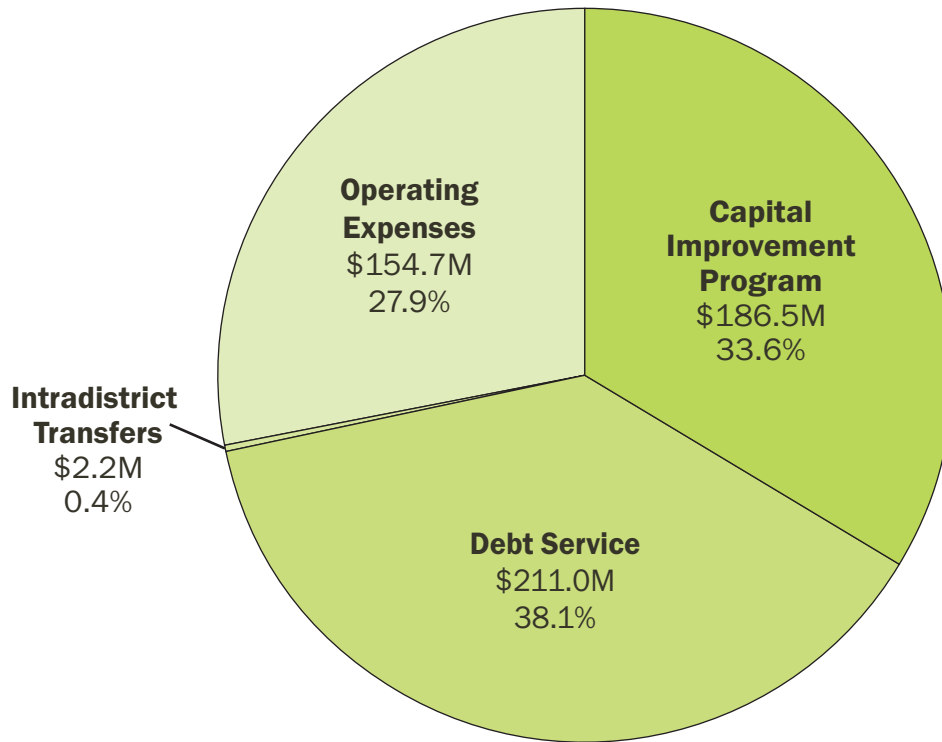
## **Debt Proceeds – \$0M**

Certificates of Participation (COPs) are OCSD's primary mechanism for financing capital projects. COPs are repayment obligations based on a lease or installment sale agreement. COPs are not viewed as "debt" by the State of California, but rather a share in an installment arrangement where OCSD serves as the purchaser.

No new money debt issuances are being proposed over the next two fiscal years as the \$2.3 billion in future replacement, rehabilitation, and refurbishment projects anticipated over the next ten years will be adequately funded through current sewer service fee charges and existing reserves.

# FINANCIAL SUMMARY/FUNDING USES BY CATEGORY

## WHERE THE MONEY GOES



### Funding Uses by Category (in millions)

Category	2012-13 Actual	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Capital Improvement Program*	\$99.1	\$92.6	\$186.5	\$206.1
Debt Service	109.8	82.6	211.0	86.7
Operating Expenses	140.6	144.9	154.7	157.4
Intradistrict Transfers	26.6	7.5	2.2	1.1
<b>Total Funding Uses</b>	<b>\$376.1</b>	<b>\$327.6</b>	<b>\$554.4</b>	<b>\$451.3</b>

\*Capital Improvement Program total includes Replacement, Rehabilitation & Refurbishment

# FINANCIAL SUMMARY/FUNDING USES BY CATEGORY

OCSD budgets its funds in six distinct areas:

## Capital Improvement Program (CIP) – \$169.2M

To provide an appropriate level of service to OCSD’s rate payers, large capital improvements are required. The CIP provides for the management and implementation of these improvements.

## Replacement, Rehabilitation, & Refurbishment – \$17.3M

Based on its Asset Management Plan, the District anticipates the replacement, rehabilitation, or refurbishment (RRR) of existing capital facilities. The Asset Management Plan indicates that specific facilities are in need of RRR that have not yet been identified or where a detailed job plan has yet to have been prepared.

## Debt Service – \$211.0M

This is the cost of issuing debt. Long-term debt financing allows the District to complete large multi-year capital projects by providing funds not always immediately available.

## Operating Expenses – \$154.7M

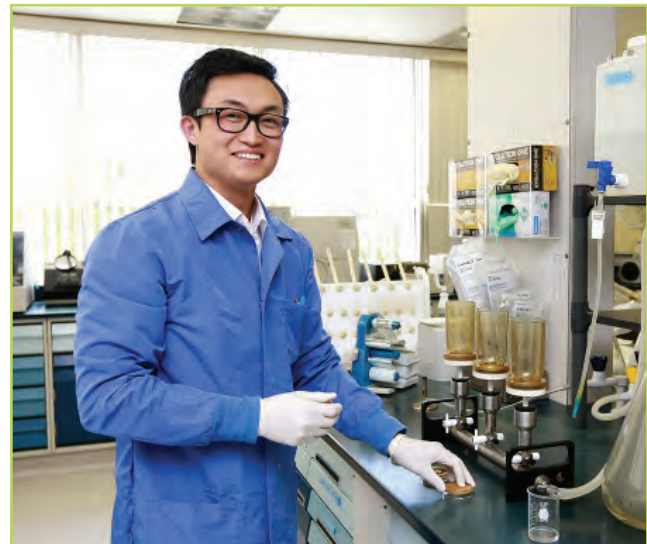
The proposed budget allocates resources to operate, maintain and manage our sewage collection, treatment and disposal system, and for any associated administrative or technical requirements.

## Intradistrict Transfers – \$2.2M

In accordance with Amendment No. 2 to the Agreement for Purchase and Sale of Capacity Rights in Treatment, Disposal and Sewer Facilities between Irvine Ranch Water District and Orange County Sanitation District dated November 15, 1995, ownership is adjusted annually to reflect the current equity percentage ownership based on sewage flows.

## Reserves – \$599.8M

OCSD budgets reserves for various potential needs including cash flow, operating contingencies, capital improvements, capital replacement and refurbishments, and catastrophic loss. The reserve levels are governed by OCSD policy.



# CAPITAL IMPROVEMENT PROGRAM

## **CIP Budget Request Summary**

Each year, the Board of Directors, through their committee process, reviews and approves the Capital Improvement Program (CIP) prepared by staff for both sewage collection system projects (collections) and the joint works treatment and disposal system projects.

Many of the District's projects take several years to complete the planning, design and construction cycle. The budget for a construction project covers the life of the project. This budget is reevaluated each year for the purpose of managing annual cash flows. Thus, many of the projects in the CIP Budget for Fiscal Years 2014-15 and 2015-16 are continuing projects that were approved in prior years.

The Asset Management Program within the Planning Division continues assessing the condition of the District's existing assets and systems to ensure that these assets and systems can provide the necessary level of service. The Planning Division will continue to review and update the ongoing and future CIP to appropriately manage the risks associated with asset or system failure. This year several projects were delayed, consolidated and rescope to help ensure that the CIP is delivered in the most efficient way possible. The Asset Management Program will continue these efforts and will continue to define the future CIP project requirements not currently included on the CIP list but are anticipated within the long term financial plan to ensure effective and efficient operations in the future.

Three new projects are proposed for addition to the 2014-15 and 2015-16 budget to rehabilitate the Main Street Pump Station, rehabilitate the Slater Avenue Pump Station and make improvements to the Plant No. 1 perimeter security and storm water system. These projects increase the amount of the CIP by \$75.8 million. However, these projects will be funded from the future rehabilitation, renewal, and replacement line item in OCSD's existing budget and will not impact OCSD user rates.

In conjunction with preparation for the 2014-15 and 2015-16 budget, District staff has developed and reviewed with the Board of Directors a capital program to deliver the levels of service included in the District's 5-year Strategic Plan (see Appendix).

District staff has also validated the active CIP projects currently being executed to ensure that the active project scopes of work and cost estimates were accurate. The validated CIP includes 77 large capital projects and 38 special projects with a 20-year expenditure of \$1.9 billion. This total represents a \$120.6 million increase from the 2013-14 CIP estimate. This increase is mostly attributed to improvements made to project scopes of work and cost estimates.

The proposed 2014-15 CIP budget is organized by treatment process. The funds requested for the current cash flow budget total \$169.2 million, an increase of 19.8 percent from last year's cash flow request of \$141.3 million. The current year cash flow is part of an overall total cost of \$2.8 billion for active projects.

Following is a chart of the 2014-15 Proposed CIP Cash Flows and the total Project Costs for all proposed projects, by project phase, in millions:

Current Status	2014-15 Cash Flow	Total Project Cost
Future	\$0.0	\$1,059.2
Planning	8.5	80.7
Design	6.7	147.4
Construction	152.0	1,474.5
Capital Equipment	2.0	16.0
<b>Total</b>	<b>\$169.2</b>	<b>\$2,777.8</b>

There are currently 36 projects in the Planning Phase with proposed capital outlay spending in 2014-15. Two of the larger 2014-15 cash flow projects in the Planning Phase are the Collection System Master Planning and the Odor Control Master Plan with current year projected expenditures of \$700 thousand and \$695.1 thousand respectively.

There are currently 34 projects in the Design Phase with proposed capital outlay spending in 2014-15. The two largest projects in the Design Phase are the Trunk Line Odor Control Improvements at Plant No. 1 and the Sludge Dewatering and Odor Control at Plant No. 2 with projected current year expenditures of \$373.7 thousand and \$322 thousand respectively.



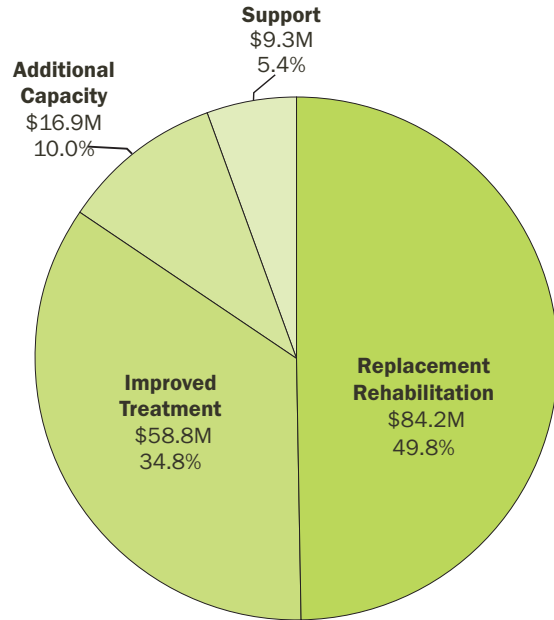
# 2014-15 AND 2015-16 BUDGET



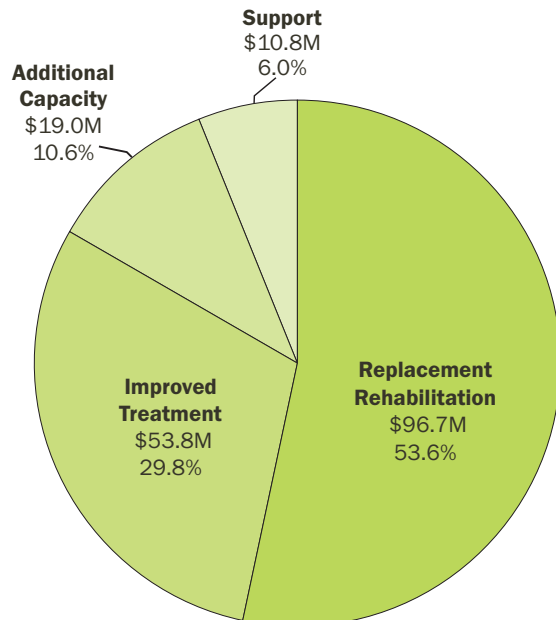
There are currently 37 projects in the Construction Phase with proposed capital outlay spending in FY 2014-15. The two most significant projects in the construction phase are the Sludge Dewatering and Odor Control at Plant No. 1 and the Newport Force Main Rehabilitation with projected FY 2014-15 expenditures of \$61.1 million and \$20.4 million respectively.

Standard contingency factors have been applied to improve cost estimates. The rates of 20, 20, and 10 percent have been applied respectively to the estimates made during the project development, design, and construction project phases. This reflects standard practice for estimating construction project costs.

**FY 2014-15  
CIP Expenditures by Process  
Total = \$169.2M**



**FY 2015-16  
CIP Expenditures by Process  
Total = \$180.3M**



# CAPITAL IMPROVEMENT PROGRAM

## The Treatment Process

OCSD collects wastewater from 479 square miles in central and north Orange County. It is fed through 15 pump stations and gravity sewers. Influent wastewater undergoes Preliminary Treatment at our two treatment plants where it is filtered through bar screens and grit chambers. Primary Treatment consists of large clarifying basins where solids are settled out and sent to Solids Processing.

Primary treated wastewater is pumped to Secondary Treatment where it is treated using either activated sludge or trickling filter processes. The resulting water from these secondary treatment processes is blended to become final effluent.

Methane gas generated during the natural decomposition of the solids in the digesters is used to fuel the Central Power Generation System and produce electricity used to operate both treatment plants.

Solids are treated and then dewatered to approximately 20 percent solids consistency, called biosolids. Biosolids are recycled by composting, by use as a land application, or by use at a local landfill that produces methane.

Approximately 90 million gallons per day of secondary effluent from Reclamation Plant No. 1 is sent to the Orange County Water District (OCWD) for reclamation in its two treatment and distribution systems. OCWD makes use of this secondary effluent in two ways.

The first is OCWD's GWRS. The GWRS is the largest water purification project of its kind in the world and its construction was funded jointly by OCWD and OCSD. At 70 million gallons per day, the GWRS

generates enough pure water to meet the needs of 500,000 people.

The second is OCWD's Green Acres Project (GAP), which is a water recycling effort that provides reclaimed water for landscape irrigation at parks, schools and golf courses as well as for industrial uses, such as carpet dying.

The total OCSD annual demand for GAP water is about 1.6 million gallons per day. There was a significant decrease in use after the completion of a project allowing the power plant cooling systems to use plant water instead of recycled GAP water.

## Debt Financing

Due to the magnitude of identified future annual capital and operations and maintenance expenditures, it is necessary that the District utilize debt financing to meet its total obligations. Debt financing allows the District to meet projected construction schedules while achieving the lowest possible user fees, as well as long-term stability in future sewer service fee rates.

## Certificates of Participation (COP)

The primary debt financing mechanism used is Certificates of Participation (COP). COPs are repayment obligations based on a lease or installment sale agreement. The COP structure was selected over other structures because COPs are not viewed as debt by the State of California, as the purchaser does not actually receive a "bond," but rather a share in an installment sale arrangement where the District serves as the purchaser. COPs can be issued with fixed or variable interest rates.



# DEBT FINANCING PROGRAM

As of July 1, 2014, the total outstanding COP indebtedness will be \$1.2 billion.

## Build America Bonds Financings

The District issued the \$80.0 million Wastewater Revenue Obligations, Series 2010A in May 2010 and the \$157.0 million Wastewater Revenue Obligations, Series 2010C in November 2010 as “Build America Bonds” (BABs) fixed rate debt.

The American Recovery and Reinvestment Act of 2009 created a new financing product, BABs, for the municipal issuer. BABs are issued as higher interest taxable bonds; however, the U.S. Treasury provides a 35 percent subsidy on interest payments. The net cost, after accounting for the 35 percent subsidy payment, frequently results in lower net costs to the issuer, specifically in the maturity years beyond ten years.

On March 1, 2013, the federal government implemented certain automatic spending cuts known as the sequester. As a result of the sequester, federal subsidy payments on BABs were reduced by 8.7 percent and by 7.2 percent for the federal fiscal years ended September 30, 2013 and September 30, 2014, respectively.

## Dedicated Funding Source

In 1992 and 2004 the Board of Directors formalized the dedication of certain funding sources. To ensure the continuation of favorable credit ratings, revenues were dedicated to debt service in the following order:

1. Ad valorem property taxes
2. Sanitary sewer service charges
3. Other revenues

This apportionment of the ad valorem tax was consistent with and pursuant to the Revenue Program adopted in April 1979 to comply with regulations of the Environmental Protection Agency and the State Water Resources Control Board and in accordance with COP documents and Board policy.

## The District Maintains AAA Bond Rating

The District’s bond rating is “AAA” from both Standard & Poors and Fitch Ratings. An “AAA” Rating is the highest for a government agency. In order to maintain this rating, the District adheres to its 2001 Debt Policy and coverage ratios requirements. This Board-adopted policy serves as the agency’s guide in the management of existing debt and in the issuance of future debt.

## Debt Ratios

The District has contractual covenants within the existing COP agreements which require minimum coverage ratios of 1.25. The minimum coverage ratio is the ratio of net annual revenues available for debt service requirements to total annual debt service requirements for all senior lien COP debt. The coverage ratio for senior lien COP debt is being proposed to remain above 3.00 for Fiscal Years 2014-15 and 2015-16.

## Future Financings

No new money debt issuances are being proposed over the next two fiscal years as the \$2.3 billion in future replacement, rehabilitation, and refurbishment projects anticipated over the next ten years will be adequately funded through current sewer service fee charges and existing reserves.





# OPERATING EXPENSES

Category	2012-13 Actual	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Salaries and Benefits	\$90.7	\$93.7	\$99.2	\$100.6
Contractual Services	22.2	22.9	24.2	24.5
Operating Materials & Supplies	16.6	15.6	15.8	16.3
Repairs and Maintenance	10.1	9.6	13.1	12.9
Utilities	6.4	7.0	7.4	7.8
Professional Services	3.1	2.9	3.3	3.1
Other Materials, Supplies, Services	2.0	2.0	2.5	2.8
Self-Insurance Requirements	1.4	2.0	2.2	2.4
Administrative Expenses	1.3	1.2	1.4	1.6
Training and Meetings	0.7	0.8	1.1	1.1
Research and Monitoring	1.1	0.8	0.8	0.8
Printing and Publications	0.4	0.3	0.4	0.4
Cost Allocation	(15.4)	(13.9)	(16.7)	(16.9)
<b>Total Operating Expenses</b>	<b>\$140.6</b>	<b>\$144.9</b>	<b>\$154.7</b>	<b>\$157.4</b>

## Salaries, Wages & Benefits – \$99.2M

**Salaries & Wages** – The proposed budget for Full Time Equivalent (FTE) positions for both Fiscal Year 2014-15 and 2015-16 remains unchanged from the Fiscal Year 2013-14 approved staffing level of 626.0 FTEs. Provision has been made in these salary projections to comply with the terms of the most recently adopted Memorandums of Understanding.

**Retirement** – OCSD employees are members of the Orange County Employees’ Retirement System (OCERS). Information from OCERS indicates that the employer’s required contribution rates will be increased in Fiscal Year 2014-15 from 31.95 percent to 36.57 percent. In addition, OCSD pays 3.5 percent of the employee’s required contribution.

**Group Insurance** – These expenses include OCSD’s share (approximately \$14,400 per employee) of employee medical plan benefits for the indemnity plan, prepaid HMO plans, dental insurance plan, and life and disability insurance premiums. The proposed budget includes a 5.7 percent increase for medical plans and a 1.0 percent decrease for the dental plan over the prior year projected.

## Contractual Services – \$24.2M

The treatment plants currently produce about 765 wet tons per day of biosolids which are recycled in California and Arizona. Nearly 50 percent of biosolids are currently allocated to composting, 40 percent is used on farms for soil enrichment, and 10 percent is sent to a local landfill that produces methane. In Fiscal Years 2014-15 and 2015-16, biosolids budgets will be approximately \$18.3 million and \$18.6 million respectively, approximately 76 percent of the Contractual Services budget. Other residuals solids and waste includes disposal costs for grit and screening waste, digester cleaning waste, and hazardous materials.

This category also includes appropriations for grounds keeping, janitorial, security, toxic waste removal, outside laboratory, trash pickup, plant site sweeping, closed circuit television pipeline inspections, line cleaning, and temporary services.

# 2014-15 AND 2015-16 BUDGET

## Operating Materials & Supplies – \$15.8M

**Disinfection Chemicals** – The largest cost related to disinfection is for chemicals, specifically bleach.

**Sodium Hypochlorite (Bleach)** – Roughly 60 percent of the bleach is used for effluent disinfection. The remaining bleach usage is for odor control (10%), disinfection of plant water, and the control of filamentous organisms in activated sludge in the secondary treatment process (30 percent). It is anticipated that OCSD will use 1.2 million gallons of bleach in each of the next two fiscal years. This reduction in bleach usage over the past few years is due to the completion of the new secondary treatment facilities. These new facilities reduce the amount of bacteria in the effluent requiring less disinfection.

**Chemical Coagulants** – Anionic polymer is added to the influent wastewater along with ferric chloride to improve solids removal efficiencies in the primary clarifiers. Ferric chloride is also added to the digesters for solids odor control. Cationic polymer is added to digested sludge prior to dewatering to aid in coagulation, improving the sludge and water separation process. Cationic polymer is also added to the waste activated sludge dissolved air flotation thickeners (DAFTs) to improve solids coagulation.

The costs for this group of chemicals are expected to remain steady in Fiscal Year 2014-15, but increase by 5.5 percent in FY 2015-16 due to chemical rate increases.

**Odor Control Chemicals** – The District uses hydrogen peroxide, sodium hydroxide (caustic soda), and muriatic acid as the primary odor control chemicals in the treatment plants. Ferrous chloride, magnesium hydroxide, calcium nitrate, and hydrogen peroxide are the primary odor control chemicals used in the collection system.

The Fiscal Year 2014-15 and 2015-16 budgets for these chemicals are \$7.1 million, and \$7.3 million, respectively. The collection system chemical usage is expected to increase due to the Irvine Ranch Water District (IRWD) discontinuing the addition of ferric chloride in the treatment process. Since IRWD's ferric chloride addition lessened odors in the OCSD collection system, OCSD must increase ferrous chloride usage to compensate for that chemical addition and mitigate collection system odors.

## Repairs and Maintenance – \$13.1M

This item, which is for parts and services for repair of plant and collection facilities and annual service contracts is expected to increase by approximately \$3.5 million or 36.2 percent in Fiscal Year 2014-15, followed by a slight reduction of 1.0 percent in Fiscal Year 2015-16.

Planned repairs include: digester cleaning (\$1M); process area preventative maintenance painting (\$327K); CenGen engine overhaul (\$893K); gas compressor overhaul (\$103K); interplant gas line maintenance (\$175K); manhole cover purchases (\$100K); and dig alert and street overlays/manhole raising (\$75K).

## Utilities – \$7.4M

During Fiscal Year 2014-15, the overall cost for utilities, a significant component of the operating budget, is anticipated to increase by 6.1 percent over the projected Fiscal Year 2013-14 costs and then increase by \$0.3 million, or 4.7 percent, in Fiscal Year 2015-16.

**Natural Gas** – Natural gas is purchased from two providers for different purposes. Purchases from a gas marketer are used to supplement the digester gas that is used to run the CenGen facilities. The Fiscal Year 2014-15 natural gas budget is \$401,000, six percent lower than the projected 2013-14 costs. Currently, only one engine can operate using greater than ten percent natural gas because a catalytic converter was installed to meet South Coast Air Quality Management District (SCAQMD) emission requirements. By January 1, 2016, all engines will be required to meet these standards. At that time, OCSD is expected to have four engines with converters installed. Natural gas use should increase as the engines are upgraded.

Natural gas purchased directly from The Gas Company is used mainly for building heating and supplemental process heating. The core subscription at Plant No. 2 increased considerably when the auxiliary boilers that provide supplemental heat to the digesters changed from digester gas to natural gas, providing more digester gas to CenGen to support two engines and still comply with the SCAQMD limits for use of natural gas.

# OPERATING EXPENSES

**Electricity** – Electricity is the largest utility cost incurred by OCSD. Purchased electricity is used in running the plant processes as a supplement to power produced in the central generation facilities.

The Fiscal Year 2014-15 proposed budget is 11.6 percent higher than the 2013-14 projected costs. The increase is due to rate increases and increased plant water pumping due to the conversion of CenGen cooling from GAP water to plant water after completion of the Cengen Cooling Water System Replacement project.

Upon completion of the emission controls system installation, staff will have the opportunity to optimize power usage by either purchasing supplemental natural gas or electricity, whichever costs less.

**Water** – Water is used throughout the treatment plants. Potable (drinking) water is supplied by the Cities of Fountain Valley and Huntington Beach; reclaimed water is supplied by the GAP; and plant water is disinfected secondary effluent.

- GAP Water is secondary treated effluent from the Sanitation District that is further treated by the Orange County Water District. GAP water is significantly less expensive than potable water and is used in the process wherever possible. The major uses of GAP water include cooling water, solids handling, and landscaping. The proposed budget is \$159,000 for each of the next two years.
- Potable Water – The potable water budget includes water supplied by the City of Fountain Valley for Plant No. 1 and the City of Huntington Beach for Plant No. 2. Approximately 5 percent of the potable water at Plant No. 1 is used for domestic uses and less than 1 percent is used for irrigation. The majority of the irrigation at both plants uses reclaimed water. Less than 1 percent of the potable water used at Plant No. 2 is for domestic uses due to the relatively small number of employees at Plant No. 2. The proposed total potable water cost for Fiscal Year 2014-15 is \$513,500, a six percent increase from the project 2013-14 costs.

## Professional Services – \$3.3M

Professional Services includes General Counsel, special labor counsel, audit and miscellaneous accounting services, legislative advocacy, engineering, and other technical consulting services.

## Other Material, Supplies, Services – \$2.5M

This category of costs includes the in-lieu insurance premium used to maintain the level of accumulated reserves for the property and general liability self-insurance programs. This in-lieu cost for 2014-15 is proposed at \$0.5 million.

Expenses not chargeable to other categories, such as freight and miscellaneous items, and annual regulatory fees assessed by the South Coast Air Quality Management District, are recorded with this category.

## Insurance – \$2.2M

The District's outside excess general liability insurance coverage is \$30 million per occurrence with self-insurance retention of \$250,000 and \$500,000 for employment practices liability insurance.

The District's property insurance coverage of \$1 billion for perils of fire and \$300 million for perils of flood is subject to a self-insurance retention of 5 percent per unit of insurance up to \$250,000 for fire and \$100,000 for flood. The District is totally self-insured for earthquake. The District also increased its sublimit for builder's risk under the property insurance program from \$25 million to \$50 million to ensure upcoming construction projects are adequately covered.

An appropriation of \$0.5 million for in-lieu premium contribution charged to operations is recommended for the Property and General Liability Program.

This will serve to maintain the reserves balance.

# 2014-15 AND 2015-16 BUDGET

## Administrative Expenses – \$1.4M

These accounts include supplies, postage, technical journals and publications, forms, small office equipment, and small computer items that cost less than \$5,000 per item and exclude items that are capitalized.

## Training and Meetings – \$1.1M

Board member and staff travel has been significantly reduced in recent years. This category also includes meetings of professional societies; ongoing technical training and materials for staff; training for computerized plant monitoring and control systems, MAXIMO (a computerized maintenance management system), Enterprise Resource Planning (ERP), and other “high tech” equipment, processes and systems; and training to allow for an adaptive and flexible work force. While OCS D continues to place an emphasis on effective safety training, as well as technical, leadership and management training, the training budget has been reduced from previous highs of 2.0 percent to approximately 1.7 percent of budgeted regular salaries due to savings achieved in part through the use of online courses.

## Research and Monitoring – \$0.8M

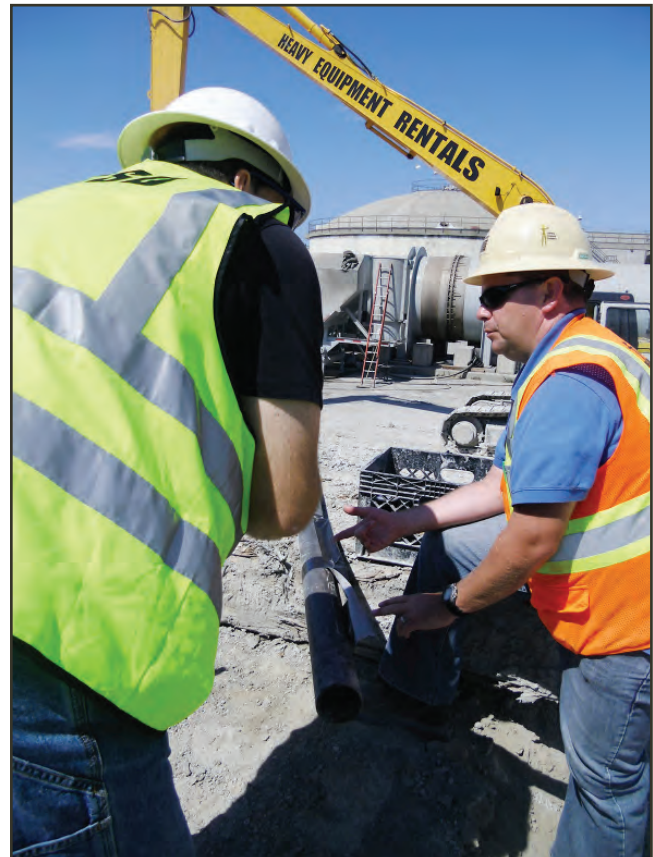
Research and monitoring expenditures consist of contract services to carry out the extensive ocean monitoring program required by the EPA under provisions of the District’s NPDES permit; air quality monitoring costs; the District’s contribution to the Southern California Coastal Water Research Project (SCCWRP) being conducted under a joint power agreement with other Southern California municipal dischargers; and also provide for increased operational and ocean research and evaluation to develop optimum operating parameters in treatment plants.

## Printing and Publication – \$0.4M

The budget provides for in-house and outside reproduction costs and reflects an expanded management information system and administrative requirements, as well as a continuing demand by the public and regulatory agencies for information. The continuing effort of the Public Affairs Office to improve public education programs about the District’s activities is also reflected in the budget for this line item. This group of accounts also includes costs for photo processing, advertisements, and notices.

## Cost Allocation – (\$16.7M)

This represents direct labor and benefit charge outs and materials, supplies and services cost allocation to the capital projects where the related work was performed.



# DEPARTMENTS SUMMARY

<b>Expense by Department (in Millions)</b>					
Department	Projected 2013-14	Proposed 2014-15	Percent Change	Proposed 2015-16	Percent Change
<i>Administration Units</i>					
General Manager's Office	\$3.3	\$4.0	21.2%	\$4.0	0.0%
Human Resources	4.0	4.1	2.5%	4.2	2.4%
Administrative Services	20.3	21.5	5.9%	22.2	3.3%
<i>Sub-Total</i>	\$27.6	\$29.6	7.2%	\$30.4	2.7%
<i>Operating Units</i>					
Facilities Support Services	21.1	22.6	7.1%	22.9	1.3%
Engineering	11.2	10.3	(8.0%)	10.4	1.0%
Operations & Maintenance	83.0	90.0	8.4%	91.3	1.4%
<i>Sub-Total</i>	\$115.3	\$122.9	6.6%	\$124.6	1.4%
<b>Grand Total</b>	<b>\$142.9</b>	<b>\$152.5</b>	<b>6.7%</b>	<b>\$155.0</b>	<b>1.6%</b>

<b>Staffing by Department (FTEs)</b>					
Department	Projected 2013-14	Proposed 2014-15	Percent Change	Proposed 2015-16	Percent Change
<i>Administration Units</i>					
General Manager's Office	14.00	16.00	14.3%	16.00	0.0%
Human Resources	18.00	16.00	(11.1%)	16.00	0.0%
Administrative Services	110.00	111.00	0.9%	111.00	0.0%
<i>Sub-Total</i>	142.00	143.00	0.7%	143.00	0.0%
<i>Operating Units</i>					
Facilities Support Services	78.00	76.00	(2.6%)	76.00	0.0%
Engineering	123.00	123.00	0.0%	123.00	0.0%
Operations & Maintenance	283.00	284.00	0.4%	284.00	0.0%
<i>Sub-Total</i>	484.00	483.00	(0.2%)	483.00	0.0%
<b>Total FTEs</b>	<b>626.00</b>	<b>626.00</b>	<b>0.0%</b>	<b>626.00</b>	<b>0.0%</b>



# 2014-15 AND 2015-16 BUDGET

## Administration Units

### General Manager's Office Budget \$4.0M – Staffing 16 Positions

The General Manager's Office provides general oversight of all District operations and incorporates functions in the areas of Public Affairs and Board Services. This office reports directly to the Board of Directors. The budget reflects the transfer in of two positions from other departments.

### Human Resources Budget \$4.1M – Staffing 16 Positions

The Human Resources Department works with management and employees to ensure an effective and productive employment relationship. This department reports directly to the General Manager. The budget includes the transfer out of two positions to other departments.

### Administrative Services Budget \$21.5M – Staffing 111 Positions

The Administrative Services Department maintains financial oversight and administration of all District funds and accounts and is responsible for contract administration and procurement, oversees all District computer, networking and customer support issues, and provides risk management to the organization to create a safe, healthy and secure environment for staff, contractors, and visitors. The budget reflects the transfer in of one position from another department.

## Operating Units

### Facilities Support Services Budget \$22.6M – Staffing 76 Positions

The Facilities Support Services Department provides fleet and heavy equipment services for the District, handles non-public works construction support and projects, and operates and maintains the regional collection system facilities providing reliable collection and transportation of wastewater, and efficient, safe operation and maintenance of the system in the 479 square mile service area. The budget includes the transfer out of two positions to other departments.

### Engineering Budget \$10.3M – Staffing 123 Positions

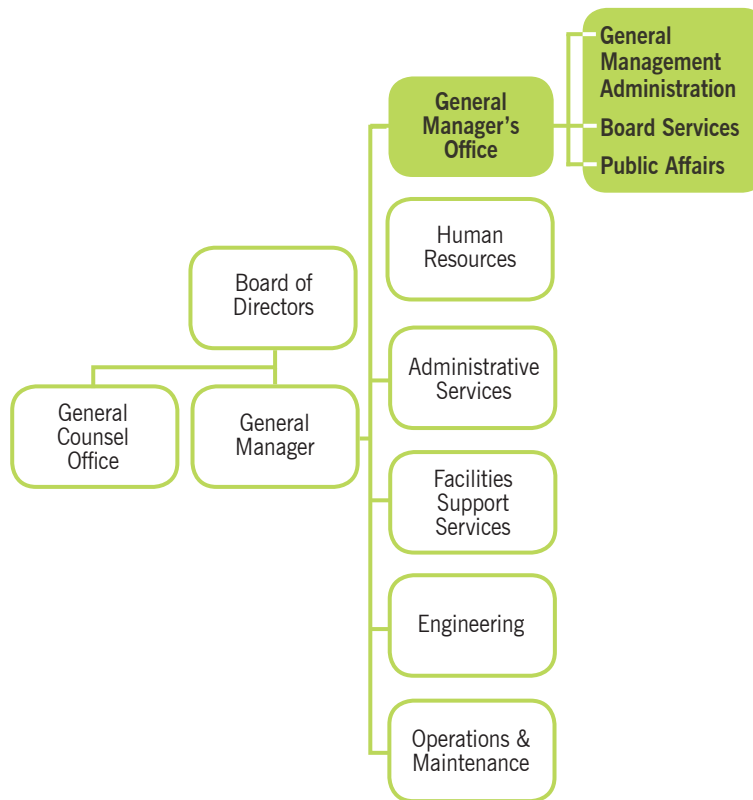
The Engineering Department is responsible for the planning, design and construction of the District's capital improvement program as well as environmental compliance and asset management.

### Operations and Maintenance Budget \$90.0M – Staffing 284 Positions

The Operations and Maintenance Department is responsible for operation of the District's two wastewater treatment plants as well as the environmental laboratory and ocean monitoring. The budget reflects the transfer in of one position from another department.



# GENERAL MANAGER'S OFFICE



## Service Description

**General Management Administration** is responsible for working with the Board of Directors to establish standards, policies and procedures, and the overall goals and Strategic Plan of the agency. The General Manager reports directly to the Board of Directors and provides general oversight to all District operations, interagency relations, legislative activities, communications, and the Strategic Plan. The Assistant General Manager directly oversees the Public Affairs and Board Services Divisions.

**Board Services** provides a high level of customer service through the Clerk of the Board's office. The Clerk of the Board's office supports the Board of Directors and the public by preparing and publishing agendas in accordance with legal requirements for meetings of the Board of Directors; recording the actions taken by the Board; publishing notices as required by law; acting as filing officer for Statement of Economic Interests filings; receiving and processing summons and complaints filed against the District; and maintaining rosters of the Board of Directors and appointed committee assignments.

**Public Affairs** provides services and implements programs to meet the communications needs of OCSD's internal and external audiences. The division is responsible for OCSD's media relations, internal and external communications, community relations, public education and outreach program, social media, special events, agency branding, collateral materials, graphic design, and crisis communications. The division's goal is to develop and manage a total communications program in accordance to OCSD's Core Values and OCSD's Strategic Plan.

# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$1,995,592	\$2,061,700	\$2,108,200	\$2,388,200	\$2,431,500
Supplies	265,976	299,040	270,250	298,390	283,490
Professional / Contractual Services	1,138,597	539,750	804,704	225,000	200,000
Research & Monitoring	0	0	0	0	0
Repairs & Maintenance	1,657	1,560	1,539	1,500	1,500
Utilities	96,737	108,000	103,020	128,000	136,000
Other	99,677	710,240	151,520	1,087,800	1,088,700
Cost Allocation	(96,492)	(96,500)	(96,500)	(92,500)	(92,500)
<b>Total</b>	<b>\$3,501,744</b>	<b>\$3,623,790</b>	<b>\$3,342,733</b>	<b>\$4,036,390</b>	<b>\$4,048,690</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the General Manager's Office reflects an increase of 11.4 percent and in Fiscal Year 2015-16 an increase of 0.3 percent. The increase is primarily due to restoring the General Manager's contingency and the transfer of two positions from other departments.

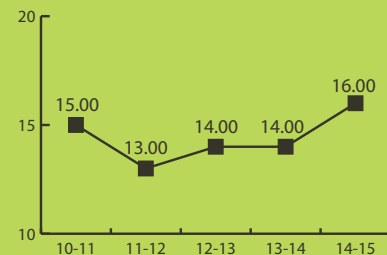
## Performance Objectives/Measures

- Ensure the District does not exceed 626 FTEs by the end of Fiscal Years 2014-15 and 2015-16.
- Deliver a minimum of 90 percent of each fiscal year's CIP budget.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Ensure OCSD's total recordable injury rate is below the industry average of 4.6.
- Pursue legislation to revise OCSD's charter to provide a seat on the Board of Directors for Yorba Linda Water District in place of the City of Yorba Linda.
- Ensure that the Board approved Strategic Plan is implemented.

### Authorized FTE Positions

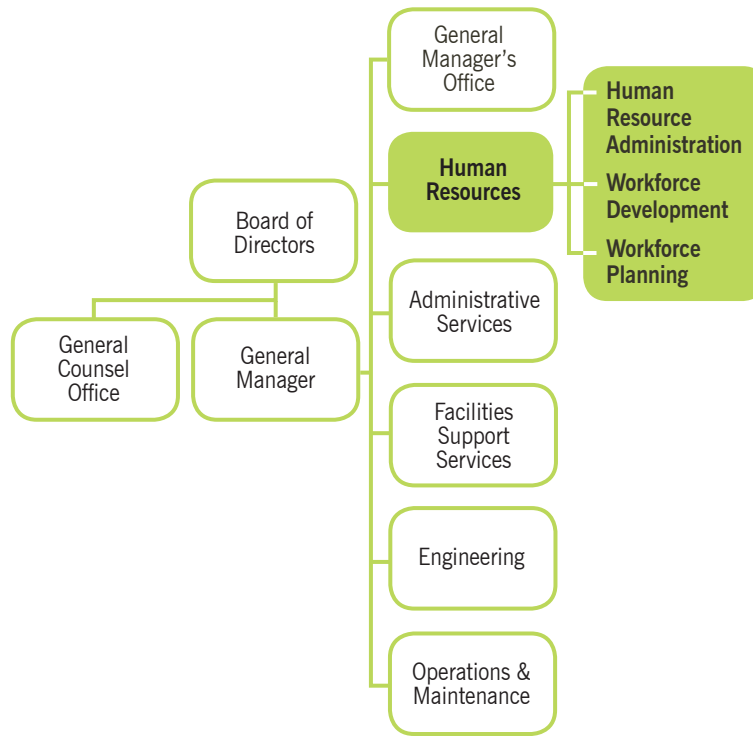
Managers.....	3.00
Supervisors /Professionals.....	6.00
Administrative /Clerical.....	5.00
Other.....	2.00
<b>Total .....</b>	<b>16.00</b>

### Staffing Trends





# HUMAN RESOURCES DEPARTMENT



## Service Description

The Human Resources Department is responsible for working with management and employees to ensure an effective and productive employment relationship. The Human Resources Department is committed to supporting a workplace environment grounded in fair and equitable employment decisions and practices.

This department is responsible for all aspects of human resources management and labor/employee relations. It serves as the in-house advisor to the General Manager, executive staff, OCSD departments, and line staff. Delivering services with a high-level of customer satisfaction is a key objective.

The Human Resources Department Administration oversees delivery of the workforce planning and workforce development function.

Workforce Planning activities include recruitment and selection, compensation and classification, and benefit and leaves in support of the major goal of equal employment opportunity for all persons on the basis of job-related merit.

Workforce Development activities include performance management, training and development, employee relations and labor relations by supporting each operating unit and its employees in achieving their full potential.

# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$3,141,625	\$3,815,900	\$3,857,000	\$3,873,200	\$3,908,000
Supplies	463,858	303,130	200,570	184,810	192,810
Professional / Contractual Services	635,720	789,480	563,000	705,480	738,660
Research & Monitoring	0	0	0	0	0
Repairs & Maintenance	200	0	0	0	0
Utilities	0	0	0	0	0
Other	27,272	51,540	30,720	35,540	35,540
Cost Allocation	(668,100)	(667,900)	(668,100)	(682,400)	(682,400)
<b>Total</b>	<b>\$3,600,575</b>	<b>\$4,292,150</b>	<b>\$3,983,190</b>	<b>\$4,116,630</b>	<b>\$4,192,610</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the Human Resources Department reflects a 4.1 percent decrease from the prior year primarily due to a reduction in professional services.

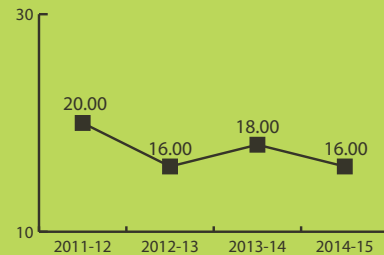
## Performance Objectives/Measures

- Support departments in the development of multi-year workforce planning requirements.
- Support departments in the development of multi-year workforce development plans.
- Provide continuous Leadership Development through June 2015.
- Meet the training level of service of 45 hours per employee.
- Support departments in the development of multi-year succession plans.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Implement a comprehensive employee relations and labor relations training program by the end of Fiscal Year 2015-16.

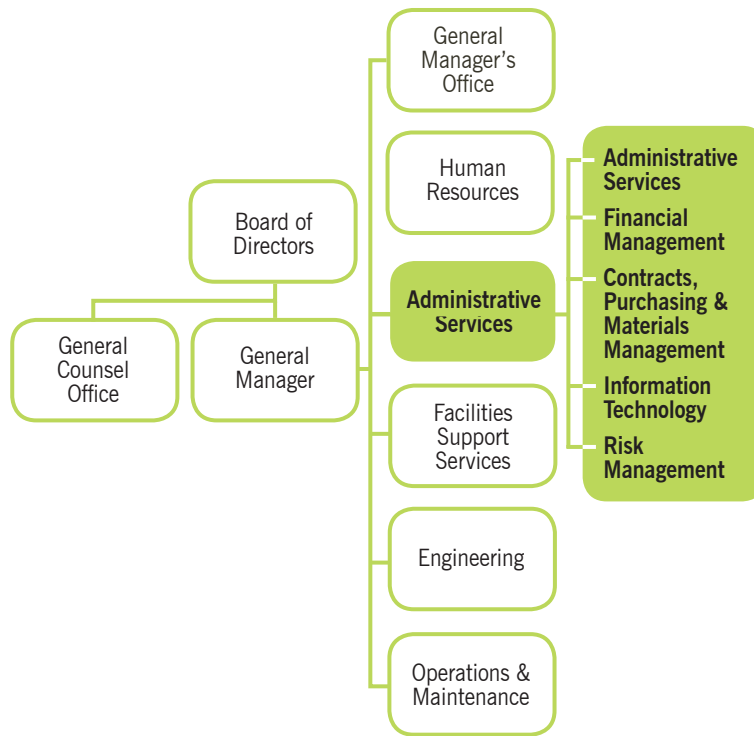
### Authorized FTE Positions

Managers.....	2.00
Supervisors /Professionals.....	11.00
Administrative /Clerical.....	3.00
<b>Total .....</b>	<b>16.00</b>

### Staffing Trends



# ADMINISTRATIVE SERVICES DEPARTMENT



## Service Description

The Administrative Services Department oversees all of OCSD's finance, contracts/purchasing, risk management, and information technology activities, including both day-to-day operations and strategic planning. The department serves as a liaison to Executive Management, the Board of Directors, and other departments of OCSD. The department includes five divisions:

**Administrative Services** provides leadership and oversight to all Administrative Services divisions.

**Financial Management** oversees and administers all OCSD's funds and accounts. Programs include treasury and debt management, accounts receivable and payable, user fees, payroll, fixed assets accounting, and coordinating the capital and operating budget process.

**Contracts, Purchasing, & Materials Management** is responsible for contract administration and procurement for all departments. Additionally, this division manages OCSD's warehouses, receives and maintains inventory, and distributes supplies, materials, and equipment.

**Information Technology** is responsible for customer support related information technology assets and services, networking and infrastructure, telecommunications service operation and maintenance, network and programming, solutions and application support.

**Risk Management** identifies and manages potential risk to the organization and provides solutions for mitigation or reducing the risk to acceptable levels. The Risk Management Division works to create a safe, healthy, and secure environment for OCSD staff, contractors, and visitors. Additionally, it provides the support for management and employees to take ownership of identifying and controlling risk and cost-effectively addressing safety, health and security issues.

# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$15,257,311	\$16,735,300	\$15,663,000	\$16,853,200	\$17,102,100
Supplies	1,568,095	1,480,720	1,352,424	1,541,980	1,716,570
Professional / Contractual Services	1,850,912	2,503,030	1,936,685	2,377,420	2,363,120
Research & Monitoring	0	0	0	0	0
Repairs & Maintenance	1,389,658	1,221,190	1,219,520	1,305,660	1,357,690
Utilities	223,863	300,000	240,000	320,000	385,000
Other	1,024,843	1,518,310	1,013,550	598,550	788,330
Cost Allocation	(1,183,412)	(1,177,110)	(1,161,310)	(1,552,210)	(1,553,410)
<b>Total</b>	<b>\$20,131,270</b>	<b>\$22,581,440</b>	<b>\$20,263,869</b>	<b>\$21,444,600</b>	<b>\$22,159,400</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the Administrative Service Department reflects a 5 percent decrease from the prior year primarily due to a decrease in the general liability in-lieu premium expense.

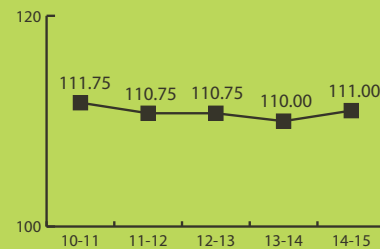
## Performance Objectives/Measures

- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Comply with the California State Government Code 100 percent of the time with all treasury investments.
- Submit the annual sewer service fee property parcel database to the County in time for placement on annual secured property tax bills.
- Process all approved sewer service fee refund requests within 45 days, 90 percent of the time.
- Ensure all debt service payments will be paid electronically, on the actual due dates, and error free 100 percent of the time.
- Continue the cycle count program and maintain a 97 percent accuracy rate or better.
- Ensure the measurement of the Information Technology Strategic Plan target achievement based on the importance and completion of goals supporting the Levels of Service (LOS) in the OCSD Strategic Plan.
- Maintain an average uptime of 90 percent for critical applications.
- Develop a new liability claim procedure that streamline claim intake and expedite claim investigation by the end of Fiscal Year 2014-15.
- Align the Risk Register with the General Manager’s Work Plan.

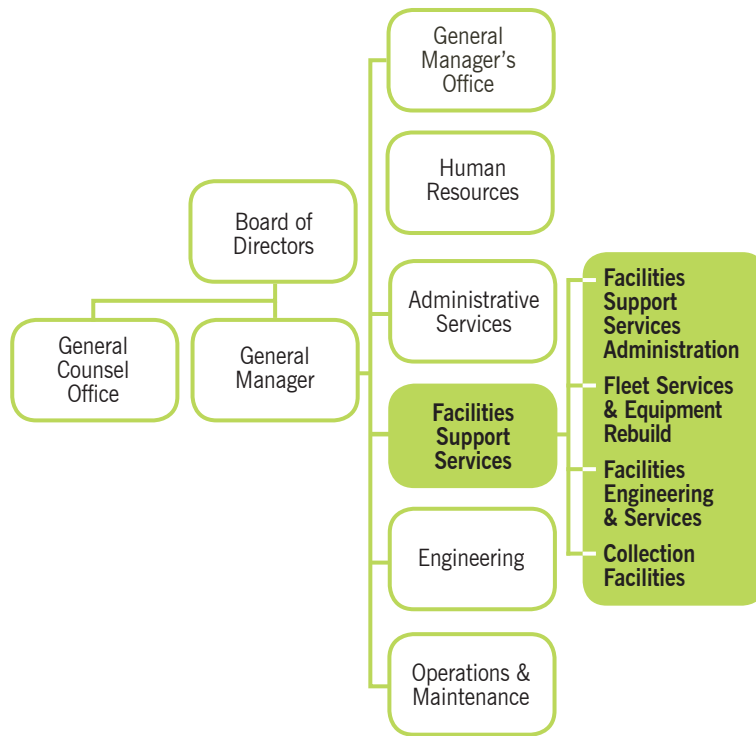
### Authorized FTE Positions

Managers.....	6.00
Supervisors /Professionals.....	66.00
Administrative /Clerical.....	37.00
Other.....	2.00
<b>Total .....</b>	<b>111.00</b>

### Staffing Trends



# FACILITIES SUPPORT SERVICES DEPARTMENT



## Service Description

The Facilities Support Services Department is responsible for providing reliable and effective services in the areas of Fleet Management, Equipment Rebuild/Welding/Fabrication and Machine Shop Services, Facilities Engineering and Contracted Services Management, Source Inspection, Sewage Conditioning for Odor and Corrosion Control, and the operation and maintenance of the Sanitary Sewer System Pipelines and Pumping Facilities. The Facilities Support Services Department consists of four divisions:

**Facilities Support Services Administration** provides leadership, support, and management oversight for the Department in order to accomplish OCSD’s Strategic Plan and departmental annual goals.

**Fleet Services & Equipment Rebuild** provides fleet and heavy equipment services and motor pool management, equipment rebuild and fabrication, and machining/fabrication/welding services to all OCSD staff.

**Facilities Engineering and Services** provides engineering, technical support, and outsourced services support in order to deliver solutions and facility repair projects for the agency.

**Collection Facilities** operates and maintains the regional facilities which include gravity sewers and pumping facilities; provides services to minimize odor and corrosion impacts within the facilities; and works with industrial and commercial dischargers to inspect, monitor and sample within the collection system to ensure regulatory compliance. This includes coordination and troubleshooting support on sewer debris issues with cities and sewerage agencies that discharge to the OCSD system, including SAWPA.



# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$11,143,443	\$11,579,900	\$10,705,600	\$11,468,600	\$11,604,400
Supplies	6,550,252	6,780,490	6,515,244	6,728,210	6,907,820
Professional / Contractual Services	2,148,918	1,831,935	1,822,230	2,208,420	2,182,230
Research & Monitoring	28	7,000	5,000	5,000	5,000
Repairs & Maintenance	2,678,377	1,491,125	1,475,390	1,685,190	1,728,440
Utilities	602,215	671,670	679,354	704,540	735,920
Other	64,565	50,300	49,355	47,720	49,290
Cost Allocation	(87,249)	(298,400)	(153,040)	(277,470)	(279,170)
<b>Total</b>	<b>\$23,100,549</b>	<b>\$22,114,020</b>	<b>\$21,099,133</b>	<b>\$22,570,210</b>	<b>\$22,933,930</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the Facilities Support Services Department reflects a 2.1 percent increase over the prior year. The increase is primarily due to increases in Repairs and Maintenance and Chemical costs.

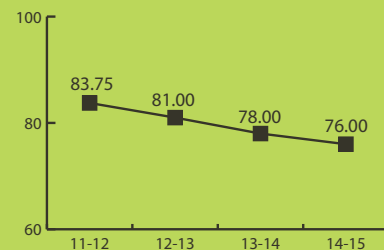
## Performance Objectives/Measures

- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Achieve 100 percent compliance with water, air, safety, and mobile equipment permits.
- Achieve 100 percent compliance with the Safety Scorecard.
- Achieve 100 percent of the Levels of Service consistent with resource availability.
- Achieve Levels of Service for less than 12 Collection System odor complaints per year.
- Achieve Levels of Service for keeping the number of sewer spills less than 13 per year based on the industry average of 2.1 per 100 miles of sewer.
- Achieve Levels of Service response to sewer spills within one hour and full containment within five hours.
- Complete the transfer of local sewers in the City of Tustin and unincorporated areas of Service Area 7.

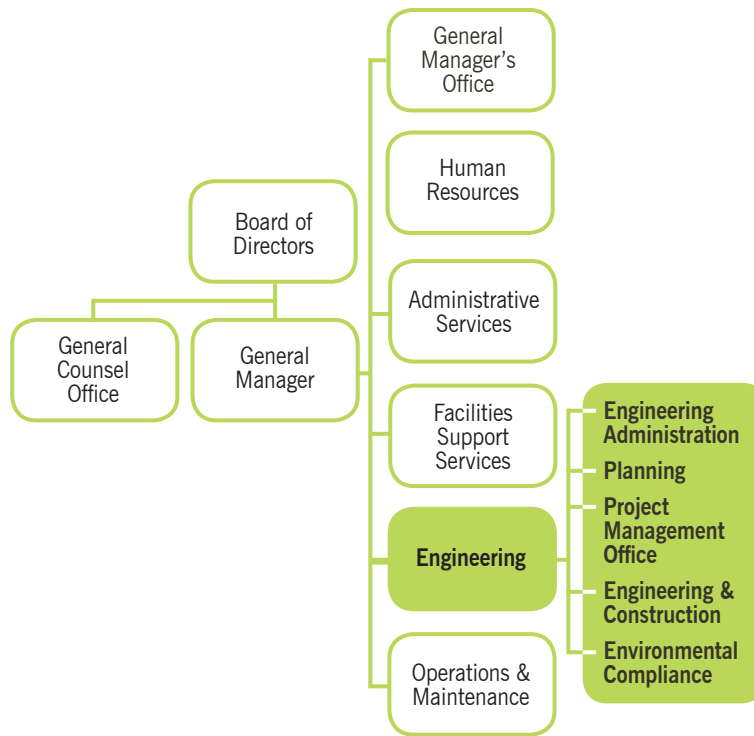
### Authorized FTE Positions

Managers.....	3.00
Supervisors /Professionals.....	19.00
Administrative /Clerical.....	6.00
Technical.....	13.00
Operations & Maintenance.....	35.00
<b>Total .....</b>	<b>76.00</b>

### Staffing Trends



# ENGINEERING DEPARTMENT



## Service Description

The Engineering Department is responsible for the planning and execution of OCSD’s Capital Improvement Program, Environmental Compliance, and the Asset Management Program. The Engineering Department is comprised of five divisions:

**Engineering Administration** provides management to all Engineering divisions.

**Planning** is responsible for estimating future capacity requirements, planning existing asset lifecycles, performing applied research, developing the OCSD Capital Improvement Program and complying with the California Environmental Quality Act. In addition, this division is responsible for OCSD’s Corrosion Inspection and Asset Management programs to ensure that required levels of service are maintained by performing necessary rehabilitation and replacement of facilities at optimal lifecycle costs. The Planning division also performs services for annexations, connection permitting, and inter-agency agreements.

**Project Management Office** is responsible for the delivery of capital projects from the preliminary design stage through the closeout of construction.

**Engineering and Construction** provides design and construction engineering, quality control inspection, and other technical support for design and construction projects.

**Environmental Compliance** is responsible for securing and maintaining permits from regulatory agencies for activities that may impact air, land, water, and endangered and threatened species. In addition to supporting biosolids reuse, the division evaluates and proactively identifies new regulations, along with legislative and opportunities for grants, while building positive relationships with the regulatory community, agency associations and the public. The Industrial Source Control and Non-Industrial Source Control groups act as the wastewater control authority for OCSD’s service area and all contributing outside agencies, implementing programs (including the federally mandated industrial pretreatment program) that regulate industrial, commercial, and residential users. The division also supports the Groundwater Replenishment System with our partner the Orange County Water District.

# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$20,253,244	\$21,154,300	\$20,694,100	\$21,446,400	\$21,660,100
Supplies	352,157	558,020	442,231	523,670	530,950
Professional / Contractual Services	587,023	902,000	681,000	822,300	799,400
Research & Monitoring	91,718	85,000	85,000	85,000	85,000
Repairs & Maintenance	523	2,160	750	1,000	1,000
Utilities	0	0	0	0	0
Other	660,259	714,310	711,843	682,040	702,040
Cost Allocation	(12,351,453)	(13,837,450)	(11,413,260)	(13,233,100)	(13,355,500)
<b>Total</b>	<b>\$9,593,471</b>	<b>\$9,578,340</b>	<b>\$11,201,664</b>	<b>\$10,327,310</b>	<b>\$10,422,990</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the Engineering Department reflects a 7.8 percent increase over the prior year primarily due to personnel cost increases driven by higher employer contribution rates for the Orange County Employees Retirement System.

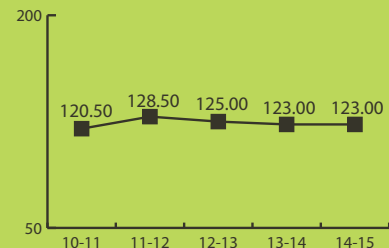
## Performance Objectives/Measures

- Expend minimum 90 percent of project annual Capital Improvement Program cash flows for Fiscal Year 2014-15.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Ensure that reporting divisions achieve 90 percent of individual performance objectives.
- Complete the Odor Control Master Plan by the end of Fiscal Year 2015-16.

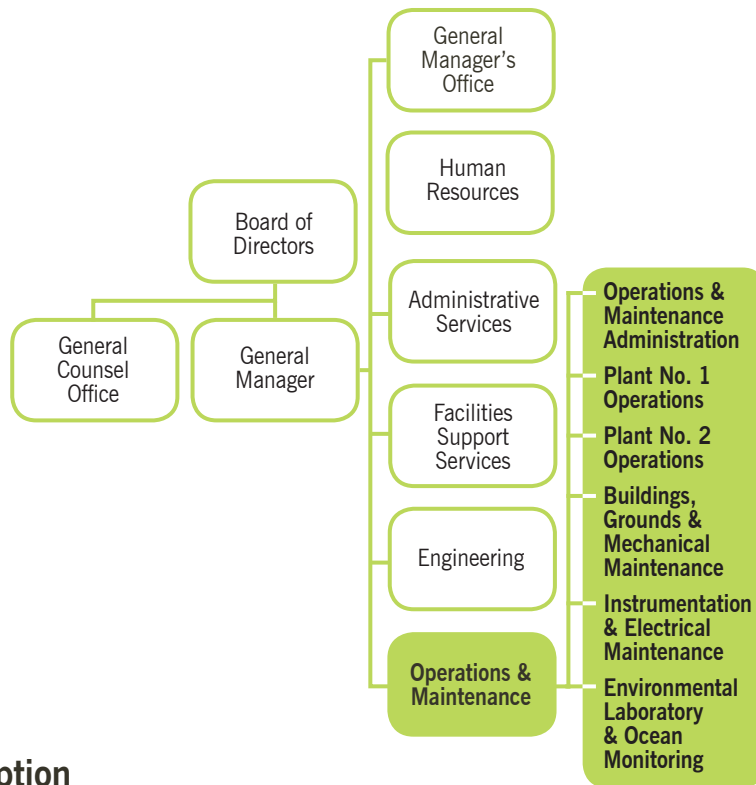
### Authorized FTE Positions

Managers.....	5.00
Supervisors /Professionals.....	83.00
Administrative /Clerical.....	35.00
<b>Total .....</b>	<b>123.00</b>

### Staffing Trends



# OPERATIONS & MAINTENANCE DEPARTMENT



## Service Description

The Operations and Maintenance (O&M) Department is responsible for treating wastewater, reusing or disposing of the treated wastewater and all residuals, and providing maintenance support to all facilities. The O&M Department consists of six divisions:

**Operations and Maintenance Administration** provides leadership and oversight to all O&M divisions.

**Plant No. 1 and Plant No. 2 Operations** are responsible for the daily management of the wastewater treatment processes, sludge and biosolids treatment and loading processes, and odor and air quality control processes. Activities also include ensuring compliance with all regulatory permits, support of the Capital Improvement Program, and coordination of construction and maintenance work. Plant No. 1 Operations also ensures the delivery of specification water to the Ground Water Replenishment System.

**Buildings, Grounds and Mechanical Maintenance** provides mechanical maintenance support for all wastewater treatment process and maintenance support for all OCSD's buildings and grounds in a safe, efficient, and effective manner so that OCSD can meet all discharge requirements while minimizing impacts to our neighbors. Also housed within the division is the Maintenance Management Group and the Reliability Maintenance Team which provides district-wide support services for planning and scheduling maintenance events and predictive maintenance activities.

**Instrumentation and Electrical Maintenance** is responsible for maintaining all instrumentation, electrical, HVAC equipment and systems in the treatment plants, pump stations, support and office buildings; providing reliable power by operating the two generating facilities and back-up generator power sources, repairing all systems, and supporting the CIP.

**Environmental Laboratory and Ocean Monitoring** performs analytical procedures, monitoring method development, data analysis and reporting for a broad range of programs and sample types, including wastewater treatment streams, industrial inputs, offshore and nearshore receiving waters, final effluent and air in order to demonstrate the effectiveness of wastewater treatment processes, the industrial source control program, compliance with water and air regulations and protection of the receiving water environment.

# FISCAL YEARS 2014-15 AND 2015-16

## Operating Expense

Category	2012-13 Actual	2013-14 Budget	2013-14 Projected	2014-15 Proposed	2015-16 Proposed
Personnel	\$38,868,062	\$42,648,200	\$40,672,900	\$43,139,200	\$43,875,800
Supplies	9,856,133	10,329,860	9,117,338	9,410,160	9,719,320
Professional / Contractual Services	18,980,781	20,387,055	19,928,856	21,172,920	21,357,460
Research & Monitoring	961,530	782,000	717,000	740,000	750,000
Repairs & Maintenance	6,024,642	8,450,255	6,895,456	10,069,860	9,839,140
Utilities	5,480,199	6,596,800	5,985,500	6,285,230	6,528,160
Other	82,306	89,920	82,042	90,630	91,520
Cost Allocation	(1,027,550)	(2,142,840)	(410,470)	(903,020)	(914,520)
<b>Total</b>	<b>\$79,226,103</b>	<b>\$87,141,250</b>	<b>\$82,988,622</b>	<b>\$90,004,980</b>	<b>\$91,246,880</b>

## Budget Overview

The Fiscal Year 2014-15 budget for the Operations and Maintenance Department reflects a 3.3 percent increase from the prior year. This increase is primarily due to increases in Repairs and Maintenance.

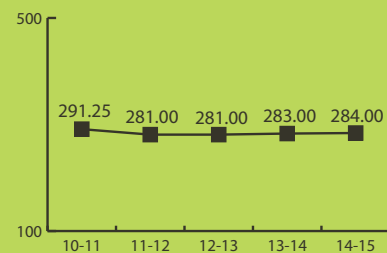
## Performance Objectives/Measures

- Achieve 100 percent compliance with water, solids, air, and energy permits.
- Achieve a compliance level of 90 to 100 percent of the O&M performance measurement targets consistent with resource availability.
- Manage operating expenditures to within 96 to 100 percent of the approved budget.
- Complete an implementation plan with a recommendation to the Board of Directors by the end of Fiscal Year 2014-15 regarding ceasing the ocean outfall disinfection program.

### Authorized FTE Positions

Managers.....	5.00
Supervisors /Professionals.....	96.00
Administrative /Clerical.....	5.00
Technical.....	3.00
Operations & Maintenance.....	175.00
<b>Total .....</b>	<b>284.00</b>

### Staffing Trends







# Appendix





**APPROVED**  
**November 20, 2013**

**5** year strategic plan  

---

NOVEMBER 2013





ORANGE COUNTY SANITATION DISTRICT  
**five year strategic plan**  
NOVEMBER 2013







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# board of directors

The strategic planning effort starts with the Board of Directors setting overall policy and priorities for the Sanitation District. Based on that policy direction, staff develops the annual operational plan and budget.

## **Anaheim**

Lucille Kring

## **Brea**

Brett Murdock

## **Buena Park**

Fred Smith

## **Costa Mesa Sanitary District**

James M. Ferryman

## **Cypress**

Prakash Narain

## **Fountain Valley**

Steve Nagel

## **Fullerton**

Gregory Sebourn

## **Garden Grove**

Steve Jones

## **Huntington Beach**

Joe Shaw

## **Irvine**

Steven Choi

## **Irvine Ranch Water District**

John Withers

## **La Habra**

Tom Beamish

## **La Palma**

Peter Kim

## **Los Alamitos**

Troy Edgar  
(Board Chair)

## **Midway City Sanitary District**

Tyler Diep

## **Newport Beach**

Keith Curry

## **Orange**

Teresa Smith

## **Orange County Board of Supervisors**

Janet Nguyen

## **Placentia**

Scott Nelson

## **Santa Ana**

David Benavides

## **Seal Beach**

Michael Levitt

## **Stanton**

David Shawver

## **Tustin**

John Nielsen

## **Villa Park**

Brad Reese

## **Yorba Linda**

John Anderson  
(Vice Chair)



## message from the general manager



In 2014, the Orange County Sanitation District will celebrate 60 years of protecting the public's health and the environment. Over those years, OCSD in partnership with our member cities and agencies has provided reliable and cost effective service to our ratepayers. OCSD's level of service has evolved from the 30 million gallons per day of primary wastewater treatment in 1954 to the 210 million gallons of secondary treated wastewater that we produce today.

In 2007, the Board of Directors and staff charted a course for the future through the development of the agency's first Five-Year Strategic Plan. We committed to the execution of that plan and implementation of the goals necessary to achieve success. This year, I am pleased to report that over the past six years, we completed thirty-eight strategic goals and made strides to improve technical operations, biosolids management, odor control, and regulatory compliance. Building on this success, the District's Board of Directors and staff are charting the future through the development and execution of this 2014 Strategic Plan.

This Strategic Plan envisions an organizational culture that adheres to our core values and makes efficient and effective use of all available resources. Through a newly developed Vision Statement, I am committed to focusing our efforts on customer service, protecting public health and the environment, fiscal responsibility, communications, partnering with others and creating the best possible workforce. This focus will be achieved through the goals laid out in this plan which focuses our collective efforts and provides alignment from the Board of Directors to our management staff.

OCSD is a world-renowned organization, and our team is regarded as leaders in our industry with significant achievements over the years. In the past 10 years alone, we partnered with the Orange County Water District to develop the Groundwater Replenishment System, completed full Secondary Treatment, had fewer sewer spills than in the past, significantly improved our safety record, and received numerous wastewater industry awards in every part of our organization. This success is truly a testament to our Board of Directors' leadership and our workforce.

Under the direction of the Board of Directors, I am honored to be leading an agency with a track record of innovation, robust planning, and sound financial management. I look forward to working together to accomplish all of our goals in the years ahead and continuing our successes.

Respectfully submitted,

A handwritten signature in black ink that reads "James Herberg". The signature is written in a cursive, flowing style.

James D. Herberg, General Manager

## executive summary

Strategic Planning is as much about the process as it is about the outcome. In working together towards achieving the newly developed vision and developing a path forward OCSD staff, senior management, and Board of Directors and Alternates came together in a spirit of partnership. They gained a better understanding of the Agency's opportunities, challenges, and the expertise and commitment of its staff. We are proud of the inclusiveness of our process and the consensus that we achieved. The culture of teamwork and consensus will provide a strong foundation for us to continue to work together, in partnership with our stakeholders, toward realizing our vision and delivering on priorities.

This year marks the beginning of a new Five-Year Strategic Plan for 2014 through 2019 supported through a newly crafted Vision Statement. Each year, the plan will be reassessed, updated, and submitted for approval by the Board of Directors.

As a result of two Strategic Planning workshops, individual Board interviews, employee and management focus groups, eight new strategic goals were identified and modifications to six of OCSD's service levels are contained in this Plan.

### **Strategic Goals:**

1. Odor Control – Completion of the Odor Control Master Plan.
2. Future Biosolids Management Options – Study biosolids management options including 3rd party contracts and onsite capital facilities.
3. Energy Efficiency – Continue to research new energy efficiency and energy conversion technologies.
4. Disinfection of Ocean Discharge – Develop an implementation plan including the technical, financial and societal factors associated with cessation of disinfection of the ocean discharge.
5. Local Sewer Transfers – Complete the transfer of 174 miles of local sewers serving parts of Tustin and unincorporated areas north of Tustin and local sewer transfers in the City of Santa Ana.
6. Legislative Advocacy and Public Outreach – Develop a unified legislative advocacy and public outreach program.
7. Future Water Recycling – Determine partnerships, needs, strategies, benefits and costs associated with recycling of Plant No. 2 effluent water.
8. Workforce Planning and Workforce Development – This initiative is ongoing and part of a comprehensive workforce planning and development effort to ensure we have the right people with the right skills and abilities, in the right place, at the right time.

# executive summary

## **Modifications to Levels of Service:**

- Urban Runoff – Establish a new level of service target of up to 10 million gallons per day.
- Maximum offsite odor impacts – Treatment Plant No. 1 – Deletion of the dilution to threshold level of service until the scheduled Odor Control Master Plan has been updated.
- Maximum offsite odor impacts – Treatment Plant No. 2 - Deletion of the dilution to threshold level of service until the scheduled Odor Control Master Plan has been updated.
- Number of odor incidents/events: Collection System – Establish new level of service from 34 to 12 based on historical data.
- GWRS – Reword the existing level of service from a specific number of million gallons to, provide 100 percent of the specification effluent available to the Groundwater Replenishment System to maximize full production of purified water.
- Biosolids – modifications to the following levels of service:
  - o Delete - Maintain National Biosolids Partnership Certification of Biosolids Environmental Management System. This is an operational standard and will continue to take place.
  - o Delete - Percent of biosolids recycled and percent of biosolids to landfill. This performance measure will be replaced with: Tons of biosolids to landfill through 2017 Peak Production period.



Wastewater is transported through the 570 miles of sewers throughout a service area of close to 500 square miles and enters into the headworks at either Plant No. 1 in Fountain Valley or Plant No. 2 in Huntington Beach.



# strategic planning framework

The planning framework illustrated below shows how OCSD staff and the Board of Directors play a critical role in strategic planning and resource allocation.



## our mission statement

The Mission Statement is the basic foundation that defines why we exist.

***“We protect public health  
and the environment  
by providing effective  
wastewater collection,  
treatment, and recycling.”***



# vision statement

The Vision Statement supports the Mission Statement by expressing a broad philosophy of what the Orange County Sanitation District strives to achieve in the delivery of services to our customers, vendors, other agencies, the general public, and each other.

## ORANGE COUNTY SANITATION DISTRICT WILL BE A LEADER IN:

- Providing reliable, responsive and affordable services in line with **customer** needs and expectations.
- **Protecting** public health and the environment utilizing all practical and effective means for wastewater, energy, and solids resource recovery.
- Continually seeking **efficiencies** to ensure that the public's money is wisely spent.
- **Communicating** our mission and strategies with those we serve and all other stakeholders.
- **Partnering** with others to benefit our customers, this region, and our industry.
- Creating the best possible **workforce** in terms of safety, productivity, customer service, and training.



# core values

The Core Values support the Mission and Vision Statements by expressing the values, beliefs, and philosophy that guides our daily actions. They help form the framework of our organization and reinforce our professional work ethic.

## **Honesty, Trust and Respect**

We aspire to the highest degree of integrity, honesty, trust, and respect in our interaction with each other, our suppliers, our customers, and our community.

## **Teamwork and Problem Solving**

We strive to reach OCSD goals through cooperative efforts and collaboration with each other and our constituencies. We work to solve problems in a creative, cost-effective and safe manner, and we acknowledge team and individual efforts.

## **Leadership and Commitment**

We lead by example, acknowledging the value of our resources and using them wisely and safely to achieve our objectives and goals. We are committed to act in the best interest of our employees, our organization, and our community.

## **Learning/Teaching**

We continuously develop ourselves, enhancing our talents, skills, and abilities, knowing that only through personal growth and development will we continue to progress as an agency and as individuals.

## **Recognition/Rewards**

We seek to recognize, acknowledge, and reward contributions to OCSD by our many talented employees.

# risk register 2013

The Risk Register is an annual compilation of the various risks, opportunities and continuity challenges facing the Orange County Sanitation District determined by our management team. As the world dealt with a variety of crises last year (building collapses, Hurricane Sandy, drought and wildfires) OCSD management identified a larger number of risks directly related to our infrastructure and ongoing services. However, management did agree on our single biggest risk, earthquake and its associated impacts.

## The 2013 Risk Register Update identified these as the top risks:

- **Seismic event damages infrastructure** – reflecting the concern that an earthquake, of the sort anticipated to strike Southern California eventually, may have an impact on OCSD facilities.
- **Interruption of chemical supply in event of disaster** – pointing to the need OCSD has for a reliable, continuing supply of chemicals to treat wastewater even in the aftermath of a disaster which might interrupt highways or other modes of transportation.
- **Electric failures or fire (including after a disaster) interrupt power** – underlining the concern that a disaster or event may cause electrical problems which impact the District’s ability to treat wastewater continuously.

## The top opportunities for the 2013 update are:

- **As employees leave, restructure staffing to become more efficient** – referring to the many employees who are eligible for retirement, and the opportunity to look at staffing needs thereafter.
- **Focus on main mission without other endeavors leading to higher rates** – an opportunity to stick to the core purpose so that costs are kept in line.

## The major underrated continuity challenges include:

- **Pipelines damaged or severed after earthquake** – focusing on the many hundreds of miles of pipelines that the District has underground in the county, and the challenge of continuing to serve customers after an earthquake has shaken the pipelines.
- **Insufficient disaster preparedness** – expressing the sense that exercises, although held in the past, should be more frequent and responsive to OCSD’s risk and continuity challenges.

Staff is developing plans to mitigate the risks and continuity challenges, and to take advantage of the opportunities. OCSD’s Risk Management division released a schedule of “table top exercises” designed to respond to the top risks and challenges, and held an exercise focused on the possible interruption of electrical power after a disaster. An exercise is also planned to consider how to respond to the potential disjunction and relocation of pipelines in an earthquake. As for opportunities, OCSD’s General Manager has directed, as part of this Strategic Plan, that comprehensive workforce planning activities be designed and implemented.



# strategic goals and levels of service

The Orange County Sanitation District developed eight strategic goals to support the new vision of the 2014 OCSD Board of Directors and Executive Management Team. The levels of service are key performance indicators in achieving the overall vision.

## **Providing Exceptional Customer Service**

- Providing reliable, responsive and affordable services in line with **customer** needs and expectations.
1. **Odor Control** - Completion of the Odor Control Master Plan to make sure the District's investment is current and, if needed, future process systems will produce the benefits intended.  
*Target completion in FY 15-16.*

## **Levels of Service to support Customer Service:**

- Odor complaint response: Treatment Plants within 1 hour
- Odor complaint response: Collections System within 1 working day
- Number of odor incidents/events: Reclamation Plant No. 1 – Zero (0) under normal operating conditions
- Number of odor incidents/events: Treatment Plant No. 2 – Zero (0) under normal operating conditions
- Number of odor incidents/events: Collection System (12)
- Respond to public complaints or inquiries regarding construction projects within 1 working day
- New connection permits processed within 1 working day
- Respond to all biosolids contractor violations within a week of violation notice

## **Protecting Public Health**

- Protecting public health and the environment utilizing all practical and effective means for wastewater, energy, and solids resource recovery.
2. **Future Biosolids Management Options** - Study biosolids management options including 3rd party contracts and onsite capital facilities for mid-term and long-term approaches beginning in 2016-2017.  
*Target for completion in FY 15-16.*
  3. **Energy Efficiency** - The District will research new energy efficiency and energy conversion technologies to maximize energy efficiency, reduce operating costs, minimize environmental impact, and replace assets that are at the end of their useful lives. *Target for completion in FY 17-18.*



OCSD owns and operates \$6.2 billion in infrastructure assets. Through these assets OCSD collects, treats, and either reuses or safely discharges 210 million gallons per day of wastewater.

# strategic goals and levels of service

## Levels of Service in support of Protecting Public Health:

- Receive and treat, free of fees, up to 10 MGD of dry weather urban runoff diversion flows
- Air emissions health risk to community and employees, per one million people (for each treatment plant). Target: <10
- No Notices of Violation (NOVs) with air, land, and water permits
- Respond to collection system spills within 1 hour
- Sanitary sewer spills per 100 miles, less than 2.1 as the industry average
- Contain sanitary sewer spills within 5 hours
- Meet secondary treatment standards: 25 BOD-C (mg/L)
- Meet secondary treatment standards: 30 TSS (mg/L)
- Frequency of unplanned use of emergency one-mile (78-inch diameter) outfall (per year during dry weather). Target: 0 times
- Tons of biosolids to landfill through 2017 Peak Production period (less than 100 tons)
- Thirty-day geometric mean of total coliform bacteria in effluent after initial dilution of 250:1 (mpn)
- Compliance with core industrial pretreatment requirements

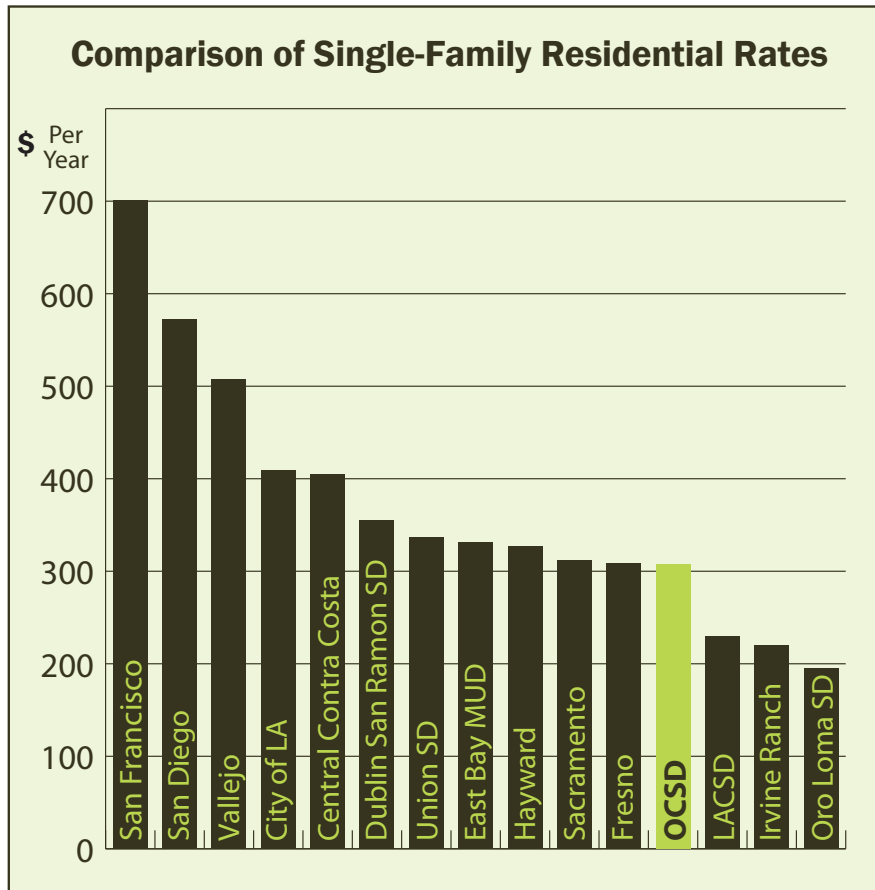
## Managing and Protecting the Public's funds

- Continually seeking efficiencies to ensure that the public's money is wisely spent.
- 4. **Disinfection of Ocean Discharge** – Continue discussions with the regulatory agencies and the environmental groups to gauge the response and stance related to the cessation of disinfection of the ocean discharge. Bring forward to the Board of Directors an implementation plan including the technical, financial, and societal factors associated with this decision.  
*Target for completion in FY 13-14.*
- 5. **Local Sewer Transfers** – Complete transfer of 174 miles of local sewers serving parts of Tustin and unincorporated areas north of Tustin and local sewer transfers in the City of Santa Ana to be concluded by December 31, 2013. Following those, no further local sewers to be transferred at the initiation of OCSD. If a local jurisdiction is interested in OCSD transferring sewers, each request will be considered on an individual basis assuming the sewers meet the requirements identified.  
*Target for completion in FY 13-14.*

## Levels of Service to support Managing and Protecting the Public's funds:

- Annual user fees sufficient to cover all O&M requirements
- Actual collection, treatment, and disposal costs per million gallons in comparison with budget
- Maintain AAA Bond Rating

# strategic goals and levels of service



## Stakeholder Understanding and Support

- Communicating our mission and strategies with those we serve and all other stakeholders.
- 6. **Legislative Advocacy and Public Outreach** – Develop a unified legislative advocacy and public outreach program to deliver our messages and positioning as a leader in the wastewater industry. *Target for completion in FY 13-14.*
- Partnering with others to benefit our customers, this region and our industry.
- 7. **Future Water Recycling Options** – Determine partnerships, needs, strategies, benefits and costs associated with recycling of Plant No. 2 effluent water. *Target for completion in FY 18-19.*

## Levels of Service to support Stakeholder Understanding and Support:

- Meet GWRS specification of less than 5 NTU required for Plant 1 secondary effluent (NTU)
- Provide 100 percent of specification effluent available to the Groundwater Replenishment System to maximize full production of purified water.



# strategic goals and levels of service

## **Organizational Effectiveness**

- Creating the best possible workforce in terms of safety, productivity, customer service, and training.

8. **Workforce Planning and Workforce Development** – This initiative is ongoing and part of a comprehensive workforce planning and development effort to ensure we have the right people with the right skills and abilities, in the right place, at the right time. Target for completion, ongoing.

### **Levels of Service to support Organizational Effectiveness:**

- Employee injury incident rate – per 100 employees ( $\leq 4.6$ )
- Meet mandatory OSHA training requirements
- Hours worked since last lost work day ( $\leq 1,000,000$ )
- Achieve annual agency target of days away from work, days of restricted work activity, or job transferred as a result of a work-related injury or illness ( $\leq 2.5$ )
- Training hours per employee (45 per year)



From March 2010 to date, 110 employees left OCSD taking 1,985 years of knowledge and experience with them. Through workforce planning and workforce development OCSD is working to ensure we have the right people with the right skills and abilities in the right place, at the right time.

Pictured above Dickie Fernandez, Associate Engineer; Randa AbuShaban, Associate Engineer; and Aharon Rosenhamer, Senior Mechanic.



## appendix A: issue papers

In preparation for the October 2, 2013 Board of Director Strategic Planning Workshop to discuss the proposed goals for 2014, staff prepared eight issue papers related to the new goals. The appendix includes issue papers on the following topics:

1. Odor Control
2. Future Biosolids Management Options
3. Energy Efficiency
4. Disinfection of OCSD's Ocean Discharge
5. Local Sewer Transfers
6. Legislative Advocacy and Public Outreach
7. Future Water Recycling Options
8. Workforce Planning and Workforce Development



*The activated sludge secondary treatment facility was the final project to meet the EPA Secondary Treatment Consent Decree. This facility increased secondary treatment capacity at Plant No.1 by 60 million gallons per day.*

# odor control

## **Should OCSD update its Odor Control Master Plan to validate the District standards for levels of service, scope and priority for facilities improvements?**

### ***Why is this issue important to the District?***

Although odors are inherent to wastewater, OCSD maintains a good neighbor policy and not be a odor nuisance to its neighbors. Controlling nuisance odor represents a significant operational and capital expense to OCSD. In 2007, the Levels of Service (LOS) for Odor Control were adopted by the Board as part of the Five-Year Strategic Plan. The District adopted a dilution to threshold (D/T) measurement system for a level of service goal. The standard was set for 14 D/T at Plant No. 1 by 2016 and 17 D/T at Plant No. 2 by 2018. This means that no odors leave the plant boundaries and affect surrounding communities.

Staff believes that offsite odor impacts have been significantly reduced since the adoption of the 2007 LOS Standards. The District is continuing with its collection system chemical dosing program on four of eleven trunklines. This continuous dosing approach helps reduce corrosion and odors in the collection system and headworks of both treatment plants. Additionally, a significant number of projects have been completed, some including new odor control technologies. Projects completed since the 2007 LOS adoption that reduce offsite odor impacts include:

- Steve Anderson Lift Station at Plant No. 1
- Trickling Filters at Plant No. 2
- Headworks Replacement at Plant No. 2
- Solids Thickening and Processing Upgrades at Plant No. 2
- Conversion of the Plant No. 1 Headworks Scrubbers from hydrogen peroxide to bleach.
- Conversion of the Plant No. 2 Primary Scrubbers from hydrogen peroxide to bleach.

The following projects are in the design or construction phases that will further reduce offsite odor impacts:

- Sludge Thickening/Dewatering and Odor Control at Plant No. 1
- Trunk Line Odor Control Improvements at Plant No. 1 Headworks
- Sludge Dewatering and Odor Control at Plant No. 2

Much of the basis for the work originally planned while adopting the current odor control standard was based on engineering studies and assumed process performance for new or altered process technologies. Recent testing of a portion of the installed odor control systems shows their performance differing from planning expectations. Thus, before moving ahead on new odor control projects, further performance assessment of the installed odor systems, including the secondary treatment facilities at both Plants and the new Headworks at Plant No. 2, is appropriate. Also, new odor measurement technologies have been developed since 2007, which may provide a better odor-impact measurement than the current D/T based LOS standard. Staff is proposing to invest the time and effort to conduct a performance assessment of the existing odor systems and potentially develop alternatives for the existing D/T based LOS standards.

## Goals

- The performance of completed odor control projects should be thoroughly evaluated to assess the actual performance versus original performance assumptions. (This will be done through an update of the Odor Control Master Plan Project SP-166.)
- Future planned odor control projects involving the following Plant 1 processes - Headworks, Trickling Filter and Primary Basins, and Plant 2 Primary Basins should be combined with Asset Management scopes of work to implement comprehensive refurbishment plans that limit offsite odor impacts on a priority basis.
- Reassess whether dilution to threshold is the most appropriate measurement system. This may include investigating odorant based measurement systems, or shifting the dilution to threshold system to the Engineering Design Guidelines for future comprehensive Asset Management based project designs, or develop a new level of service recommendation as part of the odor control Master Plan (SP-166).
- Assess retaining the odor complaint level of service measurement and reporting system, modifying our goal to achieve no offsite odor complaints during normal process operations.

## Desired Outcome

- The District remains committed to being a good neighbor and limiting offsite odor impacts in a comprehensive and cost effective manner. Completion of the Odor Control Master Plan is necessary to make sure the District's investment is current and, if needed, future process systems will produce the benefits intended.



*OCSD is committed to being a good neighbor. We are committed to a service level of no more than 12 odor complaints in the collection system and zero complaints under normal operating conditions, for the plant facilities.*



# future biosolids management options

## Should OCSD study potential biosolids management options ahead of the 2016 request for proposals?

### ***Why is this issue important to the District?***

OCSD's biosolids management contract with Synagro expires in December 2016. OCSD has sent up to half of its daily biosolids production to Synagro composting facilities in Kern County, California and La Paz County, Arizona since 2002. The last full-scale biosolids management study was completed in 2003. Since that time, new biosolids management options have been developed; the markets for and regulations impacting biosolids management have changed; and the economy has weakened. All of these events have resulted in more biosolids management markets with more competitive pricing.

Although there is an option to renew the Synagro contract, staff recommends studying biosolids management options to ensure that OCSD obtains the most cost effective and efficient process for its future biosolids management. Studying the current market for available biosolids management options prior to selecting a new management option or renewing the contract would ensure that OCSD has the necessary information to implement the best strategy, as well as providing OCSD staff with the knowledge on how to improve the purchasing process or develop a capital project. Due to the large costs involved in biosolids management contracts, staff seeks to develop the fairest process with the most beneficial outcome.

The 2003 Long-Range Biosolids Management Plan resulted in guidelines for the diversification of biosolids products, contractors, and markets to create a sustainable biosolids program. The updated biosolids policy (2013 Board Resolution No. OCSD 2013-03) commits OCSD to a diverse portfolio of biosolids options and to recycle biosolids, among other requirements. A study of current and available biosolids recycling options will assist OCSD in selecting the right option to ensure conformance with the biosolids policy regarding diversity of management options and other criteria.

Ahead of the selection of the next biosolids management option, staff recommends studying mid-term (4-10 years) and long-term (10+ years) strategies for biosolids management available after 2016-17 when the Synagro contract expires, IRWD stops sending solids to OCSD, and centrifuges come online thereby reducing our biosolids production by one-third. The study of biosolids management options will include off-site and on-site facilities, new and established technologies, and biosolids markets, as well as ensuring onsite strategies are aligned with any new recommendations and research.

### **Goals**

- Study available biosolids management options and costs relevant and applicable to OCSD's daily biosolids production;
- Verify available biosolids management options align with new capital facilities and meet established levels of service;
- Identify practical and reasonable biosolids management options considering OCSD's Biosolids Policy and relevant research information;
- Develop a mechanism to allow for short-term demonstrations of viable biosolids management options;
- Develop a strategy to select a management contractor or capital project for biosolids management options in the mid-term and long-term timeframe.

## Desired Outcome

- OCSD will have a clear mid-term and long-term strategy for biosolids management options (beginning after fiscal year 2016-2017) when the existing composting contract expires, centrifuges begin operation, and daily biosolids production is reduced by one-third. Consider on-site options.
- Maintain a sustainable biosolids management program in accordance to OCSD's Biosolids Policy that includes diversification of products, markets, and contractors.



OCSD takes pride in our strict oversight of our Biosolids contractors. Biosolids Inspector, Leyla Perez, interviewing South Kern Compost Manufacturing Facility staff during regular inspection. About one-third of our biosolids are turned to compost here.

# energy efficiency

## Should OCSD continue to expand the creation and utilization of renewable energy in wastewater management?

### **Why is this issue important to the District?**

OCSD and its contractors are a significant consumer of energy. Energy is procured in the forms of electricity, natural gas, diesel fuel and gasoline. In addition, the organic sludge recovered in the wastewater treatment process is an energy rich resource which OCSD has been converting into electricity and heat for many years.

OCSD seeks to minimize its overall energy usage and maximize the conversion of sludge to energy. Minimizing energy usage is designed into every project constructed by the OCSD. Capital dollars are expended when a lifecycle payback is calculated for energy efficiency. Variable speed pumping systems, ultra efficient electrical motors, and efficient aeration systems for our Activated Sludge Plants are examples of component selection for long term energy efficiency. Energy utilization is a significant factor in process technology selection when unit processes are added or replaced. Examples of this include using Trickling Filters rather than Activated Sludge Plants, and creative designs to replace collection system pump stations with gravity lines. Transportation fuels are also optimized by selection of advanced technology options. OCSD is investing in biosolids dewatering technology to reduce diesel costs and emissions for hauling biosolids.

OCSD is also a leader in the conversion of organic sludge to energy. OCSD has operated anaerobic digestion which uses bacteria to convert sludge to methane gas. The methane has been used to fire boilers and generators. The reduction of sludge volume and the use of heat to pasteurize the sludge creates a useful fertilizer product with lower volume and corresponding diesel fuel input to haul the product to farms.

### **Goals**

- Complete the fuel cell research evaluation and make a recommendation to the Board of Directors.
- Continue to design energy efficiency into every project.
- Search for new research opportunities to improve conversion of organic sludge to energy.
- Search for new research opportunities to optimize processes energy and to minimize hauling energy.

### **Desired Outcome**

- Reaffirm the OCSD commitment to leadership in energy efficiency and energy conversion from organic sludge to electricity, gas, and useful heat.



# disinfection of OCSD's ocean discharge

## Should OCSD stop the disinfection of effluent?

### **Why is this issue important to the District?**

During the summer of 1999, stretches of Orange County beaches were closed due to elevated levels of fecal indicator bacteria. In response, Orange County Sanitation District (OCSD) and numerous other organizations conducted extensive studies to determine the source(s) of this contamination. The outcome of these studies recognized several potential sources, including birds, Talbert Marsh and the Santa Ana River discharge, and groundwater contamination. A trunk line near the coast and the effluent plume discharging from the OCSD's 5 mile outfall were also investigated, but were not found to be contributing sources of bacterial contamination. However, in an effort to be proactive and insure protection of public health, in 2002 OCSD began disinfection of its final effluent using chlorine at both treatment plants as a temporary measure to eliminate any uncertainty.

In 2006, OCSD observed degradation of marine life near the ocean outfall. Staff conducted 10 individual studies targeting potential causes for these observed effects. Results showed that the OCSD's use of chlorine for ocean outfall disinfection was highly correlated with the observed effects and is therefore the likely cause of the decline in biological communities near the outfall.

In addition, staff performed a historical analysis using the most recent 14-years of bacterial data from beaches monitored by OCSD in order to assess if public health protection improved since the initiation of OCSD's disinfection of its ocean discharge. The results from this assessment showed that disinfection of OCSD wastewater at an average annual cost of \$4.18 million dollars over the 14 year period had no measurable public health benefit. Regardless of disinfection, bacteria concentrations did not change significantly, either temporally or spatially, at Orange County beaches.

A 2008 review of OCSD's disinfection practices by a 9 member independent panel of experts organized by the National Water Research Institute produced a recommendation to re-evaluate the need for disinfection once full-secondary treatment was achieved. With full secondary treatment now in place, these studies indicate no public health benefit has been gained; there are negative impacts to the biological community near OCSD's ocean outfall and going forward disinfection costs OCSD's rate payers approximately \$500,000 annually.

### **Goal**

- Cessation of disinfection of OCSD's effluent.

### **Desired Outcome**

- Requirement to disinfect long outfall removed from our ocean discharge permit.
- Full recovery of marine life around the ocean outfall.

# local sewer transfers

## Should the Sanitation District continue its efforts to transfer local sewers to member cities and sewerage agencies?

### **Why is this issue important to the District?**

The Strategic Plan of November 2007 recommended transferring back to cities local assets that are not serving a true regional purpose. Successor Strategic Plans reaffirmed this initiative. This allows OCSD to focus staff's full attention on the medium and larger diameter regional sewer pipes and pumping facilities that we own and operate, i.e., our core business.

### **Background**

Since 1984, we have successfully transferred 61 miles of our sewers and 2 pumping facilities to member cities and sewerage agencies. Most recently we transferred 3 miles of local sewers to the City of Anaheim. We anticipate completing the transfer of an additional 174 miles of local sewers serving parts of Tustin and unincorporated areas north of Tustin by December 31, 2013.

OCSD Resolution No. 11-11 provides the criteria for classifying a local facility as compared to a regional facility. Regional facilities transport combined flows from two or more jurisdictions. Local facilities are directly connected to the properties they serve and allow the local utility to assess and collect local fees for service including reserves for future replacement. Local facilities also transport flows within the boundaries of the city or sewerage agency to the point of connection at the downstream OCSD regional sewer.

Discussions are underway with staff in Newport Beach, Huntington Beach, Santa Ana, Orange and Costa Mesa Sanitary District to transfer about 72 miles of sewers and 6 pumping facilities serving only local purposes.

All cities and sewerage agencies must establish appropriate local fees for services as mandated by state regulations. The GM's FY 13/14 Proposed Work Plan recommends that we seek the Board's input on whether to continue to pursue transfers of local sewers and pumping facilities to local sewer agencies.

### **Desired Outcome**

- Gain Board support for the current direction as is or,
- Seek Board input and support for desired changes in the current Resolution or program.

# legislative advocacy and public outreach

## Should OCSD expand its legislative advocacy and public outreach efforts?

### **Why is this issue important to the District?**

As a special district, we owe it to our ratepayers to keep them apprised of our efforts to accomplish our mission of protecting public health and the environment. A mandated Proposition 218 notice is among the only points of communication that we have with our customers. It is far more effective for OCSD to reach out to the communities we serve throughout the year to describe our cost-management efforts, our budget process, audits, findings, and capital improvement projects.

As the largest regional wastewater utility in Orange County, and the third largest west of the Mississippi River, OCSD recognizes the need for an active state and federal legislative advocacy program to ensure that the interests of the ratepayers and board of directors are protected. Towards that end, staff monitors activities in Sacramento and Washington, D.C., and, with the assistance of our legislative advocates, takes appropriate action to support or oppose legislative initiatives.

A unified legislative advocacy and public outreach program is essential in delivering our messages and positioning the District as a leader in our field.

### **Goals**

- Establish a special committee of the Board of Directors to oversee and guide development of the legislative and public outreach program.
- Develop a legislative advocacy strategic plan to set priorities for state and federal elected official outreach.
- Track bills and legislative activities.
- Identify and pursue grant funding opportunities.
- Analyze and lobby on behalf of proposed legislation that may impact the District.
- Carry out public outreach and legislative advocacy activities in support of the policy guidance contained in the strategic plan.
- Promote What 2 Flush outreach program that educates the public about the importance of infrastructure investment and supports the District's mission to protect the public's health and the environment.

### **Desired Outcome**

- Position OCSD as a leader in innovative solutions to infrastructure issues.
- Secure additional funding for OCSD programs.
- Educate the public about OCSD's purpose, mission, and the services we provide.

# future water recycling options

## Should OCSD study the possibility of expanding water recycling to Treatment Plant No. 2 in Huntington Beach?

### **Why is this issue important to the District?**

Water demands are forecasted to increase in north and central Orange County, emphasizing the importance of water recycling to boost local water resources and reduce dependence on imported water. Estimated water demands in the OCSD and Orange County Water District service area are projected to increase from approximately 480,000 acre-feet per year up to 558,000 acre-feet per year in 2035 (OCWD, “Long Term Facilities Plan”, 2009). Presently, about one-third of the area’s water demands are supplied with imported water. To bolster local supplies, OCSD and OCWD have jointly sponsored renowned water recycling projects such as the Groundwater Replenishment System and the Green Acres Project. Yet, about half of OCSD’s treated wastewater is lost to ocean disposal. Treated wastewater from OCSD’s Plant No. 2 could be used as source water for water recycling, via groundwater recharge, a purple pipe irrigation system, and/or wetlands restoration. This Project will help OCSD, along with its partner OCWD, determine if Plant No. 2 effluent could be used as feedwater to support expansion of the Groundwater Replenishment System or for a new reclamation facility. More water recycling will help serve Orange County’s escalating water demands, maximizing local water independence, enhancing supply reliability, restoring and protecting wetlands, and shielding against droughts.

### **Goals**

- Develop alternative treatment and utilization alternatives for Plant No. 2 effluent including potential technologies and partnerships;
- Create an evaluation methodology to weigh the benefits, costs, and risks of each alternative;
- Compare alternatives and make recommendations for the best apparent project(s) and partner(s) to be implemented.

### **Desired Outcome**

- OCSD will begin to plan for the highest and best utilization of effluent water at Treatment Plant No. 2.

# workforce **planning** and workforce **development**

**Should OCSD advance the workforce planning and workforce development initiative as a means to ensure workforce capabilities match the work required to meet the mission and levels of service?**

## **Why is this issue important to the District?**

OCSD continues to face staffing challenges. Since March 2010 to date, 110 employees have left OCSD taking 1,985 years of knowledge and experience with them. Based on retirement eligibility today, analysis of OCSD core wastewater occupations and management positions indicates potential job replacement rates of over 38% and 57%, respectively. Robust technical skills training and leadership development efforts are in place to deal with the challenges. It is essential that OCSD continues to act on preparing for future staffing needs and ensuring access to qualified applicants while developing the existing workforce.

The workforce planning and workforce development (WFPD) programs position organizations for improved performance by ensuring that workforce capabilities match the work required to meet their mission and levels of service. To that end, it is important to have a diverse, competitive group competing for a position instead of simply hiring the next person in line based on time on the job. This Initiative will continue to help OCSD get the right people with the right skills in the right positions at the right time.

Ongoing efforts aimed at District-wide WFPD activities are necessary to ensure the ongoing delivery of efficient and effective levels of service to meet our mission. Workforce planning reinforces authorized staffing levels while addressing future needs and changing work requirements. Workforce development strengthens the workforce by preparing employees for future opportunities and focusing efforts on growth of technical skills to ensure staff is well-trained.

It is important that WFPD remains an OCSD Strategic Plan Goal for the Board of Directors to emphasize to District management that this issue requires organization-wide attention and resource allocation.

## **Goals**

- Develop and implement workforce plans that ensure critical work is performed, identify new ways to perform work, and meet future workforce needs.
- Enhance OCSD's ability to recruit highly qualified, diverse staff.
- Develop employees to meet workforce demands.
- Actively manage employee performance to ensure OCSD goals are met.
- Create an environment that encourages retention of employees.

## **Desired Outcome**

- Integrate WFPD efforts to ensure workforce capabilities match work required to meet the mission and levels of service.

## appendix B summary of accomplishments

Goal	Completed						
	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
<b>SARI Line Relocation</b> - Work in conjunction with the County of Orange and the Federal Government to relocate the SARI Line by December 31, 2013.							●
<b>Management System for Environmental Compliance</b> - Implement a management control system for environmental compliance information that incorporates a dashboard-style report.	●						
<b>Contaminants of Potential Concern (CPC)</b> - Complete three phase testing and analysis of 550+ CPC, prepare report on findings and recommendations, develop initial source control strategy if they are CPCs identified that require control.	●						
<b>Climate Change/Greenhouse Gases</b>							
Develop an overall strategy for responding to climate change regulations and proactively adapting to the effects of climate change including identification and mitigation of greenhouse gases and adapting to any impacts to our facilities and operations.		●					
Develop models to estimate greenhouse gas and traditional pollutant emissions for determination of our environmental footprint. (Functional predictive greenhouse gas model completed)				●			
<b>Engine Emission Compliance</b>							
Complete study to evaluate alternatives for complying with lower emission limits in the South Coast Air Quality Management's Rule 1110.2. Initiate planning and design of demonstration testing of most promising technology(s) identified in the study.	●						
Implement capital improvements or operational modifications in order to achieve compliance..							●
<b>Providing Ongoing Leadership Development</b> - Maximize the development of a pool of dedicated and talented employees ready to lead OCSD into the future.				●			



# summary of accomplishments

Goal	Completed						
	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
<b>Fuel Cell Evaluation</b>							
Start up 300kW demonstration unit. .				●			
Evaluate cost feasibility of replacing or supplementing CGS engines with fuel cell.							●
<b>Reclaiming Santa Ana River Interceptor Line (SARI) Flows</b> - Meet with stakeholders, develop a list of obstacles that need to be overcome to reclaim the SARI Line and develop a strategy to obtain regulatory approval to reclaim SARI Line flows. This goal was canceled due to inability to obtain regulatory approval.		●					
<b>Sewer Rate for Green Development</b> - Submit for Board approval an amendment to sewer rate ordinance with incentives for green developments.	●						
<b>Complete Facilities Master Plan Update</b> - Complete a comprehensive update of the Facilities Master Plan and obtain Board approval	●						
<b>Enterprise Information Technology Strategic Plan</b> - Complete a District-wide Information Technology Strategic Plan.			●				
<b>Updating OCSD's Risk Register</b> - Review and update OCSD's risk register to include an assessment of technical, regulatory, financial, and political risks (among others) and possible mitigation strategies	●						
<b>Annex Unincorporated Areas</b> - With Board concurrence, annex unincorporated areas onto OCSD's service area.	●						
<b>Review Interagency Agreements</b> - Conduct a comprehensive review of agreements with the Santa Ana Watershed Project Authority and Irvine Ranch Water District, and, if appropriate, reopen for discussion.			●				
<b>Strategic Business Plan</b> - With Board concurrence, annually update and implement the Strategic Plan and Business Plan.				●			

## summary of accomplishments

Goal	Completed						
	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
<b>Business Accountability Charters</b> – Create Business Accountability Charters for each department consistent with those developed by managers and supervisors.				●			
<b>Chemical Supplies</b> – Develop a Chemical Sustainability Plan that provides OCSD with options for obtaining wastewater treatment chemicals during chemical shortages, emergencies or complete stoppages.				●			
<b>Chemical Sustainability</b> - Ensure a reliable and sustainable chemical supply using multiple vendor contracts to reduce the risk of supply disruption while benefiting from competitive pricing.						●	
<b>Full-Cost Recovery 2010-11</b> - Conduct a comprehensive review of the Sanitation District's Urban Runoff Program to ensure a fair share recovery of costs for services.				●			
<b>Full-Cost Recovery 2012-13</b> - Implement a direct charging mechanism to recover the full cost of urban runoff treatment starting July 1, 2013 when the new rate structure is in place. This goal was canceled in FY 12-13 to allow additional urban runoff at no cost to the local jurisdiction.						●	
<b>Groundwater Replenishment System</b> - Maximize the production of GWR System product water to augment and protect the Orange County groundwater basin with a goal of 70 mgd.		●					
<b>Sustainable Biosolids Program</b>							
Complete new in-county Compost Take-Back Program Plan Strategy.	●						
Evaluate the feasibility of deep injection/methane recovery including commissioning a study of the geological formations below Plants 1 and 2, and availability and acceptability of any existing wells		●					
Evaluate option of processing some biosolids at the City of Los Angeles Terminal Island demonstration well.		●					
Implement Energy Master Plan – After the completion of the plan, assess final recommendations to ensure adequate power resources and energy management.			●				

# summary of accomplishments

Goal	Completed						
	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
<b>Disinfection of Final Effluent</b> - Develop a cost effective program to sustain protection of public health associated with bacteria in the effluent and incorporate program elements into our NPDES Permit.				●			
<b>Ocean Protection</b> – Undertake studies to determine the cause of benthic community changes near the ocean outfall and take corrective action to return affected areas to reference conditions.					●		
<b>Space Planning Study Recommendations</b> – Complete relocation of staff housed in Information Technology Trailers, Administration Building, Control Center and Building 6.	●						
<b>Improve the Sanitation District Security</b> - Provide long-term security enhancements at both treatment plants and within OCSD's Collection System.	●						
<b>Safety and Health Strategic Plan</b> – Develop and implement a Safety and Health Strategic Plan for all OCSD activities.		●					
<b>Human Resources Strategic Plan</b> - Design, develop and implement human resources policies, practices, systems and tools to ensure OCSD has a workforce that meets future needs of OCSD and the public it serves.		●					
<b>Succession Plan</b> - Implement the Succession Management Plan including management training and the creation of a Leadership Academy.		●					
<b>North County Yard</b> – Open the North County Maintenance Yard and complete the relocation of selected staff and equipment to the facility. Implement flex space for added agency-wide needs as appropriate. This goal was canceled in FY 10-11 and the facility is currently being leased.				●			
<b>Five-Year Rate Plan</b> – Prepare an updated 5-year rate schedule for Board consideration to go into effect July 1, 2013						●	
<b>Sustainable Biosolids Program</b> - Conduct research to reduce the amount of biosolids produced and increase digester gas production						●	

## appendix C: glossary

**Activated-sludge process**—A secondary biological wastewater treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen, and consume dissolved nutrients in the wastewater.

**Biochemical Oxygen Demand (BOD)**—The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

**Biosolids**—Biosolids are nutrient rich organic and highly treated solid materials produced by the wastewater treatment process. This high-quality product can be recycled as a soil amendment on farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

**Business Accountability Charters**—A business unit strategic plan.

**Capital Improvement Program (CIP)**—Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

**Coliform bacteria**—A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere used as indicators of sewage pollution. E. coli are the most common bacteria in wastewater.

**Collections system**—In wastewater, it is the system of typically underground pipes that receive and convey sanitary wastewater or storm water.

**Certificate of Participation (COP)**—A type of financing where an investor purchases a share of the lease revenues of a program rather than the bond being secured by those revenues.

**Contaminants of Potential Concern (CPC)**—Pharmaceuticals, hormones, and other organic wastewater contaminants.

**Dashboard**—A computer based business tool used to visually track performance.

**Dilution to Threshold (D/T)**— the dilution at which the majority of the people detect the odor becomes the D/T for that air sample.

**1,4-Dioxane**—A chemical used in solvents for manufacturing, fumigants and automotive coolant. Like NDMA, it occurs in the Groundwater Replenishment System water and is eliminated with hydrogen peroxide and additional ultra-violet treatment.

**Greenhouse gases**—In the order of relative abundance water vapor, carbon dioxide, methane, nitrous oxide, and ozone gases that are considered the cause of global warming (“greenhouse effect”).

**Groundwater Replenishment (GWR) System**—A joint water reclamation project that proactively responds to Southern California’s current and future water needs. This joint project between the Orange County Water District and the Orange County Sanitation District will provide 70 million gallons a day of drinking quality water to replenish the local groundwater supply.

**Levels of Service (LOS)**—Goals to support environmental and public expectations for performance.

**Million gallons per day (mgd)**—A measure of flow used in the water industry.

**Most Probable Number (MPN)**—Number of organisms per 100 ml that would yield a test result or the observed test result with the greatest frequency. Commonly used for coliform bacteria.

**NDMA**—N-Nitrosodimethylamine is an N-nitrosoamine suspected cancer-causing agent. It has been found in the Groundwater Replenishment System process and is eliminated using hydrogen peroxide with extra ultra-violet treatment.

## appendix C: glossary

**National Biosolids Partnership (NBP)**—An alliance of the National Association of Clean Water Agencies (NACWA) and Water Environment Federation (WEF), with advisory support from the U.S. Environmental Protection Agency (EPA). NBP is committed to developing and advancing environmentally sound and sustainable biosolids management practices that go beyond regulatory compliance and promote public participation in order to enhance the credibility of local agency biosolids programs and improved communications that lead to public acceptance.

**O&M**—Operations and maintenance of the treatment plants facilities and collections system.

**Publicly-owned Treatment Works (POTW)**—Municipal wastewater treatment plant.

**Recycling**—The conversion of solid and liquid waste into usable materials or energy.

**Risk Register**—An internal document that describes vulnerabilities of the Sanitation District.

**Santa Ana River Interceptor (SARI) Line**—A regional brine line designed to convey 30 million gallons per day (MGD) of non-reclaimable wastewater from the upper Santa Ana River basin to the ocean for disposal, after treatment.

**Sanitary sewer**—Separate sewer systems specifically for the carrying of domestic and industrial wastewater. Combined sewers carry both wastewater and urban run-off.

**South Coast Air Quality Management District (SCAQMD)**—Regional regulatory agency that develops plans and regulations designed to achieve public health standards by reducing emissions from business and industry.

**Secondary treatment**—Biological wastewater treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

**Sludge**—Untreated solid material created by the treatment of wastewater.

**Total suspended solids (TSS)**—The amount of solids floating and in suspension in wastewater.

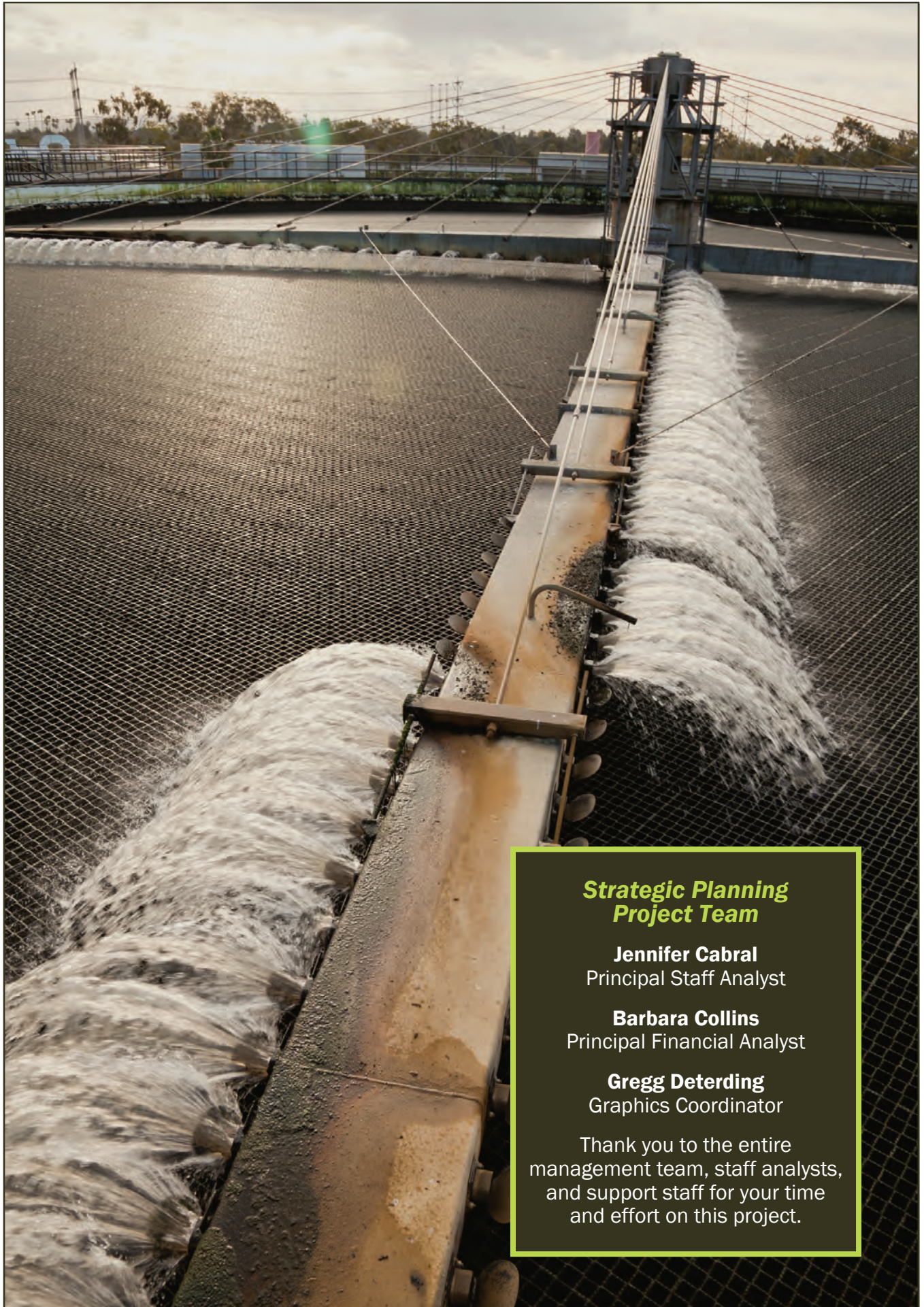
**Trickling filter**—A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in wastewater as it trickles over them.

**Urban runoff**—Water from city streets and domestic properties that carry pollutants into the storm drains, rivers, lakes, and oceans.

**Wastewater**—Any water that enters the sanitary sewer.

**Watershed**—A land area from which water drains to a particular water body. OCSD's service area is in the Santa Ana River Watershed.





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Project Team***

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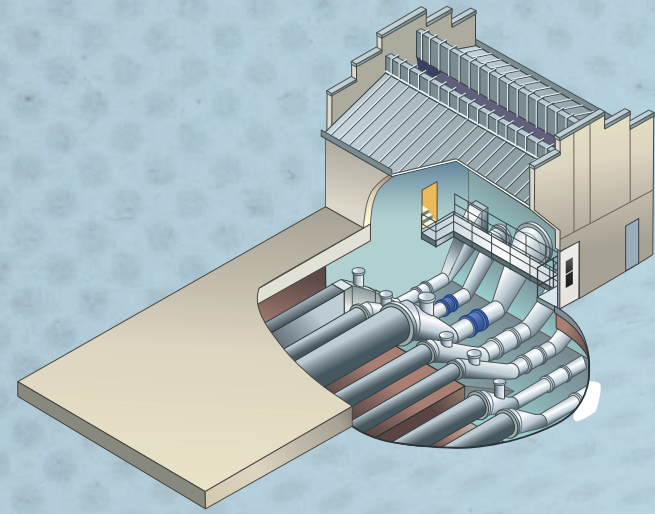
**Gregg Deterding**  
Graphics Coordinator

Thank you to the entire  
management team, staff analysts,  
and support staff for your time  
and effort on this project.





# Orange County Sanitation District Wastewater Treatment Process

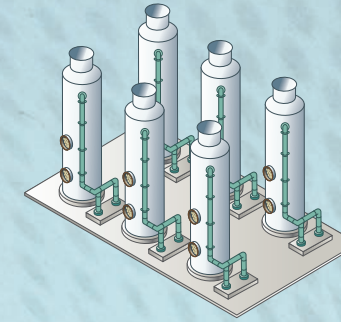
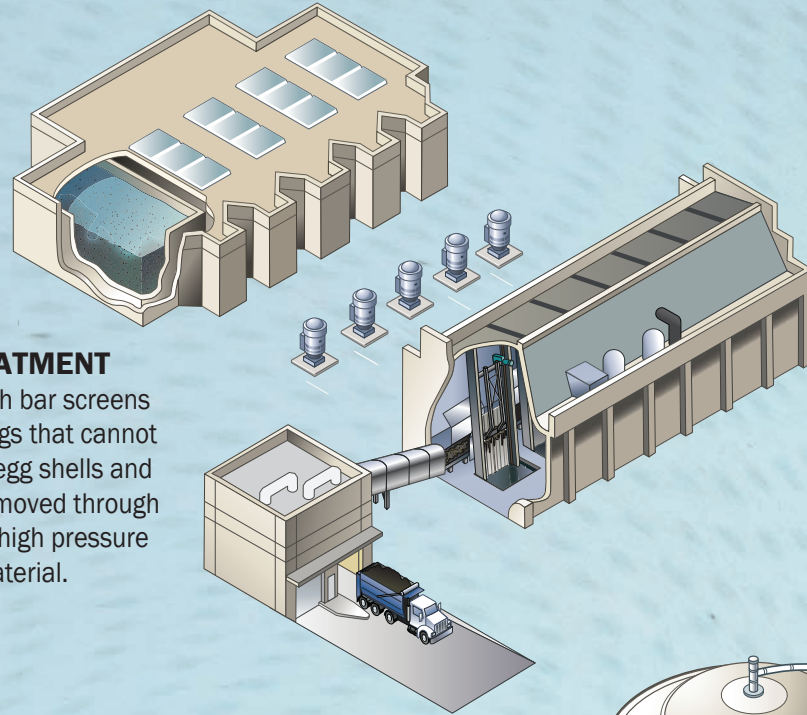


## 1. METERING AND DIVERSION

Wastewater enters our plant at 2.5 - 5 mph through pipes up to 10 feet in diameter. High tech equipment monitors the temperature, pH, conductivity, and flow of the incoming wastewater.

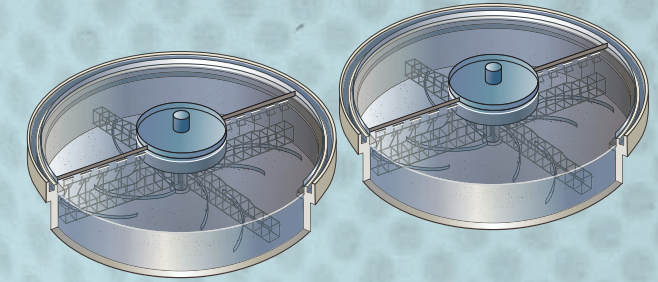
## 2. PRELIMINARY TREATMENT

Raw sewage passes through bar screens that trap large items like rags that cannot be recycled. Materials like egg shells and coffee grounds are then removed through the grit chamber that uses high pressure air to separate the gritty material.



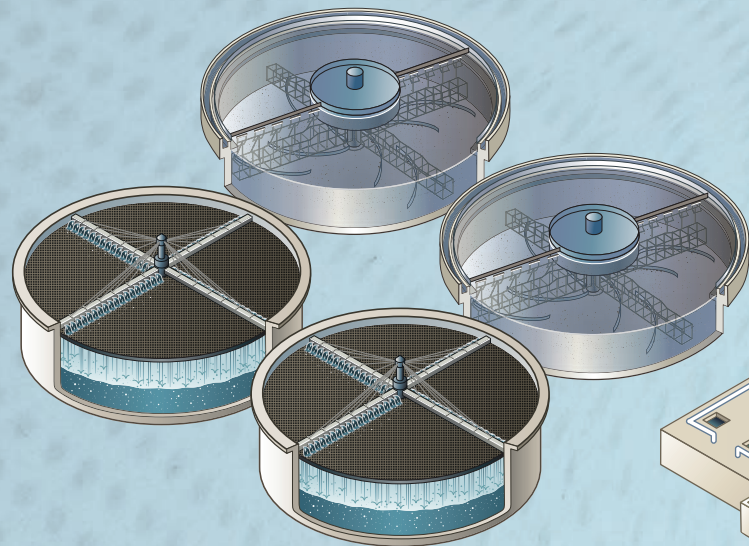
## 3. AIR SCRUBBER

Hydrogen Sulfide (foul air) is captured throughout the process and funneled into large silos passed through a plastic medium and mixed with caustic soda. The odorous compounds are neutralized and the air becomes clean.



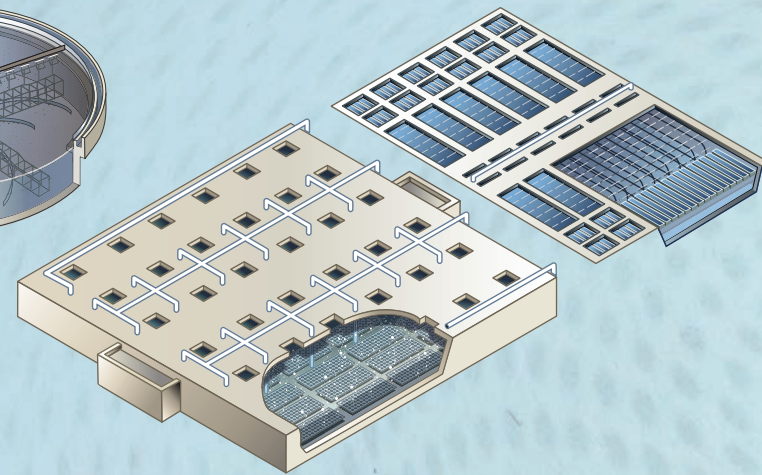
## 4. PRIMARY TREATMENT

Primary clarifiers or settling basins, slow the water down to let the solids that are within the water settle out and separate. Scrapper arms that move along the top and bottom remove up to 80% of the solids. Solids are then sent to digesters for processing.



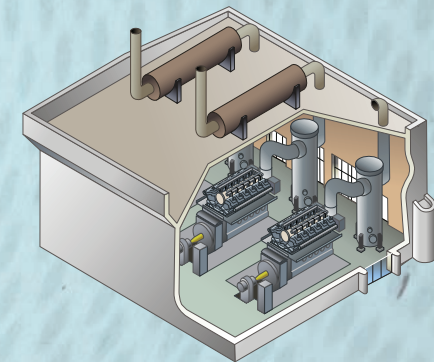
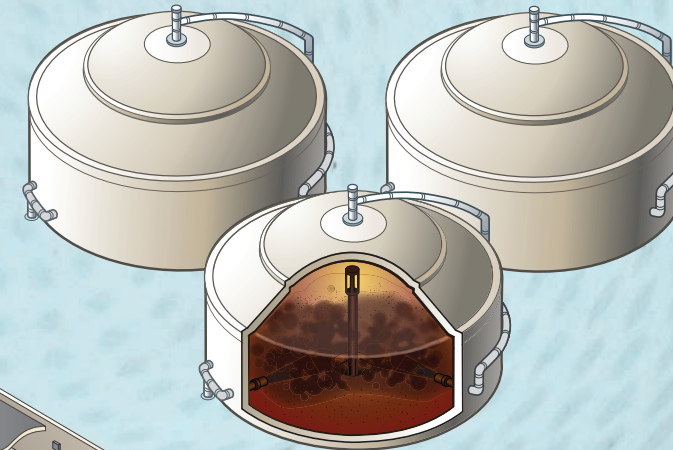
## 5. SECONDARY TREATMENT

Trickling filters and aeration basins are used to further clean the water. In trickling filters the water is sprayed over a honeycomb type material upon which aerobic bacteria grow. As the water trickles down, the microorganisms consume the solids that were not collected through primary treatment. Aeration tanks use a combination of oxygen and microorganisms, (activated sludge) that consume the remaining organic solids. Clean water is then sent to the Orange County Water District for recycling, or discharged into the ocean.



## 6. BIOSOLIDS

Solids captured from primary and secondary processes are batch loaded into digesters where they are sealed off, heated to about 98 degrees and treated for 18-21 days before they enter de-watering where water is squeezed out via belt presses. The nutrient rich biosolids are trucked off where they are recycled for direct land application, and composting. The digestion process produces methane gas.



## 7. CENTRAL GENERATION

Methane gas that is captured from digesters is compressed and used to fuel engine-generators that produce electricity, supplying about 60% of our energy needs.

## 8. HYDROGEN FUEL FACILITIES

We produce enough hydrogen to fuel approximately 50 cars per day. We also have a CNG fueling station.







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